

The US High Yield Market: Characteristics of the BBG HY Very Liquid Index (VLI)

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Quick Read

High yield bonds can play a key role as a strategic long-term investment and a mainstay allocation in well diversified portfolios. Over the past twenty years, high yield securities have provided equity-like returns with lower volatility and less sensitivity to interest rate movements. The rating quality of the overall market has improved: The percentage of BB-rated bonds in the U.S. HY market is near a 10-year high at 50.1%, while the number of CCC-rated credits declined steadily during the past decade and are currently at around 12%.

The Bloomberg US High Yield Very Liquid Index (VLI) is a component of the broad US Corporate High Yield Index designed to track a more liquid portion of the market. Since 2010, the VLI index has closely tracked the broad benchmark with an annual tracking error of 84bps and much improved liquidity characteristics. The average daily volume of institutional trades for an average bond the VLI basket is 60% greater than the daily volume of a comparable bond in the broader universe. Bonds in the liquid universe were also, on average, 28% cheaper to trade over the 2007-2023 period.

Because of its large number of issuers, the importance of idiosyncratic risk and the large dispersion of returns, the high yield market can be a fertile ground for factor and systematic strategies. Fallen angels is an example of such strategies and have outperformed the broad high yield market by 5.8% annually since 2010. The market value weight of fallen angels in the BBG VLI index has averaged 9.4% compared to 8.1% for the larger universe.

The Case for High-Yield Bonds

High yield bonds, defined as corporate bonds rated below BBB or Baa3 by leading rating agencies, can play a significant role in investment portfolios by providing diversification, potential for higher income, and enhanced total returns. These bonds, issued by corporations deemed riskier, typically offer higher coupons than treasury and investment grade corporate bonds and have averaged a spread of around 500 bps since the year 2000.

Occupying a middle ground between investment-grade bonds and equities from a risk-return perspective, high yield bonds have historically provided equity-like returns with lower volatility and less sensitivity to interest rate movements. Over the past 20 years, the high yield market, as measured by the Bloomberg High Yield Index (LF98TRUU), has averaged a 7.4% annual return which was higher than any other Fixed Income index and greater than the BBG enhanced roll yield commodity index (BERY) as Figure 1 shows.

Additionally, high-yield bonds have continued to provide higher average yields relative to other forms of debt (Figure 2).

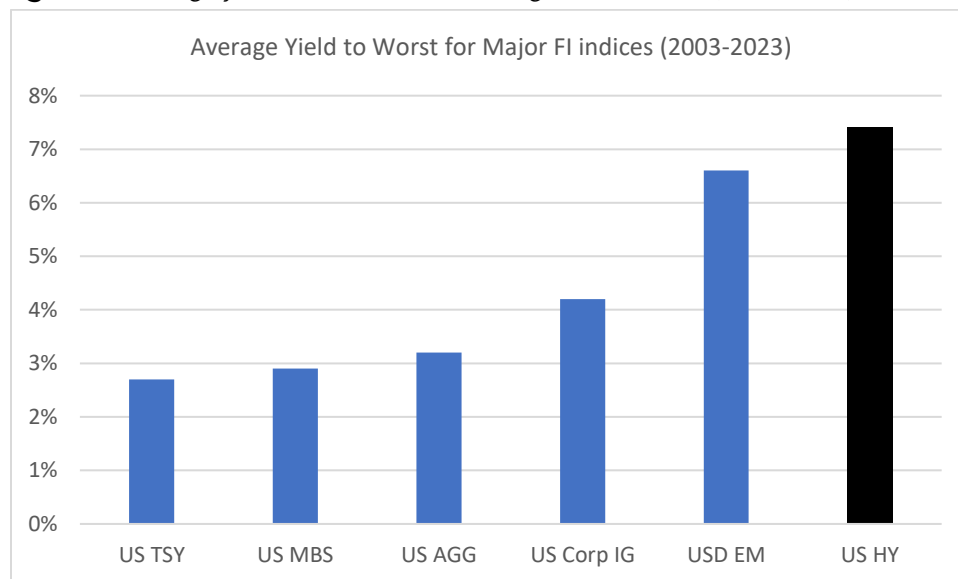
From 2003 through 2023, high yield monthly returns annualized volatility was 9.2%, versus 14.8% and 19.3% for large-cap and small-cap stocks, respectively. Although large-cap stocks earned a higher average annual total return of 10.5%, their higher volatility resulted in a similar Sharpe ratio 0.64 to high-yield bonds.

