
CONVERTIBLE MARKET OUTLOOK 2022

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Recap of 2021

After a stellar 2020 when convertible bonds returned 46.2%¹ (as measured by the ICE BofA All US convertible Index - VXA0) and outperformed the S&P 500 by more than 25%, the asset class had a more modest 2021. In 2021, the VXA0 returned 6.34%, which outperformed most fixed income indices but underperformed most equity indices as shown below:

2021 Annual Performance¹

	Return
The ICE BofA All US convertible Index - VXA0	6.34%
S&P 500	28.68%
Russell 2000	14.78%
Bloomberg Barclays High Yield Bond Index	5.28%
Bloomberg Barclays US Corporate Inv. Grade Bond Index	-1.54%
Bloomberg Barclays Intermediate Treasury Bond Index	-1.72%

The S&P 500 outperformed most indices in 2021. Large cap stocks performed well and domestic stocks once again outgained international stocks. The VIX (CBOE volatility index) finished the year near the year's low at 17.22 but had numerous spikes throughout the year due to periodic Covid, inflation, and China fears. The credit markets remained strong throughout the year with spreads tightening a bit and finishing the year near historic lows. The S&P 500 maximum drawdown during the year was less than 6%². This is somewhat misleading as the average U.S. stock experienced significant drawdowns as there were several intense factor/sector rotations during the year.

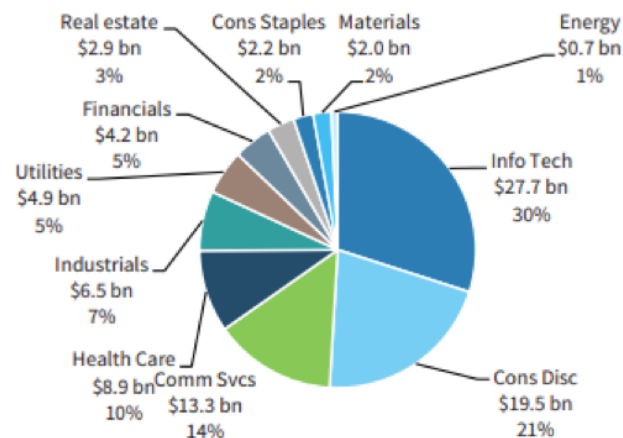
1. Source: Bloomberg, BofA Global Research, ICE Data Indices LLS annual returns as of 12/31/2021 unless otherwise noted

2. Source: Bloomberg, year to date maximum drawdown as of 12/31/2021

2021 started off similarly to the 2nd half of 2020, with both growth stocks and reopening stocks outperforming and driving strong convertible bond returns. However, by mid-February, growth stocks faced selling pressure due to a spike in interest rates and elevated equity valuations. This had a negative impact on convertible bond returns due to their outsized exposure to the Technology and Healthcare sectors. Most reopening stocks, another segment of the market where convertibles have high exposure, peaked in the Spring of 2021 as the Delta variant emerged. This was another drag on convertible bond returns.

Mega cap technology stocks were the biggest driver of return for the S&P 500 in 2021 while small and mid-cap growth underperformed large cap growth significantly for the year. The fact that convertibles have an underweight to mega cap growth companies was a contributor for their underperformance relative to the S&P 500.

After a record year of issuance in 2020 totaling \$113.7b, the convert market followed it up with another strong year with \$93.5b of total issuance³. As shown in the chart below and similar to the prior year, there was a diverse mix of issuers with many cyclical companies coming to the market in addition to the historically more common convert issuers in the Info Tech and Healthcare sectors.



Source: Barclays Research. As of 12/15/2021

3. Source: Barclays Research, year to date issuance as of 12/31/21

Convertible Asset Class Outlook for 2022

SSI's Expected Return Estimates⁴

S&P EPS (Earnings Per Share) est. Growth '22	+14%
Convertible Issuers est. EPS Growth	+20%
Convertible Universe Delta	57%
P/E Contraction	10%
Convertible Universe Current Yield	1.8%
Convertible Total Expected Return	6.3%

Higher interest rates and lower credit spreads offset each other
8% underlying stock appreciation $(1.20 \times 0.90) - 1$
Convert Total Return = 4.56% + 1.8% yield = 6.33%

