

Compelling Valuations in the Convertibles Market

By John P. Calamos, Sr. and Nick P. Calamos, CFA

Our research estimates an historic undervaluation of convertible securities, with the asset class more than 10% below fair value. This is the most significant undervaluation we have seen in our 30 years of managing convertible portfolios. Increasingly attractive valuations coupled with the uncertain outlook for global equity markets provide a compelling backdrop for investing in convertibles.

Convertible valuations

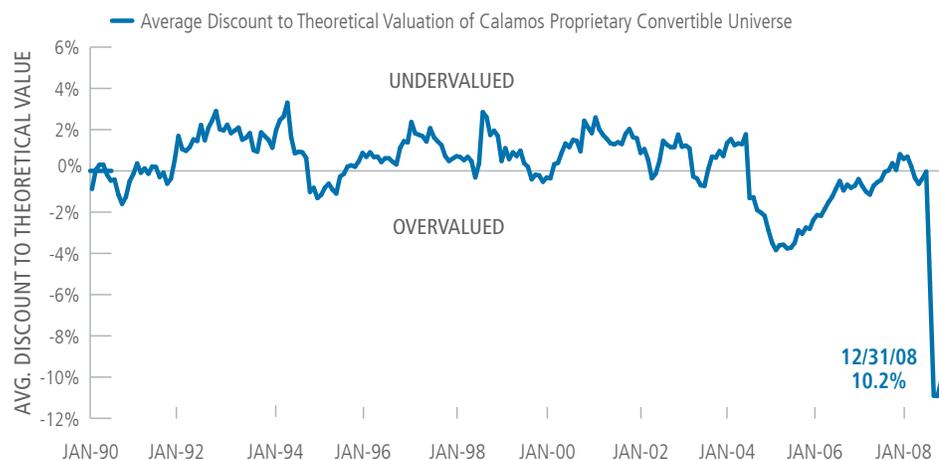
Figure 1 shows the mean convertible security valuation over the past 18 years, as measured by our proprietary valuation model. We have often published this chart but the story it tells today is unlike any we have seen, or even thought possible. As of December 31, 2008, the undervaluation of the convertible market is an historic 10.2%. This level of undervaluation represents what we believe is a rare opportunity—one we have not witnessed in more than 30 years of managing convertible portfolios.

According to our analysis, the valuation distribution in the convertible market has shifted significantly over the past year and provides a further illustration of the extreme level of undervaluation (Figure 2). The valuation distribution has moved from a near-normal distribution around the mean, to a distribution heavily skewed to the right. A year ago, the mean was about 1% overvalued; more recently, the mean has been about -10%.

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FIGURE 1. CALAMOS ESTIMATED UNDERVALUATION OF THE CONVERTIBLE MARKET

All U.S. Convertibles, January 31, 1990 to December 31, 2008



Source: Calamos Corporate System (CCS), Calamos Advisors LLC. 2008

A temporary dislocation

Convertible bonds can exhibit fixed income and equity characteristics. The fixed income values usually provide a floor that can cushion losses as the underlying stock declines. In the current market, the performance of convertible securities has correlated more directly to the decline in the underlying common stocks than it has historically. The fixed income value has been largely ignored in the marketplace.

Typically, convertible arbitrage hedge funds use leverage to deliver market performance, borrowing through prime brokers. As the cost of borrowing and poor performance dramatically increased, it appears many hedge funds could not maintain the leverage and have been forced to liquidate portfolios. In addition, the market makers and the prime brokers also seem to be deleveraging. In the past, the convertible arbitrage community along with traditional market makers would provide liquidity in the convertible market, reducing the spreads. In this way, the convertible market in general benefited. The current forced liquidation is causing convertibles to follow the panic of the stock market. In September and the fourth quarter of 2008, the decline in convertible prices closely matched the plunging stock prices.

