INVESTMENT NOTE

SHENKMAN

Convertible Bonds: A Remedy for Rising Rates, Increased Volatility, and High Valuations

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The convertible bond market has outperformed most fixed income asset classes for the last five years, and may be poised to go through one of its most significant transitions in decades. Future performance will likely be driven by the rising interest rate regime, improving economic forecasts, and new US tax laws. We believe these factors should lead to continued strong performance, while increasing market diversity may serve to expand the opportunity set in convertibles. Additionally, we believe that certain strategies in convertibles should be particularly well positioned to capture a reasonable amount of equity upside, and less downside, if current high multiple equity valuations experience drawdowns.

Adding Alpha With an Underinvested Asset Class

The hybrid nature of convertibles has posed challenges to investors from neatly classifying the product using traditional categories. This has resulted in an underinvested asset class that has been overlooked by many investors and allocators. However, a properly constructed and maintained selection of convertibles could add alpha and increase portfolio efficiency of both fixed-income and equity allocations.

While convertible bonds participate in a company's equity upside, investors retain the right to be repaid par at maturity. This debt-like feature creates a tendency for convertibles to capture more positive performance on the upside than they do negative performance on the downside. Some investors may look to create a similar strategy synthetically, but given the makeup of the corporate bond market and the limited availability of medium-term equity options, investing directly in the convertible asset class tends to be more efficient. The superior risk-adjusted returns of convertible bonds over traditional products provide interesting asset class characteristics which deserve a place in a diversified portfolio.

For a fixed-income portfolio

The looming threat of government rate hikes and its effect on the US yield curve will be a risk for fixed income investors going forward. Coupon rates and credit spreads are at or near post-recession lows and are creating a challenging environment for investment grade bonds in a rising rate environment. Historically, the convertible bond market has been more negatively correlated to US Treasury prices (see Exhibit 1), and both convertibles and equities tend to rise more than traditional bonds in environments with higher rates and growth. Convertible bonds can offer an interesting way for traditional fixed income allocators to achieve equity-like returns, without assuming the full risk that a pure equity allocation would entail.

Exhibit 1

Historical Correlations January 1994 - December 2017	Convertible Bonds	Investment Grade Bonds
10-Year Treasury	-0.16	0.67

The ICE BofAML Corporate Index represents Investment Grade Bonds; the Thomson Reuters U.S. Vanilla Convertible Bond Index represents Convertible Bonds. ***Source:*** *eVestment, ICE Data Indices, Thomson Reuters.*

At the end of 2017, the US convertible bond market had an effective duration of 2.5 years, roughly 65% lower than the US investment grade market. While correlated with equities, the bond-like principal protection provided by the credit quality and fixed pay maturity structureof the issuer means that a convertible bond will generally rise faster in a bull market than it would fall in a bear market, providing a superior risk/reward dynamic.

For an equity portfolio

As equity markets reach and exceed all time high levels, the downside risk in many sectors has increased. While corporate earnings continue to be very strong and, on average, companies continue to raise future guidance, many stocks have seen their valuation levels climb. Stocks could fall if businesses fail to meet increasingly bullish earnings expectations. We believe that convertible bonds, with the tendency to move slower on the way down than they do on the way up, present a more conservative option to maintain exposure to an increasingly risky equity market. As shown in Exhibits 2 and 3, convertible bonds have historically exhibited a higher Sharpe Ratio than equities and can be a good allocation to an equity portfolio looking to reduce volatility.

Exhibit 2

Convertible Bonds versus Equities – Risk Adjusted Returns

10-Year Period Ending December 2017	Annualized Return	Standard Deviation	Sharpe Ratio
Thomson Reuters US Vanilla Convertible Bond Index	7.94%	11.61%	0.65
S&P 500	8.50%	15.08%	0.54
Russell 2000	8.71%	19.90%	0.42
MSCI World Index	5.63%	16.34%	0.32

Source: *Thomson Reuters, S&P, Russell, MSCI*

Exhibit 3

S&P 500 versus Convertible Bonds – One Year Rolling Monthly Returns

Longest Common Period (January 1994 - December 2017)	S&P Positive 1-Year Periods	S&P Negative 1-Year Periods
Total Periods	222	55
% of Periods Convertible Market (TR Vanilla) Outperformed	22.52%	74.55%
Convertible Market (TR Vanilla) Average Return	15.44%	-11.11%
S&P Average Return	18.17%	-16.96%
Upside/Downside Capture	84.94%	65.50%

Source: *Thomson Reuters, S&P*

The Changing Landscape is Making Convertible Bond Issuance Attractive Again

Two important events in the US could rekindle corporate issuers' willingness to issue convertible bonds and lead to increased diversification in the market.

