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Insights

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The Case for Investment Grade Convertible Securities: Equity-Like Returns with Lower Risk

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Study Highlights

- The addition of convertibles to a portfolio can improve its overall risk/reward profile.
- Today's market is characterized by high delta, equity-sensitive convertibles with low conversion premiums, making them an attractive option in a bullish market.
- In rising rate environments, the underlying embedded call option of convertibles tends to soften the negative effect of rising interest rates.
- Convertibles tend to "out-yield" their corresponding equity counterparts, providing investors an additional degree of support and return.

Overview

The hybrid nature of the convertible market makes the asset class compelling in a variety of market scenarios and flexible enough to address multiple views in regards to the mid-to-long term outlook. Convertible securities provide investors several advantages over a portfolio of traditional stocks and bonds.

- First, the addition of convertible securities to a mix of stocks and bonds lowers the overall volatility of a portfolio. The fact that the return profile of convertibles is unique is a plus for investors wishing to diversify their holdings into an uncorrelated asset class.
- Second, convertibles provide investors an opportunity to participate in upside gains in equity markets while providing downside support in a falling equity market through bond floor, yield or both.
- Third, convertibles give portfolio managers greater flexibility in managing to a specific level of risk through properties such as delta and gamma. Depending upon the portfolio manager's outlook for interest rates, volatility and the market in general, he may choose to allocate more time to alpha-generating features of his fund and less time to the lower-return bond components.
- Fourth, convertibles also attract investors looking for credit exposure but who are concerned about the risk of rising interest rates or increased credit spreads. While rising rates can diminish the value of a convertible's fixed income component, rates that rise in connection with improving equity performance tend to have less of a performance impact.

Two of the primary drivers of a convertible's performance are its yield and conversion premium. Yield plays tend to be straight debt with relatively high conversion premiums. Since the embedded equity option on yield plays is far out-of-the-money, these securities are purchased for their downside protection and cash flow stability. Yield plays also provide a theoretical floor under which a convertible is unlikely to trade unless the market experiences shifts in the general level of interest rates.

On the other end of the spectrum are equity-sensitive convertibles. Since the option on these convertibles is at- or in-the-money, the owners of these securities typically exercise their right to own the stock outright. These convertibles are characterized by low yields, modest conversion premiums and high delta sensitivity. The conversion premium is the price the investor pays above parity to own the convertible. Parity, or conversion value, is the value of a convertible security if it were converted into equity. As the underlying value of the embedded option increases, the parity or conversion value of the bond also increases since parity is directly proportional to the price of the underlying equity. These characteristics have helped convertibles generate competitive risk-adjusted returns relative to stocks and bonds over a complete market cycle.

Convertible Correlations

Long term studies of convertibles show that the addition of the asset class to an existing portfolio of stocks and bonds can improve the overall risk and return profile. Because every convertible is unique in conversion premium, credit profile and equity sensitivity, correlations between convertible securities, the S&P 500 and the BofA ML Corp & Govt Bond Index have varied over time. From December 1989 through November 2013, the correlations between the BofA ML U.S. Investment Grade Convertible Index and the S&P 500 and BofA ML Corp & Govt Bond Index have been a relatively high 0.84 and low 0.04, respectively. Although different time periods can exhibit varying degrees of correlations, over complete market cycles, the relationships have remained fairly steady.

Convertible Correlation Matrix 12/89 through 11/13

	S&P 500	BofA ML Corp & Govt Bond Index	Russell 2000	BofA ML High Yield Master	BofA ML Corp Master
Correlation w/BofA ML All U.S. Convertible	0.82	0.01	0.87	0.59	0.14
Correlation w/BofA ML U.S. IG Convertible	0.84	0.04	0.80	0.54	0.17

Source: BofA ML Convertible Research

What the data show is that the deeper a convertible trades in-the-money, the more equity-like it becomes and the more its return profile mirrors that of the underlying equity. Today's market is dominated by post-crisis, equity-sensitive convertibles, as strong equity performance has translated into solid convertible performance and low conversion premiums. Structurally, the convertible market is more skewed toward equity sensitivity today, with the proportion of equity-sensitive issues increasing from the year-ago period. Equity-sensitive convertibles are characterized by high deltas and low conversion premiums. Concurrent with the low conversion premium is a near record high delta of 0.62, ranking in the 93th percentile of delta observations since 1995. This relatively high current price elasticity suggests high correlations to the S&P 500 and low correlations to the BofA ML Corp & Govt Bond Index. This dynamic is expected to benefit convertibles in 2014 as the Fed begins reducing its bond purchases likely allowing rates to return to more normalized levels. While rising rates typically weaken the bond valuation component of convertibles, the current low duration of the U.S. Investment Grade Convertible Index (just 1.94 years) will limit any potential damage and likely be offset by higher equity price elasticity.

