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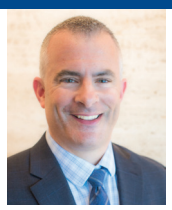
SARVER VROOMAN
WEALTH ADVISORS

9237 Ward Parkway, Suite 320 | Kansas City, MO 64114

Convertible Securities



Peter Vrooman, CFA®, CIMA®, CRPC®
Partner, Wealth Advisor
Fundamental Choice Portfolio Manager
816-601-1152
peter.vrooman@svwealthadvisors.com

Jonathan Sarver, CPWA®
Partner, Wealth Advisor
Fundamental Choice Portfolio Manager
816-601-1151
jonathan.sarver@svwealthadvisors.com

Convertible bonds – engineered to help investors achieve a combination of three goals:

- Capital Appreciation
- Income
- Stability

Why Convertibles for today's market environment?

The year of 2020 has certainly been a time of tremendous health, economic, and market upheaval.

While the fixed income and equity markets have shown strong resiliency and impressive returns coming off the March lows and also year-to-date as of this writing, many investors are still shell-shocked and concerned about the direction of the equity market going forward. Many, understandably, are bracing themselves for more volatility and are fearful of another major decline at some point in the not-too-distant future, Covid-related or not.

At the same time, Core bonds such as Treasuries and Agency securities offer very low yields by historical standards. Thus, the potential returns and non-correlation cushioning of high-quality bonds may be less fruitful than in the past. The current 10-year Treasury Bond yield = 0.829% (as of 11/20/2020). In addition, the interest rate risk or "duration" of higher-quality bonds moves the opposite of yield, and therefore sits at a very high level today. A modest rise in yields may translate into a significant price decline in intermediate to longer term high-grade bonds. In other words, the investment category that has historically provided one of the best protections against stock market declines is offering the potential for very low returns and potentially high downside risk today.

Many investors, in an eager pursuit of yield, have increased weightings to riskier, lower-rated, or "junk" bonds. However, junk bonds tend to offer little protection to investors when equity markets sell-off, as they are economically sensitive, and therefore should often be viewed as "closet equities". High-yield bonds could be looked at as a more conservative part of an equity sleeve as opposed to a bond sleeve.

What is a Convertible?

A convertible bond is a hybrid instrument, exhibiting properties of both fixed income and equity. A convertible bond is a corporate bond, with a maturity and a coupon payment (outside of zero-coupon bonds). It is a debt instrument, backed by the full faith and credit of the issuer. Typically, convertible bonds will pay a lower coupon than the straight, plain vanilla bond of the same company, due to the fact that the convertible bond has the ability to participate in equity upside. You give up some coupon income in return for equity participation. If they offered the same coupon amount as the identical non-convertible bond, then no one would ever buy the non-convertible bond, as the convertible offers the equity "kicker."

Each convertible bond can be exchanged into a fixed, pre-determined, number of shares of the underlying stock. This can typically be done at any time at the discretion of the investor. Since the bond is convertible into equity shares, if the underlying stock prices increases, then the convertible will typically appreciate automatically. If the underlying stock

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declines, the convertible will typically decline as well, but usually not as significantly, as the convertible has a $1000 face value (par value) and a set maturity date.

How Convertibles work

Here is a *theoretical way of looking at Convertibles:* a Convertible Bond equates to the combination of a Corporate Bond and a Call Option on the company stock. The bond part offers a beneficial capital component and the "bond floor" if the stock declines in value. The "call option" is the component that offers potential upside if the stock appreciates. If the stock appreciates, then the call option gains value. As when someone buys a call option, there is a cost or "premium" to doing so, and that is equivalent to the Conversion premium when the Convertible bond is issued. At initial issuance, the Conversion Value (number of shares times the current stock price) is usually well below the Convertible bond price. Another way of saying it is the conversion value if one converted is well below the initial Conversion price. Therefore, at the start there is no incentive to convert. The "option" is out of the money. The investor is essentially paying a higher price than the stock price to own the convertible. That means you give up some of the stock upside as the cost for owning the convertible. Also, the convertible has to accept a lower coupon than if they just owned the straight bond equivalent. In short, the Convertible owner gives up a little yield as the cost of owning the "call option" but has upside potential. However, the conversion premium requires at the outset that the investor gives up some of the equity upside, until it breaches the conversion price. This is an example of the free market offering benefits of bonds and stock in one instrument, but there is no free lunch. There are some tradeoffs. If one were extremely optimistic on the company stock, you may just want to own the stock and get 100% of the upside. If one were pessimistic about the equity, you may want to own the straight bond and receive a higher coupon. The convertible would make sense if an investor is somewhat or cautiously optimistic, or perhaps simply prefers to take less risk than the equity investor.