Figure 1: Annual returns, volatilities and Sharpe ratios of various Multi-asset Bloomberg Indices (2003-2023)

2003-2023	US Equity	US TSY	US IG	US HY	USD EM	US MBS	US TIPS	BERY
Total Return in %	10.5	2.7	4.2	7.4	6.5	2.9	3.9	7.3
Annual Volatility in %	14.8	4.5	6.4	9.2	8.7	3.4	6	15.8
Sharpe Ratio	0.64	0.28	0.43	0.63	0.58	0.42	0.41	0.4

Source: Bloomberg Research

Figure 2: Average yield to Worst for Bloomberg USD FI Indices (2003-2023)



Source: Bloomberg Research

High-yield bonds have also typically been less sensitive to rises in interest rates because of their shorter maturities. They are typically issued with terms of 10 years or less and are often callable after four or five years. Their wider spread also often acts as a cushion, absorbing some of the rise in treasury yields. The combination of higher yields and shorter maturities means that high-yield bonds have typically had lower duration than most types of fixed income debt.

High yield bonds and equities tend, however, to respond in a similar way to the overall market environment, which can lead to similar performance over a full market cycle and higher correlations (66% over the past 20 years). However, returns on below investment grade bonds tend to be less volatile because the income component of the total return is typically larger, providing an added measure of stability.

Figure 3: Average duration and correlation to Equities for BBG USD FI Indices (2003-2023)

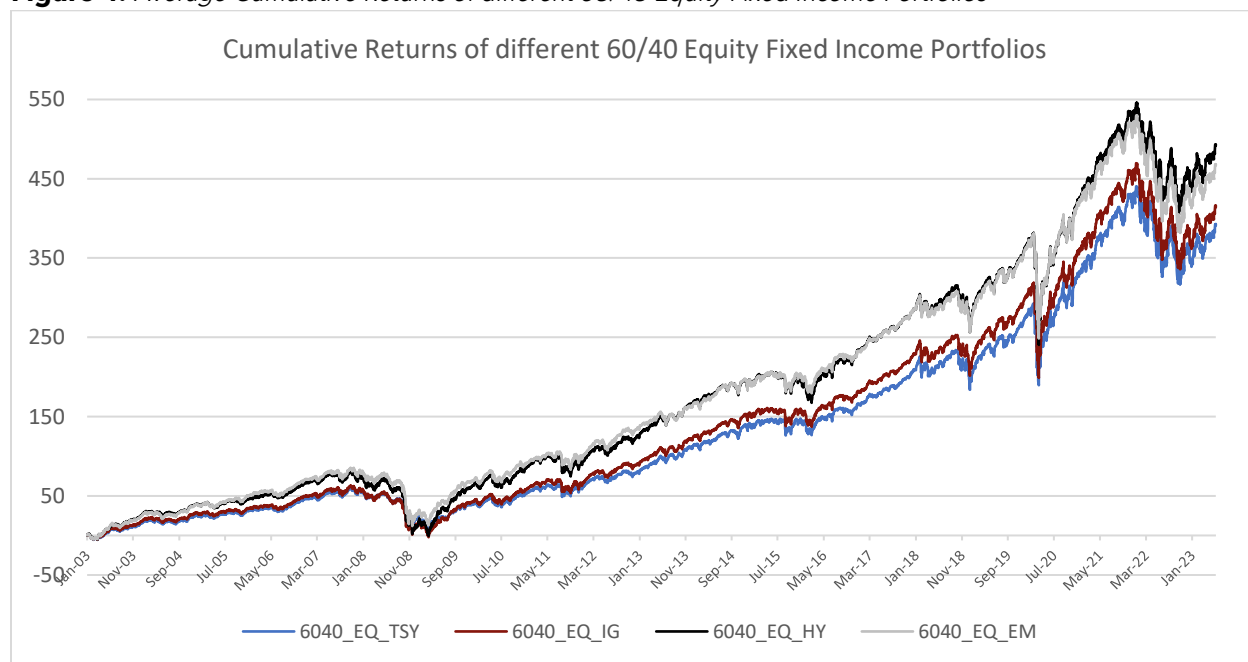
2003-2023	US TSY	US IG	US HY	USD EM	US MBS
Average Duration	5.8	6.9	4.2	6.2	3.8
Correlation to EQ	-26%	15%	66%	49%	1%

Source: Bloomberg Research

Despite their large correlation to equities, high yield bonds have a still key role as a strategic long-term investment and a mainstay allocation in a well-diversified Equity/Fixed-Income portfolio.

