Merrill Lynch

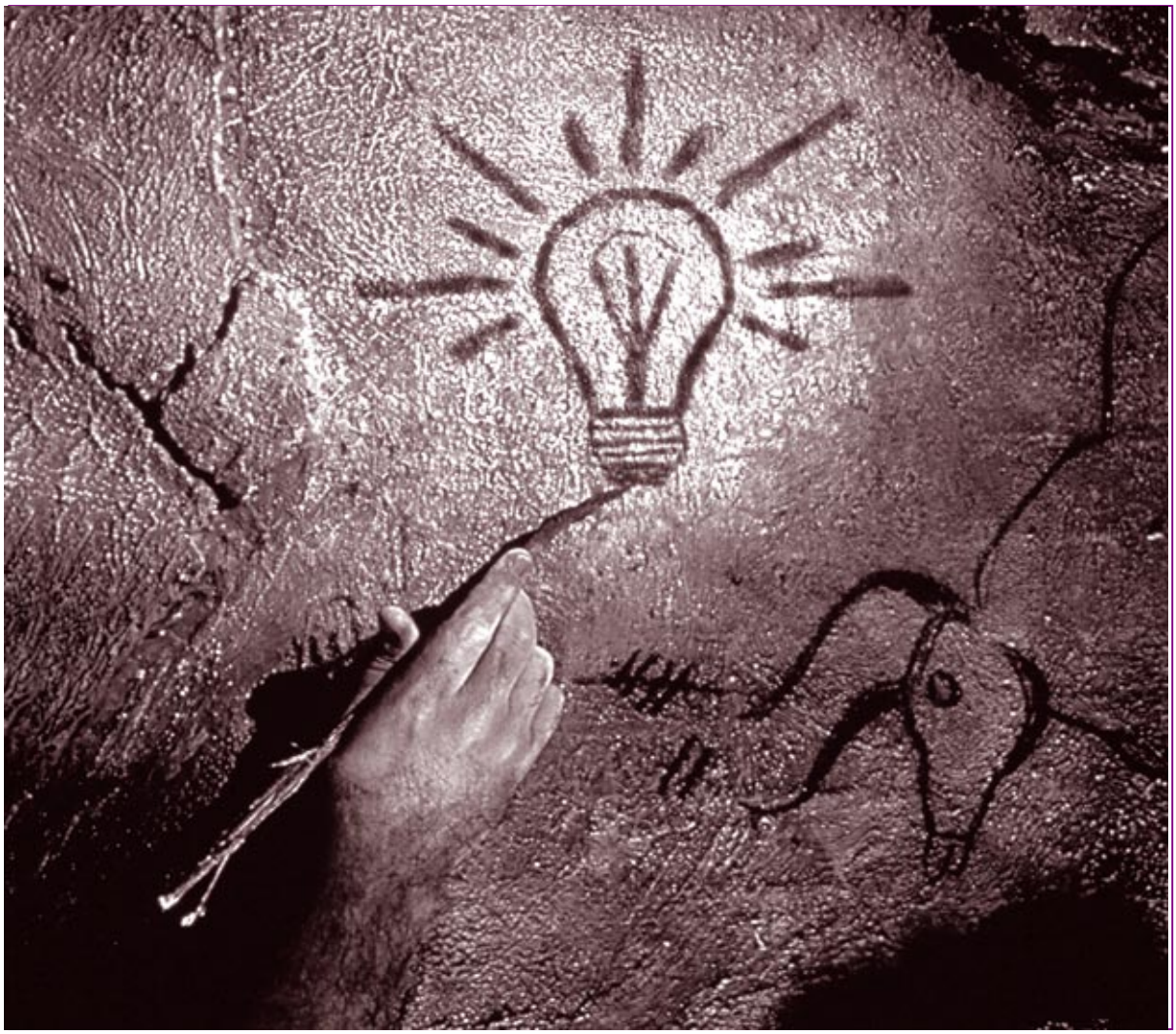
United States

8 January 1999 (Corrected)

T. Anne Cox, CFA
First Vice President
(1) 212-449-0174
Preston M. Harrington III
First Vice President
(1) 212-449-0240
Anne Elliott
(1) 212-449-6857

Convertible Special Report

Convertible Structures: Evolution Continues
1999 Update



Highlights:

Comprehensive guide to Convertible Bonds & Preferreds, LYONs, TOPrS, PERCS, PRIDES, Feline PRIDES and more

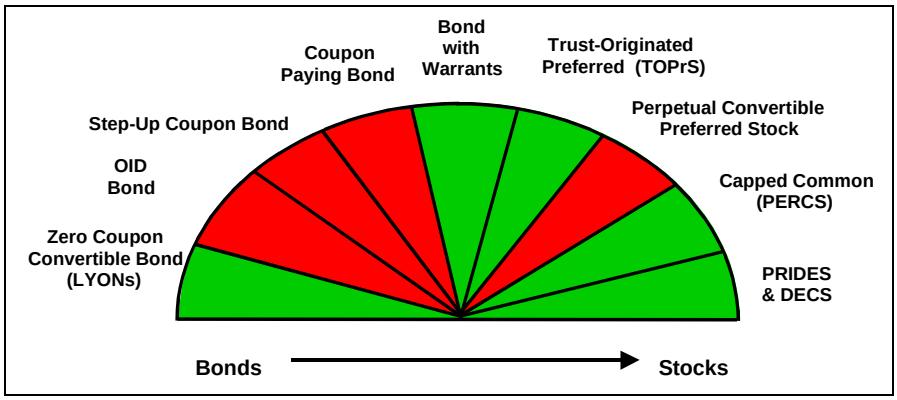
Global Securities Research & Economics Group
Global Convertibles Research Group

RC#61302801

CONTENTS

1. Convertible Bonds & Preferreds: Hybrid Vigor

The Convertible Spectrum



Convertibles provide a way for companies whose stocks are volatile to access the debt market.

The first convertible bond issue is associated with J.J. Hill, the railroad magnate, in 1881. Hill believed that the market was ascribing too much risk to his rail project and needed an innovative way to secure long term financing. Unwilling to sell stock until his planned expansion had reaped financial rewards, yet shut out from the traditional debt market, Hill issued a convertible bond. Obviously, since that time, there has been considerable growth and innovation in the convertible market which is now over $350 billion world-wide. However, convertibles still fulfill the same financing need they did in Hill's day. Convertibles provide a way for companies whose stocks are volatile to access the debt market.

The appeal of a convertible is that, as a hybrid security, it combines features of a straight debt instrument with those of an equity warrant. As such, the different estimates of the issuer's risk are relatively unimportant to the value of a convertible.

As we shall see, convertibles can be thought of as roughly equivalent to a fixed income investment combined with a warrant on the issuer's stock. As a rule, debt investors exact a high toll for risk. In practice, this means they will demand a higher coupon from an issuer whose business they perceive as risky or volatile. If managers of such firms cannot convince investors to reevaluate the level of risk in their business, they will have to bear interest costs on straight debt higher than their own expectations would warrant. The appeal of a convertible is that, as a hybrid security, it combines features of a straight debt instrument with those of an equity warrant. As such, the different estimates of the issuer's risk are relatively unimportant to the value of a convertible. The more volatile the business the more the warrant portion is worth, and the less volatile the more the bond portion is worth. So even if investors and management cannot agree on the risk of the issuing firm, they will be able to come to terms on the proper price for a convertible bond or preferred.

The more volatile the business the more the warrant portion is worth, and the less volatile the more the bond portion is worth.

Many different customized convertible structures now exist, each tailored to fit the characteristics of specific issuers and investors. However, the basic premise that led to the initial development of convertibles has also driven these later innovations. They are essentially variations on a theme.

In this report, we will discuss the features and valuation of the various convertible securities found in the U.S. market. Our discussion of "plain vanilla" convertibles will serve as a springboard for our analysis of the more exotic flavors of convertible financing.

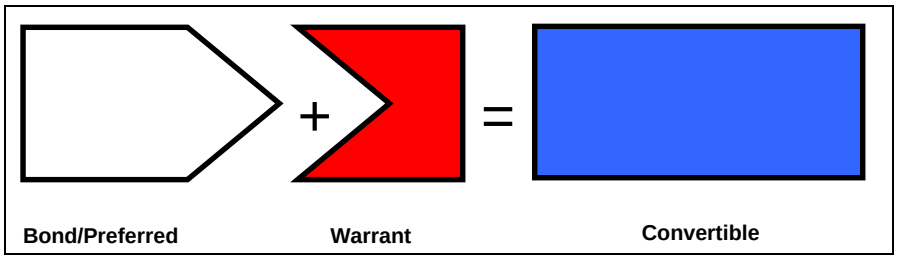
Introduction:

Convertible Bonds and convertible preferreds are fixed income securities that may be exchanged at any time for a fixed number of shares of common stock.

Convertible Bonds and convertible preferreds are fixed income securities that may be exchanged at any time for a fixed number of shares of common stock. This exchange, or conversion, feature is the primary driver of the performance for these securities. For this reason, convertibles are generally regarded as equity surrogates despite their obvious fixed income structure. In the simplest sense, the convertible "package" can be thought of as a bond or preferred stock plus a long term warrant to purchase common stock.

In the simplest sense, the convertible "package" can be thought of as a bond or preferred stock plus a long term warrant to purchase common stock.

Simplified Convertible Spectrum



Convertibles by nature are hybrid securities. The fixed income aspect of the security provides downside support, sometimes referred to as a ***"bond floor"***, while the embedded warrant supplies the potential for participation with the common stock's gains. In practice, the fixed income component is not an absolute floor, because it will shift in relation to the general level of interest rates and the company's credit quality. The warrant portion is also subject to early termination since it is an embedded security and subject to refinancing risk after call protection expires.

The fixed income aspect of the security provides downside support, sometimes referred to as a "bond floor", while the embedded warrant supplies the potential for participation with the common stock's gains.

In comparison with their underlying common stock, convertibles generally provide:

- Higher current yield
- Greater downside protection
- Seniority over the common with regard to income payments and in liquidation

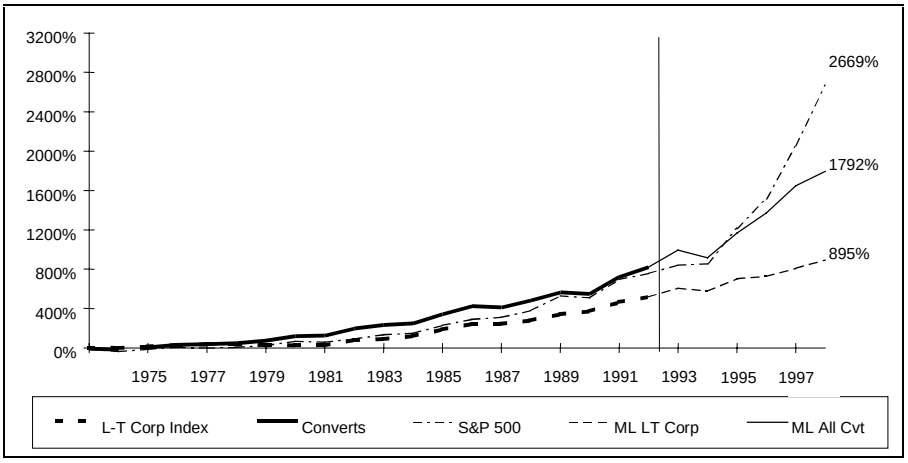
Because of these factors, convertibles normally sell at a premium to their ***intrinsic value*** or ***parity***. Moreover, this premium is not constant; it will shrink as the price of the underlying stock rises and expands as it declines. As a result, the price volatility of a convertible is usually dramatically lower than that of its underlying common stock.

Convertible Historical Returns:

In terms of total returns, convertibles have shown considerable hybrid vigor. The chart below compares long term returns of Convertibles, the S&P 500 and High Grade Bonds. Convertibles returns have largely kept pace with those of stocks while vastly outdistancing those of bonds. The returns of convertibles over this period are more impressive when one adjusts for the relative volatility of convertibles and stocks.

Convertibles returns have largely kept pace with those of stocks while vastly outdistancing those of bonds.

Cumulative Total Returns of Stock, Bonds & Convertibles from 12/73 to 12/98



Sharpe Ratio Analysis

The returns of convertibles over this period are more impressive when one adjusts for the relative volatility of convertibles and stocks.

Dec 1989 through Dec 1998	Annual Return %	Standard Deviation %	Sharpe Ratio
All Convertibles V0A0	13.21%	8.48%	0.93
All Invest Grade Converts V0A1	12.80%	8.15%	0.92
All Spec Grade Converts V0A2	14.42%	9.18%	0.99
S&P 500	17.87%	12.79%	0.98
Russell 2000	12.54%	14.26%	0.51
ML Corporate & Govt. Master Index	8.83%	5.67%	0.62

* Sharpe Ratio = $\frac{\text{Total Return - Risk Free Rate}}{\text{Standard Deviation}}$

Risk Free Return = 5.32%

General Convertible Description:

Convertible bonds and convertible preferreds share the basic fixed income structures of their namesakes — a fixed coupon or dividend rate, priority in regard to income and liquidation, a fixed maturity (for bonds), early redemption provisions, anti-takeover features (frequently) and put options or sinking funds (occasionally). In addition, of course, they are convertible for stock.

Convertible bonds and convertible preferreds share the basic fixed income structures of their namesakes.

Typically they have the following terms:

Conversion Privilege—The conversion privilege is usually described in terms of a conversion price or a conversion ratio (number of shares obtainable by converting one share of preferred of one $1,000 bond). When initially sold, the conversion price may be set anywhere from 15% to 30% above the market price of the underlying common stock, with 20%-25% the most common range. Conversion, at the option of the investor, is usually permitted at any time during the life of the issue.

Coupon—Coupon and dividend rates are generally set below what the issuer would have to pay in the non-convertible market typically 300-400 bps below. The coupon or dividend rate averages 400 to 600 bps above that of the common stock.

Maturity—Convertible bonds had initial maturities of twenty years or longer as recently as the early 1980s. Today, seven years has become the most common maturity and almost none have been issued with maturities beyond ten years. Convertible preferreds are normally perpetual but a number of recent issues have included mandatory redemption features, effectively setting a "maturity date" of as short as ten years after issue.

Call Protection—Call protection was rarely included in convertible securities prior to 1982. In the early '80s, several issues were redeemed within less than a year of issue. A few were redeemed before they had been outstanding for six months, with the result that not even one coupon was paid before investors were forced investors to convert in order to maximize returns. Soon after, call protection became a standard feature.

Convertibles provide a fixed coupon or dividend rate, priority in regard to income and liquidation, a fixed maturity, early redemption provisions, anti-takeover features and occasionally put options or sinking funds. In addition, of course, they are convertible for stock.

Restrictions on the issuer's right to call a convert come in two forms, which sometimes are combined in the same issue. ***Hard call protection*** (most common) simply prohibits redemption under any circumstances. ***Provisional or "soft" call protection*** prohibits redemption unless the underlying common reaches a certain threshold price level. For example, redemption might be prohibited unless the closing price of the underlying stock was at least 150% of the conversion price for any 20 out of 30 consecutive trading days. The length of call protection is most often three years, but it may range from two to five years. Like other terms, this is subject to change with market conditions.

Sinking Fund — Through a sinking fund the issuer retires a portion of the issue before maturity according to a fixed schedule. The most common types of sinking funds are through open market purchases and by lottery. The issuer redeems the bonds in the open market by purchasing them on prearranged dates. On the other hand, when the bonds are redeemed by lottery they can be selected at random. Ordinarily bonds redeemed through lottery are redeemed at face value. While sinking funds tend to support bond prices they serve to reduce the value of the conversion feature.

Subordination—The vast majority of convertible bonds are ***subordinated debt***, ranking junior to any senior debt, whether existing or prospective. Subordinated debt has a lower priority with regard to payment of interest or principal. ***Convertible preferred***, as a type of equity, ranks below all debt but ahead of common stock in the capital structure. In most cases, it ranks equally with other preferred stocks. ***Preference stock*** generally ranks below other preferreds. Preferreds may be further stratified using the designations ***"junior"*** or ***"second",*** or if the terms of another series of preferred give it priority.

As a general rule, conversion is not a taxable event.

Taxation— As a general rule, conversion is not a taxable event. An investor's basis in the convertible is carried over to the stock received upon conversion. The main exception to this is for ***"exchangeable" convertibles***, where conversion is into stock of a different corporation than the issuer. In addition, conversion into a package of stock and cash, or stock and bonds, is taxable with regard to the non-stock portion of the package.

Valuation:

The valuation of convertibles can get quite complex as one weighs conversion premium against yield advantage, taking into account the remaining call protection, the credit quality of the issue and the merits of the underlying stock. For this reason, Merrill Lynch has developed a valuation model that combines the stock's volatility and dividend rate and the appropriate credit spread to derive a theoretical value for the convertible. In this way, we are able to combine the various factors that influence a convertible's value.

Merrill Lynch has developed a valuation model that combines the stock's volatility and dividend rate and the appropriate credit spread to derive a theoretical value for the convertible.