SSI expects mid-single digit positive gains for equity markets in 2022. GDP and EPS growth will certainly decelerate from '21 levels due to base effects, but growth rates should still exceed historical averages. The decline in fiscal stimulus relative to 2021 will be a headwind to GDP growth but this will be offset by a strong job market, record consumer net worth, accelerating bank loans, and a high savings rate. Also, some 2021 demand has been deferred to 2022 due to supply shortages. A prime example is automobiles where SAAR (US Auto sales total annualized) averaged under 13m units the last 5 months of last year when true demand was likely closer to 18m⁵. Business inventory levels are at very low levels and there should be significant restocking later this year as bottlenecks improve. Another catalyst for outsized growth is a further reopening of the global economy, which is likely due to the sharp drop in Omicron cases we have seen in South Africa, London, and other locations that had an early Omicron outbreak.

2022 S&P 500 EPS is expected to grow +9.4% per Factset's estimate on 1/13/22. SSI's EPS estimate calls for +14% growth⁶. We expect revenues to beat estimates due to high nominal GDP growth. Profit margins should remain near historic high levels due to most companies having strong pricing power, with the ability to pass on cost increases to the consumer.

4. Source: Bloomberg and SSI Internal Research, based on data as of 12/31/2021. Projections based on a combination of Bloomberg data and SSI Internal calculations

5. Source: U.S. Bureau of Economic Analysis, US Auto Sales Total Annualized [SAAR], retrieved from FRED, Federal Reserve Bank of St. Louis, 1/19/2022

6. Source: Factset, SSI Internal Research, accessed on 1/13/2022

The stock market will likely see some multiple contraction in 2022, as it did in 2021 (S&P 500 returned +28.68% with EPS growth expected to finish the year at +45.3%)⁷. This is due to rising interest rates, high inflation, and a more hawkish Fed. It is now expected that the Fed will end the taper in March, will start quantitative tightening soon after, and will hike rates 3 or 4 times in 2022. This aggressive projected timeline has resulted in an increase in volatility and a sharp sell-off in growth stocks that started late last November.

Volatility will likely stay elevated until inflation peaks and the expected number of Fed rate hikes stabilizes. On an absolute basis, the Fed continues to be highly accommodative as real Fed Fund rates hover around -7% (Fed Fund Rate – CPI). This represents an enormous challenge for fixed income investors as the loss in purchasing power poses a significant headwind. The last time the CPI reached the level of 7% y/y, as it did in Dec'21, the Fed Fund rate was more than 13%, in 1982, instead of the current 0.00-0.25%. In addition, the M2 money supply grew by +13.1% y/y in November 2021, well ahead of historical averages, continuing to support inflationary pressures in 2022⁸.

Other likely contributors to volatility this year are:

- Covid: The Omicron strain looks like it is peaking but there is always the risk of another strain emerging later in the year.
- Geopolitical: Russia/Ukraine, China/Taiwan, a black swan event
- China economic slowdown: Potential contagion from overleverage and defaults in the property sector. Weak retail spending. Increased Government regulation.
- Mid-term elections: The market is typically more volatile in mid-term election years with lower returns. According to Bespoke, the S&P 500 averages 5.03% in mid-term election years since WW-II, compared to an average 10.26% return in all other years⁹.

7. Source: Bloomberg, data as of 12/31/2021

8. Source: Board of Governors of the Federal Reserve System (US), Federal Funds Effective Rate, U.S. Bureau of Labor Statistics, Consumer Price Index for All Urban Consumers, retrieved from FRED, Federal Reserve Bank of St. Louis; 1/19/2022

9. Source: Bespoke Premium Research, accessed 1/19/2022

Growth stocks have been laggards of late, primarily due to the sharp rise in interest rates. While it's impossible to know when the sell-off in growth stocks will conclude, we believe there will be very attractive opportunities in the segment in the near future. Equity valuations have dropped significantly and hedge fund positioning has corrected. Tightening monetary policy alone does not mean growth stocks will continue to underperform. During the last tightening cycle (2017-2018), IWF (iShares Russell 1000 growth), IWP (iShares Russell mid-cap growth), IGV (iShares Expanded Tech-Software), all outperformed the S&P 500, as shown in the table below.