The first factor is the potential increase in funding costs in the corporate bond market. The recent era of low interest rates has allowed many companies to raise growth capital, refinance existing debt, and finance share buybacks at record low interest rates. While the US is currently in its longest stretch of sub-3% annual GDP growth since at least 1958, the recently-passed congressional "Tax Cuts and Jobs Act" may lead to accelerating economic growth. As a result of the bill, many companies have announced plans for the repatriation of offshore cash reserves, including new construction and job growth plans. With December 2017's unemployment rate falling to a 17-year low of 4.1%, and the US economy near "full employment", the possibility of wage inflation is the highest in years. A combination of higher GDP, rising inflation, and higher interest rates should put upward pressure on corporate new issue coupon rates. These higher coupons on straight debt may increase the attractiveness of low coupon convertibles for corporations.

The second factor relates to the benefits of interest expense deductibility for corporations. Historically, companies could fully deduct any debt financing costs from their income when calculating annual tax payments. The recently passed tax bill changed this in two ways:

1. The corporate tax rate reduction from 35% to 21% will reduce the deduction benefit, as the interest savings on debt are proportional to the tax rate applied; and

2. From 2018 through 2021, companies will only be able to deduct interest of up to 30% of EBITDA (a measure of profit). Starting in 2022, the limitation will change to 30% of EBIT (a more onerous calculation).

These changes to interest deductibility decrease the value of interest expense as a method of lowering corporate tax rates. As a result, corporations may become more focused on the coupon rate differential between straight and convertible bonds, increasing the likelihood of convertible issuance.

Exhibit 4 details these potential after-tax benefits. The exhibit is based on a 5x leveraged company which derives 30% of its EBITDA from a depreciation addback. It also assumes a 25 basis point annual increase in convertible new issuance coupon rates and a 50 basis point per year increase in high yield new issuance coupon rates, consistent with the pre-crisis period of rising interest rates.

Exhibit 4

After-Tax Cost Analysis

	2017	2018	2022
Convertible After Tax Rate	1.50%	1.82%	2.61%
High Yield After-Tax Rate	4.14%	5.11%	7.49%
Interest Savings from Convertibles	2.64%	3.29%	4.87%

Source: *Shenkman Capital. This analysis is an estimate based on certain assumptions and is provided for informational purposes only; actual results may vary and no representation is made as to, and no responsibility, warranty or liability is accepted for, the accuracy or completeness of such information. Additional information regarding the assumptions used is available upon request.*

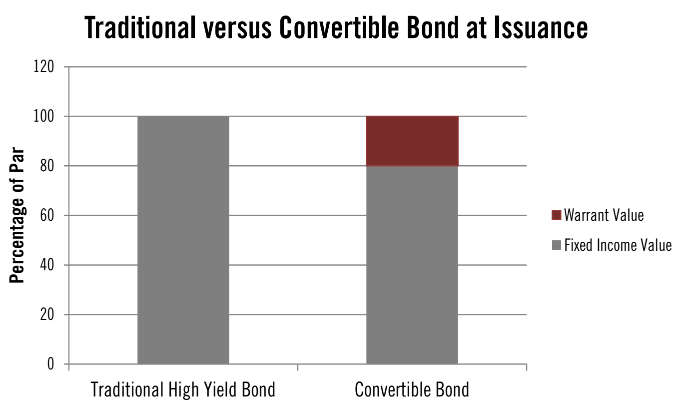
For a company deciding whether to issue a high yield or convertible bond, the immediate impact of Exhibit 4 is for the after-tax cost of the high yield bond to increase 97 basis points, while the cost for a convertible bond would rise only 32 basis points. As interest rates rise, and the more onerous interest deduction cap is instituted, the relative cost savings to issue convertibles rise.

In addition to the benefit of a lower coupon rate, the continued strength of underlying equities supports convertible issuance. Many companies have experienced a significant rise in their market capitalizations over the past several years, allowing them to refinance debt with significantly lower dilution than only a few years prior. Combining this benefit with the previously mentioned interest rate analysis creates a setting for convertible bond issuance to look more attractive to corporations than it has at any time over the past ten years.

What are Convertibles?

A convertible bond is a hybrid security that has properties of both traditional bonds and equities. Similar to traditional bonds, a company issues a convertible bond with a fixed coupon and the obligation to repay the holder par at maturity. In addition, the holder has the right, at his or her option, to exchange the convertible bond for equity in the company (i.e., each convertible bond is exchangeable into a fixed number of shares). Economically, a convertible bond can be thought of as a traditional bond packaged together with an equity warrant (see Exhibit 5).