Figure 4 demonstrates how the 60/40 portfolio using the broad HY market as the Fixed income sleeve has outperformed similar multi-asset portfolios using treasuries, corporate investment grade or EM hard currency bonds over the Jan 2003 to Jun 2023 period.

Figure 4: Average Cumulative Returns of different 60/40 Equity Fixed Income Portfolios



Source: Bloomberg Research

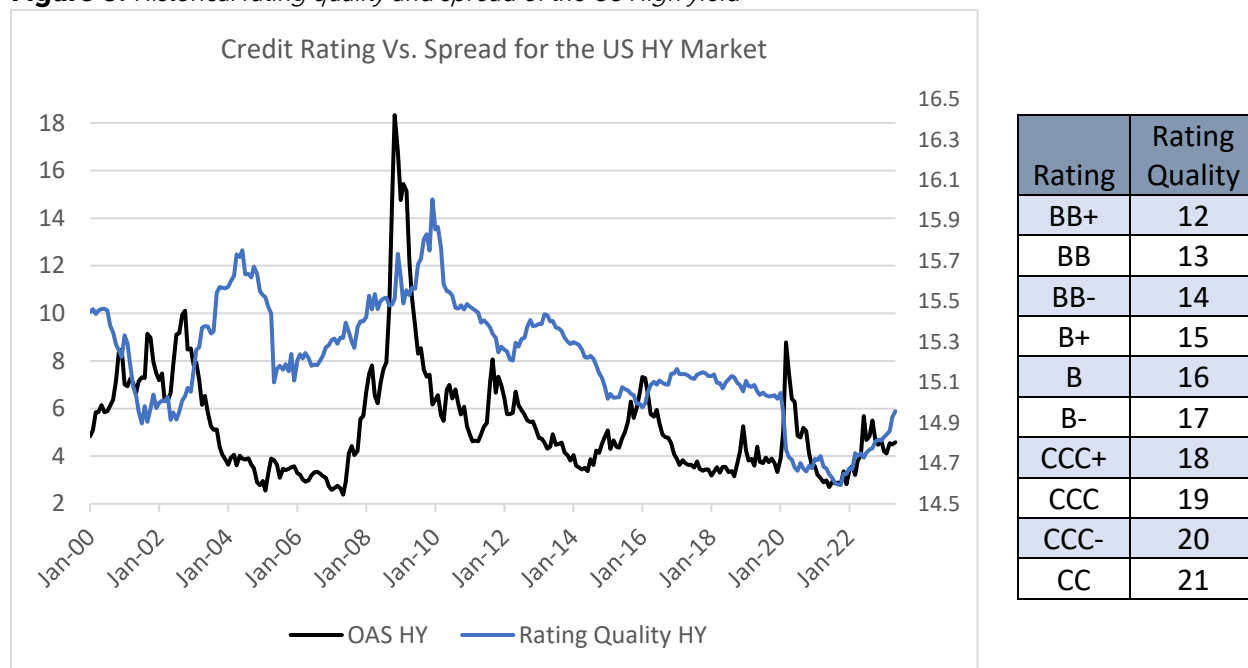
Characteristics of the High Yield Market

Rating Quality of the High Yield Index

While typically not as volatile as equities, high-yield bonds are issued by companies that are often sensitive to the economic cycle and to events within individual sectors which can lead to large price fluctuations. Holding a diverse portfolio of high-yield bonds such as the BBG HY index can help an investor reduce the idiosyncratic risk of an individual bonds/issuers. US high yield bonds typically offered 350 to 500 basis points of additional yield relative to U.S. Treasury securities of comparable maturity, as figure 5 shows. The overall spread can, however, spike significantly such as following the 2008 credit crisis and 2020 COVID market turmoil, where the index's spread reached highs of close to 1850 basis points and 880 bps respectively.