2017-2018 Cumulative Total Return¹⁰

	Return
IWF - iShares Russell 1000 Growth	+18.8%
IWP - iShares Russell Mid-Cap Growth	+18.9%
IGV - iShares Expanded Tech-Software	+59.8%
S&P 500	+16.5%

We believe disruptive growth companies will continue to offer outsized long-term returns despite some periods of high volatility and it is likely that the world returns to a low nominal GDP growth environment in 2023. The factors that influenced the Pre-Covid environment, such as excess debt, demographics, and low productivity, have not gone away. In this climate, where there is a scarcity of growth, disruptive fast paced companies should benefit. We believe the ideal way to gain exposure to disruptive growth is through convertible bonds. Relative to equities, convertibles provide a lower volatility, principal protection, and positive asymmetric return profile due to the embedded structure of the asset class.

The convertible universe has meaningful exposure to structural growth companies in the Technology and Healthcare sectors that are disruptors with large addressable markets and potential for long lasting high growth. Some of the major structural growth themes that have heavy representation in the convertible universe are:

- Digitization of the economy and cloud computing/SAAS (software as a service)
- Genomics, personalized medicine, gene therapy, telehealth, and biotech M&A
- 5G build out, data center reacceleration, artificial intelligence, and automated mobility
- Green Energy: Solar, hydrogen fuel cells, EVs

¹⁰. Source: Bloomberg, Bespoke Premium Research, returns from 1/1/2017 to 12/31/2018

Positioning

SSI remains constructive on the asset class in 2022. The SSI Investment Team is currently managing portfolio construction by deploying a barbell approach to exposures of growth with truncated downside and cyclical exposure to companies experiencing tailwinds from a reopening economy.

Within Technology, we continue to favor semiconductor companies due to rising earnings estimates, reasonable valuation, and the expected growth in key end markets (data center, autos, 5G). We currently have a slight underweight in software although we have selectively added some exposure recently after the deep sell-off that started last November. In Healthcare, we have an overweight to medical device companies with innovative new products. We remain underweight Biotech as the news flow regarding FDA decisions and Phase II/III data has been unfavorable over the last year or so.

We currently favor cyclical areas of the market as we expect above consensus GDP growth for 2022. The Energy and Materials sectors should benefit from high inflation, low equity valuations, and improved profitability. Reopening/travel stocks are likely to outperform as Covid cases are expected to decrease, eventually leading to the removal of travel restrictions. We have concerns in the Retail industry as it is a group vulnerable to margin pressure due to high cost inflation. At this point in the economic cycle we believe it is still too early to have significant exposure to defensive areas of the market such as Consumer Staples and Utilities.

The Case for Convertibles in 2022 and Beyond:

- The challenge of a loss in purchasing power and negative real rates requires a renewed vigor in the structure of portfolio allocations. Portfolio structure can be modified to address this but will require sharply reduced allocation to risk from inflation and rising interest rates and increased exposure to real economy or credit risk.

- Convertibles exhibit strong balance sheets supported by robust new issuance over the past few years and historically low default rates. Currently, default rates for convertibles are the lowest they've been since prior to the global financial crisis in 2008 (US Convertible market LTM default rate as of 12/31/21 was 0.49%)¹¹.
- Due to strong new issuance, the convert market has shown impressive growth over the last few years. As shown below, the size of the market has doubled in the last 3 years, creating more opportunities to invest in Convertibles with an attractive risk return profile.