The table below highlights the performance of stocks, bonds and convertibles over the past 20 years during periods in which the 10-year Treasury yield increased by at least 100 bps. In each of the nine periods reviewed, the BofA ML U.S. Investment Grade Convertibles Index outperformed the BofA ML Corp & Govt Bond Index by a median of over 930 bps, due in part to the embedded equity option of the convertible. Furthermore, in the seven of nine periods where the S&P gained over 5%, the BofA ML U.S. Investment Grade Convertible Index captured on average 81.5% of the upside. Adding convertibles to an existing portfolio of stocks and bonds during periods of tighter monetary policy not only mitigated the impact of rising rates on portfolios but allowed investors to participate in the majority of the upside.

Investment Grade Convertibles in Rising Rate Environments (1993-2013)

	Median	Average	10/15/93 - 11/7/94	1/18/96 - 6/12/96	10/5/98 - 1/20/00	11/7/01 - 4/1/02	6/13/03 - 6/14/04	6/1/05 - 6/28/06	12/30/08 - 6/10/09	10/1/10 - 2/8/11	7/24/12 - 9/5/13
Increase in 10-Yr. U.S. Treasury Yield			290 bps	150 bps	263 bps	130 bps	180 bps	140 bps	190 bps	150 bps	161 bps
BofA ML U.S. IG Convertible	7.4%	10.5%	-1.8%	10.4%	36.7%	-0.6%	6.9%	5.3%	8.9%	7.4%	21.8%
S&P 500	10.9%	15.0%	2.2%	10.9%	48.7%	3.3%	15.8%	5.7%	6.8%	14.4%	26.8%
Barclays U.S. Aggregate Bond Index	-2.4%	-2.7%	-5.1%	-3.4%	-2.4%	-2.4%	-2.4%	-1.3%	-0.5%	-3.1%	-3.6%
Upside Capture to S&P 500	81.2%	81.5%	NA	95.5%	75.4%	NA	43.5%	93.3%	130.5%	51.1%	81.2%
Over/Underperformance vs. Barclays Agg	9.3%	13.2%	3.4%	13.8%	39.1%	1.8%	9.3%	6.6%	9.3%	10.5%	25.4%

Source: Bloomberg

Upside / Downside Capture

Since convertible securities include components of both debt and equity, investors are able to participate in equity appreciation with some measure of downside protection. Studies show that because of this hybrid nature, the price of a convertible typically lags in rising equity markets but maintains more of its value in declining markets. Moreover, over a complete market cycle, convertibles have demonstrated comparable or even superior risk-adjusted performance to both stocks and bonds. As seen in the tables below, between 12/89 and 11/30/13, the BofA ML Investment Grade Convertible Index generated 81% of the return of the S&P 500 with just 56% of the risk, as measured by standard deviation. *Therefore, on a risk-adjusted basis (identified using the Sharpe ratio), the BofA ML U.S. Investment Grade Convertible Index outperformed the S&P 500 by nearly 26% and the Russell 2000 by nearly 42%.*

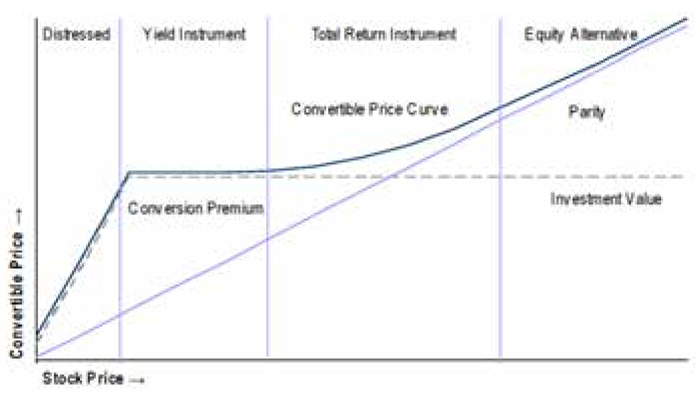
Risk Adjusted Returns 12/89 through 11/13

	Annualized Return	Standard Deviation	Sharpe Ratio
BofA ML U.S. IG Convertible	7.6%	9.3%	0.44
S&P 500	9.4%	16.7%	0.35
Russell 2000	9.9%	20.9%	0.31
NASDAQ Composite	10.6%	22.9%	0.31
BofA ML Corp & Govt Index	6.6%	4.6%	0.69
BofA U.S. High Yield Index	9.1%	6.6%	0.86

Source: BofA ML Convertible Research

Studies also show that convertibles tend to perform best during periods of non-trending to moderately positive equity markets and stable-to-improving credit markets. During these periods, investment strategies favor coupon-paying convertibles with higher gamma, providing investors a return on their investment while they wait for an upturn in the market. Gamma measures the rate of change in the convertible's delta with respect to a change in the underlying stock price and is at its peak when convertibles are at-the-money. Convertibles that are deep-in- or out-of-the-money have low gammas. If a portfolio manager believes the market is ahead of itself or expects it to be range bound in the near-to-medium term, he can choose to lower the delta of the portfolio and swap into higher yielding, higher premium convertibles. Alternatively, if a portfolio manager believes the market is cheap or expects the near-to-medium term outlook to be strong, he may opt to increase the delta of the portfolio and swap into equity alternatives trading at parity.