The credit quality of the overall index (LF98) has been improving over the past 12 years reaching a low of 14.6 (between BB- and B+) in late 2021 as the figure below shows on its secondary axis.

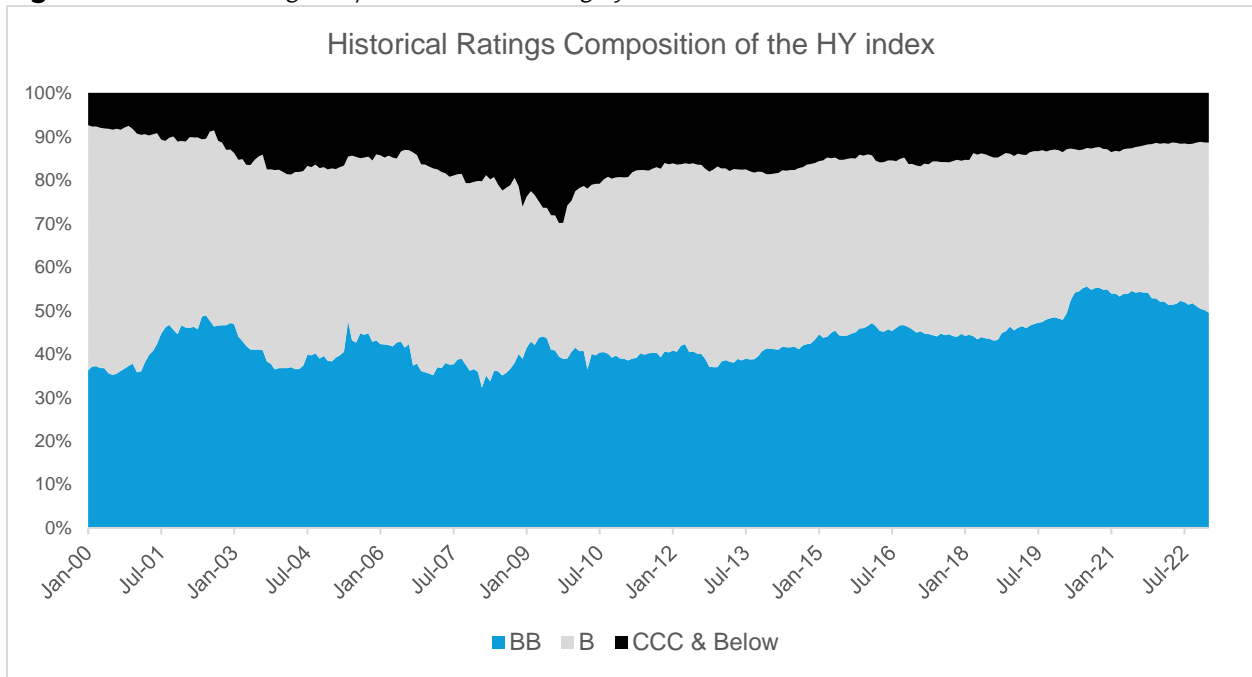
Figure 5: Historical rating quality and spread of the US High yield



Source: Bloomberg Research

Looking at the broad market composition in figure 6, the percentage of BB-rated bonds in the U.S. market is near a 10-year high at 50.1%, while the number of CCC-rated credits declined steadily during the past decade and are currently at around 12%. In the months following the global financial crisis, the portion of high yield bonds that were rated CCC peaked at 22.8% (nearly double the June 2023 value) whereas the total amount of bonds rated CCC or below peaked at 29.9% of the index, almost three times current levels.