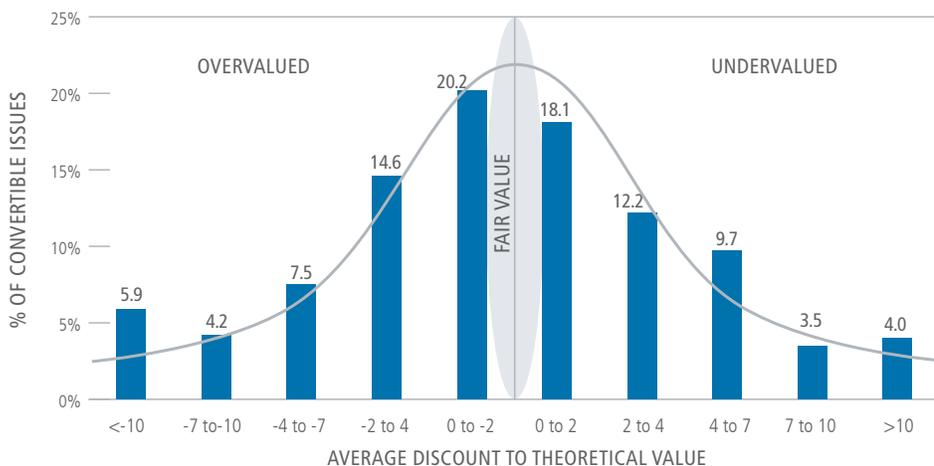
In the long term, volatile markets have generally experienced a reversion to the mean. In other words, an extreme event is likely to be followed by an event in the opposite direction. In the convertible area the reversion should be to fair value. Yet the recent market panic is creating the most unusual pricing variation that we have ever seen in convertibles. In the past, we have seen valuations revert back over a period of several quarters as it did from the end of 2004-2005; other times it occurs in just a few months. We see an excellent investment opportunity in the convertible market for investors who have an investment horizon beyond the current crisis.

Why convertibles?

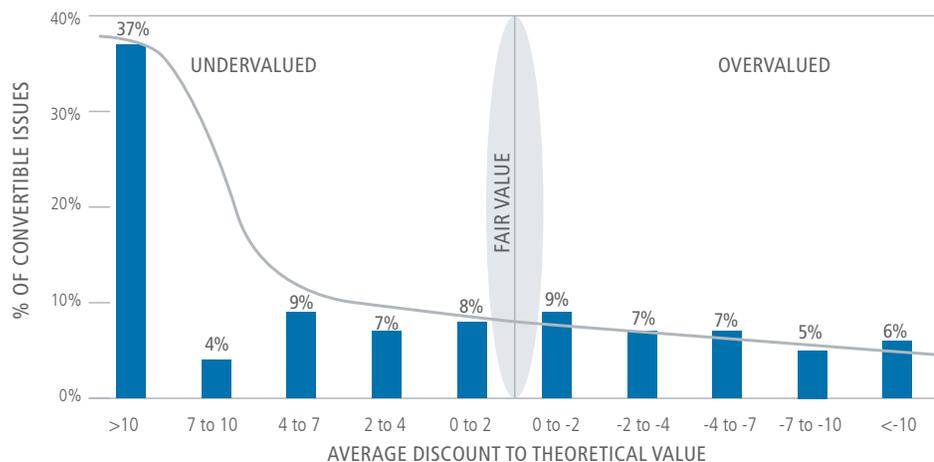
Market declines and panic selling look to have placed many asset classes at desirable valuations. While we believe there are many

FIGURE 2. CALAMOS ESTIMATED CONVERTIBLE MARKET VALUE DISTRIBUTION

Close-to-Normal Distribution: September 30, 2007



Highly Unusual Skew: December 31, 2008



Source: Calamos Corporate System (CCS), Calamos Advisors LLC. 2008

attractively priced securities, not all undervaluations are equal, either in their accuracy or in their ability to help investors harness current opportunities. Common stock and bond valuation may suffer from a lack of transparency and emphasis on future expectations. Common stock valuation is almost entirely forward looking, based on future free cash flows and a company's ability to provide a competitive return on capital above its cost of capital. Bond valuation is also forward looking in regard to inflation and credit spreads, though it can offer higher confidence, in line with the credit quality of the issuer.

Determining fair value

Convertible valuation is based on arbitrage theory and a neutral hedge argument, meaning that all or most risks of the security can be hedged or significantly reduced, resulting in a risk-free return on the security. If the hedged security offered returns above the risk-free rate, arbitrageurs will step in and purchase the security and drive the value up until the risk-free return is achieved. Likewise, if the hedged convertible offered a return below the risk-free rate, the arbitrageur would short the security and establish the reverse hedge. An economic convergence is likely to occur unless some market dislocation takes precedence. Today, the

massive deleveraging and liquidity squeeze has presented what we believe is a rare opportunity in the convertible marketplace.

