



# CONVERTIBLES EDUCATION

STATE OF RHODE ISLAND

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# EXECUTIVE SUMMARY



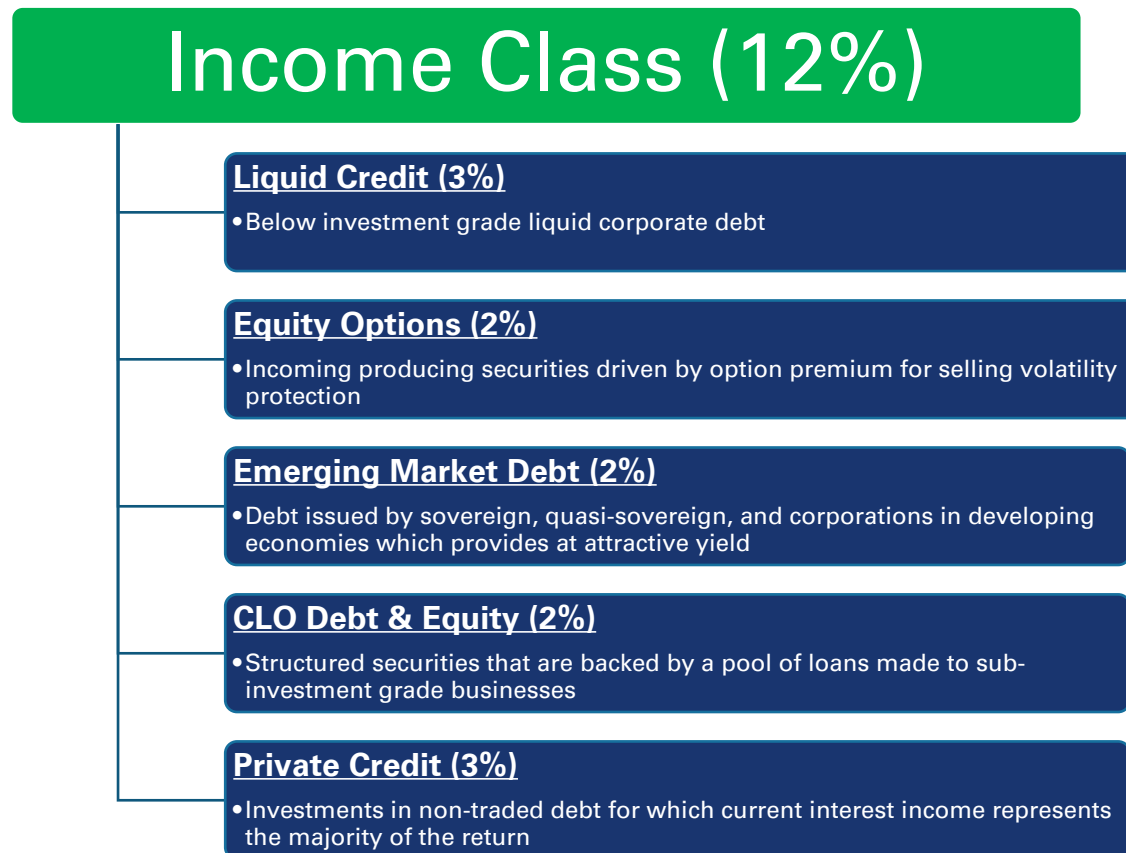
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# WHY CONVERTIBLES COULD MAKE SENSE FOR ERSRI

- **Traditional fixed income returns are expected to continue to trend lower due to structural head winds:**
  - Historically low interest rates
  - A declining trend in yields accompanied by tighter credit spreads across most fixed income asset classes
  - Inflationary pressures potentially eating away at future returns
- **Consistent with our prior discussions, NEPC and ERSRI Staff continue to try to find opportunities that can help mitigate these structural challenges**
  - Equity Options and CLO Equity are two examples to recent changes that reflect our line of thinking
- **Convertibles offer a compelling opportunity for ERSRI to consider:**
  - 1) **Expand Liquid Credit Opportunity Set:** convertibles provide exposure to sectors and issuers underrepresented/inaccessible via the high yield market. Convertible bonds are complementary to ERSRI's existing high yield exposure while expanding the equity-sensitive credit investment opportunity set
  - 2) **Total Return Potential:** convertible returns are not capped like high yield; Historically convertibles have captured 70-85% of the S&P 500 upside with less volatility
  - 3) **Low Interest Rate Sensitivity:** convertibles have exhibited a negative correlation to interest rates

# THE ROLE OF THE INCOME CLASS PORTFOLIO

- **The Income Class portfolio is designed to achieve a meaningful yield premia over the investment grade credit and produce a stable income return stream**
  - As such, the Income Class consists of various yield focused allocations across various asset classes and liquidity types

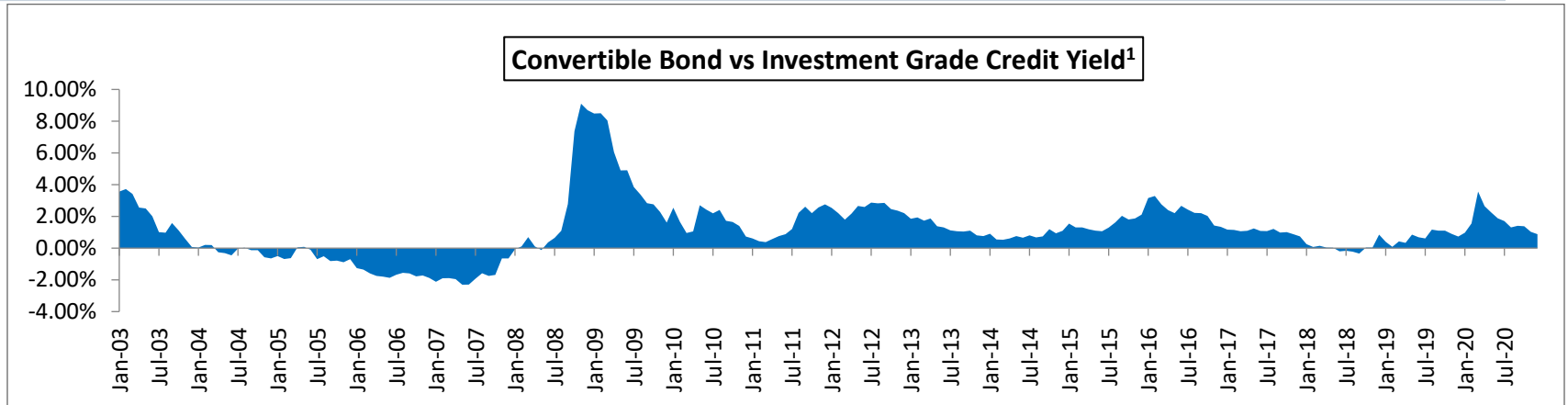


# LIQUID CREDIT ALLOCATION

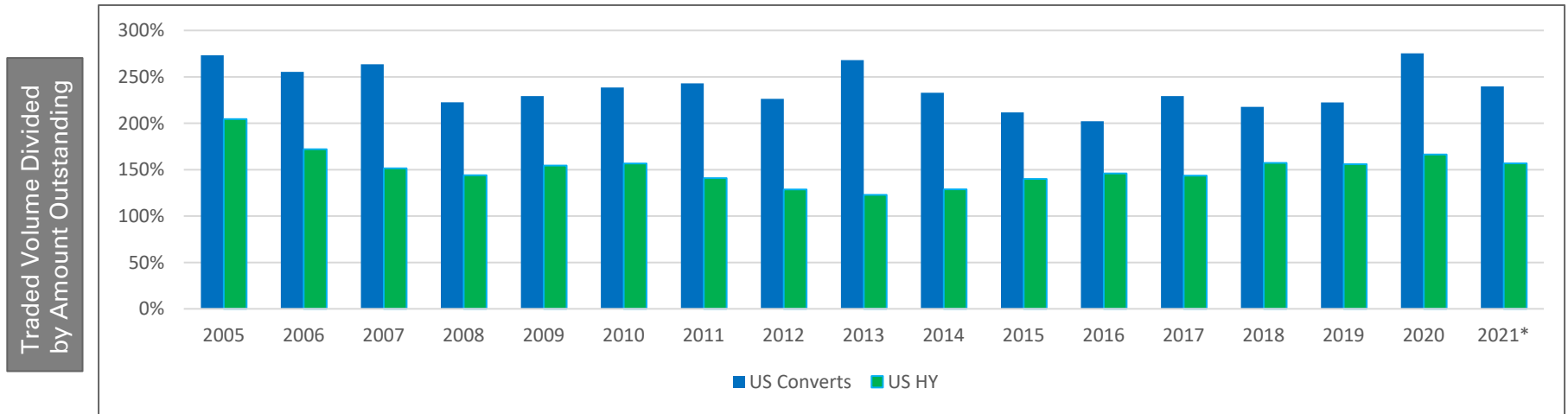
- **As previously mentioned, the Liquid Credit allocation is part of the ERSRI Income Class and seeks to:**
  - Invest in below investment grade liquid corporate debt securities
  - In addition to income generation, Liquid Credit investments may produce return through price appreciation that is driven by economic improvement and issuer performance
- **NEPC & ERSRI Staff have developed this educational overview to examine the Convertible Bond opportunity set and explain how they fit within the Liquid Credit asset class and complement the allocation's existing High Yield exposure**