Chart 2: Hybrid behavior of a convertible bond



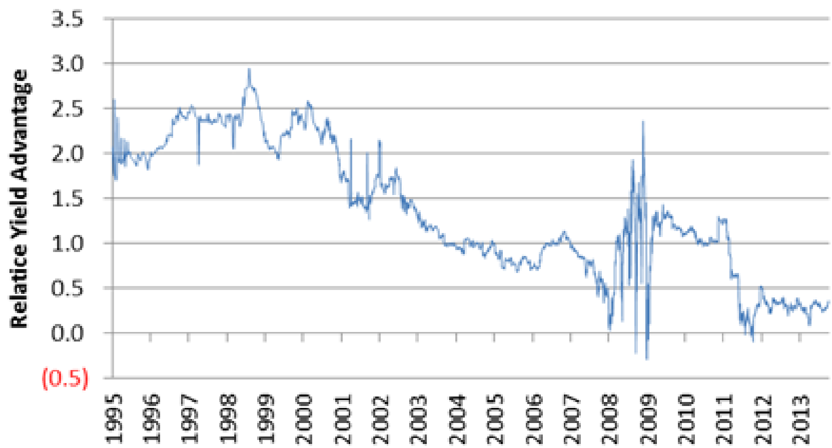
Source: BofA Merrill Lynch Convertible Research

Yield Advantage Relative to Equities

Convertible securities range from high yield, low delta, "busted" convertibles (considered bond equivalents) to high gamma, total return, balanced convertibles to high delta, low premium, deep-in-the-money convertibles (considered equity equivalents). Bond-like convertibles offer sizable yield advantages with little to no value assigned to the embedded call option. These convertibles are defensive in nature, provide a floor under which the security is unlikely to trade, and sustain equal or wider spreads to similarly dated fixed income instruments. High gamma, total return convertibles demonstrate positive upside/downside price elasticity relative to the underlying equity. Portfolio managers find these convertibles attractive in range-bound markets since they are paid to wait. These securities offer exposure to advancing markets via their embedded call option and downside protection to declining markets via their straight bond characteristics. In the event of a market decline, the conversion premium on the convertible expands, providing investors an additional layer of valuation support. The conversion premium is the excess of the convertible's price above its parity. Finally, high delta, low premium, deep-in-the-money, equity-sensitive convertibles are typically used by portfolio managers with bullish outlooks and little concern for a market drawdown.

An index dominated by equity-like (bond-like) convertibles is often the product of the market's bullish (bearish) evolution. In prolonged market upturns (downturns), convertible bonds tend to reflect the characteristics of their equity (fixed income) counterparts. Since the market bottom on March 5th 2009 (@682.55), the S&P 500 has gained 16,500 bps while the relative yield of the Investment Grade Convertible Index has declined 119 bps. Given that the bull market in stocks is nearly 2,100 days in duration, the convertible indices largely reflect characteristics of the S&P500, rather than the higher-yielding BofA ML Corp & Govt Bond Index. Since March 1995, there have been only 25 days (out of 5,200 or 0.48% of the days reviewed) where the BofA ML U.S. IG Convertible Bond Index did not "out-yield" the S&P500, providing investors an additional degree of support and return.

U.S. Investment Grade Convertible Bond Yield Advantage vs. S&P 500 (%)



Source: Bloomberg

As the value of the equity component increases, the parity (conversion value) of the bond also increases since parity is directly proportional to the price of the underlying equity. Provided the embedded call option of the underlying equity does not "out-yield" its corresponding convertible, the value of the convertible will be the greater of parity or face value of the bond. Lastly, risk-averse equity investors may choose convertibles as a more defensive alternative to owning the equity outright. The additional yield support offered by convertibles has been an important component of their total return.

Summary

The uniquely correlated return profile of convertibles provides a diversification benefit to a portfolio of stocks and bonds. Convertibles provide investors an opportunity to participate in upside in equity markets while providing downside support in a falling equity market through the bond component. In rising rate environments, the underlying embedded call option of a convertible tends to soften the negative effect of rising interest rates. Over a complete market cycle, convertibles have demonstrated comparable or even superior risk-adjusted performance to both stocks and bonds. They have also provided a yield advantage to equities over time.