Figure 6: Historical rating composition of the US High yield



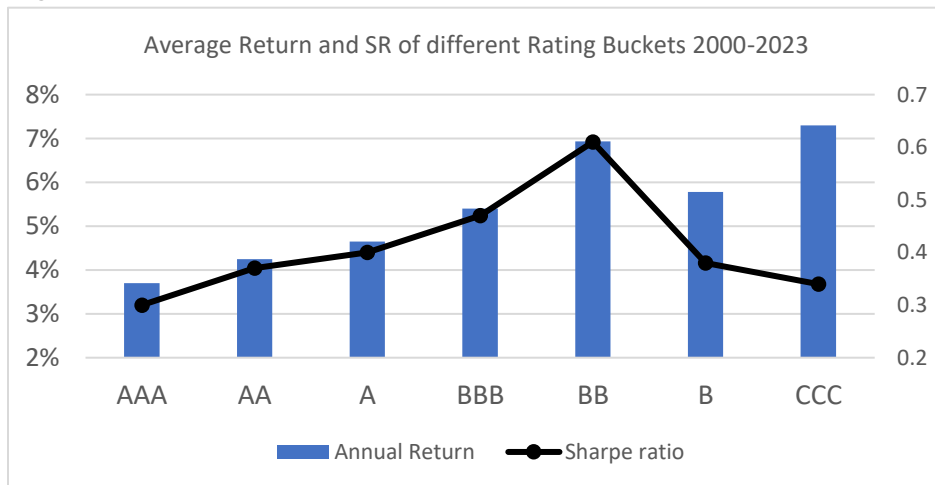
Source: Bloomberg Research

Conditional performance of the High Yield Market

The High-yield market has produced attractive risk-adjusted returns (returns per unit of risk taken) over the long term. Looking at the full investment USD universe of treasuries, investment grade corporate and high yield bonds over the past 20 years, the BB rating bucket (50% of the HY universe currently) has produced an annual return of 6.9% and the highest Sharpe ratio at 0.62. The BBB bucket followed at 0.47.

The BB returns per unit of risk were more than twice the levels of bonds rated CCC and much higher than high-grade corporate bonds and Treasuries.

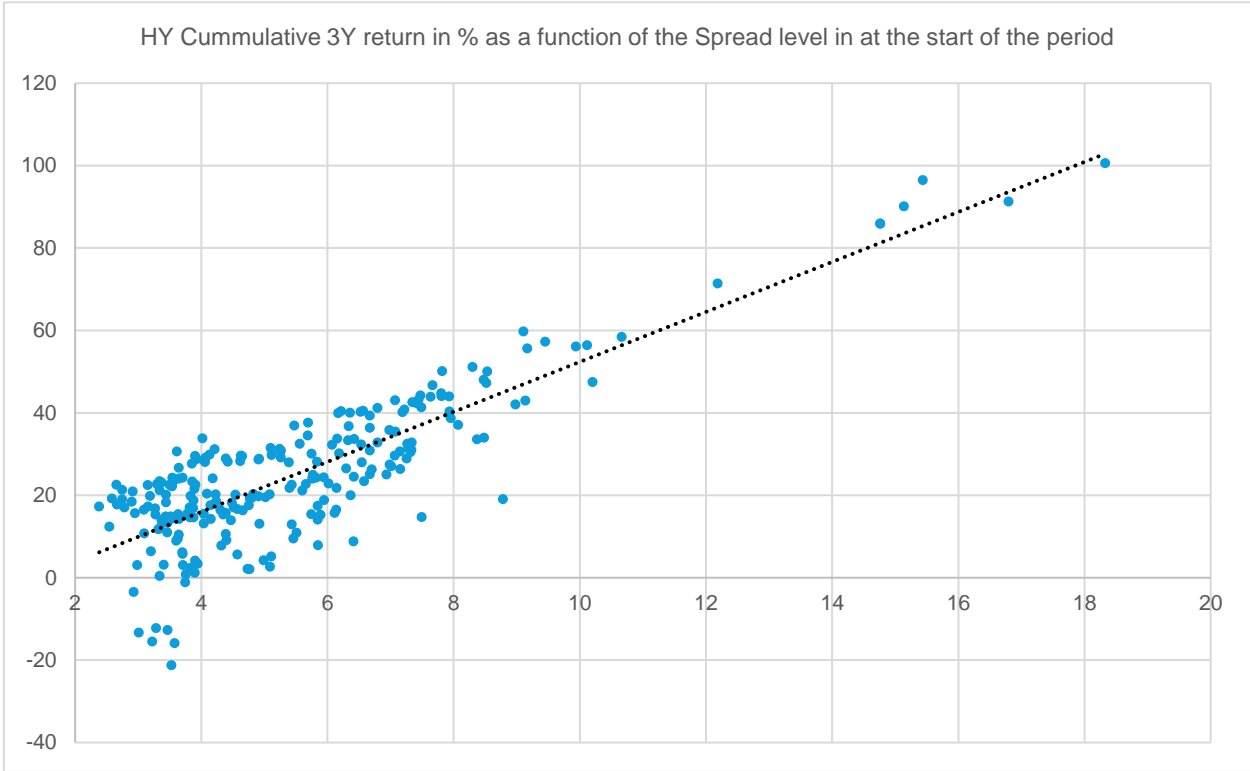
Figure 7: Annual Return and Sharpe ratios across the different rating buckets