The factors which influence the Bond/Preferred component are:

- Interest rates
- Credit rating/spreads
- Coupon
- Duration

The factors which influence the Warrant component are:

- Stock performance
- Embedded strike price
- Common dividend yield and dividend growth rate
- Stock volatility
- Life of warrant/call protection

■ Historical Valuation Methods

Traditional valuation methods, though useful as a rule of thumb, are not as accurate as an arbitrage pricing approach.

One traditional method for valuing converts is to calculate a ***"payback"*** period, which is the length of time, in years, required to recoup the conversion premium through the income advantage of the convertible. Sometimes useful as a quick "rule-of-thumb" type of calculation, it also has its flaws. It fails to take into account changes in the common dividend and ignores the time value of money. In addition, when referred to as ***"breakeven"***, it becomes even more misleading, for the total returns of the convert and its underlying common will only be equal if, in addition to the common dividend remaining constant, their prices remain unchanged for the calculated number of years.

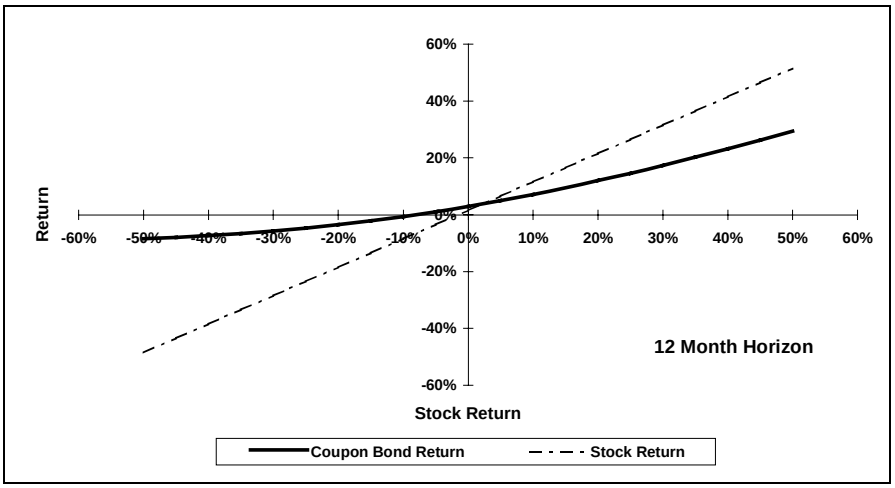
Return Profile:

The charts that follow present total return profiles for a convertible bond and a convertible preferred over a one year and three year horizon. Generally it is not in the investor's best interest to convert early and thereby give up the additional yield and seniority over the common. However, if the common stock's dividend has grown enough since issuance to outstrip that of the convertible early conversion may be optimal. In the vast majority of cases the issuer calls the convertible at a slight premium to par once the parity value is 10-20% above the call price. This effectively "forces" the holder to convert into common stock. Thus, the point at which call protection expires, usually three years from issuance, becomes critical.

Generally it is not in the investor's best interest to convert early and thereby give up the additional yield and seniority over the common.

Coupon Convertible Bonds vs. Stock Total Returns

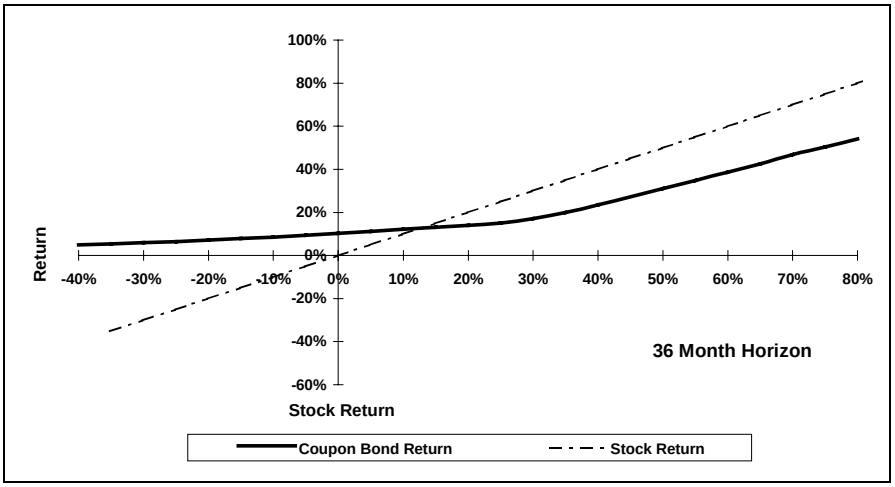
One Year Horizon



Downside protection vs. the common stock is considerable and increases over time as the income compounds.

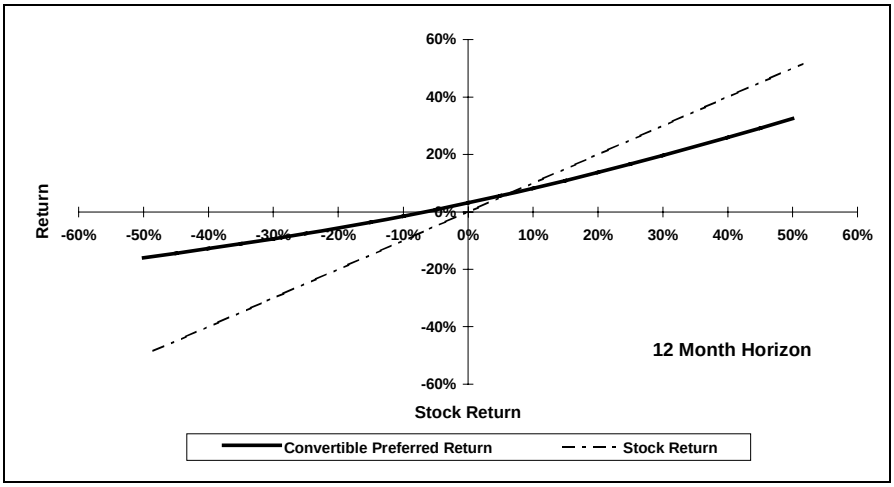
Coupon Convertible Bonds vs. Stock Total Returns

Three Year Horizon



Convertible Preferreds vs. Stock Total Returns

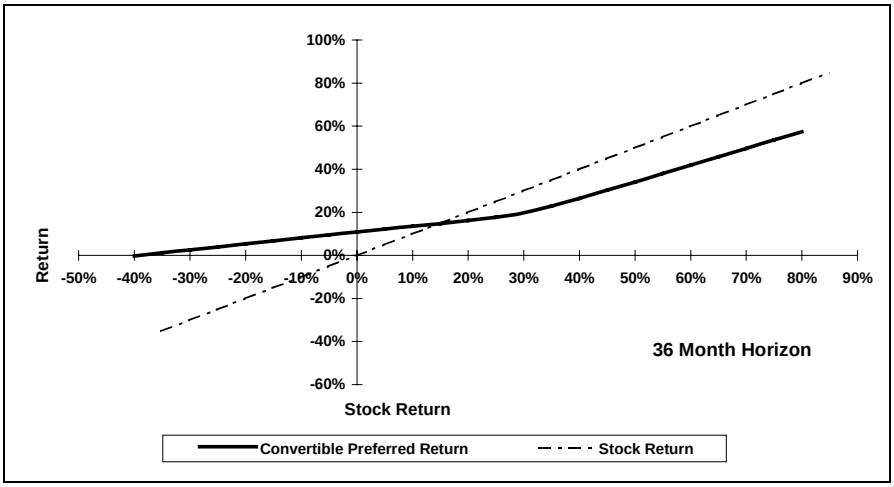
One Year Horizon



Convertible preferreds also offer meaningful downside support, but less than that of convertible bonds.

Convertible Preferreds vs. Stock Total Returns

Three Year Horizon



Convertible Bond Variations:

Original Issue Discount Convertibles

Original Issue Discount (OID) convertible bonds have below-market coupon levels and are offered at a steep discount to their par (or face) value.

Original Issue Discount (OID) convertible bonds have below-market coupon levels and are offered at a steep discount to their par (or face) value. The most extreme version of an OID is the LYON or zero coupon convertible bond (discussed later in this report). In between the zero coupon and the full coupon, almost any combination of coupon and discount is possible. In recent years, we have seen a 6.55% coupon offered at 79.5% of par and a 1.125% coupon offered at 55.36% of par. The deeper the discount, the more LYONs-like the bond becomes. *Unlike LYONs, OID bonds usually do not have put options.*

The bond component of return on an OID convert comes partly from the coupon and partly from accretion of the discount. Upon conversion, the accretion is not paid, so realization of this portion of total return becomes an either/or situation. Either the stock appreciates faster than the growth in accreted value, or the accretion is paid at maturity or earlier redemption. The steeper the initial discount, the more significant this accretion factor becomes. The accretion of OID is treated as ordinary income and is taxable, just as with a LYON.

Step-Up Convertible Bonds

The distinguishing feature of step-up bonds is straightforward; after a certain period of time, the initial interest rate is stepped up to a higher rate. In most cases, this is scheduled to occur at the first call date.

In the convertible security spectrum, ***Step-Up*** converts lie between Coupon Pay bonds and OID bonds. The distinguishing feature of these bonds is straightforward; after a certain period of time, the initial interest rate is stepped up to a higher rate. In most cases, this is scheduled to occur at the first call date. If the stock has performed well since the convert was issued, the bond may be called to ***"force" conversion*** and the issuer never has to pay the higher coupon. If the stock has not risen sufficiently to force conversion, the higher coupon may provide an incentive to the issuer to refinance. For tax purposes, Step-Up bonds are considered to have imbedded OID, creating a situation where there is ordinary income subject to tax even though it has not been received in cash form. Generally, this is a smaller amount than for most OID bonds.

Eurodollar Convertibles

Eurodollar convertible bonds are simply U.S. dollar denominated convertible bonds sold outside of the U.S.

Eurodollar convertible bonds are simply U.S. dollar denominated convertible bonds sold outside of the U.S. Traditionally the Euro market was centered in London. When offered by U.S. corporations, they are quite similar to domestic convertible bonds. However, unlike domestic issues, Euros are not registered with the S.E.C. and are issued in bearer form. Because they are not registered, new Eurodollar issues may not be sold to U.S. investors until a 40 day ***"seasoning"*** period has elapsed. Interest coupons are frequently paid on an annual basis versus the standard semi-annual domestic schedule. The "pure" Eurodollar market is used less often by U.S. issuers now than in the 1980s. Today, most Eurodollar issues are accompanied by a U.S. tranche that is offered under the Rule 144A exemption from registration pursuant to the Securities Act of 1933.

U.S. corporate Euro issues involve no currency risk to dollar based investors. Neither do Eurodollar convertibles issued by foreign companies as regards principal and interest payments. However, the value of the conversion feature is subject to the currency risks associated with foreign stock markets.

■ Bonds with Warrants

In its most common form, this structure pairs a bond with enough warrants to make the strike price times the number of warrants per bond equal to par or $1,000.

If, as we have seen, it is reasonable to think of a convertible as a package consisting of a bond plus a warrant, why not create a security where the warrant is separable rather than embedded in the package? As a matter of fact, this has frequently been done, though the structure has never become widely popular. In its most common form, this structure pairs a bond with enough warrants to make the strike price times the number of warrants per bond equal to par or $1,000. In addition, the terms of the issue often provide that the bonds may be applied to payment of the strike price and are valued at par when so used. ***"Usable bonds"*** is the term applied to such bonds. Viewed as a package, such a security is equivalent to a standard convertible bond, though the warrant may expire before the maturity of the bond.

In the secondary market, the pieces will also trade in separate markets — the ***"ex-warrant"*** bonds may appeal to fixed income investors, while the warrants will likely be of interest to investors in the options market. The unit is usually offered at par and the separated bond becomes an OID bond with issue price equal to par, minus the value of the warrants originally attached to it.

Additional Security Provisions

■ Change of Control Provisions

The goal of change of control provisions is to allow the investor to exit a position at par in the event of mergers that lower the value of the conversion option.

The mergers and takeovers of the 1980s exposed a gap in the protective features of the traditional convertible structure. This was most evident in cash mergers when the convert was selling well below par. In such cases, the provisions existing at the time simply adjusted the conversion feature by multiplying the conversion ratio by the merger price per share of stock. Thus, for example, a bond selling at 75 with a conversion value of 45 might have its conversion value boosted to 60 by a merger, but with all the value represented by cash so that future equity participation was canceled out. The bond would then trade as a straight bond and, depending on coupon, maturity and credit rating, might even fall in price from its pre-merger level.

Generally, these come into play during cash based mergers.

As a result, various forms of ***"poison puts"*** were added and have become a common, if not universal, feature. The goal of these provisions is to allow the investor to exit a position at par in the event of mergers that are potentially harmful to the conversion option. There are several variations. Generally, poison puts are triggered by a ***"Change of Control"***, in which a third party obtains either 50% or over 50% voting control of the company. Some simply provide for a cash put at par plus accrued interest; others aim to adjust the ratio so that parity will equal par. An all-stock merger usually does not trigger a put, nor does a merger in which conversion parity exceeds par just before the merger. Initially, poison puts only applied to hostile takeovers, but over time, they have been modified so that friendly mergers are covered as well. Because complete standardization has not yet been achieved, each issue needs to looked at individually.

The Infamous "Screw Clause"

Most convertible investors are familiar with the provision that says ***"upon conversion, no adjustment will be made for interest or dividends."*** In plain English this means that when you convert, you don't get the income accrued since the last payment. Exceptions to this are extremely rare. An investor can avoid serious injury from this provision by timing. Confusion and difficulty arise most often at the first call date if the convert is in the money and the company decides to call it in order to "force" conversion. For most bonds and many preferreds, the first call date coincides with an interest/dividend payment date. What are some of the pitfalls?

In plain English, a "screw clause" means that upon conversion, holders don't get the income accrued since the last payment.

- Early expiration of the conversion privilege. It is not uncommon for the conversion right to expire one or more days before the redemption date.
- Conversion before the pay date. Many issues require that if conversion takes place between a record date and a pay date, the interest/dividend that will be received has to be repaid to the company.

In combination, these two requirements create a kind of Catch-22 situation:

1) if you wait to receive your interest, you forfeit a valuable conversion feature, or 2) if you convert, you lose your interest. Investors may reasonably object if the bond that they thought had three years of call protection turns out to have only 2.5 years with regard to interest payments. In response, many convertible issues now include wording that effectively cancels out the ***"screw" provisions*** at the first call date. But some do not and the above example does not necessarily exhaust legal creativity. So, read the prospectus. Forewarned is forearmed.

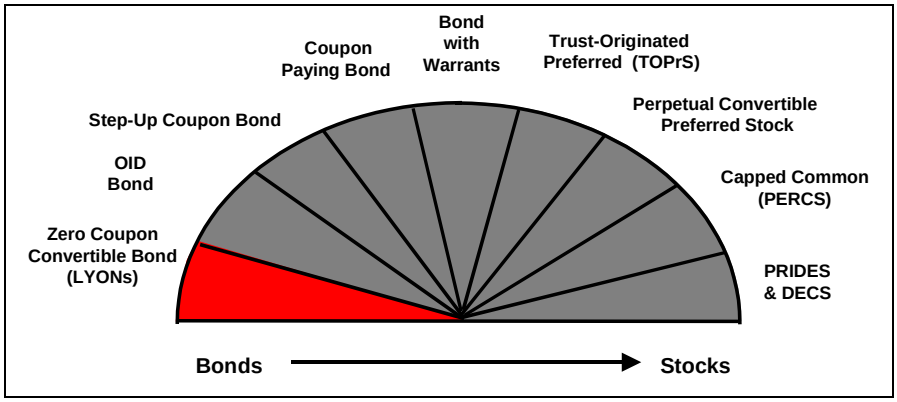
Anti-Dilution Provisions

Most convertibles protect the convertible investor in the event of actions on the company's part which might dilute the investors' equity interest.

Most convertibles protect the convertible investor in the event of actions on the company's part which might dilute their equity interest. These can include issues of equity at a discount (e.g. rights issues), scrip issues, subsidiary spin-offs, stock splits or one-time extraordinary dividends. The convertible ratio is usually adjusted upwards, pro rata the convertible investor's theoretical loss, in such events.

2. LYONs : A Breed Apart

The Convertible Spectrum



Liquid Yield Option Notes LYONs were developed and introduced by Merrill Lynch in early 1985. To create LYONs, the standard convertible bond was redesigned in two important respects: (1) the bonds were reconfigured as deep discount zero coupon instruments; and (2) one or more put options were added.

LYONs, because of their put option, tend to be less sensitive to changes in interest rates than either long maturity bonds or preferred stocks.

Liquid Yield Option Notes (LYONs) were developed and introduced by Merrill Lynch in early 1985. To create LYONs, the standard convertible bond was redesigned in two important respects: (1) the bonds were reconfigured as deep discount zero coupon instruments; and (2) one or more put options were added. The put prices were equal to the LYONs original offering price plus accrued interest to the put dates. This reduced the downside risk of the security while (at the same time) largely retaining the equity participation characteristics of traditional convertible bonds. This structure also provided issuers tax advantages and its introduction spurred the issuance of more large investment grade convertibles.