ICE BofA All US Convertibles

Index (VXA0)¹²

12/31/2018

12/31/2021

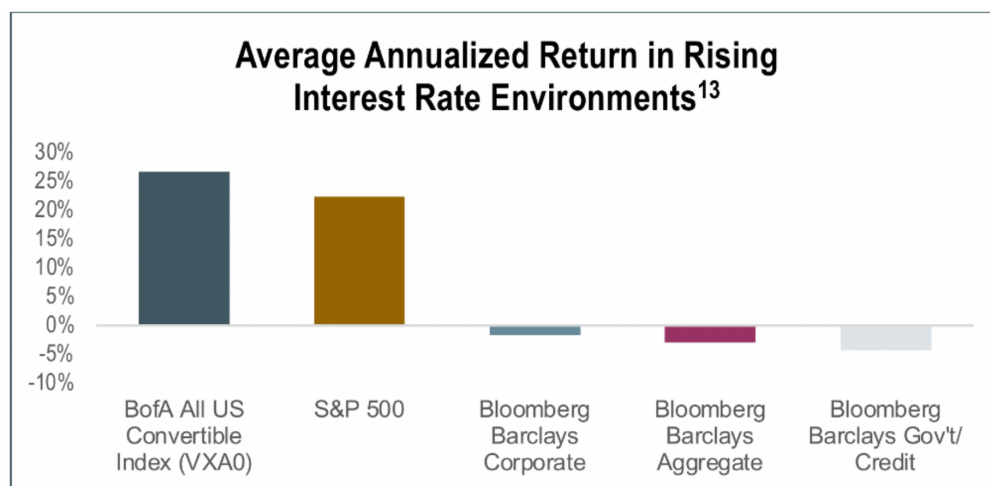
Market Value of U.S. Convertible

Market (\$mn)

\$170,727

\$340,913

- Convertibles are a constructive solution and a diversifier within a fixed income allocation. They have a significantly lower duration than Corporate bonds or the Barclays Aggregate and thus have historically outperformed in rising interest rate environments (see chart below). The issuer composition for convertibles is very different than high yield bonds and thus provides effective diversification. In addition, the historical default rate for convertibles is significantly lower than high yield bonds.



11. Source: BofA Global Research, Global Convertibles Chartbook, 1/03/2022

12. Source: BofA Global Research, Global Convertibles Chartbook, 1/03/2022

13. Source: SSI internal research; ICE BofA Convertible Research; Bloomberg; Barclays. Rising interest rate environment periods based on SSI internal research/evaluation where the 10-Year Treasury rises at least 100 bps in a twelve-month rolling period. Please note: Rising interest rate environment date ranges located on "Notes" page in Appendix section

- Convertibles are a great fit for low vol equity allocations. A low volatility quant equity strategy is likely to be skewed in favor of Utilities, Consumer Staples, and REITS, with underweights in Technology and Healthcare. By contrast, convertibles have a high representation in Technology and Healthcare, along with underweights in Consumer Staples and Utilities. Therefore, convertibles can provide meaningful diversification benefits to a portfolio, along with the ability to significantly truncate the potential volatility from exposure to these high growth sectors.
- The most compelling reason to own convertible bonds is its long-term risk-adjusted performance against other asset classes, as shown in the chart below. The convex nature and low duration characteristics of Convertibles provide an improved risk/reward profile to equities and corporate bonds, with more enhanced downside protection than common equity positions, and less interest rate risk than most other fixed income investments.

20 Years: US Risk Adjusted Returns¹⁴

As of December 31, 2021

	Annualized Return	Standard Deviation	Sharpe Ratio
ICE BofA All US Convertible Index (VXA0)	9.24%	12.20%	0.66
S&P 500 Index	9.52%	14.61%	0.57
Russell 2000 Index	9.35%	19.45%	0.42

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Appendix

Average Annualized Return in Rising Interest Rate Environments Date Ranges

Analysis Period Abbreviated Date Range	Analysis Period Extended Date Range	Analysis Period Abbreviated Date Range	Analysis Period Extended Date Range
12/89 - 4/90	12/21/89 - 4/30/90	12/08 - 6/09	12/30/08 - 6/10/09
10/93 - 11/94	10/8/93 - 11/18/94	10/10 - 2/11	10/6/10 - 2/16/11
12/95 - 6/96	12/31/95 - 6/13/96	7/12 - 4/14	7/24/12 - 4/29/14
10/98 - 1/00	10/8/98 - 1/21/00	7/16 - 2/17	7/8/16 - 2/14/17
10/01 - 4/02	10/31/01 - 4/1/02	9/17 - 4/18	9/7/17-4/25/18
6/03 - 6/06	6/3/03 - 6/28/06	4/20 - 3/21	4/1/20 - 3/31/21

14. Source: BofA Global Research, ICE Data Indices LLS, Bloomberg, data as of 12/31/2021