# YIELD ADVANTAGE & LIQUIDITY

## CONVERTIBLES VS. IG CORP. CREDIT YIELD\*



## CONVERTIBLES VS. US HIGH YIELD LIQUIDITY\*\*



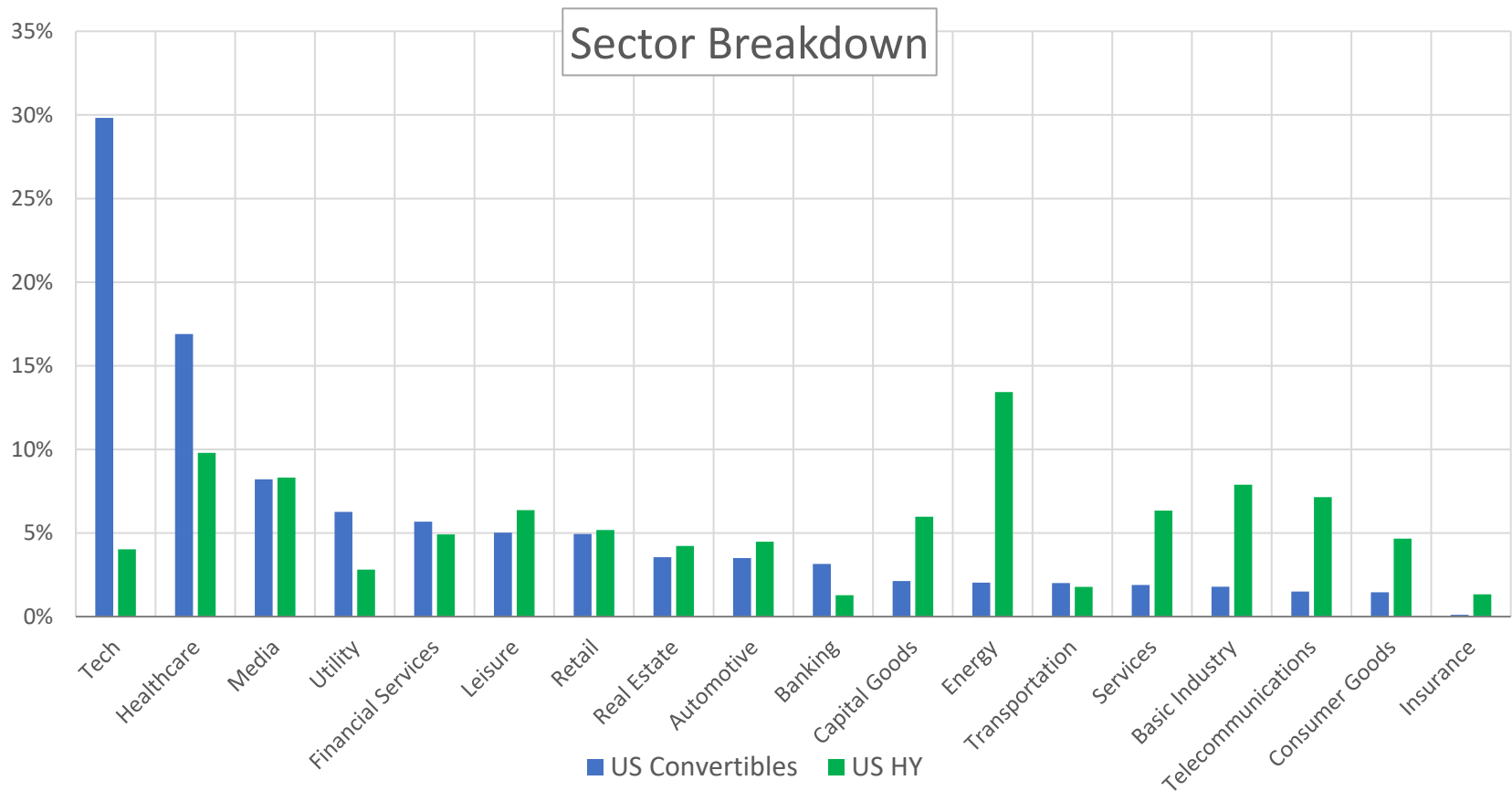
<sup>1</sup>Sources: Bloomberg, Barclays US Convertibles Index, Bloomberg Barclays US Aggregate Bond Index