Because it is more robust, we believe convertible valuation provides a much higher degree of reliability and different reversion to the mean value compared to stocks and bonds. Convertible valuation involves estimating the implied volatility of the underlying stock, as well as the credit quality and spread for the issuer. Multiple embedded options, call features, contingencies and triggers can make convertible terms complicated, but the finance and math models appear to handle most of this quite well.

What distinguishes convertible valuation is that an investor can arbitrage price inefficiencies by: shorting the underlying stock or a like corporate bond, purchasing credit insurance (a credit default swap) against the security, purchasing or selling options that match the embedded options in the security, as well as other creative means to arbitrage the security. The result is a highly correlated hedge with a high probability of economic convergence. In practice, if all risks are hedged, the return offered the investor is equivalent to the risk-free rate, so arbitrageurs accept a high degree of active risks with which they are comfortable, while hedging the highest risks. Often, hedging the convertible's equity sensitivity is the chosen route because of the degree of volatility in the equity, as compared to the other risks.

There are limitations to any valuation analysis. However, because of the economic convergence that will occur with the security's components and the hedge, convertibles offer

a more consistent mean reversion with a high degree of accuracy in the arbitrage. The popularity of the convertible hedge with hedge funds is due to its high correlation with other asset classes.

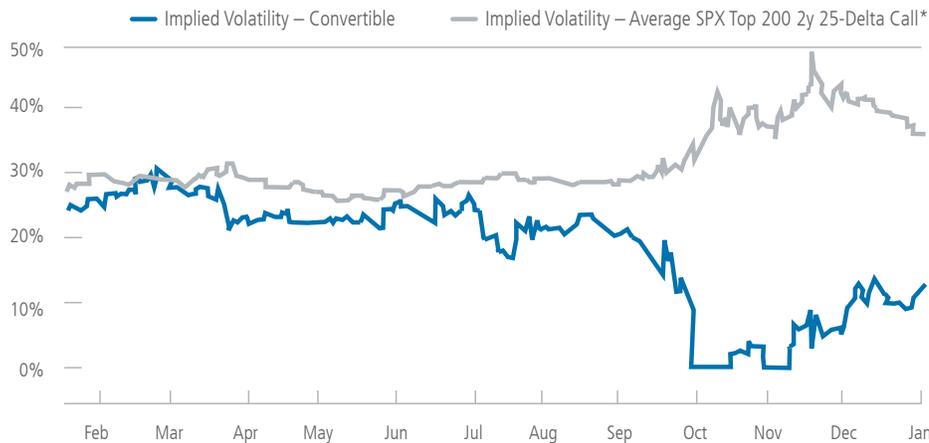
Implied volatility analysis

We believe another indication of the incredible opportunity in the marketplace can be found by comparing the implied volatility inherent in the convertible market with the implied volatility in the options marketplace for similar companies. Implied volatility measures investors' expectations of future volatility in the market, stock or asset under consideration. In today's market, option implied volatility has increased, causing option values to increase dramatically while the options embedded in convertibles have seen implied volatility collapse (Figure 3).

A convertible with an implied volatility of zero indicates the option embedded in the convertible is free. Of course, a free option does show up every now and then in the marketplace, but certainly not with the frequency that we see today. In the past, a convertible with a free option indicated the convertible was busted and traded only on its fixed-

FIGURE 3. IMPLIED VOLATILITY, CONVERTIBLES VERSUS OPTIONS

January 7, 2008 through January 7, 2009



Source: Goldman Sachs "Opportunities in the Convertible Bond Market." October 10, 2008.
*An average of a subset of options for the largest 200 companies within the S&P 500 Index.

income value. This occurs when the equity price has declined considerably and investors do not expect any future value from the significantly out-of-the-money option.