Introduction:

LYONs, because of their put option (five years or less after issuance), tend to be less sensitive to changes in interest rates than either long maturity bonds or preferred stocks. Their put feature also provides significant downside price support and insures holders a minimum total return equal to the yield to put, provided, of course, the issuer remains solvent. LYONs, due to their high safety level and modest equity sensitivity, are the most ***"bond-like"*** convertible structure.

LYONs were the first of what has become a wide array of innovative convertible structures with acronyms to match. Since their introduction, LYONs and similar zero coupon convertibles have captured a sizable share of the market.

Description:

LYONs are zero-coupon convertible bonds which are convertible anytime (at the holder's option) into common stock.

Typically they have the following terms:

Variations on standard LYONs structure are minor.

Coupon / Yield to Maturity: Zero coupon bonds priced at 20% to 40% of par to provide an average yield to maturity of 4%-7%.

Maturity: Generally 15 to 20 years

Put Option: Putable at the investor's option on one or more dates prior to maturity. The most common put schedule provides for a put option five years after issuance and at additional five year intervals through maturity. Put options can be divided into two groups: ***"hard" puts***, payable only in cash; and ***"soft" puts*** which the company, may satisfy with cash, common stock, or subordinated notes and, in some cases, a combination of all three.

Conversion Premium: Initial conversion premiums have ranged from 12% to 20%. LYONs are convertible into a fixed number of common shares, subject to adjustments for stock splits. In some cases, the company has the option to deliver cash equal to the conversion value, rather than deliver the actual underlying shares. This feature is most common with ***"exchangeable" LYONs***. Exchangeable securities are convertible into stock other than that of the issuer.

Call Protection: Five years of call protection is the most common provision. Issuers must give 15-30 days of call notice before they can redeem the securities. This notice provides investors the opportunity to convert or sell their LYONs if parity is above the call price.

Valuation:

Simplistically, a 5-year zero bond plus a 5-year call option.

Merrill Lynch has developed a valuation model for LYONs which combines the stock's volatility and dividend rate, and the appropriate credit spread to derive a theoretical value for the security. A more simplistic, but nonetheless useful approach, is to view LYONs as a combination of the following securities:

1. A five year zero coupon bond; and
2. A five year call option.

Why should an investor treat the fixed income component as having a five year maturity rather than the LYON's 20 year stated maturity?

The LYON's put option ensures that an investor receives at least the accreted value after five years, even if interest rates have moved up and the underlying stock has declined. On the other hand, if interest rates move down the issuer is more likely to call the LYON after five years and refinance at lower rates, even if its stock has not performed well. This was a frequent occurrence in 1992-93. In this regard LYONs contrast with other convertibles, where calls primarily occur if the underlying stock has risen sharply. Thus, while it is true that LYONs are the most "bond-like" of all convertibles (see Return Profile below), because of their effective five year duration a LYON's price will actually change less for a given change in interest rates than will a coupon bearing convertible's. [1]

[1] In statistical terms, a regression of LYON's returns on changes on interest rates would give a higher R2 but a lower slope than a similar regression for coupon bearing converts.

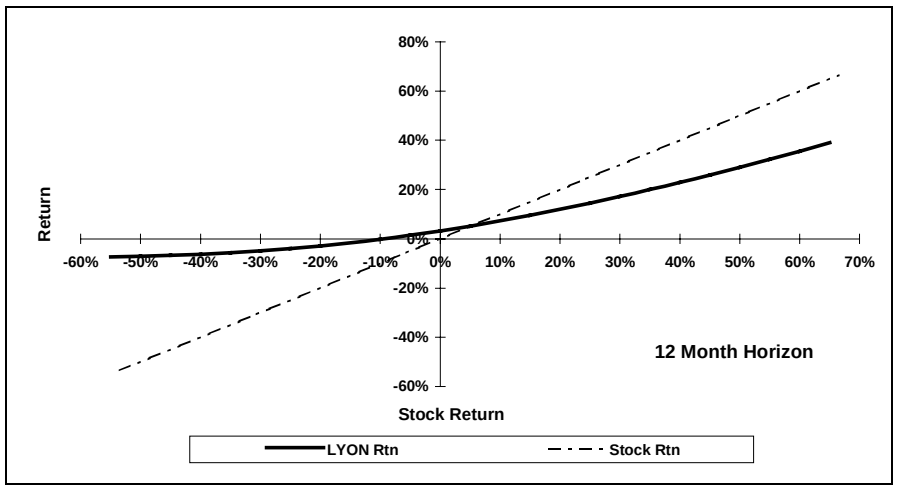
Return Profile:

The charts below show the return profile of a LYON compared to its underlying common stock after one, three, and five years. As they show, the LYON's downside protection relative to the underlying common increases as it approaches the put date. After one year the LYON has significant downside risk, but after three years this has largely disappeared. By the put date the return profile is a ***"hockey stick"***.

Downside risk is greatest in the first year.

LYON vs. Stock Total Return

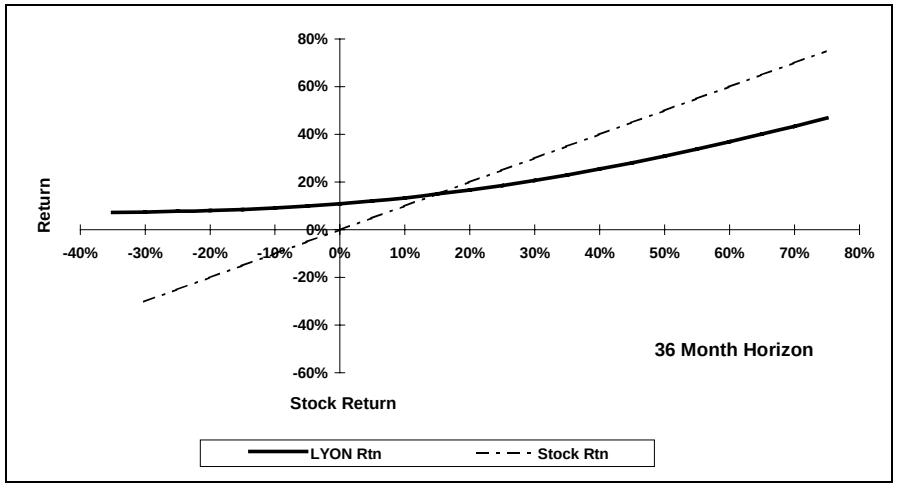
One Year Horizon



LYON vs. Stock Total Return

Three Year Horizon

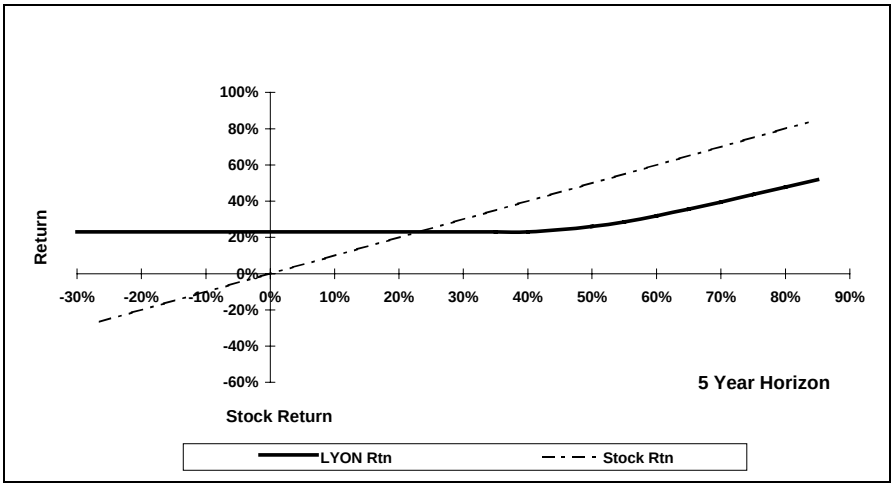
After three years, very little equity risk remains.



Over a five year period, the stock's appreciation must exceed the accretion rate for the conversion feature to have value.

LYON vs. Stock Total Return

Five Year Horizon



Much of the appeal of LYONs to issuers lies in their tax treatment. Issuers deduct the accrued interest, even though no cash interest is being paid, just as they do with straight zero coupon securities.

Conversely, investors pay taxes on the LYON's accreted interest (discount amortization) as ordinary income.

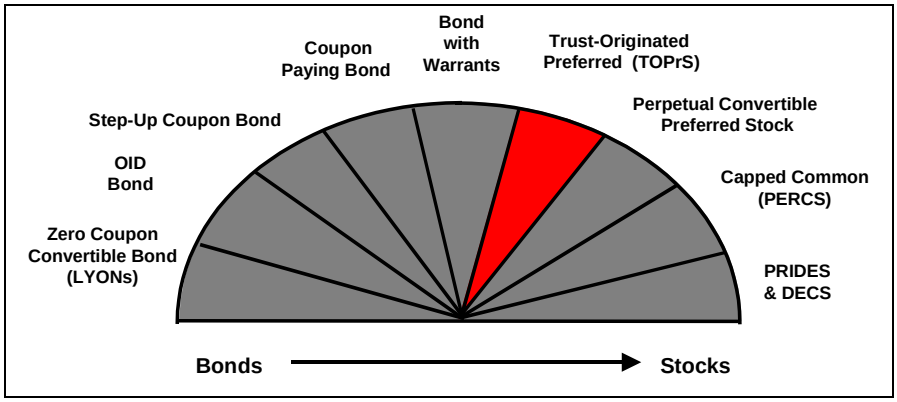
On the upside, the conversion feature of the LYON will only become valuable if the underlying stock appreciates at a higher rate than the accretion rate on the LYON. For this reason, the initial conversion premium can be a little misleading. With a coupon bearing convertible the investment value of the bond rises only slowly as the bond ages. Because of this, the price that the underlying stock must exceed in order for parity to exceed investment value also remains relatively constant. However, with a LYON investment value rises more rapidly since the bond accrues interest rather than paying in cash. Thus the price that the underlying stock must exceed in order for parity to exceed investment value also rises more rapidly. Since an investor will not want to convert earlier than necessary and give up downside protection, for valuation purposes the critical date is when call protection expires (typically five years). That being said, when calculating the strike price for the embedded option investors should therefore use the investment value after five years (i.e. the put price) divided by the conversion ratio.

Tax Considerations:

Much of the appeal of LYONs to issuers lies in their tax treatment. Issuers deduct the accrued interest, even though no cash interest is being paid, just as they do with straight zero coupon securities. Conversely, investors pay taxes on the LYON's accreted interest (discount amortization) as ordinary income. This tax treatment holds for LYONs purchased in the secondary market, even if the purchase price exceeds accreted value. However, in this case the premium over accreted value may be deducted, on an amortized basis through maturity.

3. TOPrS: Preferreds Made Better

The Convertible Spectrum



Convertible TOPrS, or Trust Originated Preferred Securities, are essentially convertible preferred securities that pay quarterly dividends. From the issuer's perspective their attraction is twofold: unlike regular preferreds, Convertible TOPrS' "dividends" are tax deductible, yet the securities still receive partial equity credit from the rating agencies.

Introduction:

At present there are about two dozen Convertible TOPrS issues outstanding. They have been favored by issuers because of their obviously advantageous tax structure. For the same reason, corporations have found it economically viable to exchange outstanding convertible preferreds into Convertible TOPrS. A case in point is Unocal (UCL) Corp.'s exchange of their 7% series convertible preferred for a 6.25% series trust-originated preferred.

Description:

Convertible TOPrS are preferred shares which pay quarterly dividends and are convertible into common shares of a primary issuer.

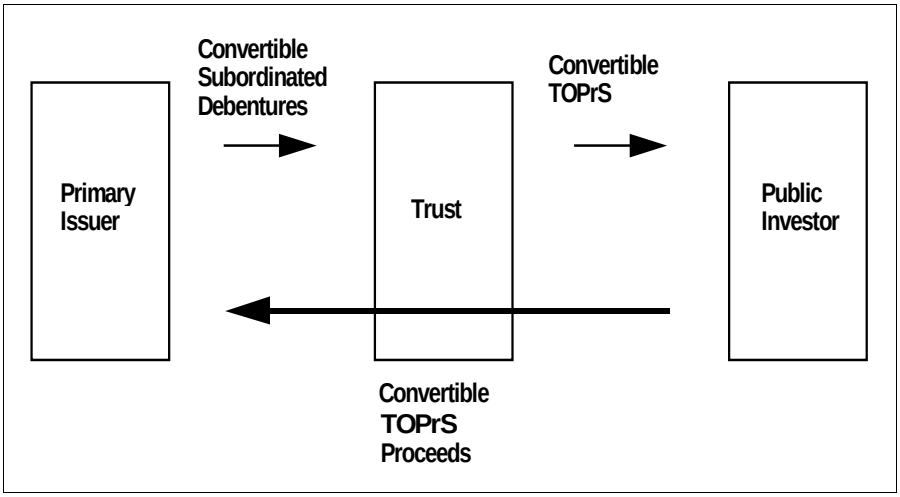
Convertible TOPrS are preferred shares which pay quarterly dividends and are convertible into common shares of a primary issuer.

Typically they have the following terms:

- $50 par value
- 20-30 year maturity (with possible extensions)
- Three to Five years of call protection
- Conversion premium of 20-25%.
- Convertible any time at holder's option into a fixed number of shares
- Quarterly dividends paid in arrears
- Dividend payments not eligible for Dividend Received Deduction
- Yield advantage of 4 - 7 percentage points over the primary issuer's common stock

The mechanics of a Convertible TOPrS are as follows: The primary issuer sets up an entity to issue the Convertible TOPrS. The entity is a Delaware statutory business Trust which sells the TOPrS to the public investor. The proceeds go to purchase convertible subordinated debentures with terms identical to those of the convertible TOPrS. The primary issuer owns all the common securities in the Trust; this allows for consolidation of these securities on the corporations balance sheet.

Simplified Convertible TOPrS Schematic



Interest Deferral

The primary issuer may defer interest payments on the convertible subordinated debentures for up to but not exceeding 20 consecutive quarters, or 5 years. However during this period dividend payments will continue to accrue and compound quarterly.

The primary issuer may defer interest payments on the convertible subordinated debentures for up to but not exceeding 20 consecutive quarters, or 5 years. However, during this period dividend payments will continue to accrue and compound quarterly and the primary issuer would be prohibited from paying dividends on its own common or preferred stock. So the Convertible TOPrS and the convertible subordinated debentures are essentially at the same level in the capital structure.

Since the primary issuer has sold convertible subordinated debentures to the Trust, it is entitled to deduct the coupon payments for tax purposes. However, the debentures do not appear on the primary issuer's balance sheet. Instead, the primary issuer consolidates its financial statements with those of the Trust and the Convertible TOPrS show up as a minority interest. This consolidation allows the primary issuer to receive partial equity treatment from the rating agencies.

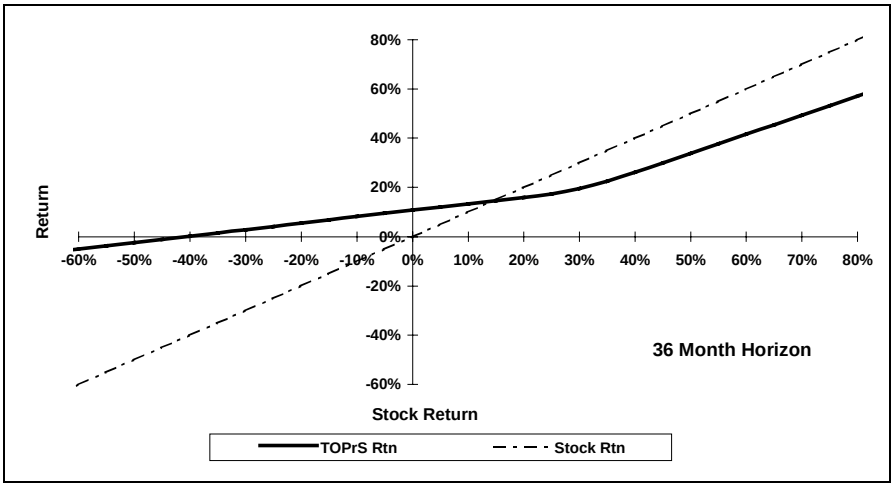
TOPrS, like many convertible securities, are issued under a variety of brand name acronyms. For a list of TOPrS-like products, see page 44.

Valuation And Return Profile:

From a valuation standpoint, Convertible TOPrS are almost the same as traditional convertible preferreds. Hard call protection is often four to five years, more generous than the standard three years. Also, the fixed maturity of Convertible TOPrS should make them slightly less interest rate sensitive and bolster their investment value. This effect is negligible for thirty year maturities, but becomes more significant with shorter maturities.

For a taxable corporate investor the loss of the ***Dividend Received Deduction*** will, of course, make a Convertible TOPrS less attractive than an equivalent traditional convertible preferred. Therefore, such investors may compare Convertible TOPrS to traditional convertible subordinated debentures. The return profile for a Convertible TOPrS is quite similar to that of a traditional convertible preferred — lagging the common stock slightly on the upside and outperforming on the downside by virtue of its enhanced yield and investment value floor. Other things being equal we would expect the TOPrS to trade with a higher conversion premium because of its longer call protection. The chart below shows the Convertible TOPrS return versus its underlying stock for a three year time horizon.