Hypothetical example of a Convertible bond

Assume a 4-year Convertible bond paying a 4% coupon,

And Yield-To-Maturity = 3.5%

Face Value = $1000/Bond

Therefore, the Current Convertible Bond Price = $1018.34

Assume the Conversion Ratio = 30 (equity shares per bond)

Conversion Price = $1000/30 = $33.33

Assume Current Stock price = $30

Conversion Value = $30 X 30 = $900

Current Market Conversion Price = $1018.34/30 = $33.94

(When you buy the convertible, it's equivalent to buying the stock at $33.94)

Conversion Premium= $33.94/$30 = 13.15% Premium

So the Convertible has a Conversion premium, in return for its bond characteristics

The greater the Conversion premium, the less equity participation the convertible will experience.

Premium to Parity = $1018.34/$1000 = 1.83%

Assume the Straight, Non-Convertible Bond pays 5% coupon, same maturity

And YTM = 5.5%

Therefore, the Current Straight Bond Price = $982.47

Premium over Straight Bond Value = $1018.34/$982.47 = 3.65%

Note: The Straight Bond Value serves as a Floor on the Convertible, at which price it would Yield the same as the Straight bond (assuming no changes in interest rate or credit rating).

Assume Stock price increases 33.33% to $40/share

Convertible Bond would appreciate to $1200 (= 17.84% increase)

Convertible increases 17.84% (53.53% of the upside)

Now assume Stock decreases 33.33% to $20/share

For illustrative purposes assuming no change in the price of the underlying bond which can be negatively affected by rising interest rates and other factors the convertible should only decrease to its Straight Bond Price = $982.47,

Or a decrease of 3.52%

In this example, with a 33% up or down move in the Equity price, the Convertible gets 53% of the upside with only 10.5% of the downside of the stock.

Historical risk and return of Convertibles

Most investors are attracted to investment classes and styles that can deliver more consistent performance, that is to say, competitive returns with lower volatility. By achieving such, investors can narrow the gap between the Arithmetic mean return and the Geometric (or compounded) returns. In so doing, investors can earn higher compounded returns over time. Higher compounded returns are what investors should focus on as that is what accumulates in their account. Arithmetic average returns are simple means that do NOT factor in the volatility of returns and are thus somewhat misleading. Geometric returns, by con-

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trast, DO factor in volatility and can be compared meaningfully on an "apples-to-apples" basis, as they convert return series to the same return every period. A 6% compounded return, for example, is identical to earning 6% per period.

Since 1987, Convertible bonds have averaged 9.57% per annum, versus 10.62% for the S&P 500 stock index, but with about 33% lower downside volatility (Dow Jones News, 2020).

Also, the average maturity of Convertibles on the market have shortened to about 4-7 years (Dow Jones News, 2020). Therefore they offer equity participation, lower volatility, and currently shorter average maturities than in the past.

According to a 12/31/2016 white paper from Invesco, during the Bull market of 2002-2007, Convertibles earned over 85% of the average return of the S&P 500 (13.3% per year vs 15.5% per year), but only took on 76% of the downside during the subsequent 2007-2009 Financial crises. Over the full 2002-2016 period, Convertibles earned an average return of 8.57% versus 9.57% for the S&P 500 (about 90% of the average return), with about 1/3 lower volatility. Over that time period, Convertibles took on about 52% of the volatility of the Russell 2000 stock index.