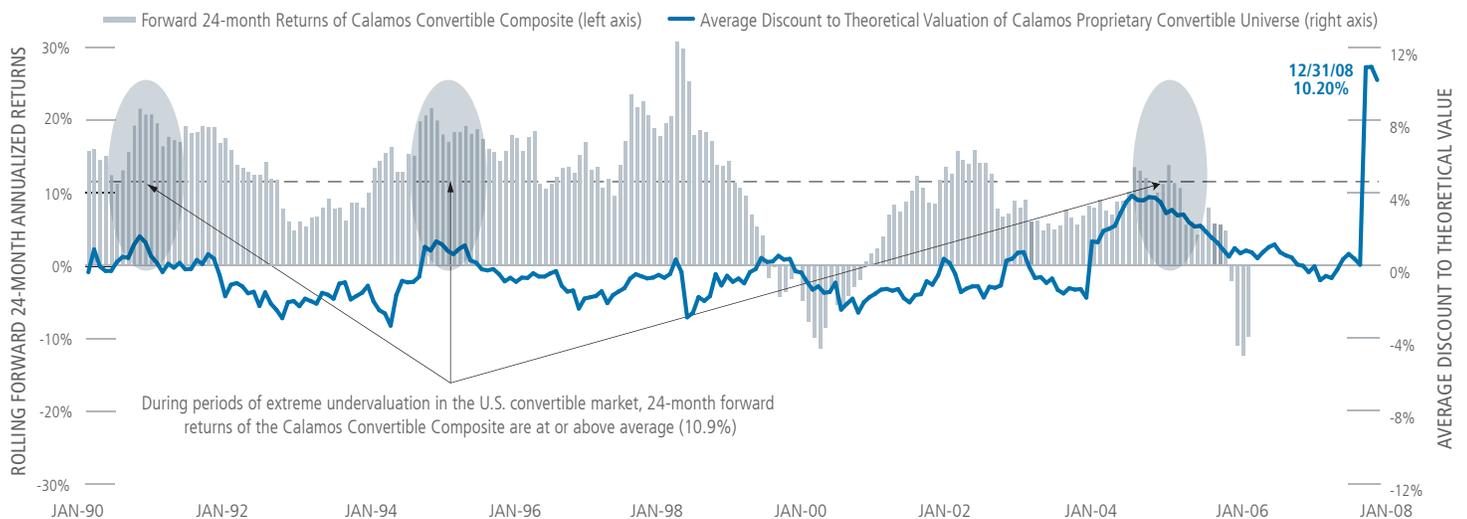
Lessons from the past

While today's pressures coming to bear on the convertible market are high, we have seen and experienced difficult times in the convertible markets before.

From January 31, 1990 through December 31, 2008, there were three periods when the convertible market was extremely undervalued according to our analysis—in 1990, 1995, and 2005. Figure 4 reveals how an undervalued convertible market has historically presented strong returns for the long investor. It shows the rolling forward 24-month annualized returns of the Calamos Convertible Composite (gross of fees). The Composite posted 24-month rolling returns of about 20%

FIGURE 4. CALAMOS CONVERTIBLE COMPOSITE

All U.S. Convertibles, January 31, 1990 to December 31, 2008



Source: Calamos Corporate System (CCS), Calamos Advisors LLC. 2008

in the wake of the 1990 and 1995 valuation discrepancies and rolling 24-month returns of about 10% following the 2005 discrepancy.

Past periods of extreme convertible undervaluations:

> **1990 – Recession and Junk Bond Market Collapse.** The problems started when the government threatened to tax leveraged buyouts (LBOs) and the United Airlines LBO failed. The low-grade bond market was also coming under a significant amount of pressure as the government went after Michael Milken and Drexel Burnham and blamed part of the savings and loan (S&L) crisis on the junk bond market. Many S&Ls were forced to sell their low-grade credits and spreads widened sharply.

In addition, the first war with Iraq was looming and energy prices spiked. The equity market declined as a flight to quality occurred and low-grade convertible credit spreads widened excessively.

> **1994 – Bond Market Decline.** The Federal Reserve raised rates while issuing a warning to highly leveraged markets and hedge funds. With equity markets holding up quite well, equity sensitive convertibles did better. However, interest rate sensitive issues, especially the lower duration issues, declined. The leverage in the convert arbitrage hedge fund market declined as the cost of borrowing increased and this caused a push below fair value.

> **2005 – Hedge Fund Redemptions.** This period was caused primarily by convertible arbitrage funds—many of whom had started when volatility levels were seemingly low and it was cheap to borrow—that

dumped convertible securities as they delevered in the face of rising interest rates and even lower volatility.