Convertible TOPrS vs. Stock Annualized Total Return



4. MIPS: Predecessor to TOPrS

Prior to the introduction of TOPrS, Convertible MIPS , or Monthly Income Preferred Securities, were introduced in 1994.

Prior to the introduction of TOPrS, Convertible MIPS , or Monthly Income Preferred Securities, were introduced in 1994. From the holder's point of view they are essentially trust preferreds with monthly dividend payments. The most important distinction is that while TOPrS are originated in a Delaware statutory business trust, MIPS are originated in a limited partnership. MIPS and TOPrS share two advantages for issuers: "dividends" are tax deductible, and securities receive partial equity credit from rating agencies. However, because of the additional issuer requirements for limited partnerships, MIPS have been all but replaced by TOPrS in the new issue market.

Description:

Only five MIPS issues were outstanding at the end of 1997. Convertible MIPS are preferred shares which pay monthly dividends and are convertible into common shares of a primary issuer.

From the holder's point of view they are essentially trust preferreds with monthly dividend payments.

Typically they have the following terms:

- $50 par value
- 30 year maturity (with possible extensions)
- Five years of call protection
- Conversion premium of 20-25%
- Convertible any time at holder's option into a fixed number of shares
- Monthly dividends paid in arrears
- Dividend payments not eligible for Dividend Received Deduction
- Yield advantage of 4 - 7 percentage points over the primary issuer's common stock

The mechanics of a Convertible MIPS are almost identical to TOPrS. The primary issuer sets up a ***Special Purpose Subsidiary (SPS)*** to issue the Convertible MIPS. The SPS, which is essentially a pass-through entity, is a limited partnership which sells Convertible MIPS to the investor. With the proceeds of that sale the SPS buys convertible subordinated debentures, with identical terms to the Convertible MIPS, from the primary issuer. The primary issuer becomes the general partner in the SPS.

The most important distinction is that while TOPrS are originated in a Delaware statutory business trust, MIPS are originated in a limited partnership.

The primary issuer may defer interest payments on the convertible subordinated debentures for up to five years. If this occurs the SPS would then be unable to pay dividends on the MIPS. However, during this deferral period dividends on the Convertible MIPS would continue to accrue (and compound interest monthly) and the primary issuer would be prohibited from paying dividends on its own common or preferred stock.

Holders of Convertible MIPS will receive an IRS Schedule K1 because the SPS is a limited partnership.

Schedule K-1 and Other Considerations:

Holders of Convertible MIPS will receive an IRS ***Schedule K1*** because the SPS is a limited partnership. The primary issuer is responsible for providing this paperwork to holders. If dividends on the Convertible MIPS fall 15 months or more into arrears the holders have the right to exchange them for the convertible subordinated debentures held by the SPS. This provision is intended to reinforce the holders' position in the event of bankruptcy. (Since this is a fairly new security structure this provision has not been tested in bankruptcy court.) The same provision comes into effect if the tax treatment of Convertible MIPS is struck down. In that case, the economics of the structure would remain unchanged, but the primary issuer would lose the minority interest treatment and its balance sheet would show the convertible subordinated debentures outstanding.

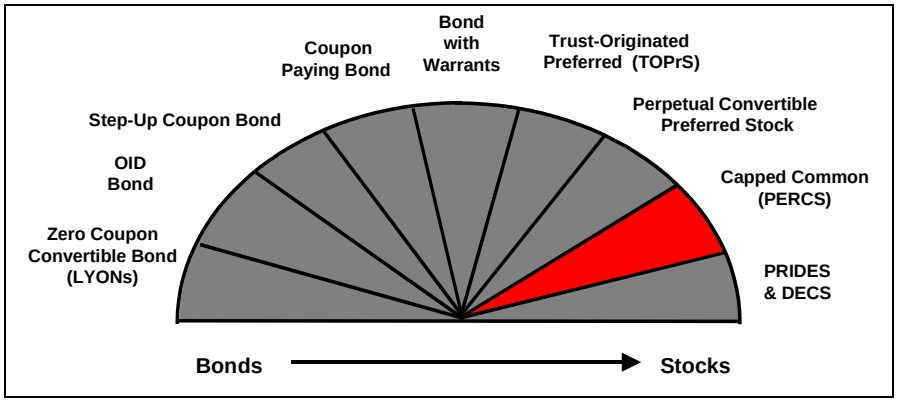
A Twist on MIPS:

Convertible MIPS are attractive from a tax standpoint to issuers looking to raise money de novo. However, they have also proven more attractive to companies with outstanding ***"hung" convertible*** preferreds — that is, converts where forced conversion is nearly impossible because the stock is trading well below the conversion price. In such a situation, an issuer may offer to exchange the outstanding security for a Convertible MIPS with identical terms. In doing so, the issuer gains the benefit of deducting the previously non-deductible dividends. In addition, rating agencies may give the issuer slightly more equity-like treatment on the new security since the possibility of five year dividend deferral gives the issuer more financial flexibility.

AMR Corp. was the first issuer to take advantage of this financing alternative. In an additional twist, AMR opted to bypass the SPS structure and offer the underlying convertible subordinated debentures directly to the existing "hung" convertible preferred holders. In doing this, management was probably motivated by the belief that rating agencies would look through the details of the structure to the underlying economics of the debt.

5. PERCS and their Relatives

The Convertible Spectrum



PERCS are preferred shares which offer limited upside participation with the underlying stock (generally 30%-35% price cap) and mandatorily convert into common stock at maturity.

PERCS are preferred shares which offer limited upside participation with the underlying stock (generally 30%-35% price cap) and mandatorily convert into common stock at maturity. Thus, as the adjacent diagram points out, PERCS are among the most equity like convertible securities and therefore offer different risk/reward tradeoffs from traditional convertible securities. Most notably, other than their yield advantage, PERCS provide no protection from a decline in the price of their underlying stock. PERCS also offer higher current yields than traditional convertibles to compensate investors for this greater downside risk and limited appreciation.

Introduction:

Basically, PERCS and their look-alikes can be thought of as long dated, packaged buy-writes.

First introduced in 1991, PERCS is an acronym for Preferred Equity Redemption Cumulative Stock. Basically, PERCS and their look-alikes can be thought of as long dated, packaged buy-writes. That is, they are economically equivalent to a share of common stock with a long-dated call option sold against it.

Typically they have the following terms:

- Approximately three year maturity at which time they mandatorily convert into common stock
- Issued with an appreciation cap of 30 - 35%
- Initial income advantage of roughly 3-4 percentage points over the common stock
- Issued at the same price as the common
- Pay a cumulative preferred dividend, quarterly
- Callable at the option of the issuer, at a declining price payable in shares

Valuation:

The most intuitive way to analyze a PERCS is to compare it to an option buy-write strategy. A PERCS security is basically a combination of:

1. Long one share of common stock;
2. Short one three year out-of-the money call with a strike price approximately 30% above the current level.

The enhanced yield the PERCS offers over the common stock is essentially the money gained by selling the out-of-the-money-call option. Unlike a straight buy-write strategy however, the premium is not received in an initial lump sum but is instead paid out in quarterly allotments.

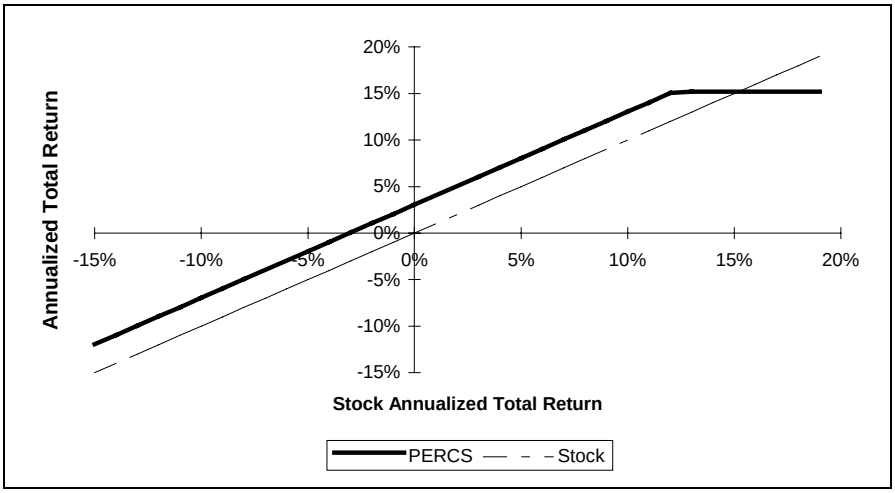
The enhanced yield the PERCS offers over the common stock is essentially the money gained by selling the out-of-the-money-call option. Unlike a straight buy-write strategy however, the premium is not received in an initial lump sum but is instead paid out in quarterly allotments. Thus the present value of the income advantage over the common should equal the value of the call option.

Return Profile:

As one would expect, PERCS have a return profile essentially identical to that of a buy-write. For moderate stock returns, PERCS outperform common if held to maturity owing to their yield advantage. For high stock returns PERCS will lag common as they are capped out on the upside at a maximum of about 30% price appreciation. The chart below compares PERCS and stock returns for a typical issue.

For moderate stock returns, PERCS outperform common if held to maturity owing to their yield advantage.

PERCS Return Through Mandatory Conversion Date vs. Stock Return



Call And Mandatory Conversion Of PERCS:

PERCS mandatorily convert into one share of common stock at maturity unless previously called by the issuer.

PERCS mandatorily convert into one share of common stock[2] at maturity unless previously called by the issuer. The issuer can call the PERCS at any time prior to the mandatory conversion date (maturity) at predetermined call prices. The PERCS call price declines daily at a fixed rate until two months before the mandatory conversion date. Thereafter, the call price remains the same till one day prior to maturity. The call schedule insures that the PERCS holder receives payment for the remaining dividend advantage of the PERCS over the common. Further, the call schedule assumes a flat stock dividend and is not adjusted downward in the event of a decrease in the stock's dividend. Generally, therefore, the issuer has little incentive to call the PERCS early, unless the stock price rises well above the cap and the company anticipates a future decline in its stock price.

The issuer can call the PERCS at any time prior to the mandatory conversion date at predetermined call prices.

If the PERCS are called the holder generally receives payment in common shares not cash. The number of shares delivered per PERCS is given by the following formula:

$$\text{Shares delivered / PERCS} = \frac{\text{Call Price + Accrued and Unpaid Dividends}}{\text{“Current Market Price”}}$$

“Current Market Price” is calculated by averaging the closing stock price for the five consecutive business days ending 2 trading days prior to the notice date . However, if the stock price on the trading day immediately after the five-day period ***(“next-day closing price”)*** is less than 95% of the 5-day average price then the “Current Market Price” will be the next-day closing price.

[2] Subject to adjustment for splits, stock dividends, etc.

This becomes clearer with an example. The table below shows two possible scenarios for the prices of an imaginary common stock underlying a PERCS issue over the period prior to a call. For the sake of simplicity we ignore accrued dividend and assume the call price on the notice date is $25.

Call Scenario Analysis

	Determination Period Stock Prices					"Next Day Closing Price"	Notice Date
	2-May	3-May	4-May	5-May	6-May	9-May	10-May
Scenario A	$25	$26	$24	$25	$25	$24	$24
Scenario B	$25	$26	$24	$25	$25	$23	$24

The averaging (or "Asian") feature can cause the PERCS holder to receive shares worth an amount significantly different from the call price.

- **Scenario A:**

Average Price During Determination Period = $25

"Next Day Closing Price" = $24 (96% of Average Price Above)

Shares Received = $25 / $25 = 1

Value to PERCS Holder = 1 x $24 = $24.00 vs. Stated Call Price of $25.00

This introduces risk for the PERCS holder because the issuer has the luxury of choosing the most opportune time to announce the call.

- **Scenario B:**

Average Price During Determination Period = $25

"Next Day Closing Price" = $23 (94% of Average Price Above)

Shares Received = $25 / $23 = 1.067

Value to PERCS Holder = 1.067 x $24 = $26.09 vs. Stated Call Price of $25.00

As this example shows, the averaging or ***"Asian" feature*** can cause the PERCS holder to receive shares worth an amount significantly different from the call price. This introduces risk for the PERCS holder because the issuer has the luxury of choosing the most opportune time to announce the call. The PERCS holders are to some extent, protected by virtue of the 95% ***"next day closing price"*** feature.

The company can choose any date from 15 to 60 days after the notice date as the delivery date for the common shares. The company announces the delivery date when they give notice of the call. We would expect the company to choose a delivery date after the record date for the common stock dividend to avoid paying the PERCS holder a double dividend.

Analysis Of PERCS Nearing Maturity:

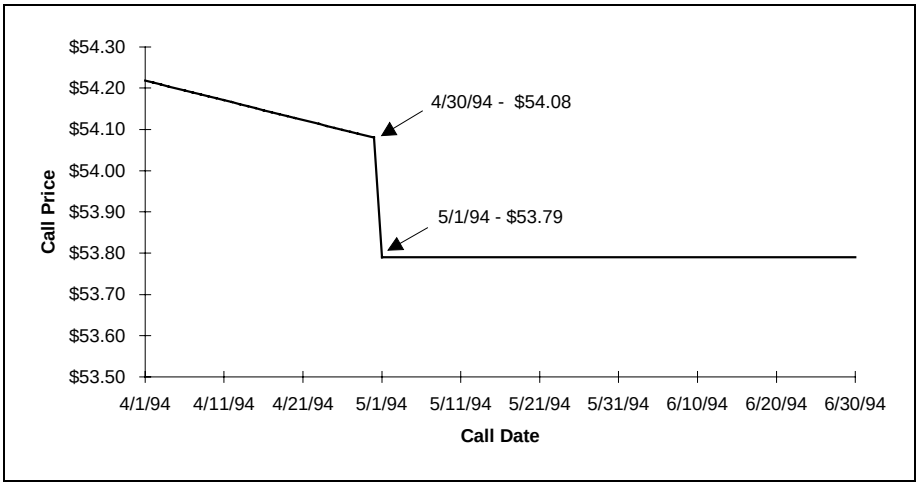
For illustration purposes, let's look at General Motors $3.31 PERCS. The call price on the GM PERCS declined at the rate of $0.004759 per day to $54.08 on 4/30/94. After 5/1/94 the PERCS were callable at a fixed price of $53.79. If it were not called by 6/30/94, it would have converted mandatorily into one share of common stock on 7/1/94 (see chart below).

As PERCS near maturity the issuer has to decide between the merits of calling early to reduce the incremental dividend payments or waiting with the hope the stock will rise so that fewer shares will be delivered at maturity.

If GM common were above $53.79, it would have been sub-optimal for GM to call the PERCS before 5/1/94 unless the Company expected the stock to drop significantly in the near future. After 5/1/94, if the stock were above $53.79, GM may have decided to call the PERCS early. The company had to decide between the merits of saving the incremental dividend on the PERCS and potentially reducing the number of shares delivered if the stock were to move up. This was particularly problematic since the common was hovering right around the final cap price. In the case of GM, the dividend accrual on the PERCS was about 1¢ per day.

So, had GM management anticipated a return on the stock of more than 1¢ per day, it would probably have been better for them to defer conversion until 6/30/94. If GM had chosen to call early, it would have been advantageous to choose a delivery date after the common stock's dividend record date (approximately May 12). As it really happened, GM deferred conversion until 6/18/94, for 0.99 shares of common per PERCS.

Call Schedule for General Motors PERCS



To date, Texas Instruments is the only issuer to have called its PERCS well before the mandatory conversion date. This represented a windfall for the PERCS holders since they received the remaining income advantage of the PERCS over the common in an up-front payment in additional shares instead of in quarterly cash installments over the PERCS remaining life. The present value of the latter was, of course, lower. Texas Instrument's "generosity" was likely due to their desire to capture the very rapid run-up in their stock price, and to conserve cash by ending the PERCS dividend.[3]

[3] GM PERCS were callable for cash or stock.

The Liquidity Trap At Conversion:

Many PERCS issues upon converting to stock pose significant liquidity implications for their underlying stocks as new shares are abruptly added to the float.

Many PERCS issues upon converting to stock pose significant liquidity implications for their underlying stocks as new shares are abruptly added to the float. As PERCS convert, the additional shares delivered have been known to depress the issuers' stock prices. Income-oriented investors, not wishing to hold common stock, will be better off selling the PERCS before mandatory conversion to avoid likely stock weakness. On the other hand Equity-Oriented investors should be aware of the potential for stock price declines as the PERCS convert to common stock. Where the fundamental equity story remains strong, such a decline may represent a buying opportunity in the common shares.

As PERCS convert, the additional shares delivered have been known to depress the issuers' stock prices.