\*\*Sources: MarketAxess, Barclays Research

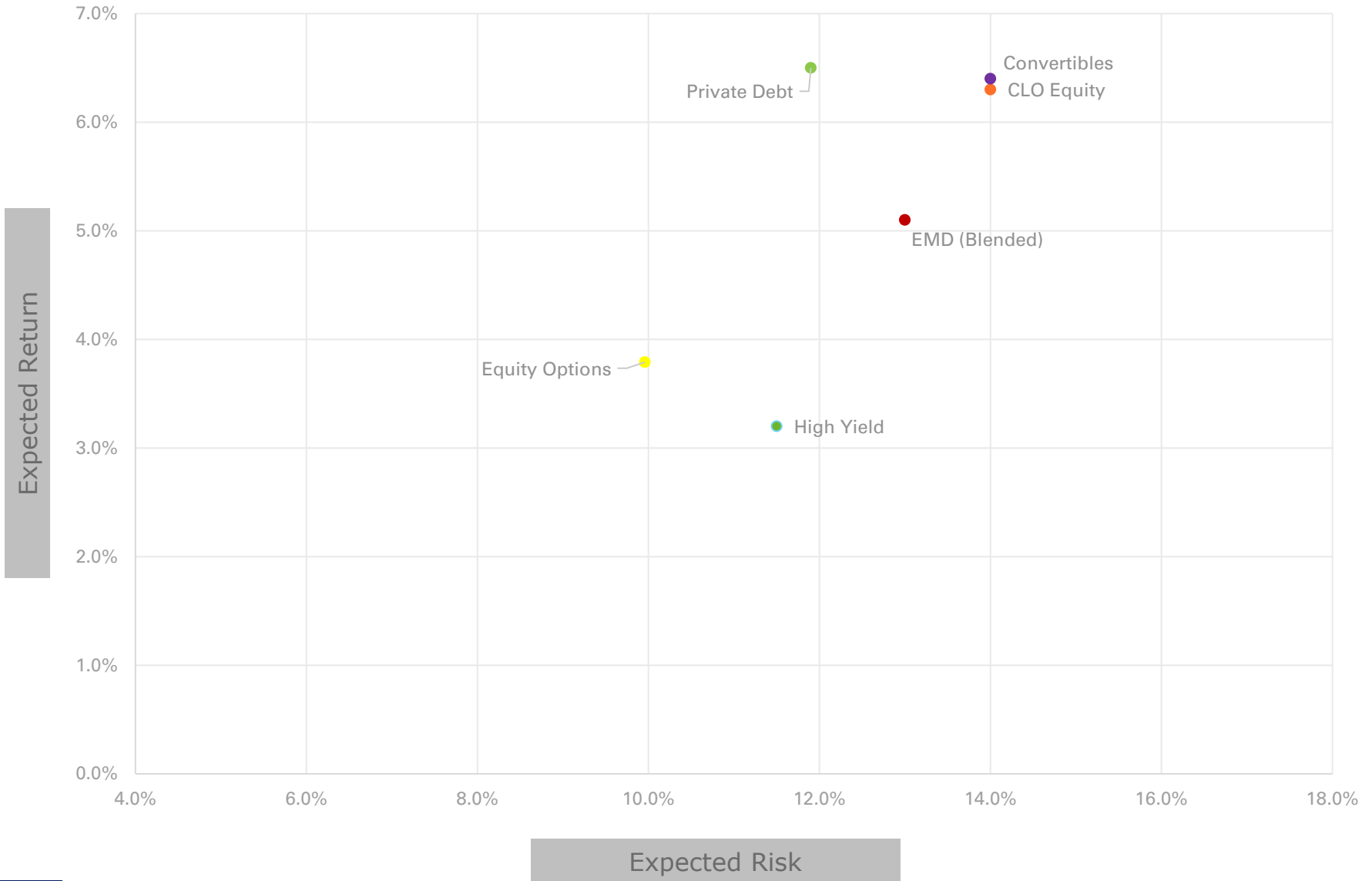


# SECTOR EXPOSURE

- **The sector allocations of Convertibles provide investors with structural exposure to more levered growth companies relative to High Yield**
  - Conversely, US High Yield investors get more exposure to highly levered cyclical companies



# NEPC RETURN EXPECTATIONS FOR INCOME CLASS

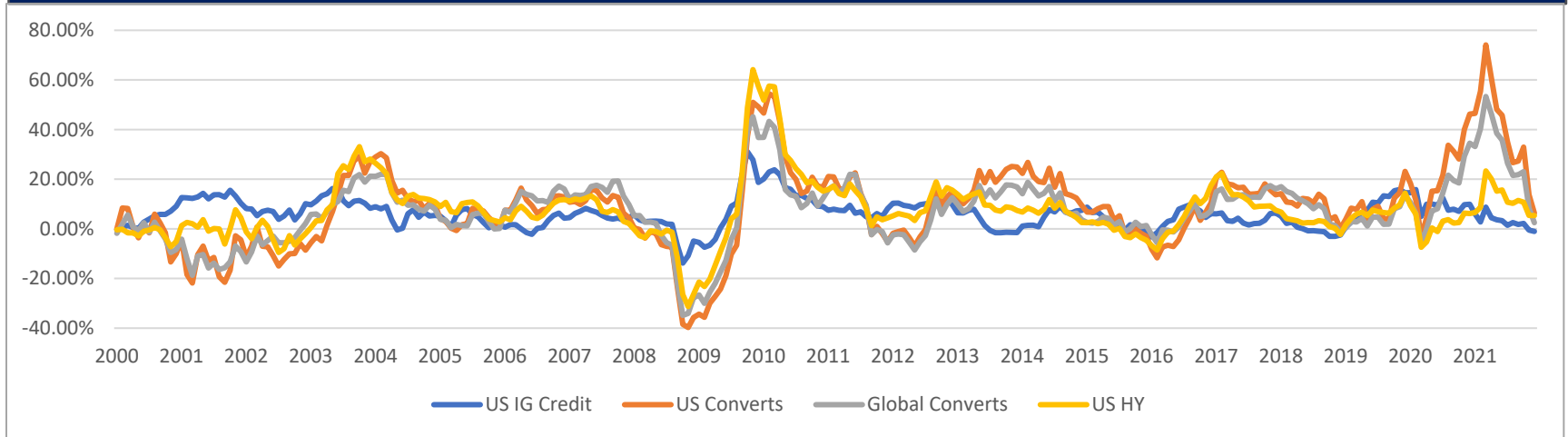


\*The above is based on NEPC's 9.30 expected 10 year returns and standard deviation