Source: Bloomberg Research

Over the past two decades, holding high yield securities has paid off a long-term investor. Despite potential short-term price volatility in the asset class, year-over-year price fluctuations tend to cancel out on a cumulative basis over the longer term, allowing the larger coupons in the asset class to drive total returns. We look at the cumulative return of the HY market over a three-year period as a function of the spread level at the beginning of the period. Figure 8 shows a positive relationship between the spread and the future performance for a long-term investor historically. For comparable spreads to the current level as of June 2023 (420 bps), the HY market as represented by the BBG HY Index (LF98), has averaged 18.7% over the following three years (based on data from 2003 to 2023).

Figure 8: *3Y Performance of the High yield market as function of the starting spread*



Source: Bloomberg Research

Defaults in the High Yield Market

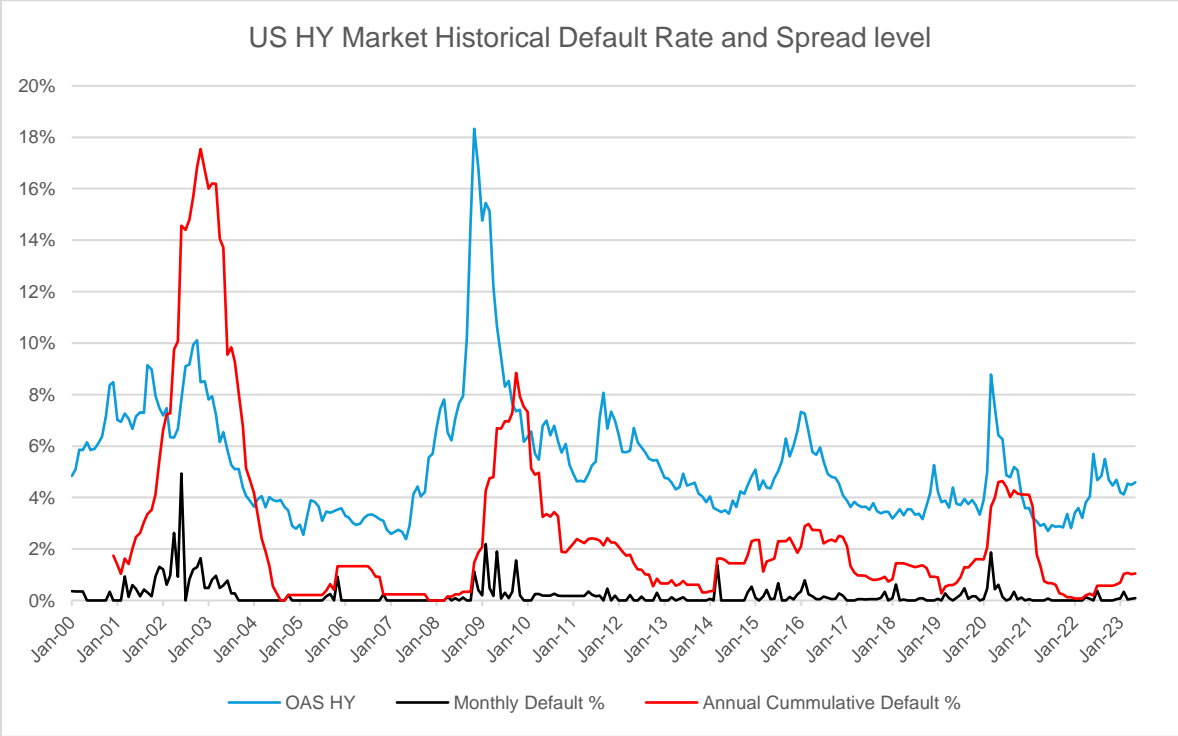
Recognizing that defaults are an inherent part of the asset class, the goal of most high yield managers and investors isn't necessarily to avoid default risk altogether; rather, the goal is to understand and mitigate key sources of risk and then seek an adequate level of compensation (or spread) over the risk-free rate to make up for that risk.