Once again, the General Motors PERCS provide a good illustration. GM's call of the PERCS resulted in the issuance of over 17 million new common shares (an addition of roughly 2% to shares outstanding). A review of GM stock's subsequent performance will thus provide investors with some useful insights. GM's stock fell nearly 5% during the two trading days after the call announcement on double its normal trading volume. During the same period, Ford and Chrysler fell 2% and 5% respectively, but on normal volume. GM PERCS, since they were very near their cap price, still had a good deal of stock sensitivity at the time of conversion. Therefore they were not predominantly held by fixed income investors, unlike some of the issues currently trading well above their cap prices. Because of this, the impact of the conversion on GM's stock price may have been more muted.

Related Securities:

The basic PERCS structure has taken different names at each Wall Street house. Additionally ***"synthetic"*** PERCS securities have also been issued. In this case the security is issued not by the underlying company but rather by a third party such as an investment banking firm. Each firm of course choosing a different acronym. Below is an acronym scorecard for PERCS and related securities:

Company Issued:

- MCPDPS: Mandatory Conversion Premium Dividend Preferred Stock
- TARGETS: TARgeted Growth Enhanced Terms Securities
- YES: Yield Enhanced Stock

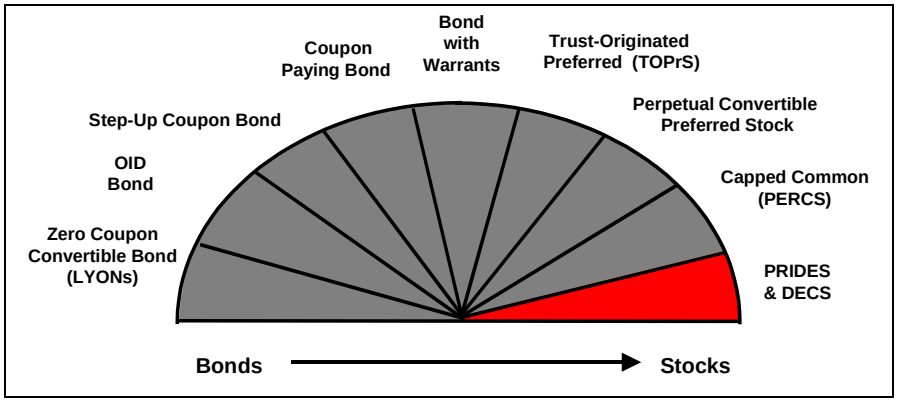
Synthetic:

- CHIPS: Common linked Higher Income Participating debt Securities
- ELKS: Equity LinKed debt Securities
- EYES: Enhanced Yield Equity Securities
- PERQS: Performance Equity-linked Redemption Quarterly-pay Securities
- YEELDS: Yield Enhanced Equity Linked Debt Securities

(For a more complete list of convertible products, see table on page 44.)

6. PRIDES : Equity for Income Lovers

The Convertible Spectrum



PRIDES, Preferred Redeemable Increased Dividend Equity Securities, are preferred shares which mandatorily convert into common shares at maturity. They offer significant yield advantage over the underlying common in exchange for limited upside participation. Because PRIDES offer no real downside protection, they are among the most equity sensitive convertible structures. As their brief performance history has proven, PRIDES are designed to move almost in tandem with their underlying equities.

Introduction:

Many traditional convertible buyers have been wary of boosting PRIDES exposure because of their higher than average stock sensitivity in both up and down markets.

Since the first issue by MascoTech in July of 1993, the outstanding value of PRIDES[4] and other PRIDES like structures has grown to $15.1 billion, nearly 13% of the U.S. convertible market.

Initially viewed as an oddity and priced somewhat erratically, PRIDES have now found a niche amongst mainly Equity-Income funds for whom the need for yield and appreciation potential is paramount. PRIDES have found some support within the dedicated Convertible fund community, but largely on a "story-specific" basis.

4 Throughout this report we use the term PRIDES to refer to the family of convertible securities which also includes DECS and ACES

Ironically for these mangers, PRIDES have outperformed more traditional structures by a wide margin.

Many traditional convertible buyers have been wary of boosting PRIDES exposure because of their higher than average stock sensitivity in both up and down markets. Ironically for these mangers, PRIDES outperformed more traditional structures by a wide margin in the first three years of their existence. In 1994, because of their minimal interest rate sensitivity, PRIDES suffered less than other convertibles when the bond market tanked. Then, from 1995 to 1997, when stocks soared to record levels, PRIDES reaped the benefit of their high equity sensitivity. For the four year period, PRIDES recorded an annualized total return of 19.37% compared to a 12.90% return for the ML All Convertibles Index. Perhaps more interesting is the fact that PRIDES nearly equaled the performance of their own underlying common stocks, which had a 19.41% annualized return. We would expect PRIDES to under perform other convertibles in periods of weak stock but strong bond market returns, however.

Security Description:

PRIDES are convertibles which are exchangeable at a premium anytime (at the holder's option) into common shares, but mandatorily convert at maturity to common stock.

PRIDES are convertibles which are exchangeable at a premium anytime (at the holder's option) into common shares, but mandatorily convert at maturity to common stock.

Typically they have the following terms:

- Three or four year maturity at which time PRIDES mandatorily convert to common stock
- Three years of call protection
- Conversion premiums of 20 to 25%
- Income advantage of 5 - 6 percentage points over their underlying common stock, and 2-3 percentage points over comparable convertible preferred stock.
- Issue price same as common shares
- Quarterly income payment, usually on same payment date as common dividend

Example: Reynolds Metals 7% PRIDES

	Reynolds Metals PRIDES	Reynolds Metals Common
Price	$47.25	$47.25
Dividend	$3.31	$1.00
Conversion Price	$57.62	N/A
Yield	7.0%	2.1%
Conversion Premium	22.0%	N/A
Minimum Conversion Ratio	0.82	N/A
Maximum Conversion Ratio	1.00	N/A
Prices reflect offering terms on January 18, 1994		

Prices reflect offering terms on January 18, 1994

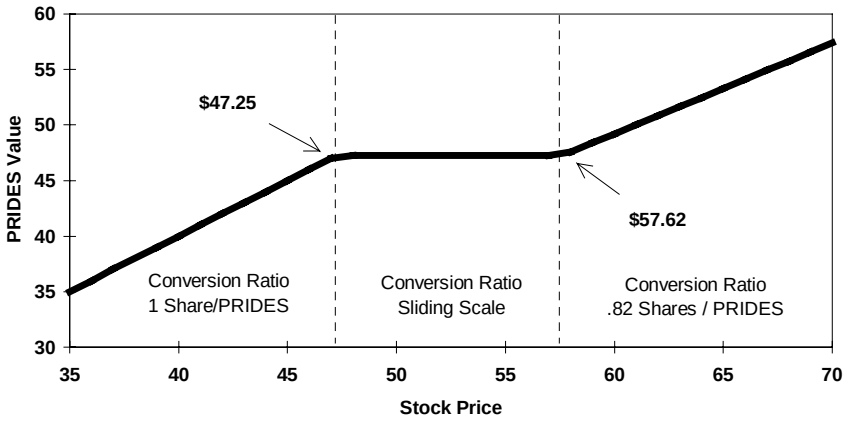
The easiest way to understand PRIDES is by working through an example. For illustration we'll use the Reynolds Metals 7% Prides.

As the chart below shows, there are three possibilities for the value of the PRIDES at maturity:

1. The common closes below the initial price. The PRIDES converts into one share of common.
2. The common closes between the initial price and the conversion price. The PRIDES converts into common according to a sliding scale designed to give the PRIDES holder common shares exactly equal in value to the initial price of $47.25. So if the common were at $50, the PRIDES would convert into 47.25/50 = 0.945 shares.
3. The common price exceeds the conversion price at maturity. The PRIDES converts into 0.82 shares of common, the minimum (or optional) conversion ratio[5]

A PRIDES value at maturity will be determined by the price of the underlying stock.

Reynolds Metals PRIDES Value at Maturity vs. Reynolds Stock Price



In the meantime, of course, the PRIDES holder enjoys a significantly enhanced dividend relative to the common, and, for that matter, relative to a comparable standard convertible preferred. PRIDES, since they are convertible into common stock at a premium, can be said to behave like convertible preferred with a higher dividend on the upside. And since they mandatorily convert into common at maturity, they will perform like common with a higher dividend on the downside.

5 The minimum conversion ratio is simply 1 / (1 + Initial Conversion Premium).

Early Conversion and Redemption:

If the common stock has declined in price, the company has little incentive to redeem early.

PRIDES are generally convertible at any time prior to maturity at a premium. The holder has the option of exchanging the PRIDES for the minimum conversion ratio number of shares — 0.82 in the case of Reynolds. (Exchangeable issues are generally not convertible at holder's option.) Of course, it is unlikely that a holder would exercise this option unless the common stock's dividend had grown so fast that the yield on 0.82 shares of the common exceeded that on the PRIDES.

An additional consideration is the possibility of early conversion being forced at the option of the issuer. (Exchangeable issues generally are not callable before the mandatory conversion date.) In the case of Reynolds, starting after three years the company can call the PRIDES at pre-specified premiums to the issue price plus accrued dividends (the call premium starts at $0.827 or one quarter's dividend, and amortizes to zero over the fourth year). The PRIDES converts into common shares equal in value to the call price, or into 0.82 shares, whichever is greater. The following table illustrates how this would work with the common at different prices (assuming no accrued dividends):

However, if the common has risen, the probability of early redemption is higher.

Reynolds Metals PRIDES—Early Redemption Scenarios:

Stock Price	Shares Received Per PRIDES	Value
$35.00	1.35	$47.25
$40.00	1.18	$47.25
$45.00	1.05	$47.25
$47.25	1.00	$47.25
$50.00	0.95	$47.25
$55.00	0.86	$47.25
$57.62	0.82	$47.25
$60.00	0.82	$49.20
$65.00	0.82	$53.30

As the table shows, if the common has declined in price after the first three years the company has very little incentive to redeem early. To do so effectively gives a put to the investor, since the issuer must grant the PRIDES holder the number of shares needed to recoup his initial investment. This type of early redemption therefore causes the issuer greater dilution than would occur at maturity, when each PRIDES would convert into only one share.

However, if the common has done well in the first three years, the probability of early redemption is higher. On the one hand, if the issuer redeems early it will save the incremental dividend on the PRIDES over the time left to maturity. On the other, if the company delays redemption the ultimate dilution will be reduced if the stock goes even higher. Of course, once it is more or less certain that the ultimate conversion ratio will be 0.82 (the minimum), the company has little incentive to delay redemption any further.

Case in point: Reynolds Metals PRIDES was called a year early on 12/31/96, forcing holders to convert. At the time the redemption was announced, RLM common was hovering around $60, high enough to insure the minimum ratio.

Valuation:

Simply, a PRIDES can be thought of as one share of stock with a call spread.

Merrill Lynch has developed a valuation model for PRIDES consistent with our other convertible securities valuation models. The model combines the volatility of the stock, the appropriate spreads for the issuer's credit, and the early call features of the PRIDES to derive a value for the security. The model also calculates the PRIDES' sensitivity to changes in: the issuer's stock price and volatility; Treasury yields; and credit spreads.

A more simplistic but nonetheless useful approach is to treat the PRIDES as a combination of the following three securities:

1. A long position in one share of the issuer's common stock;
2. A short position in a four year, at-the-money call option on one share of the issuer's common stock;

A long position in 0.82 (in the case of Reynolds) of a three year call option[6] on the issuer's common stock struck at the conversion price (i.e. 22% out-of-the-money).

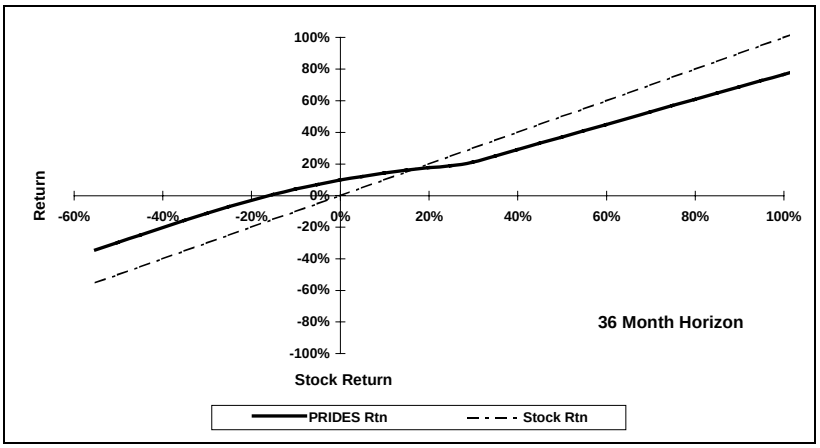
This combination would cost less to assemble than the current stock price because the premium for the at-the-money option sold is greater than the cost of the out-of-the-money option position bought. The difference could be invested in fixed income securities of the same credit as the issuer to generate yield. This additional yield should be equal to the yield advantage of the PRIDES over the common. A major issue with this approach is deciding how likely it is that the incremental yield will be earned for three years versus four.

Return Profile:

The PRIDES should provide a similar return profile to common stock: under performing slightly on the upside; but outperforming on the downside by virtue of its enhanced yield.

Above we have shown PRIDES value at maturity for different potential common stock prices. Given the early redemption feature of the PRIDES, it is important to consider how they might be valued at times prior to maturity, however. The following chart shows how we would expect a PRIDES to perform against common stock after three years, when the early redemption feature first kicks in.

PRIDES vs. Stock Annualized Total Return After Three Years



As the previous chart shows, the PRIDES should provide a similar return profile to the common: under performing slightly on the upside; but outperforming on the downside by virtue of their enhanced yield.

6 We conservatively assume a three-year life for the long option because the PRIDES becomes callable after three years. If the stock has advanced and the embedded long option is in the money we would expect the issue to be called. Again, this is irrelevant for exchangeable issues.

Comparison to Traditional Convertible Preferred:

A PRIDES' risk profile is more similar to that of common stock than to traditional convertible preferreds'. To compensate for this, PRIDES pay a higher current yield than do convertible preferreds.

PRIDES invite comparison with conventional convertible preferreds. However there are important differences:

- Yield advantage only lasts 3-4 years unlike conventional convertible preferreds.
- Mandatory conversion into common stock means PRIDES have more downside risk.
- In return for accepting more risk, PRIDES holders receive a higher yield, usually 2-3 percentage points.
- Upside participation in underlying common stock gains over the life of the security is slightly higher with PRIDES than with conventional convertible preferreds.

Because of these differences, a PRIDES' risk profile is more similar to that of common stock than to traditional convertible preferreds'. To compensate for this, PRIDES pay a higher current yield than do convertible preferreds.

Alphabet Soup?

PRIDES is Merrill Lynch's acronym for these convertible securities.

However, various Wall Street firms have each spawned their own names for these securities:

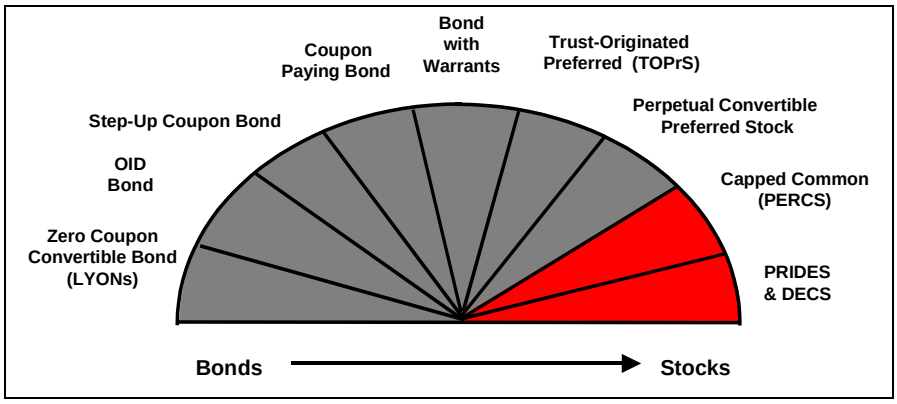
A Rose by Any Other Name. . .

ACES	Automatically Convertible Equity Securities
DECS	Debt Exchangeable for Common Stock & Dividend Enhanced Convertible Stock
MARCS	Mandatory Adjustable Redeemable Convertible Securities
PRIDES	Preferred Redeemable Increased Dividend Equity Securities
PEPS	Preferred Equity Participation Securities
SAILS	Stock Appreciation Income Linked Securities

(For a more complete list of convertible products, see table on page 44.)

7. Variations on a Theme: Product Innovations Abound

The Convertible Spectrum



These days, the announcement of a new convertible structure leaves no one shocked. The popularity of convertible products tailored to specific market conditions and issuer needs has left us with a few "hard to categorize" mandatory structures. These newer products are not as confusing as they may appear at first, however, because they can be easily explained using the terminology of their more familiar predecessors. Below are descriptions of the handful of unusual variations currently outstanding: Flex-Caps, Reset PRIDES, Feline PRIDES, Enhanced PRIDES, and STRYPES.

Flex-Caps: Variation on PERCS

A Flex-Cap participates in 100% of the stock's rise up to the partial cap, then 50% of any additional appreciation.

Flex-Caps are preferred shares which mandatorily convert into at most one share of common stock at maturity. A Flex-Cap participates in 100% of the stock's rise up to the partial cap, then 50% of any additional appreciation. So far SunAmerica has been the only issuer of Flex-Caps, though other transactions may follow.