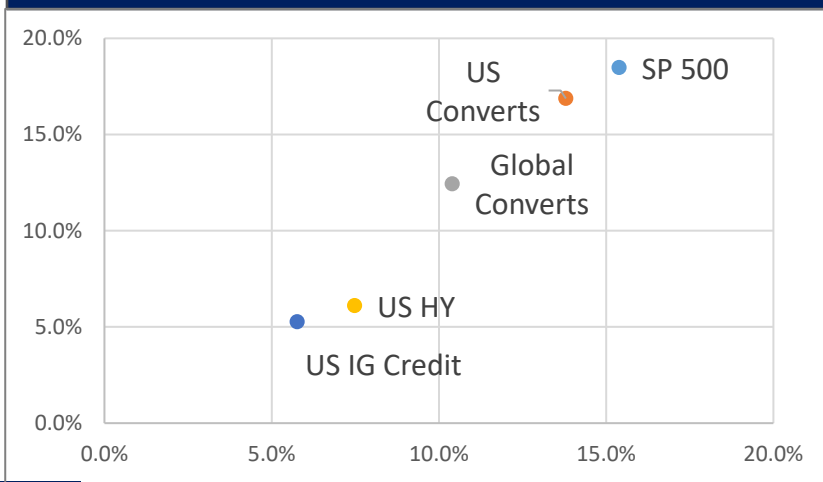


# ATTRACTIVE RETURN POTENTIAL

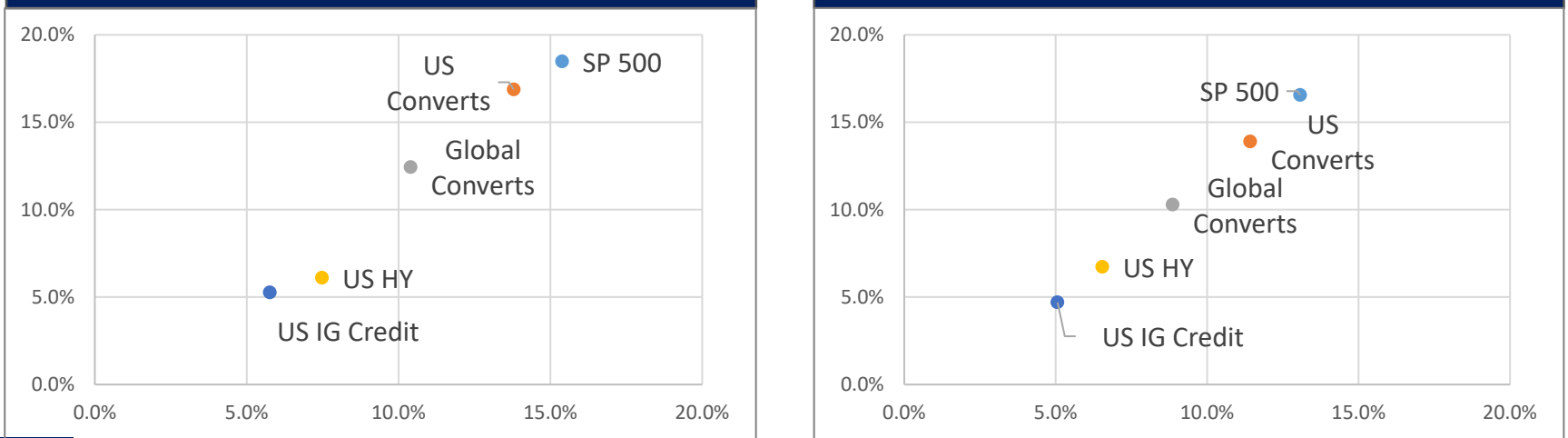
## Rolling 12-month Returns



## 5 Year Risk/Return



## 10 Year Risk/Return

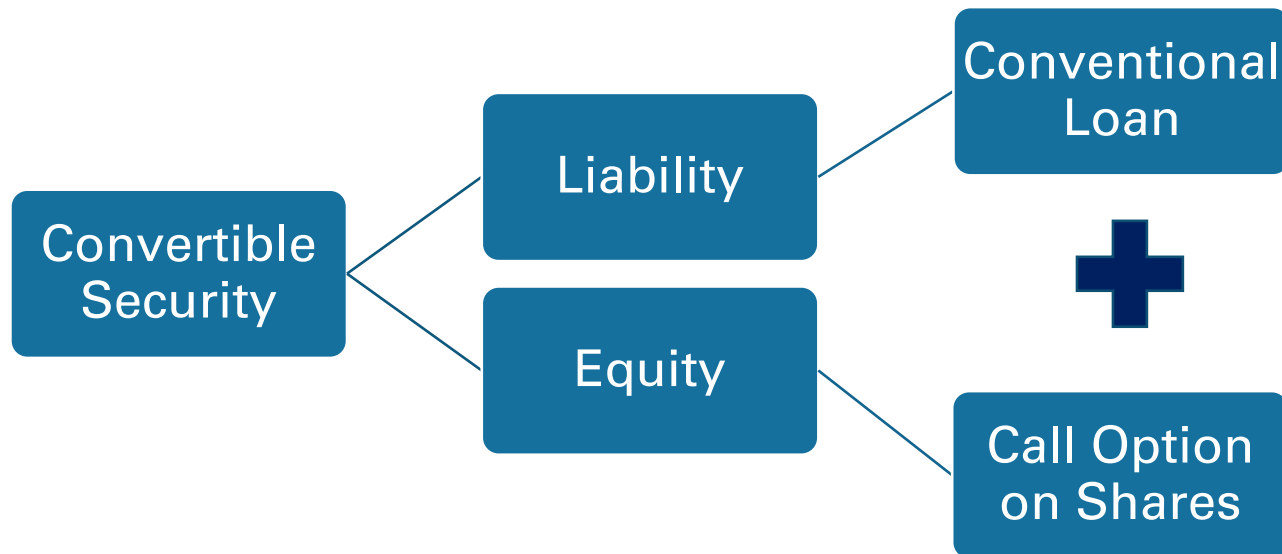


# CONVERTIBLES 101: INTRODUCTION



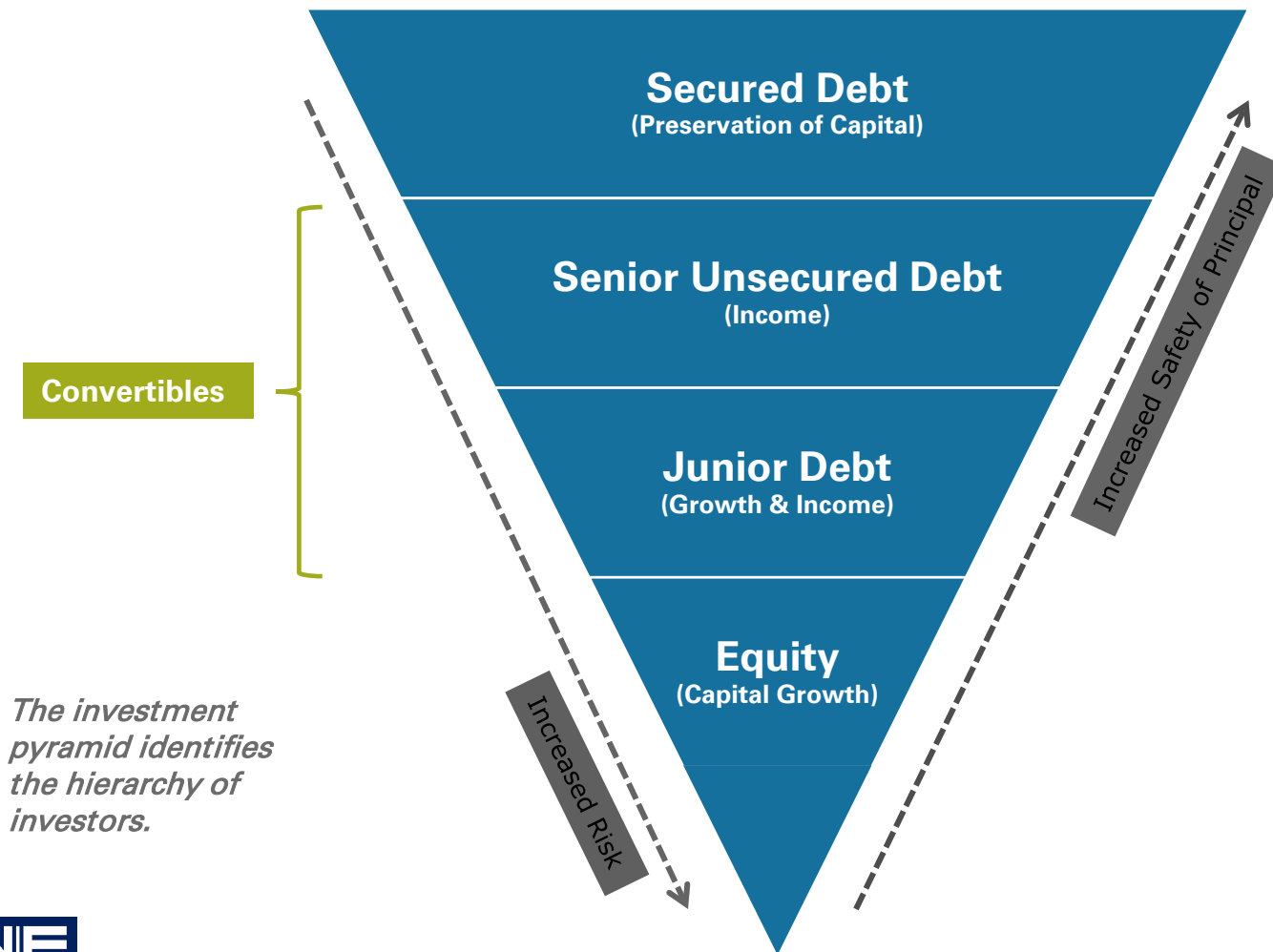
# WHAT ARE CONVERTIBLES?

- **Convertibles are hybrid securities, with a fixed income instrument that can be exchanged for a predetermined amount of the underlying company's common stock during the bond's life**
  - Usually at the discretion of the security holder
- **The fixed income portion provides fixed payments and pays principal, while the equity option has potential stock appreciation**



# UNDERSTANDING CAPITAL STRUCTURE

- **A company's capital structure refers to the way a corporation finances its assets through a combination of equity, debt or hybrid securities**
  - The investment pyramid identifies the hierarchy of investors



# CONVERTIBLE BONDS – 3 CATEGORIES

- **Debt-Like Convertibles**

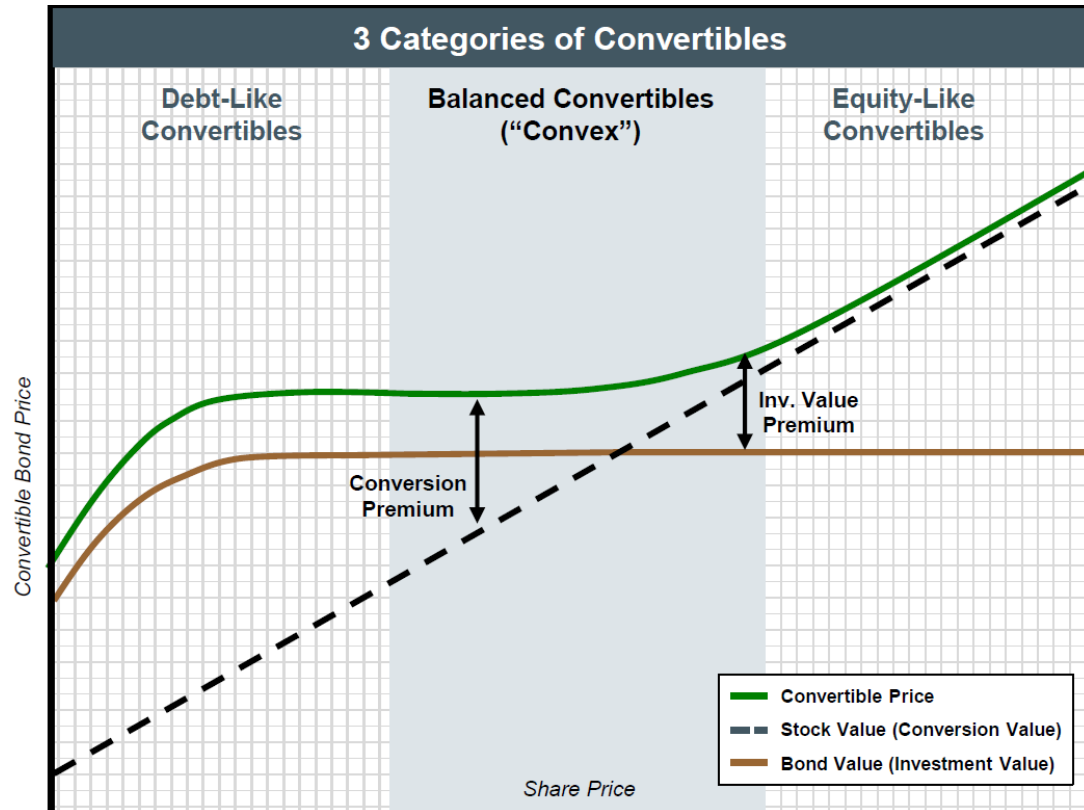
- Sensitive to movements in interest rates and credit spreads via perceived credit quality
- Minimal participation in a rising equity market