Exhibit 5



Source: *Shenkman Capital. This is a sample breakdown based on an assumed purchase of a convertible bond at issuance at par with an investment premium of 25%. This is provided for informational purposes only; actual results may vary and no representation is made as to, and no responsibility, warranty or liability is accepted for, the accuracy or completeness of such information.*

The result of this bond and warrant combination produces a security with asymmetric upside return potential:

> **On the downside:** If the company's stock trades down to a level well below the equity conversion price, the convertible will trade like a corporate bond, as the investor is still owed full principal repayment at maturity. One of the key elements to investing in convertibles is defining the bond floor.
>
> **On the upside:** If the company's stock trades up, the convertible bond holder has the option to exchange into stock, and therefore participate in a portion of the equity return.

A convertible bond has more downside risk than a traditional bond, as the coupon is usually lower and the warrant component fluctuates with the day-to-day movement of the underlying stock. However, a convertible has disproportionately higher upside potential given the possibility of equity-like participation.

Characteristics of the Convertible Bond Market

The characteristics of the convertible market have changed significantly over the past ten years, as shown in Exhibit 6.

Exhibit 6

Convertible Market Characteristics

	Year End	
	2006	2017
% Investment Grade Rated	53%	23%
% High Yield Rated	38%	35%
% Unrated	9%	42%
Financial/Industrials/Energy	35%	20%
Information Technology	13%	40%

The Thomson Reuters U.S. Vanilla Convertible Bond Index represents the Convertible Market.
Source: *Thomson Reuters, Bloomberg*

In the early 2000s, the convertible bond market was dominated by investment grade issuers. At a time when 10-year Treasury rates were between 4-5% and the average coupon in the investment grade bond market was above 6%, it made sense for higher quality companies to diversify their balance sheets into convertibles. Roughly 35% of the market consisted of mature companies in sectors such as Financials, Industrials, and Energy.

Over time, as interest rates declined in virtually all fixed income asset classes, corporate issuers saw a reduction in interest expense with each refinancing. Since the end of 2006, the yield on investment grade bonds has declined by over 240 basis points. In that environment, the interest savings between traditional and convertible bonds lessened, and the marketplace saw refinancings skew more toward traditional corporate bond issuance. This led to increased industry concentrations in the convertible market as companies with high growth statistics favored convertible issuance, while others reduced their issuance.

Given the changing macro environment discussed earlier, we believe a more diverse group of industries are likely to issue convertibles going forward, broadening the appeal of the asset class.

Convertible Credit Selection is Critical

As the makeup of the convertible market has shifted toward more unrated securities, an opportunity has developed for research-oriented investing. We believe that credit selection is one of the key elements in constructing a convertible portfolio, and bottom-up research is required when underwriting these investments. While the underlying equities of convertible issuers are often, to some extent, covered by the sell-side research community, many convertible bond issuers have no other debt outstanding. Even issuers who do have other syndicated debt facilities in the market may be overlooked when it comes to debt-focused research. The key positive benefit to convertible bonds, their tendency to fall slowly when their underlying equity trades down, only works when the underlying credit remains viable. For convertible bonds of issuers with deteriorating credit metrics and increasing bankruptcy risk, the downside protection may not materialize. As the yield required for an investor to own the security increases, the downside protection in the convertible decreases. The lack of public debt research highlights the need for buy side research-oriented convertible managers.

Summary

While both equity and fixed income investors have benefited from macroeconomic factors over the last several years, we believe the changing financial landscape provides a strong backdrop for a resurgence of issuance in the convertible asset class and improving relative risk adjusted returns. Record high stock indices, rising interest rates, and changing tax policies are each a catalyst for companies to review their capital allocation models. While convertible bonds have recently been overlooked by those in the capital markets, their unique properties should become more attractive to investors and issuers alike in this new environment. Whether looking to diversify across either fixed income or equity, convertible bonds can be an attractive asset to many portfolios.

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The Thomson Reuters US Vanilla Convertible Bond Index has an inception date of December 1993, is a subset of the Thomson Reuters US Convertible Bond Index, and excludes mandatory convertible securities. The Thomson Reuters US Convertible Bond Index includes convertible securities that are denominated in USD, have an issue size of over $300mm, and have underlying stocks that trade on US equity markets.

The ICE BofAML U.S. Corporate Index (C0A0) has an inception date of December 31, 1972, and tracks the performance of U.S. dollar denominated investment grade corporate debt publicly issued in the U.S. domestic market.

The S&P 500 Index is designed to reflect the U.S. equity markets and focuses on the large-cap sector of the market, which includes the 500 leading companies in leading industries of the U.S. economy.

The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.

The MSCI World Large Cap Index captures large cap representation across 23 Developed Markets (DM) countries. With 735 constituents, the index covers approximately 70% of the free float-adjusted market capitalization in each country.

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