Like other mandatory conversion preferreds, the downside protection Flex-Caps provide is solely due to their yield advantage over the underlying common stock. The essence of the Flex-Caps structure is that the investor gives up part of the stock's appreciation in exchange for a higher level of current income. Flex-Caps offer a current yield, which is comparable with that of a traditional convertible, preferred but offer greater common stock participation in most cases.

Description:

Basically, Flex-Caps holders exchange some potential appreciation for up front income.

Flex-Caps have the following features:

- Approximately 3 year maturity at which time they convert into common stock.
- Issued at the same price as the common stock.
- Income advantage of 3-4 percentage points over the common stock yield.
- Quarterly dividend payment, usually on the same payment date as the common stock.
- Full stock participation up to 120% of the issue price, then share in 50% of the further appreciation.
- Callable at the option of the issuer, at a declining price payable in shares.

Valuation:

Flex-Caps can be thought of as a combination of long one share of stock and short 0.50 calls struck 20% out-of-the-money.

Flex-Caps can be thought of as a combination of long one share of stock and short 0.50 calls struck 20% out-of-the-money.

The most intuitive way to analyze a Flex-Caps is to compare it to an option buy-write strategy. It is basically a combination of:

1. Long one share of common stock
2. Short 0.50 of a call struck 20% out-of-the-money.

The enhanced yield the Flex-Caps offers over the common stock is essentially the money gained by selling the out-of-the-money call option. Unlike a straight buy-write option strategy however, the premium is not received in an initial lump sum but is instead paid out in quarterly allotments. Thus the present value of the income stream should equal the value of the call option.

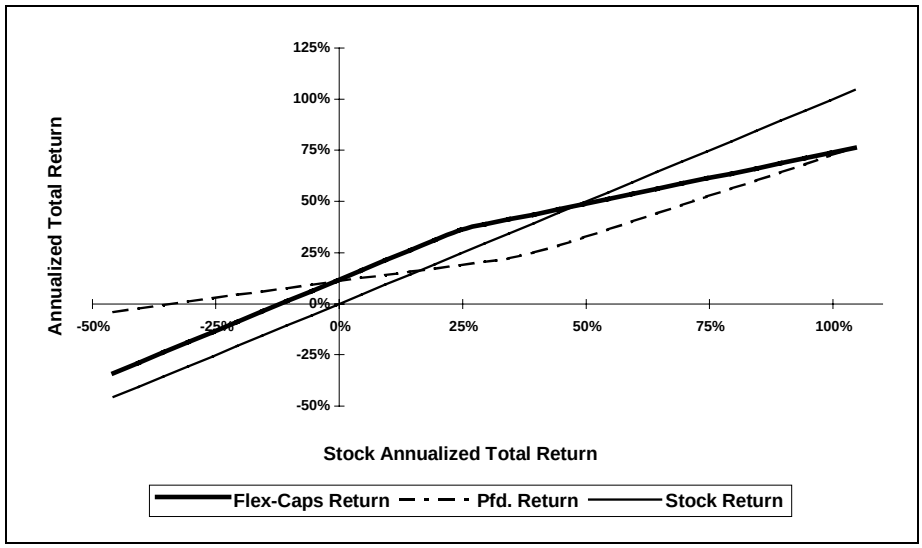
Return Profile:

Generally Flex-Caps offer more immediate participation with the common, and do not begin to lag traditional preferreds, on the upside, until the stock rises substantially.

For moderate stock returns, Flex-Caps outperform common stock. In this example the crossover point, for a 36 month horizon, comes at a compounded annual stock return of roughly 14%. The following chart compares the return through maturity of a Flex-Cap, a traditional convertible preferred, and the stock. Generally Flex-Caps offer more immediate participation with the common, and do not begin to lag traditional preferreds, on the upside, until the stock rises substantially.

Flex-Caps Return Profile

3 Year Horizon



This Chart assumes the following: Stock Yield 1.35%, Volatility 25%, Credit Spread 80 Bps, Flex-Cap Yield 5%, Flex-Cap "Partial Cap" 20%, Preferred Yield 5%, Preferred Premium 24%.

Reset-PRIDES: PRIDES with Downside Support

Unlike other members of the PRIDES family, Reset-PRIDES may convert into more than one share at maturity, up to some pre-specified maximum number of shares.

Reset-PRIDES are preferred shares which mandatorily convert into common stock at maturity. Unlike other members of the PRIDES family, Reset-PRIDES may convert into more than one share at maturity, up to some pre-specified maximum number of shares. This allows an issuer of Reset-PRIDES to offer investors more downside protection. In exchange for this enhanced downside support, Reset-PRIDES have lower current yield than regular PRIDES. The first Reset-PRIDES issue was AJL Trust convertible into Amway Japan ADSs, issued in late 1995. Only a few have yet been issued. One significant feature is that issuers must recognize the full potential dilution (i.e. 1.25 shares per Reset-PRIDES) immediately. This may limit further issues to exchangeables, where Reset-PRIDES present a way for a holder of an illiquid stock to exit in an orderly and tax efficient manner.

Unlike other mandatory conversion preferreds, the downside protection Reset-PRIDES provide is partly due to their yield advantage over the underlying common stock, and partly due to the fact that the conversion ratio increases as the underlying stock price at maturity drops below the issue price. However, the increase in conversion ratio is bounded by a maximum. So in effect the investor is sheltered from the first 20% (for example) decline in the underlying stock, but shares in the risk of declines greater than this. A Reset-PRIDES can be thought of as a bridge between regular PRIDES and more traditional convertible structures. Its yield is closer to that of a traditional convert, and it has more downside support than a regular PRIDES, but it still converts mandatorily into common at the end of its life.

Description:

A Reset-PRIDES can be thought of as a bridge between regular PRIDES and more traditional convertible structures.

Reset-PRIDES have the following features:

- Approximately 3 year maturity at which time they convert into common stock.
- Issued at the same price as the common stock.
- Income advantage of 3-4 percentage points over the common stock yield.
- Quarterly dividend payment, usually on the same payment date as the common stock.
- Conversion ratio between 1.25 and 0.833 shares depending on stock price at maturity.

The easiest way to understand a Reset-PRIDES is to work through a simple example. Consider an issue with the initial stock price at $20, where the Reset-PRIDES provides protection against the first 20% decline. The conversion ratio of the Reset-PRIDES at maturity will depend on the closing stock price. There are three possibilities:

Its yield is closer to that of a traditional convert, and it has more downside support than a regular PRIDES, but it still converts mandatorily into common at the end of its life.

1. The common closes 20% below its price at issue (i.e. $16). The Reset-PRIDES converts into 1.25 shares.
2. The common closes between $16 and $24. The Reset-PRIDES converts into common according to a sliding scale such that the investor receives stock worth exactly $20, the initial offering price.
3. The common closes above $24. The Reset-PRIDES converts into the minimum ratio, 0.833 shares.

A Reset-PRIDES can be thought of as long one share of common, long one at-the-money put and long 0.833 calls 20% out-of-the-money, but short one at-the-money call and 1.25 puts struck 20% out-of-the-money.

Valuation:

The most intuitive way to analyze a Reset-PRIDES is to break it into its components. For a Reset-PRIDES offering protection against the first 20% decline in the underlying stock, and roughly 80% participation in gains over 20%, the security is basically a combination of:

1. Long one share of common stock
2. Long one at-the-money put
3. Short 1.25 (100%/80%, or the lower strike level) puts struck at 80% of the initial stock price (i.e. 20% out of the money)
4. Short one at-the-money call
5. Long 0.833 call struck 20% out-of-the-money

The enhanced yield the Reset-PRIDES offers over the common stock is essentially the net premium from writing and buying the various options embedded in the security. However, the premium is not received in an initial lump sum but is instead paid out in quarterly allotments. Thus the present value of the incremental income offered by a Reset-PRIDES over the stock should equal the net option premium.

An alternative (and slightly simpler) decomposition of a Reset-PRIDES is:

1. Long a zero coupon bond with a maturity value equal to the initial stock price
2. Short 1.25 puts struck at 80% of the initial stock price
3. Long 0.833 call struck 20% out-of-the-money

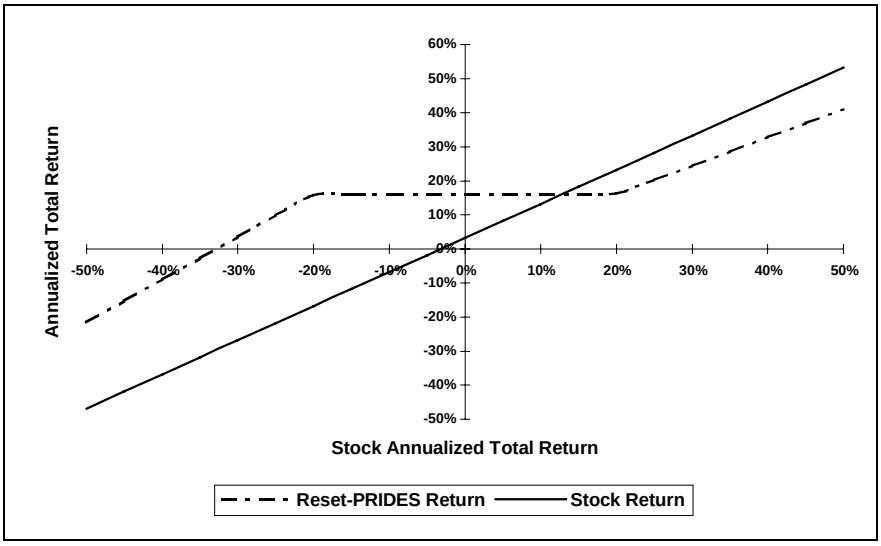
In this case, the difference between the cost of this package and the initial stock price should equal the present value of the Reset-PRIDES dividend stream.

Generally Reset-PRIDES offer less upside participation with the common than standard PRIDES but do provide more downside support.

Return Profile:

For moderate stock returns Reset-PRIDES outperform common stock. In our example the crossover point, for a 36-month horizon, comes at a compounded annual stock return of roughly 12%. The following chart compares the return of a Reset-PRIDES and its underlying stock. Generally Reset-PRIDES offer less upside participation with the common than standard PRIDES but do provide more downside support.

Reset-PRIDES vs. Stock Return at Maturity



This chart assumes the following: Stock Yield 1%, Volatility 20%, Reset-PRIDES Premium 20%, Reset-PRIDES Downside Protection 20%, Credit Spread 80 bp.

Feline PRIDES: The Sum of Their Parts

FELINE PRIDES require the holder to accept common stock at the end of a fixed period.

FELINE PRIDES were first issued by MCN in March 1997. FELINE PRIDES consist of a purchase contract collateralized by a debt security. From a holder's perspective they have an investment profile similar to standard PRIDES. Specifically, FELINE PRIDES incorporate a purchase contract that requires the holder to accept common stock at the end of a fixed period, and offer a significant yield advantage over the underlying shares in exchange for modestly limited upside appreciation.

From a holder's perspective they have an investment profile similar to standard PRIDES.

Unlike PRIDES, FELINE PRIDES can be held as component securities, namely Income PRIDES, Growth PRIDES and TOPrS. The TOPrS typically have a five-year maturity and will remain outstanding after the three-year purchase contract is settled. This structure allows investors ever more tailored investment options, and also imparts important tax and dilution benefits to the issuer.

Introduction:

FELINE PRIDES can be broken down into several components. The basic unit of these securities is called an Income PRIDES. From the investor's perspective, Income PRIDES are similar to standard PRIDES in many ways except they can be split into Growth PRIDES and TOPrS at the holder's option. The Growth PRIDES security contains a stock purchase contract identical to the one in the Income PRIDES, however, the forward contract is combined with a Treasury security, not the company's own debt.

All three components are generally offered to investors in the initial offering. Income PRIDES holders may also create Growth PRIDES in the secondary market by substituting a pre-specified Treasury security for the company debt (usually a TOPrS) which is sold in the open market. Similarly, Growth PRIDES holders can also purchase the corporate debt security and recombine it with the forward contract to create an Income PRIDES. The Growth PRIDES are issued at a lower nominal price than the Income PRIDES, due to their lower yield, and thus the investor can control the same number of common shares with a lesser up front investment.

Income PRIDES ***consist of a forward purchase contract collateralized by a debt security of the issuing company.***

Description:

Income PRIDES consist of a forward purchase contract collateralized by a debt security of the issuing company. From an investor's standpoint, economically Income PRIDES have an investment profile similar to standard PRIDES. On the forward contract's settlement date, the holder settles the contract with cash and receives a number of shares determined by a formula whose terms are set at issuance. The investor may, at his option, obtain the cash by selling the TOPrS in the remarketing provided for in the prospectus. After the remarketing the TOPrS remain outstanding for a minimum of two years. The holder may elect to settle the forward contract early, but receives only the minimum number of shares in such an event.

On the forward contract's settlement date, the holder settles the contract with cash and receives a pre-specified number of shares.

Typically Income PRIDES have the following terms:

- Three year forward contract
- Three years of call protection
- Premiums of 20-25%
- Income advantage of 5-6 percentage points over their underlying common stock's dividend
- Quarterly income payments, usually aligned with Treasury zero cycle
- Five year TOPrS with a liquidation value equal to the forward contract's settlement amount

The easiest way to understand an Income PRIDES is by working through an example. For illustration we will use the Ingersoll-Rand issue.

Example: Ingersoll-Rand FELINE PRIDES

	Ingersoll-Rand Income PRIDES	Ingersoll-Rand Growth PRIDES	Ingersoll-Rand Common Stock
Issue Price	$25.00	$21.13	$48.25
Reference Stock Price	$48.25	$48.25	N/A
Threshold Stock Price	$58.384	$58.384	N/A
Contract Adjustment Payment Yield	0.53%	0.78%	N/A
TOPrS (Capital Securities) Yield	6.22%	N/A	N/A
Total Yield**	6.75%	0.78%	1.24%
Premium	21.0%	2.3%	N/A
Minimum Purchase Contract Ratio	0.4282	0.4282	N/A
Maximum Purchase Contract Ratio	0.5181	0.5181	N/A
Purchase Contract Settlement Date	5/16/2001	5/16/2001	N/A

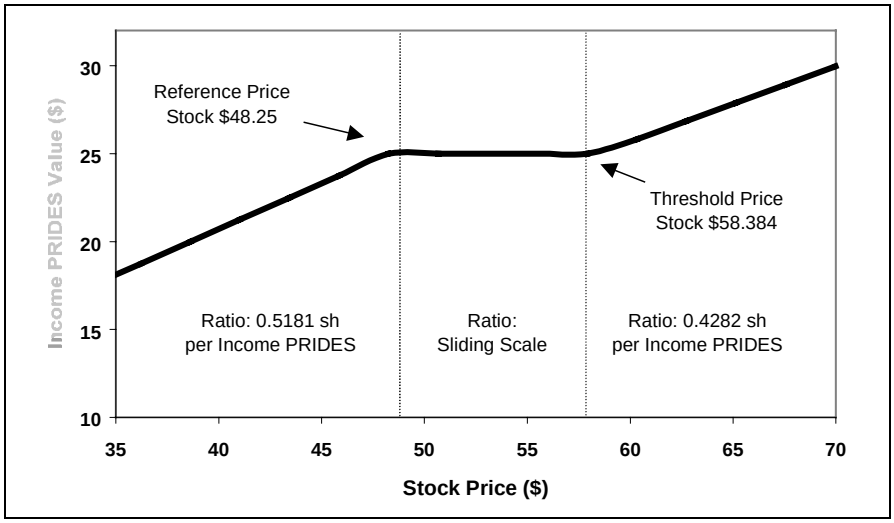
**Represents only cash yield. Mutual fund accounting allows a higher declarable Growth PRIDES yield equal to the Contract Adjustment Payment yield *plus* accretion on the collateral Treasury Securities.

As the following chart shows, there are three possibilities for the value of the Income PRIDES at the forward contract's settlement date:

1. The common stock closes[7] below the reference price. The Income PRIDES holder receives the maximum share ratio.
2. The common close is between the reference price and the threshold price. In this case the Income PRIDES holder receives common shares according to a sliding scale designed to give the holder shares equal in value to the Income PRIDES offering price. The number of shares received will be an amount between the maximum and minimum number of shares.
3. The common exceeds the threshold price at maturity. The Income PRIDES holder will receive the minimum share ratio.

There are three possibilities for the value of the Income PRIDES at the forward contract's settlement date.

Ingersoll-Rand Income PRIDES Value at Maturity vs. Ingersoll-Rand Stock Price:



Under each scenario, the investor will have to deliver cash equal to the TOPrS par value to satisfy his obligation under the forward contract.

Under each of these scenarios the investor will have to deliver cash equal to the TOPrS par value to satisfy his obligation under the forward contract. The TOPrS do not mature until year five so at year three, the forward contract expiration, the Income PRIDES holder has two options:

1. Cash settle the forward contract for $25 and retain a TOPrS whose interest rate has been reset, or
2. Cash settle the forward contract by allowing the TOPrS to be included in the remarketing process and use those proceeds.