- **Balanced Convertibles**

- Retain some fixed income characteristics –beneficial in a declining equity market
- Maintain equity sensitivity – beneficial in a rising equity market

- **Equity-Like Convertibles**

- Highly sensitive to underlying stock price movements
- Provide less downside protection



# RISKS IN THE CONVERTIBLES MARKET

- **Correlation with Equities in Down Markets**

- Because of the equity option in converts, a drawdown in the broad equity market will likely lead to negative performance
  - However, the bond value of converts should provide some downside protection in terms of a floor
- NEPC has provided rolling 12-month drawdowns to reflect Convertible performance relative to the S&P 500 and US High Yield

- **Inflation and Rising Rates**

- The fixed rate characteristics of converts could lead to underperformance in an inflationary or rising rate environment
  - However, converts are generally less sensitive to rate increases than other traditional fixed income including US High Yield
  - Inflation risk is also mitigated by the equity component of convertibles

- **Implementation Approach**

- The choice of implementation approach can significantly affect the risk and return characteristics of a convertible investment
- Depending on whether the equity option is in-the-money or out-of-the money, the strategy may perform more like equities or fixed income. A balanced approach takes a middle ground that retains some fixed income characteristics while still benefiting from a rising equity market

- **Sector Exposure**

- The convertibles market has a high level of exposure to the technology and healthcare sectors (combined 49%). This presents some sector concentration risk, but may offer diversification relative to traditional fixed income and high-yield.

# HOW SHOULD INVESTORS VIEW CONVERTIBLES?

- **A more conservative way to invest in equities or an opportunistic fixed income alternative**
  - Investors are “paid to wait,” earning interest income until the bond matures or stock price rises
  - Unlimited upside potential stock appreciation, while limiting downside risk due to bond “floor”
  - Provides fixed income stream and repays principal upon maturity, subject to underlying credit risk of the issuer
  - Historically, captures greater portion of stocks’ upside performance than downside
- **Value of the Conversion Feature**
  - The conversion feature is the stock’s current price multiplied by the number of shares the convertible bond is exchanged for
  - The conversion feature is a premium that increases as the stock price increases. This is due to the ability of the investor to convert into stock at a higher price

# CONVERTIBLES MARKET DATA

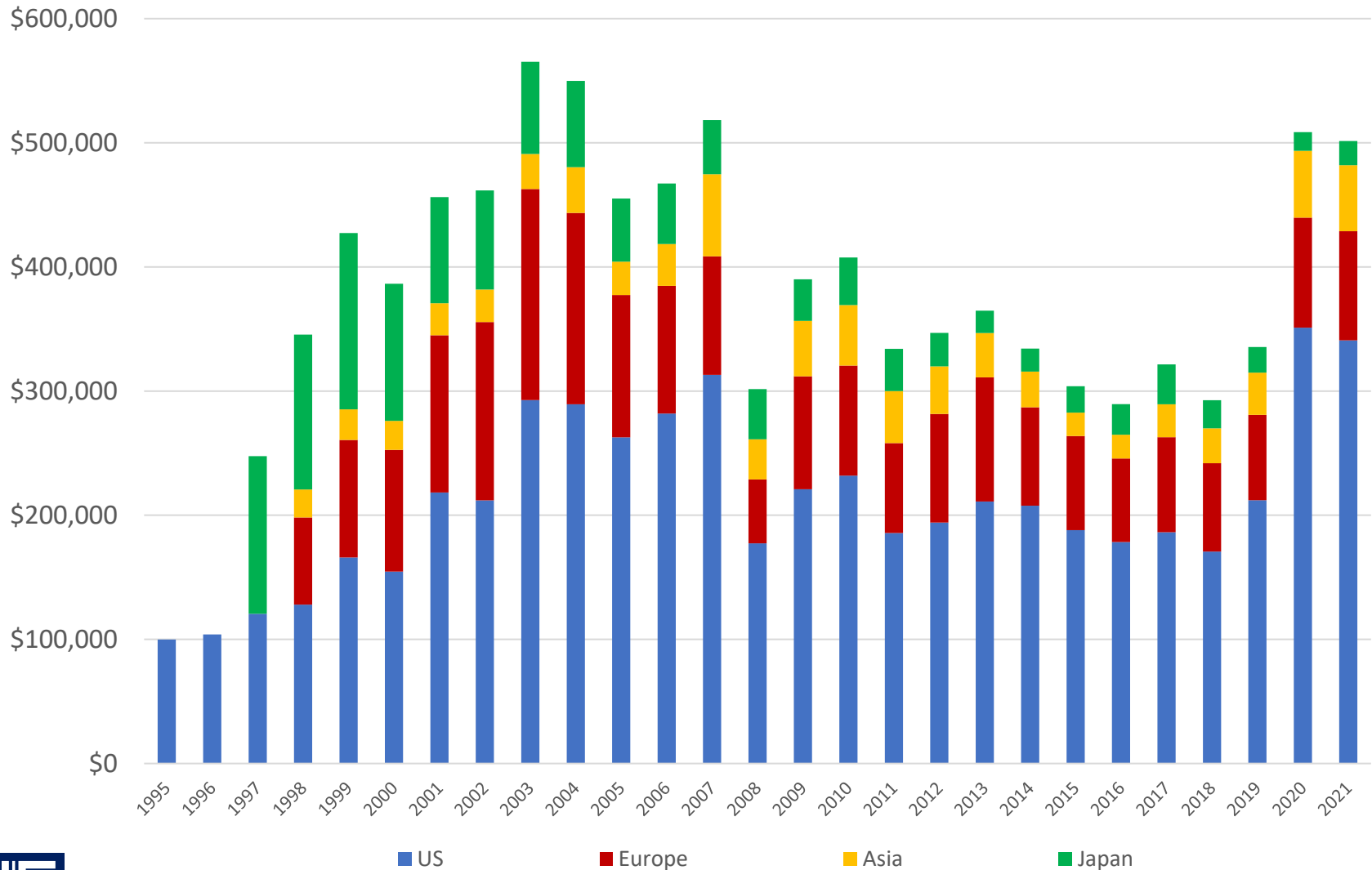


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# CONVERTIBLE BOND MARKET SIZE