Opportunities today

Similar to previous episodes when the convertible market has been undervalued, the high levels of recent hedge fund redemptions have helped create valuation opportunities for long-only investments. We believe we are in a rare period in which investors can take advantage of extreme mispricings in the convertible market through outright long positions or arbitrage positions. While the past certainly cannot predict the future with absolute certainty, we believe the current historic level of undervaluation may offer long-term investors compelling opportunities. Valuation dislocations can correct quickly and an undervaluation of 10.2% may offer excess returns that are above normal, even in a more subdued equity market environment.

Calamos takes a risk-managed approach to providing investment management services to pension funds, foundations and endowments, family offices and high net worth clients around the globe. A pioneer in the use of convertibles, Calamos is one of the world's largest convertible managers and has been recognized for its unique approach in growth equity investing developed from its proprietary process for valuing companies.

Annualized Returns (as of 12/31/08)	1-Year	3-Year	5-Year	10-Year	Since Inception of ML V0A0¹ (1/88)	Since Strategy Inception (10/79)
Calamos Convertible Composite (gross of fees)	-25.39%	-3.10%	-0.23%	4.86%	9.12%	10.95%
Calamos Convertible Composite (net of fees)	-25.76	-3.57	-0.73	4.35	8.53	10.21
ML V0A0	-33.02	-7.70	-3.19	2.21	7.77	NA

¹ Returns are shown for the performance of Calamos Convertible Composite since the inception of the Merrill Lynch All U.S. Ex Mandatory Index (V0A0) in January of 1988.

Sources: Russell/Mellon Analytical Services LLC and Calamos Advisors LLC.

Past performance is no guarantee of future results. Current performance may be higher or lower than the performance quoted.

The opinions referenced are as of the date of publication and are subject to change due to changes in the market or economic conditions and may not necessarily come to pass. Information contained herein is for informational purposes only and should not be considered investment advice.

Investing involves risk including loss of principal. Diversification does not ensure against market loss.

Please note that Figures 1, 2a and 2b, 4a and 4b include data derived from Calamos Corporate Systems (CCS), a proprietary valuation system designed and maintained solely by Calamos. While we deem the information contained in the charts to be reliable, Calamos makes no public claims as to the validity of the information derived from the system.

In addition to market risk, there are certain other risks associated with an investment in a convertible bond, such as default risk, the risk that the company issuing debt securities will be unable to repay principal and interest, and interest rate risk, the risk that the security may decrease in value if interest rates increase.

Returns presented from October 1, 1979 through December 31, 1990 are based on the Calamos Convertible Composite, which is an actively managed composite investing primarily in higher-quality foreign and U. S. convertible bonds and is comprised of all fully discretionary, fee-paying, tax-exempt accounts of \$250,000 or more, managed by Calamos Advisors LLC. Returns presented from January 1, 1991 through the current period are based on the Calamos Institutional Convertible Composite which is an actively managed composite investing primarily in high-quality U.S. convertible bonds and is comprised of all fully discretionary, fee paying, tax-exempt accounts of \$1,000,000 or more, managed by Calamos Advisors LLC.

Fees include the investment advisory fee charge by Calamos Advisors LLC. Returns greater than 12 months are annualized.

Average annual total return measures net investment income and capital gain or loss from portfolio investments as an annualized average assuming reinvestment of dividends and capital gains distributions.

HFRI RV Fixed Income - Convertible Arbitrage Index: includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a convertible fixed income instrument. Strategies employ an investment process designed to isolate attractive opportunities between the price of a convertible security and the price of a non-convertible security, typically of the same issuer. Convertible arbitrage positions maintain characteristic sensitivities to credit quality the issuer, implied and realized volatility of the underlying instruments, levels of interest rates and the valuation of the issuer's equity, among other more general market and idiosyncratic sensitivities. Source: Hedge Fund Research, Inc.® HFR, Inc. 2008. www.hedgefundresearch.com. **Merrill Lynch All U.S. Convertibles Ex Mandatory Index (V0A0)** measures the return of all U.S. Convertibles excluding mandatory convertibles. **S&P 500 Index:** measures the performance of 500 large-cap U.S. companies. Investors cannot invest directly in an index.

Calamos Advisors LLC is a federally registered investment advisor. Part II of Form ADV, which provides background information about the firm and its business practices, is available upon written request to: Calamos Advisors LLC, 2020 Calamos Court, Naperville, IL 60563-2787, Attn: Compliance Officer

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