Income PRIDES investors who fail to elect option 1 will automatically be included in the remarketing (option 2).

Holders of TOPrS securities which are separate and not a component of Income PRIDES have the following options at the end of year three:

1. Continue to hold the reset TOPrS, or
2. Deliver the TOPrS to the custodial agent to be included in the remarketing process.

At the forward contract's settlement, the interest rate on the TOPrS is reset such that the TOPrS are expected to trade at 100.5% of par. By participating in the remarketing, Income PRIDES and TOPrS holders incur a remarketing fee and may forego the ability to realize some, or all, of this excess value. Thus, it is theoretically advantageous to settle the forward contract with cash.

7 There is a 20-day averaging period during which the common stock is valued under this formula.

During the three-year life of the forward contract, the Income PRIDES holder enjoys a significantly enhanced yield relative to the common stock.

During the three-year life of the forward contract, the Income PRIDES holder enjoys a significantly enhanced yield relative to the common stock. This enhanced yield to some extent lessens the risk of Income PRIDES relative to the common stock.

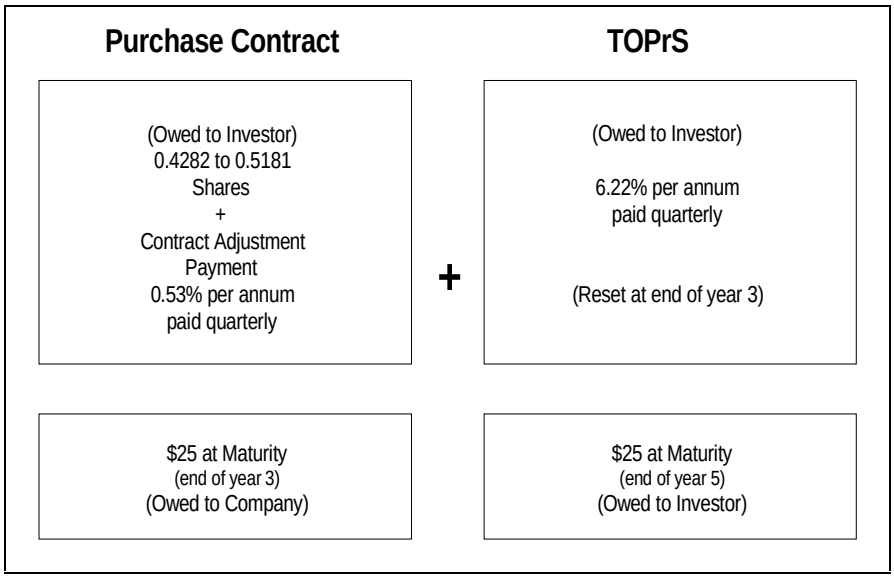
Income PRIDES can be held as their component pieces — Forward purchase contracts and TOPrS. Income PRIDES consist of:

1. A purchase contract which is linked to a specific contract adjustment payment
2. A $25 obligation from the investor to the issuer due at the end of year 3
3. A quarterly income stream from the TOPrS
4. A $25 obligation from the issuer to the investor, due at the end of year 5 with remarketing available at the end of year 3

The diagram below shows these components and their cash flows for the Ingersoll-Rand Income PRIDES.

Income PRIDES can be held as their component pieces — Forward purchase contracts and TOPrS.

Ingersoll Rand Income Prides Schematic:



The $25 cash obligation the investor owes the company is offset by the value of the TOPrS, which should be worth slightly more than $25 in year three as a result of the remarketing. As a result, Income PRIDES have a similar economic profile to that of a standard PRIDES, which were described in a earlier section of this report.

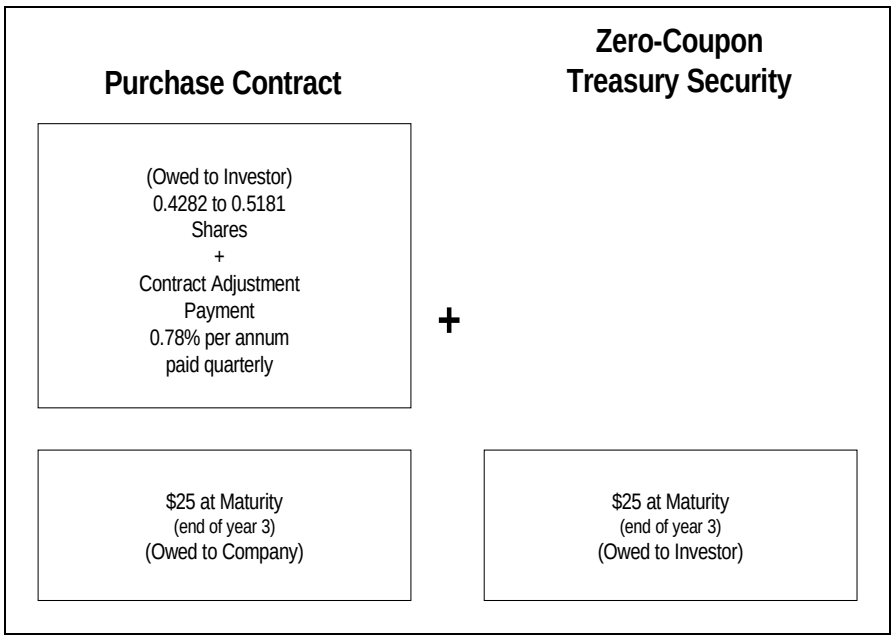
Growth PRIDES and *TOPrS* may be purchased during the offering, or may result when an Income PRIDES holder sells off the TOPrS security and posts a Treasury security[8] to secure his obligation under the forward contract. The forward contract itself is unchanged, so Growth PRIDES and Income PRIDES represent the same number of common shares. However, the contract adjustment payment of the Growth PRIDES forward contract may be higher than the contract adjustment payment for the Income PRIDES, generally by 0 to 50 basis points.

Growth PRIDES and TOPrS may be purchased during the offering, or may result when an Income PRIDES holder sells off the TOPrS security and posts a Treasury security to secure his obligation under the forward contract.

If a Growth PRIDES investor wants to reverse back into the Income PRIDES, he can do so by purchasing the TOPrS in the open market and posting it with the collateral agent, who will then release the investor's Treasury security. Because Treasury securities have a $1000 par value and the TOPrS only a $25 par value, conversions must involve a minimum of 40 Growth PRIDES for the math to work out.

The diagram below shows the components and their cash flows for the Ingersoll-Rand Growth PRIDES.

Ingersoll Rand Growth Prides Schematic:



Although the forward contract for Income PRIDES and Growth PRIDES are identical, there is an important distinction with respect to the collateral in the event of bankruptcy or default.

Although the forward contract for Income PRIDES and Growth PRIDES are identical, there is an important distinction with respect to the collateral in the event of bankruptcy or default. We refer to this feature as the "default put." The terms of the Income PRIDES and Growth PRIDES contracts' stipulate that in the event of default, the forward contract is voided and the underlying collateral is returned to the investor. In other words, the Growth PRIDES holder receives back his Treasury security which is unaffected by the issuer's credit problems, while the Income PRIDES holder receives back his TOPrS, whose value is likely to be severely impaired The exact terms of default are detailed in each issue's prospectus, but generally involve the following:

- Failure to pay interest for a certain period of time;
- Failure to repay principal at the forward contract's maturity; or
- Other events of insolvency, bankruptcy or reorganization.

8 The treasury security referred to here is specific for each issue and identified in the prospectus so that the maturity of the treasury coincides with the settlement date of the forward contract.

Valuation:

Merrill Lynch has developed a model for FELINE PRIDES and their individual components, consistent with our other convertible models. The model combines the stock's volatility and the issuer's appropriate credit spread, with the security's income, forward contract, and call features to derive a value for the security.

Essentially an *Income PRIDES* can be treated as a combination of securities:

1. A forward purchase contract of the issuer that is upon the event of default.

   The forward purchase contract can be further modeled as

   a.) A short position in a three-year at the money put option for 1 share that is void if the issuer defaults;

   b.) A long position in a three year out of the money call option for a fraction of a share; and

   c.) The present value of the sum of contract adjustment payments made by the issuer.

2. A capital security or debt instrument of the issuer.

Growth PRIDES can be valued as a combination of:

1. The forward contract detailed above; and
2. A zero coupon Treasury strip whose maturity matches that of the forward purchase contact.

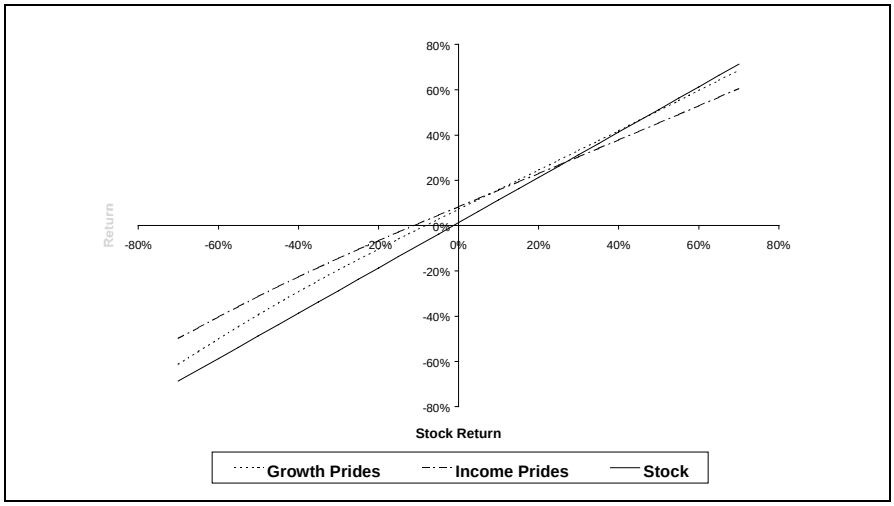
The strike and the exact fractional option proportions vary from issue to issue, but in general, the forward purchase contract can be valued as detailed above. The contract adjustment payments for Growth PRIDES and Income PRIDES need not be identical, and in fact the payments for Growth PRIDES are generally slightly higher.

Growth and Income PRIDES both provide a return close to that of the common stock; underperforming slightly on the upside; but outperforming on the downside by virtue of their enhanced yield.

Return Profiles:

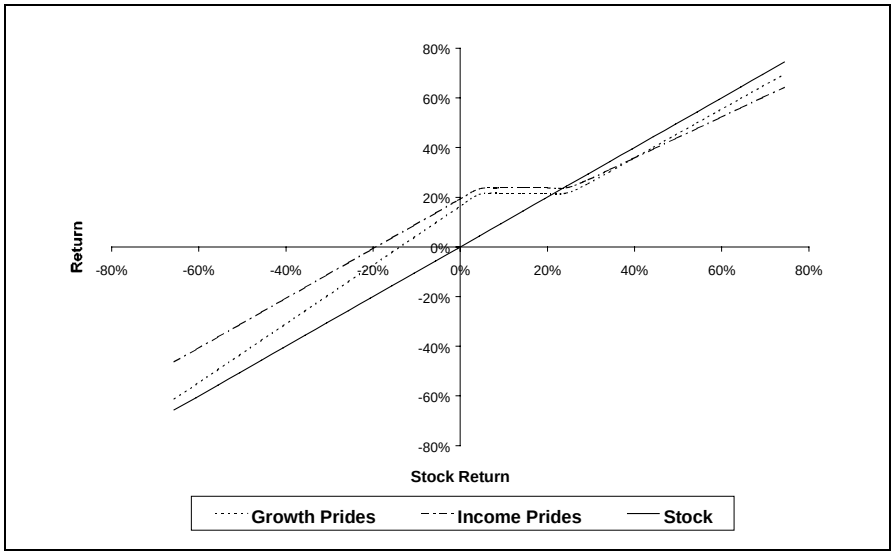
The graphs below show the return profiles of Income PRIDES and Growth PRIDES relative to their underlying stock. The first graph depicts a 12-month horizon and the second a 36-month horizon (i.e. the entire forward contract life). Both securities provide a return close to that of the common stock; underperforming slightly on the upside; but outperforming on the downside by virtue of their enhanced yield. Growth PRIDES, which represent the same number of common shares, but are issued at a discount to Income PRIDES because of their lower yield, outperform the Income PRIDES as the stock return rises. Similarly, they underperform Income PRIDES as the stock return falls. The pivot point for the Growth PRIDES outperformance relative to Income PRIDES tends to fall at roughly a 10% compounded annualized stock return.

One Year Total Return Horizon:



Merrill Lynch Global Convertible Research

Three Year Total Return Horizon:



Merrill Lynch Global Convertible Research

Accounting Implications:

FELINE PRIDES receive the same accounting treatment as equity options.

FELINE PRIDES, because they consist of separate debt and forward equity purchase contracts, receive the same accounting treatment as equity options. This is primarily of importance to the issuer, but investors should understand the EPS calculation dynamics.

The TOPrS distributions are tax deductible to the issuer, and are reported as Minority Interest Expense on the income statement.

The TOPrS are classified as a Minority Interest on the issuer's balance sheet. The TOPrS distributions are tax deductible to the issuer, and are reported as Minority Interest Expense on the income statement. The shares are accounted for under the Treasury Stock method and are not immediately included in EPS calculations.

The shares are accounted for under the Treasury Stock method and are not immediately included in EPS calculations.

The dilution calculation formula is as follows:

$$AdditionalShr = \frac{MinRatio*NumIssued*(Price-ThreshPrice)}{Price}$$

where:

AdditionalShr = # of additional shares for Diluted EPS

MinRatio = minimum contract ratio

NumIssued = # of FELINE PRIDES issued

Price = current stock price

ThreshPrice = threshold stock price

If the stock remains flat or depreciates, the shares will not be reflected in the EPS denominator until they are actually issued under the terms of the forward contract.

Thus, if the stock appreciates above the threshold price during the 3 years the forward contract is outstanding, shares will trickle into the Diluted EPS denominator as the FELINE PRIDES move into the money. If the stock remains flat or depreciates, the shares will not be reflected in the EPS denominator until they are actually issued under the terms of the forward contract. This is because at any stock price below the threshold price, the company has raised more money than repurchase of the issued shares would cost, hence, no effective dilution.

Although the shares are not immediately included in the EPS calculations, the forward contract represents equity from a rating agency standpoint, and is credited to the issuer immediately for 90% of the value of the proceeds raised through the FELINE PRIDES transaction.

Enhanced PRIDES: PRIDES with Partially Secured Income

Enhanced PRIDES are backed partially by U.S. Treasury Securities and partially by the credit of the issuing company.

Oversimplified, an "Enhanced" PRIDES consists of treasury securities with a stock purchase contract. The best way to explain Enhanced PRIDES is through a quick example: MCN Corp 8.75% PRIDES pay semiannually, and the payments consist of interest on U.S. Treasury Notes at 6.5%, plus unsecured, subordinated ***"Yield Enhancement Payments"*** by the company (i.e. MCN) at 2.25%. The Yield Enhancement Payments are deferrable at the company's option. On the ***"Final Settlement Date,"*** (mandatory conversion date) the "Stated Amount," (purchase price) will automatically be applied to the purchase of between 0.833 and 1 share of the common stock depending on the stock's market price.

Sound like a standard 8.75% PRIDES? From an investor's viewpoint, it is, with a few small exceptions. In the event of bankruptcy or reorganization, the purchase contract and Yield Enhancement Payments automatically terminate, while the Treasury securities are distributed to holders. Therefore, enhanced PRIDES do eliminate some credit risk. However, the mandatory conversion feature still makes the securities' equity sensitivity high. The return horizon scenario for Enhanced PRIDES is essentially the same as that of a standard PRIDES. (For graphic return scenario, see chart on page 32.)

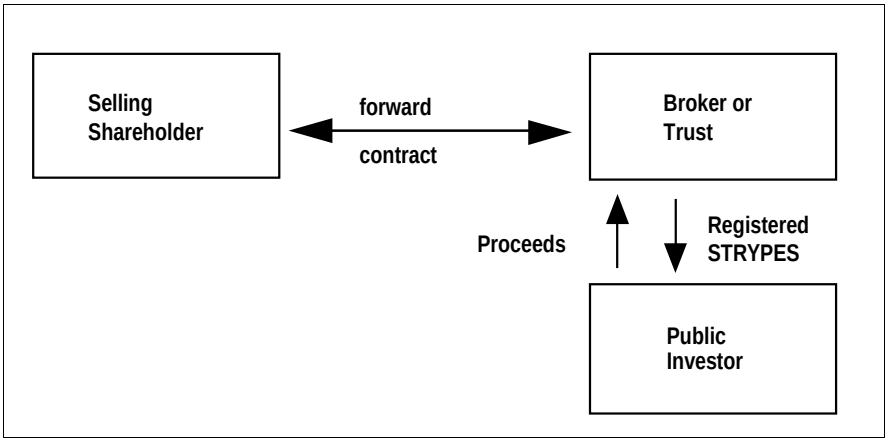
From an issuer's perspective an Enhanced PRIDES differs from a standard PRIDES in that it raises no current proceeds. However, the issuer does receive equity credit from the rating agencies equal to the maturity value of the treasury collateral.