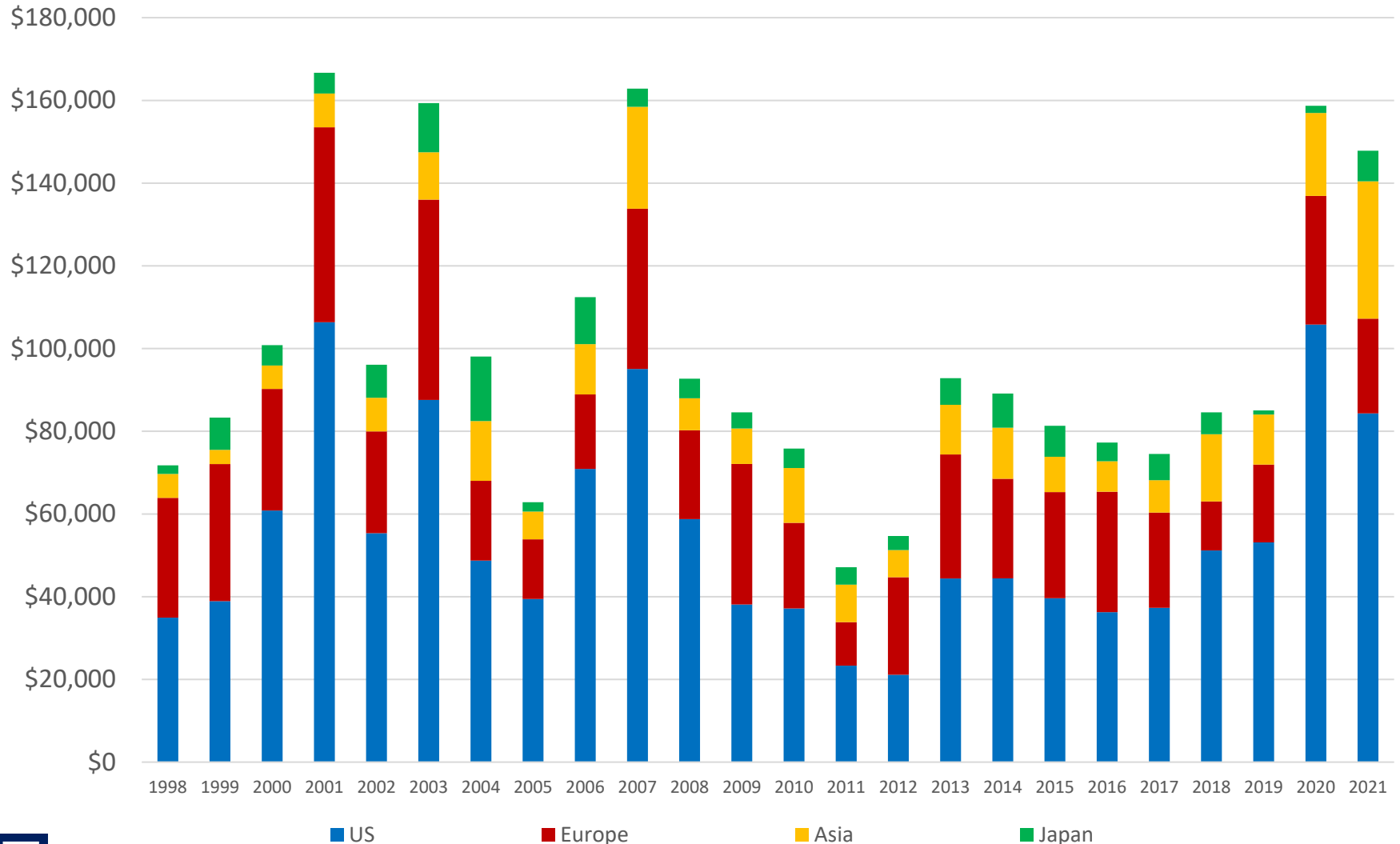
Global Convertible Market Size (millions)\*



\*Source: BofA Global Research, ICE Data Indices; Data as of Dec. 2021

# CONVERTIBLE BOND ISSUANCE

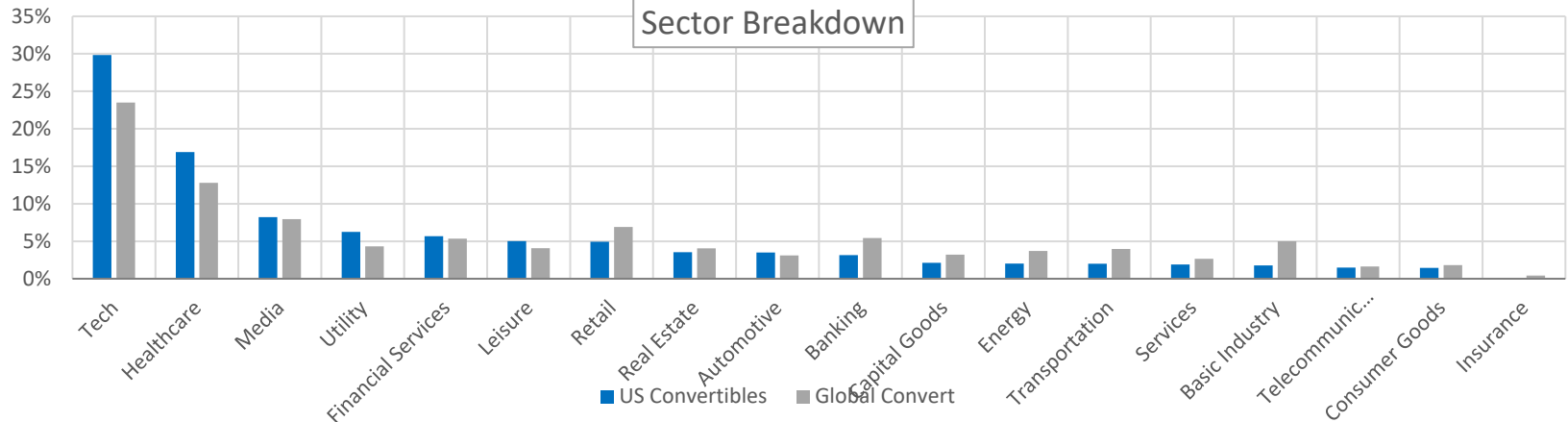
Global Convertible Bond Issuance (millions)\*



\*Source: BofA Global Research, ICE Data Indices; Data as of Dec. 2021

# CONVERTIBLE METRICS

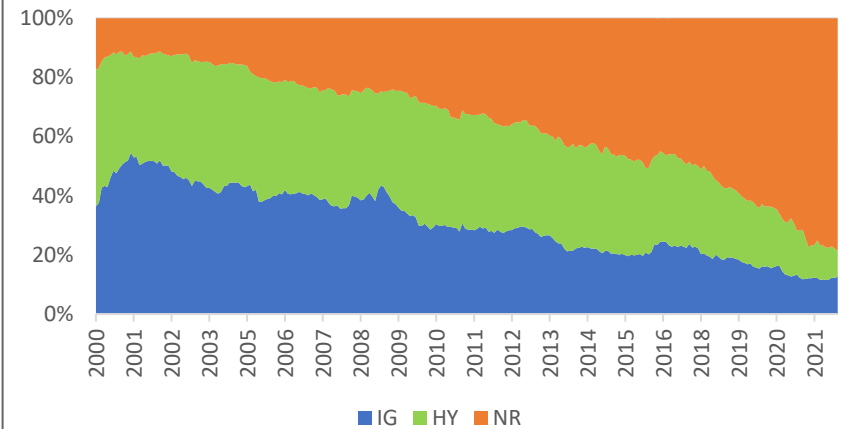
## Convertibles Industry Exposure



## Correlation Matrix

| 20 Years  | UST 10 YR | US IG | US Cvrt | Glb Cvrt | US HY | SP 500 |
|-----------|-----------|-------|---------|----------|-------|--------|
| UST 10 YR | 1.00      |       |         |          |       |        |
| US IG     | 0.37      | 1.00  |         |          |       |        |
| US Cvrt   | -0.41     | 0.45  | 1.00    |          |       |        |
| Glb Cvrt  | -0.44     | 0.46  | 0.96    | 1.00     |       |        |
| US HY     | -0.27     | 0.71  | 0.78    | 0.78     | 1.00  |        |
| SP 500    | -0.43     | 0.28  | 0.89    | 0.84     | 0.69  | 1.00   |