According to the same study, coming off the 2008 Credit crisis, between 2009 and 2016, the S&P 500 averaged about 15% per year with a standard deviation (volatility) of approximately 14.5%. The Convertible index earned just under 15% per year, with a standard deviation of under 11%.

Another advantage of adding Convertibles is the potential for lower correlations with other asset classes. According to Invesco, between 1990 and 2016, Convertibles demonstrated a Correlation of 0.83 to the S&P 500 (1.0 means perfect correlation) and only a 0.36 Correlation to the Barclays US Government/Credit Bond Index. By adding asset classes that move in less than perfect correlation to existing components of a portfolio, the overall portfolio volatility can be reduced. According to Modern Portfolio Theory, by adding less than perfectly correlated investments, investors can improve the overall risk-reward of their portfolio.

One of the concerns mentioned earlier in this writing is the prospect of potentially rising interest rates. How have Convertibles performed during periods of rising interest rates?

According to Invesco, between 1989 and 2016, there were 11 periods where the yield on the 10-year T-Bond increased by at least 100 basis points (1%).

The average return on the S&P 500 Index during the 11 periods of rising rates = gain of 11.57%

The average return on the Barclays Bond index was (3.41%)

The BofA/Merrill Lynch Convertible Index = gain of 13.01%

(During only 2 of the 11 rising yield periods did the Convertible index lose money and both were slight).

Convertibles have not only weathered rising yields well, they have actually flourished overall during those periods, outperforming Equities somewhat, and traditional Bonds dramatically.

Conclusion

In summary, for investors who are seeking Equity-like returns within a more tangible and bond-like structure, and potentially less volatility than Equities, advantages of lower correlations, and the ability to be resilient during a rising yield environment, then Convertibles could be worthy of consideration.

Risk Considerations

Past performance is not indicative of future results. All investing involves risk, including the possible loss of principal.

Convertible bonds have complex exposures to interest rates, the issuer's credit quality, liquidity spreads, the issuer's stock price and the implied volatility of the embedded option. This makes them difficult to price since their price is affected by both interest rates and share prices. They may be subordinate to other securities if the issuer declares bankruptcy which means the holder of the bond has a lower claim on the company's assets. Convertible bonds may also include call provisions which give the issuer the right to "force" the holder to redeem the bonds at face value or convert them to common shares. The call feature decreases the value of the convertible bond, limits an investor's gain and generally results in reinvestment risk. This means the proceeds from the sale will generally be reinvested in a less favorable environment. The stock feature is derived from the embedded call option that allows the convertible bond to participate in stock appreciation. As such, the option value is tied to factors affecting the underlying stock price and the amount of the time left on the option. Since a convertible bond derives a portion of its value from the common stock to which it may be converted, it is subject to the risks associated with common stocks including market risk. Stock values may fluctuate in response to general economic and market conditions, the prospects of individual companies, and industry sectors. Investments in fixed-income securities are subject to market, interest rate, credit and other risks. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can cause a bond's price to fall. Credit risk is the risk that an issuer will default on payments of interest and/or principal. This risk is heightened in lower rated bonds. If sold prior to maturity, fixed income securities are subject to market risk. All fixed income investments may be worth less than their original cost upon redemption or maturity.
ICE BofAML Convertible Bonds All Quality Index: ICE BofAML Convertible Bonds All Quality Index is an unmanaged market capitalization-weighted index of non-mandatory domestic corporate convertible securities. The Index represents bond index returns, which includes all payments to bondholders and exclude fees or expenses. Bloomberg Barclays U.S. Aggregate Bond Index is a broad-based measure of the investment grade, US dollar-denominated, fixed-rate taxable bond market. The S&P 500 Index consists of 500 stocks chosen for market size, liquidity, and industry group representation. It is a market value weighted index with each stock's weight in the Index proportionate to its market value. It is not possible to invest directly in an index.

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