STRuctured Yield Products Exchangeable for Stock— are basically a finacing wrapper that can be used to facilitate a convertible issue.

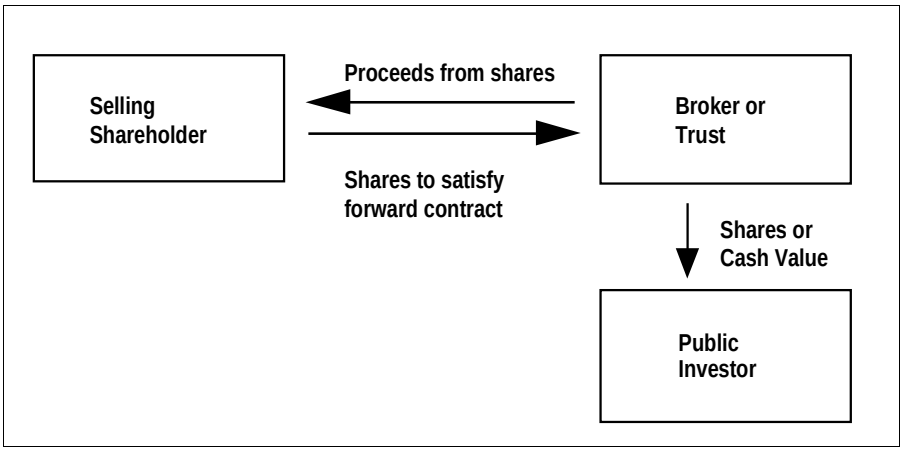
STRYPES: A Wrapper to Fit Around Any Structure

STRYPES-- STRuctured Yield Products Exchangeable for Stock-- are basically a financing wrapper that can be used to facilitate a convertible issue. What separates STRYPES from other types of convertibles is not their payoff profile, but rather the presence of a third party issuer (a brokerage firm or trust) in the middle of the transaction. The essence of a STRYPES security is that the selling company engages in a forward sale of the underlying stock either to a brokerage firm or a 1940 Act Trust. The broker or the Trust then sells the STRYPES security to the public. If the STRYPES is issued by a brokerage firm the buyer accepts that broker's counter-party risk. If the STRYPES is issued through a trust then the proceeds needed to pay the security's yield are posted in advance using U.S. Treasury notes as collateral.

STRYPES at Issuance



STRYPES at Maturity



To date most STRYPES transactions have been structured to have a basic PRIDES payoff profile, however, the payoff profile is flexible and dependant upon the seller's goals.

In the case of IMC Global 6.25% STRYPES, for example, the common shares are held by Merrill Lynch & Co. In the case of Nextel 7.25% STRYPES, the common shares are held by Nextel Trust, a subsidiary company. In each case, the entity holding the common shares is the STRYPES issuer, and the underlying common shares are called the ***"Reference Property."*** The original seller has the option to satisfy the forward contract at maturity with common shares or cash of equal value.

To date most STRYPES transactions have been structured to have a basic PRIDES payoff profile (see chart on page 32) however, the payoff profile is flexible and dependant upon the seller's goals. Issuers are attracted to STRYPES transactions for the following reasons:

- Ability to attain a tax deferred hedge on an equity stake
- Receipt of current proceeds
- Option to settle the forward contract with cash and therefore further postpone any potential capital gain
- Minimal price impact on shares monetized
- Facilitation of registered equity sale for a non-sec registrant

Acronyms Abound: Where's the Scorecard?

What's in a name?

Over the last ten or so years, expansion of the convertible market has spawned a need for product innovations tailored to issuer and investor needs. These product innovations have generated a plethora of brand names which can be confusing to even the seasoned convertible user. We believe that confusion surrounding brand names should not overshadow the convertible products themselves, which are not that complicated. The following table can serve as a quick lookup guide to convertible products, their names, and their return profiles.

Convertible Product Brand Names

Product	Stands For	Performs Like(1)	Generic Description	Underwriter
ACES	Automatically Convertible Equity Securities	PRIDES	Mandatory conversion preferred with ratio determined by stock price at maturity	Goldman Sachs
CHIPS	Common-linked Higher Income Participating debt Securities	PERCS	Mandatory conversion preferred with limited upside participation	Bear Stearns
CRESTS	Convertible Redeemable Equity Structured Trust Securities	Traditional Preferred	Trust preferred, convertible at holder's option	NB-Montgomery
DECS	Debt Exchangeable for Common Stock *or* Dividend Enhanced Convertible Stock	PRIDES	Mandatory conversion preferred with ratio determined by stock price at maturity	Salomon
ELKS	Equity Linked Debt Securities	PERCS	Mandatory conversion preferred with limited upside participation, exchangeable into stock other than that of issuer (synthetic)	Salomon
ENHANCED PRIDES		PRIDES	PRIDES-type pfd consisting of Treasury securities plus a stock purchase contract	Merrill Lynch
EYES	Enhanced Yield Equity Securities	PERCS	Mandatory conversion preferred with limited upside participation	Merrill Lynch
EXCAPS	Exchangeable Capital Units	Traditional Preferred	Unit consisting of perpetual capital security and a stock purchase contract. Issued by a capital subsidiary of the company	Merrill Lynch
Feline PRIDES		PRIDES	PRIDES-type pfd consisting of TOPrS securities plus a stock purchase contract	Merrill Lynch
LYONs	Liquid Yield Option Notes	LYONs	Zero-coupon convertible bond with put options	Merrill Lynch
MARCS	Mandatory Adjustable Redeemable Convertible Securities	PRIDES	Mandatory conversion preferred with ratio determined by stock price at maturity	UBS Securities
MCPDPS	Mandatory Conversion Premium Dividend Preferred Stock	PERCS	Mandatory conversion preferred with limited upside participation	Merrill Lynch
MIPS	Monthly Income Pay Securities	Traditional Preferred(2)	Preferred with monthly dividend payments, formed under a limited partnership	Goldman Sachs
PEPS	Preferred Equity Participation Securities	PRIDES	Mandatory conversion preferred with ratio determined by stock price at maturity; exchangeable into stock other than that of issuer (synthetic)	Morgan Stanley
PERCS	Preferred Equity Redemption Cumulative Stock	PERCS	Mandatory conversion preferred with limited upside participation	Morgan Stanley
PERQS	Performance Equity-linked Redemption Quarterly-pay securities	PERCS	Mandatory conversion preferred with limited upside participation; exchangeable into stock other than that of issuer (synthetic)	Morgan Stanley
PIERS	Preferred Income Equity Redeemable Stock	Traditional Preferred	Trust preferred, convertible at holder's option	Lehman Bros.
PIES	Premium Income Equity Securities	PRIDES	Mandatory conversion preferred with ratio determined by stock price at maturity	Lehman Bros.
PRIDES	Preferred Redeemable Increased Dividend Equity Securities *or* Provisionally Redeemable Income Debt Exchangeable for Stock	PRIDES	Mandatory conversion preferred with ratio determined by stock price at maturity	Merrill Lynch
QUIPS	Quarterly Income Preferred Securities	Traditional Preferred	Trust preferred, convertible at holder's option	Goldman Sachs
RECONS	Return Enhanced Convertible Securities	PERCS	Mandatory conversion preferred with limited upside participation	Issuer
SAILS	Stock Appreciation Income Linked Securities	PRIDES	Mandatory conversion preferred with ratio determined by stock price at maturity	CS First Boston
SPURS	Shared Preference Redeemable Securities	Traditional Preferred	Trust preferred, convertible at holder's option	Warburg,Dillon,Reed
STRYPES	Structured Yield Product Exchangeable for Stock	PRIDES or PERCS	Trust preferred with mandatory conversion, backed by treasury securities	Merrill Lynch
TAPS	Threshold Appreciation Price Securities	PRIDES	Trust preferred with mandatory conversion, backed by treasury securities	Smith Barney
TARGETS	Targeted Growth Enhanced Term Securities	PERCS	Mandatory conversion preferred with limited upside participation	Sun Co.
TECONS	Term Convertible Securities	Traditional Pfd (25-30 yr. mty)	Trust preferred, convertible at holder's option	JP Morgan
TIDES	Term Income Deferrable Equity Securities	Traditional Pfd (25-30 yr. mty)	Trust preferred, convertible at holder's option	CS First Boston
TIMES	Trust Issued Mandatory Exchange Securities	PRIDES	Trust preferred with mandatory conversion	Bear Stearns
TIPS	Trust Issued Preferred Securities	Traditional Preferred	Trust preferred, convertible at holder's option	Bear Stearns
TOPrS	Trust Originated Preferred Securities	Traditional Pfd (25-30 yr. mty)	Trust preferred, convertible at holder's option	Merrill Lynch
TrENDS	Trust Enhanced Dividend Securities	PRIDES	Trust preferred with mandatory conversion, backed by treasury securities	DLJ
TRACES	Trust Automatic Common Exchange Securities	PRIDES	Trust preferred with mandatory conversion, backed by treasury securities	Goldman Sachs
YEELDS	Yield Enhanced Equity Linked Debt Securities	PERCS	Mandatory conversion preferred with limited upside participation, exchangeable into stock other than that of issuer (synthetic)	Lehman Bros.
YES	Yield Enhanced Stock	PERCS	Mandatory conversion preferred with limited upside participation	Goldman Sachs

(1)See horizon analysis for graphical representation of projected performance.
(2)Investors will receive an IRS schedule K-1.

8. Convertible Glossary

Traditional Convertibles Glossary

Bond Delta: Also known as Rho, This is the correlation of movements between the convertible price and interest rates.

Calls and Call Protection: Most bond issuers retain the right to redeem their bonds before the maturity date. This is known as a call. However, most bonds have call protection for a period of time. This call protection enhance the convertible's attractiveness because it insures that the income advantage the convertible offers over the common stock may be enjoyed for a definite period of time.

Issuers usually redeem convertibles in order to force conversion into their underlying stock. For this to occur, parity must be well above the call price. If the underlying stock advances rapidly, and the issue is immediately callable, a convertible may be called before its income advantage has kicked in. Issuers also call convertibles when they have an opportunity to refinance at a lower interest cost.

Call protection usually takes one of two forms. (1) unconditional call protection where the issue cannot be called prior to a certain date and, (2), conditional call protection where an issue cannot be called before a certain date unless certain conditions have been met, usually the underlying stock must trade at a premium for a specified period. Generally this is 130% (or some multiple) of the conversion price. The period of unconditional call protection is also known as the "Hard No Call" period.

Conversion Premium: The excess of the convertible's price above parity, usually expressed as a percentage.

$$\textit{Conversion Premium} = \frac{\textit{Convertible Price - Conversion Parity}}{\textit{Conversion Parity}}$$

where Parity = Conversion Ratio x Current Stock Price

Conversion Price: Set at issue, the conversion price may be calculated as follows:

$$\textit{Conversion Price} = \frac{\textit{Par Value}}{\textit{Conversion Ratio}}$$

Conversion Ratio: Also set at issue, the number of shares into which each bond may be converted.

Convertible Price: Recent price of the convertible security. Usually the offer price for convertibles that traded on the day of the data capture. For illiquid issues or issues with large bid / offer spreads, a mid-price is used.

Current Yield: The annual convertible bond coupon divided by the current price.

Equity Delta: The correlation between movements in the stock price and the convertible bond price.

Investment Value %: Also known as the bond floor, the level at which a straight bond with the same maturity and credit risk would trade. Investment value effectively provides a "floor" for the price of the convertible if it loses all its equity content and trades as a fixed income instrument.

Investment Value Premium: The premium of the convertible price above investment value, expressed as a percentage.

Issue: Convertible bonds are known by the name of the issuer, the coupon and the maturity date, e.g. Hanson 9.5% 31/1/2006. Issuers may have a number of different issues outstanding.

Issuer: The company name under which the security trades. As some bonds can be exchanged into shares of different entities, the issuer name is not always the same as the underlying security name.

Moody's/S&P: These are the latest available credit ratings for Moody's Investors Service and Standard and Poor's Corporation.

Parity: Also Known as Conversion Value

Parity = Conversion Ratio X Current Stock Price

Payback: The number of years it takes for the convertible's income advantage to offset the premium paid. In other words, payback is the premium recovery period. Although payback calculations give no credit to the time value of money, payback is still commonly used as a valuation benchmark. There are two methods of calculation:

(1) *Traditional Payback* $= \dfrac{\dfrac{\%\ Premium}{1 + \%\ Premium}}{Cvt\ Current\ Yield - \dfrac{Stock\ Div\ Yield}{1 + \%\ Premium}}$

where % premium is expressed in decimal form.

(2) *Dollar for Dollar Payback* $= \dfrac{\dfrac{\%\ Premium}{1 + \%\ Premium}}{Cvt\ Current\ Yield - Stock\ Div\ Yield}$

We use the dollar for dollar method in all our research reports

Share Price: Bid price of the underlying security into which the convertible is exchangeable.

Stock Dividend Yield: The annual yield on the common stock, i.e. the annual gross dividend / stock price.

Yields to Put and Call: The gross redemption yields that are calculated to the date of the earliest put or call.

Yield to Maturity %: YTM for bonds. This is calculated on an ISMA basis of 30/360 days unless otherwise specified and is an annual gross redemption yield to the final maturity. Where any other basis is used, this is specified.

PRIDES Glossary

Conversion Premium: The percentage difference between the PRIDES price and Conversion Value.

$$\textit{Conversion Premium} = \frac{\textit{PRIDES Price}}{\textit{(Stock price x Minimum conversion ratio)}} - 1$$

Conversion Value:

Conversion Value = Stock price x Minimum conversion ratio

It is important to note that this value calculation uses the lowest conversion ratio (usually in the range 0.80-0.85). The actual conversion ratio could be as high as 1 depending on the common stock price at maturity.

Conversion Price: PRIDES are convertible into common stock at a premium price. The conversion premium can be calculated as follows:

$$\textit{Conversion Price} = \frac{\textit{Stock price at Issue}}{\textit{Minimum conversion ratio}}$$

Early Redemption: After three years the company can call the PRIDES at pre-specified premiums to the issue price, plus accrued dividends (the call premium starts at one quarter's dividend, and amortizes to zero over the fourth year). The PRIDES will convert into common shares equal in value to the call price, or the optional conversion ratio of shares, whichever is greater.

Mandatory Conversion Ratio: At maturity the PRIDES mandatorily converts into common stock. The number of shares received per PRIDES is determined by the stock price on the conversion date. There are three possibilities for the value of the PRIDES at maturity:

1. *The common closes below the initial price.* The PRIDES converts into one share of common.
2. *The common closes between the initial price and the conversion price.* The PRIDES converts into common according to a sliding scale designed to give the PRIDES holder common shares exactly equal in value to the initial issue price. The exact ratio is laid out in the prospectus, but will be between 1 and the minimum ratio.
3. *The common price exceeds the conversion price at maturity.* The PRIDES converts into the optional conversion number of common shares.

Optional Conversion Ratio: The PRIDES holder has the right to convert into common stock at any time prior to the mandatory conversion date. A holder who converts early will receive the optional conversion ratio number of shares for each PRIDES share.

$$\textit{Optional Conversion Ratio} = \frac{1}{(1+\textit{Initial Conversion Premium})}$$

*144A. This security may only be offered or sold to persons in the U.S. who are Qualified Institutional Buyers ("QIB's") within the meaning of Rule 144A under the Securities Act of 1933, as amended.

Opinion Key [X-a-b-c]: Investment Risk Rating(X): A - Low, B - Average, C - Above Average, D - High. Appreciation Potential Rating (a: Int. Term - 0-12 mo.; b: Long Term - >1 yr.): 1 - Buy, 2 - Accumulate, 3 - Neutral, 4 - Reduce, 5 - Sell, 6 - No Rating. Income Rating(c): 7 - Same/Higher, 8 - Same/Lower, 9 - No Cash Dividend.

Global Convertibles Research Group:

New York

T. Anne Cox
(1) 212-449-0174
First Vice President
Anne_Cox@ml.com

Preston M. Harrington III
(1) 212-449-0240
First Vice President
Preston_Harrington@ml.com

Inna Zoueva
(1) 212-449-1817
Senior Systems Analyst
Inna_Zoueva@ml.com

Anne Elliott
(1) 212-449-6857
Convertibles Statistician
Anne_Elliott@ml.com

Arjun Nayyar
(1) 212-449-5883
Convertible Analyst
Arjun_Nayyar@ml.com

Lisa Villacara
(1) 212-449-6224
Secretary
Lisa_Villacara@ml.com

London

James Peattie
(011-44) 171-867-4670
First Vice President
James_Peattie@ml.com

Lorraine Lodge
(011-44) 171-573-1342
First Vice President
Lorraine_Lodge@ml.com

Caspar Cook
(011-44) 171-892-4780
Senior Systems Analyst
Caspar_Cook@ml.com

Farideh Briggs
(011-44) 171-867-3308
Secretary
Farideh_Briggs@ml.com

Japan

Michiro Naito
(81-3) 3213-7605
Assistant Vice President
Michiro_Naito@ml.com

Junko Yamamoto
(81-3) 3213-7602
Assistant Vice President
Junko_Yamamoto@ml.com