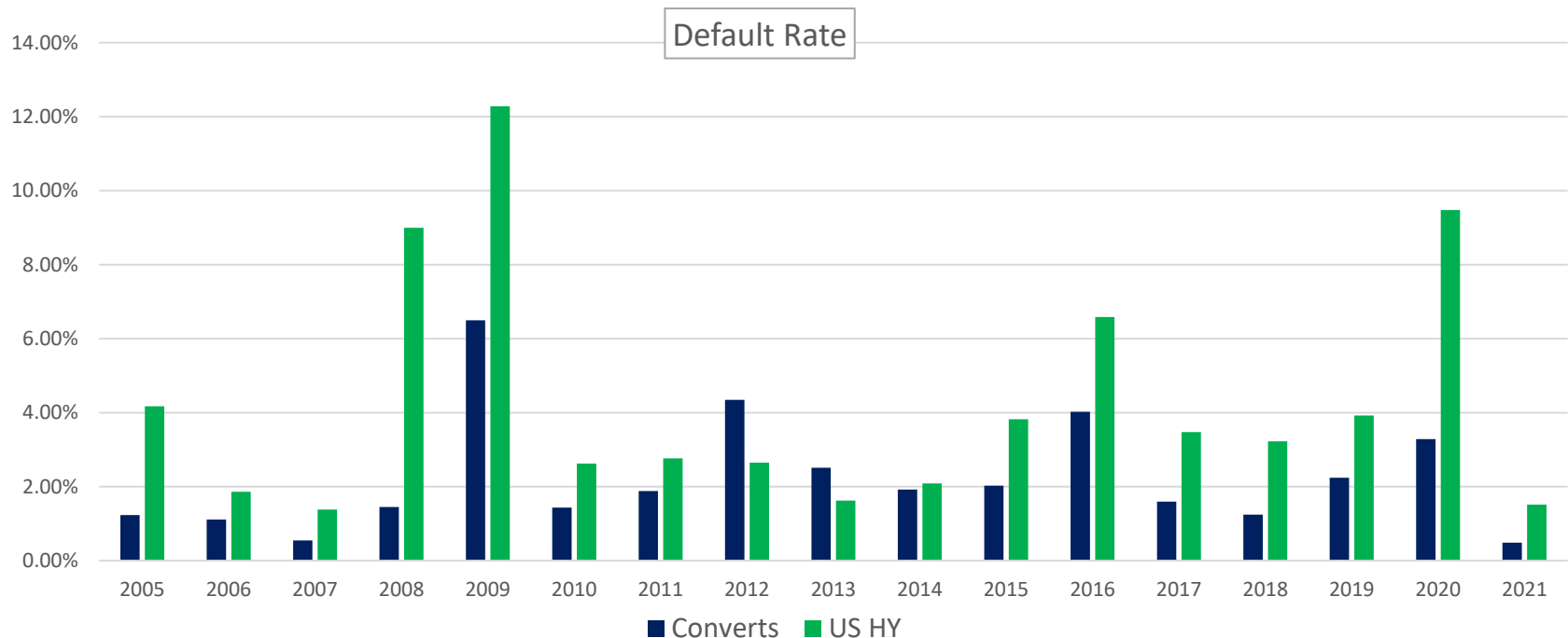
## US Converts Credit Quality



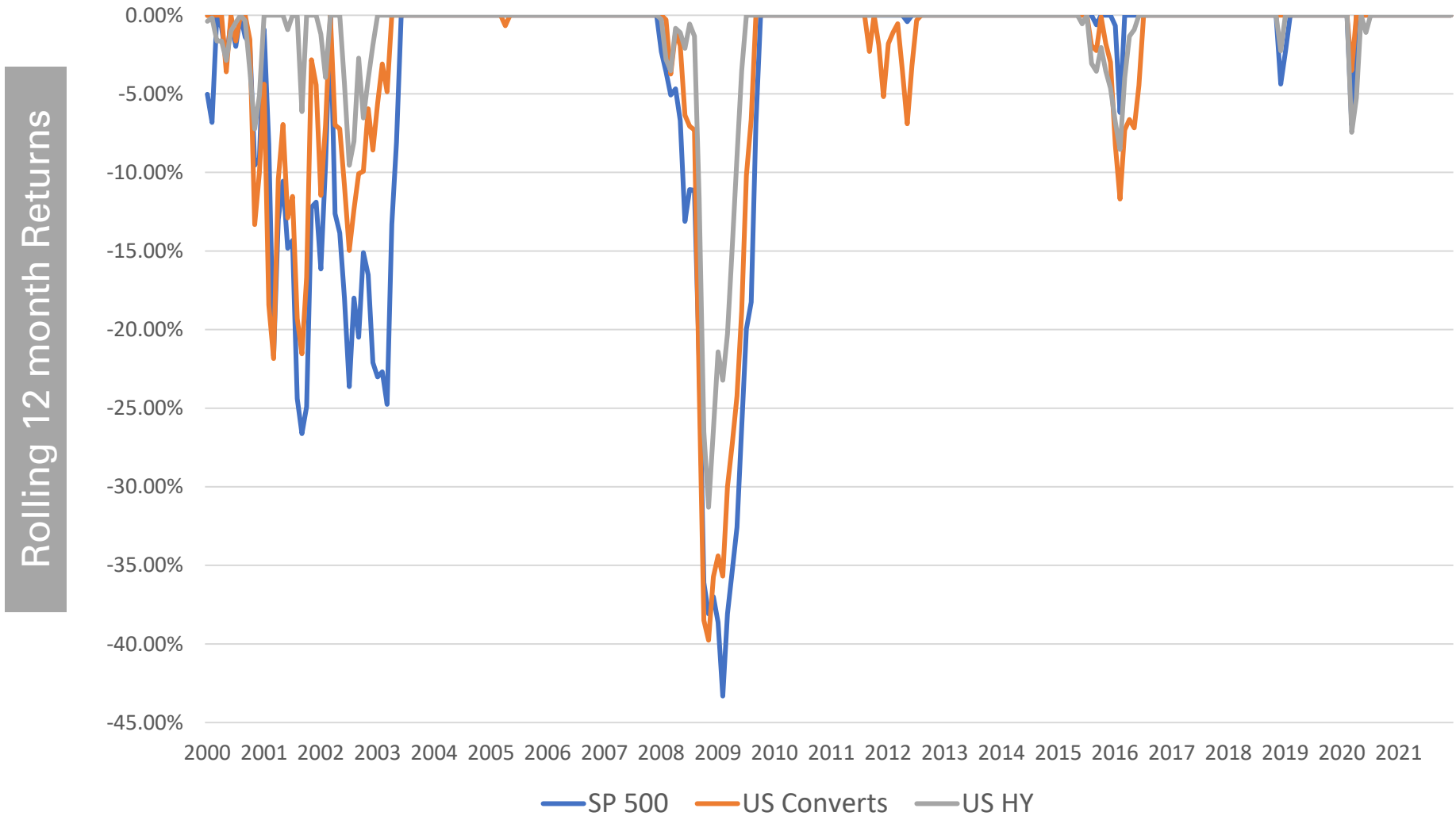
\*Source: BofA Global Research, ICE Data Indices; Data as of 12.31.21

# DEFAULT RATES: US CONVERTS VS. HIGH YIELD

- **Historically, Convertibles have had a lower default rate than High Yield**
  - The average default rate since 2005 for US Convertibles is 2.23% vs. 4.26% for US High Yield



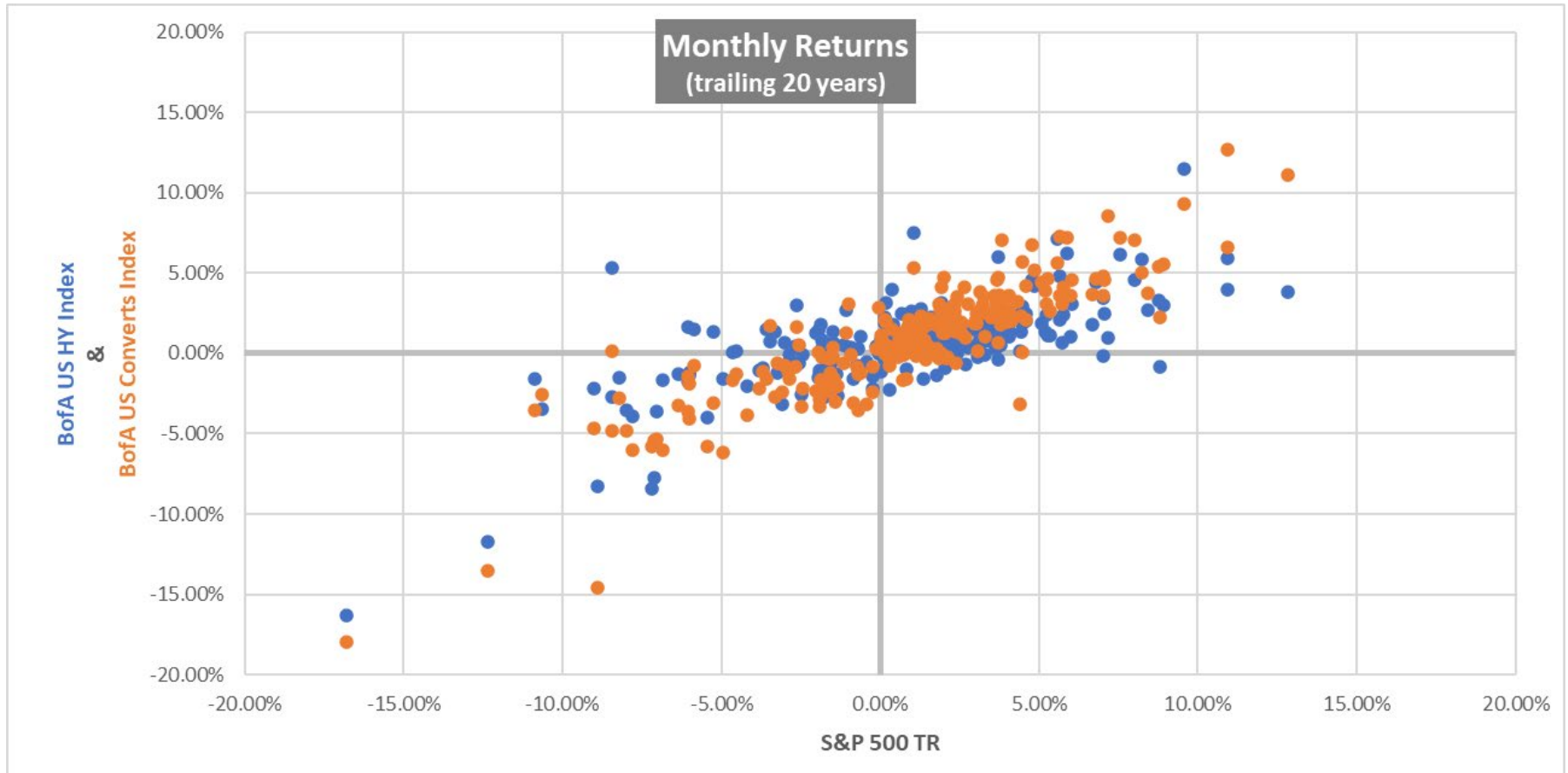
# ROLLING 12 MONTH DRAWDOWN



\*Source: BofA Global Research, ICE Data Indices; Data as of 12.31.21



# MONTHLY CONVERTIBLE BOND RETURNS VS. S&P500

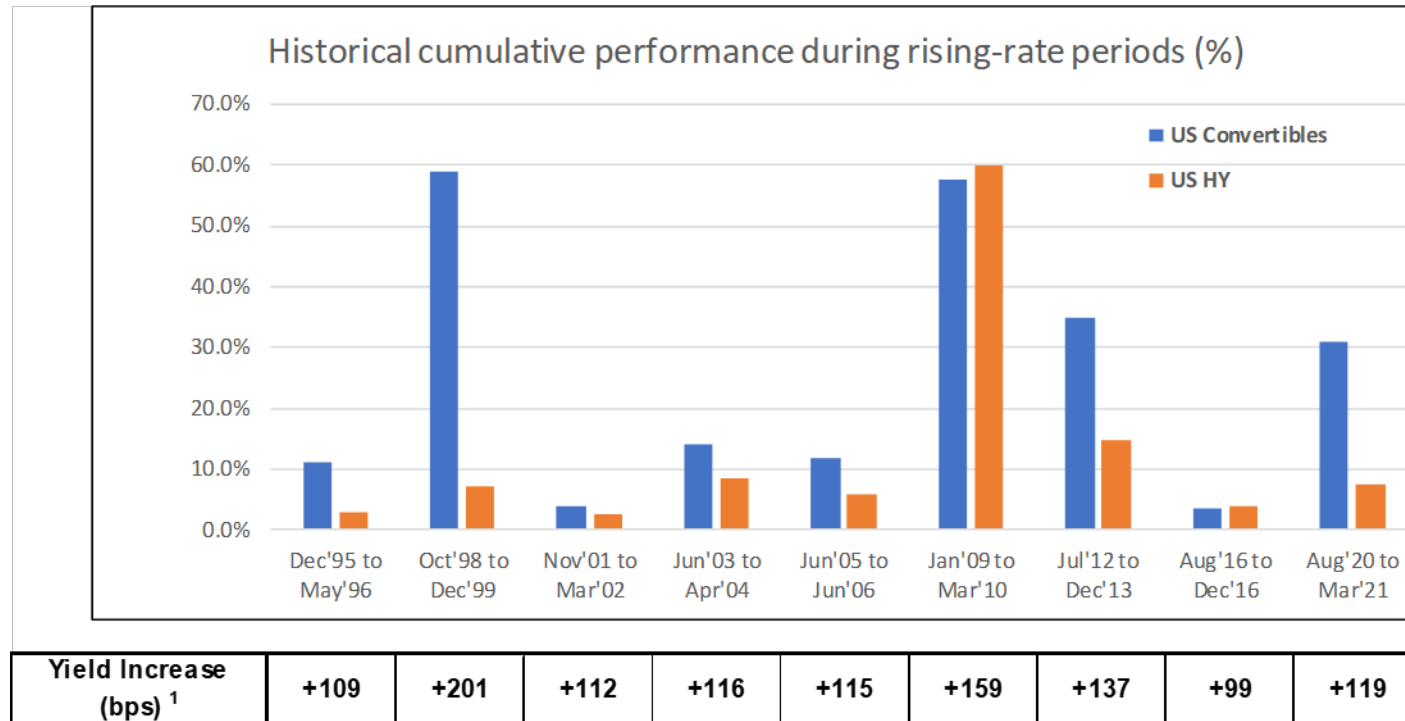


| Trailing 20-year Period (as of 12.31.2021) |         |            |          |         |          |       |
|--|---------|------------|----------|---------|----------|-------|
| S&P 500 Index Return Buckets               | <= -10% | -10% > -5% | -5% > 0% | 0% > 5% | 5% > 10% | > 10% |
| # of Observations                          | 4       | 19         | 55       | 132     | 27       | 3     |
| Avg S&P 500 Return                         | -12.7%  | -7.1%      | -2.0%    | 2.1%    | 6.8%     | 11.6% |
| Avg BofA US Convertible Return             | -9.4%   | -4.4%      | -1.4%    | 1.7%    | 4.9%     | 10.1% |
| Avg BofA US HY Return                      | -8.3%   | -2.3%      | -0.3%    | 1.2%    | 3.1%     | 4.6%  |

\*Data as of 12.31.21



# CONVERTIBLE PERFORMANCE W. RISING RATES





# APPENDIX





# APPENDIX – TERMS & DEFINITIONS

| Term                             | Definition  |
|----------------------------------|---|
| <b>Bond Value</b>                | The present value of the income stream of the bond +its redemption value, (discounted by credit spread)   |
| <b>Convexity</b>                 | Convertible security which has the potential to capture more of the upward move in the underlying stock’s equity than the downward move in the underlying stock’s equity  |
| <b>Capture Ratio</b>             | The up capture (expressed as a %) divided by the downward capture. A ratio of 1% or more is considered favorable (Ex: 80% upside capture & 60% downside capture has a <i>capture ratio</i> of 1.33%)  |
| <b>Conversion Premium</b>        | The premium by which the price of a convertible security exceeds the value of the underlying stock into which it may be converted. This number is expressed as a percentage   |
| <b>Conversion Ratio</b>          | The number of common shares the convertible holder has the option to convert into. The conversion ratio is written in the original indenture when the security is brought to market by the issuer. (e.g. Convertible security can be converted into 30 shares of common stock. Conversion Ratio = 30 shares.) |
| <b>Conversion Value (Parity)</b> | The market value of the shares into which a convertible security can be converted. [Conversion Ratio] x [Stock Price]= Conversion Value (Parity). (e.g. 30 shares x \$28 = \$840).  |
| <b>Delta</b>                     | The price of a convertible is sensitive to movements in the underlying equity. Delta measures the rate of change of its price with respect to movements in the underlying common stock.   |
| <b>Investment Value Premium</b>  | Premium by which the price of a convertible security exceeds its bond value (also called bond floor)<br><i>Investment Value Premium (%) = (Bond price –Bond Value) ÷Bond Value</i>  |
| <b>Mandatory Convertible</b>     | A type of convertible bond that has a required conversion or redemption feature. Either on or before a contractual conversion date, the holder must convert the mandatory convertible into the underlying common due to the call option on the bond   |