High-yield securities typically tend to exhibit a higher level of idiosyncratic risk, with specific company data and news influencing the bond price substantially more than investment grade bonds. This makes investing in high yield particularly rewarding for active managers who use a bottom-up approach to investing and whose decisions are informed by company level research. Alternatively, passive long-term investors can still achieve attractive returns and mitigate default risk by investing in a large, diversified basket of high yield

securities thru an electronically traded fund (ETF) which tracks the Bloomberg High yield index (the HY index has more than 1100 different issuers as of June 2023).

Figure 9 shows the historical spread, monthly default rate and cumulative annual default of the BBG HY index since 2000. Historically, high spread levels have been a precursor to further downgrades and ultimately defaults. The broad market default rate reached 17%, 9% and 6% on a cumulative annual basis after the Internet bubble burst, the global financial crisis and the 2020 global pandemic market turmoil. The HY index has averaged a 2.5% annual default rate over the 2000 to 2023 period.

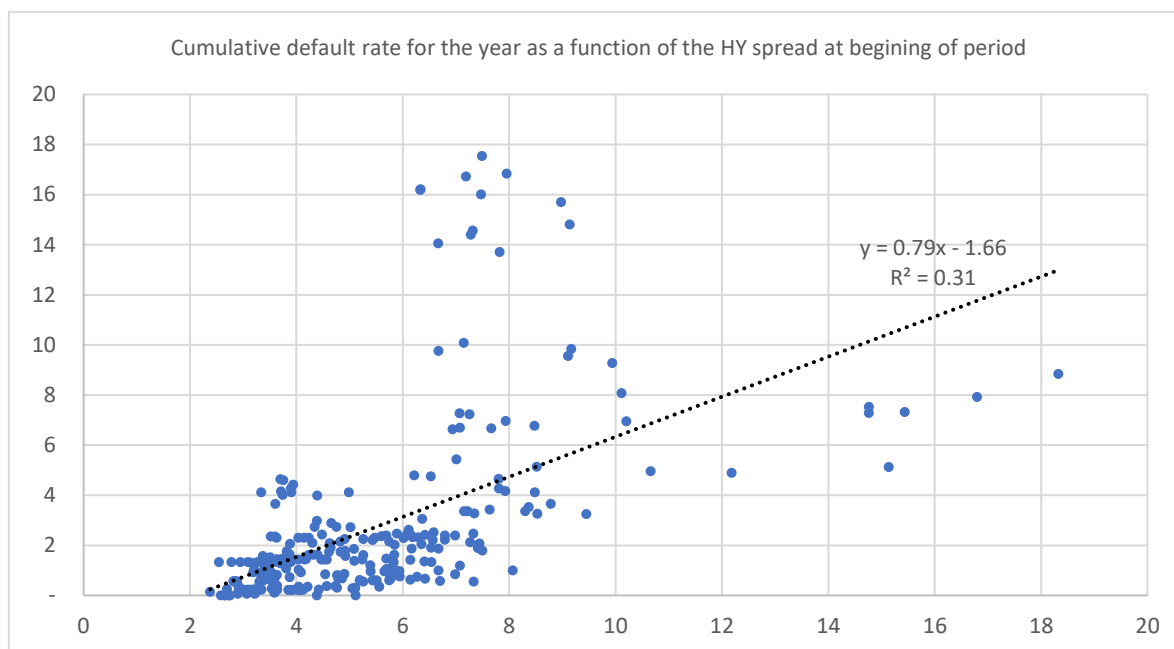
Figure 9: Historical default rate and spread for the high yield market



Source: Bloomberg Research

Just like it was the case with Figure 8, Figure 10 also shows a positive relationship between the beginning of period spread level and the observed defaults over the following one-year period. High spread levels typically lead rating agencies downgrades which at times are followed by defaults. For comparable spreads to current levels (420 bps), the HY market as represented by the BBG HY Index (LF98) has averaged a 1.8% default rate the following year (based on data from 2000 to 2023).

Figure 10: 1Y cumulative default rate of High yield as function of the starting spread



Source: Bloomberg Research

Historically, long term investors in high yield have been rewarded for their patience with asset class as the average spread of the market largely exceeded the default rate (5% vs. 2.5%) over the 2000-2023 period. Investing in large, diversified portfolios across names and sectors generally mitigate the default impact on the total performance.

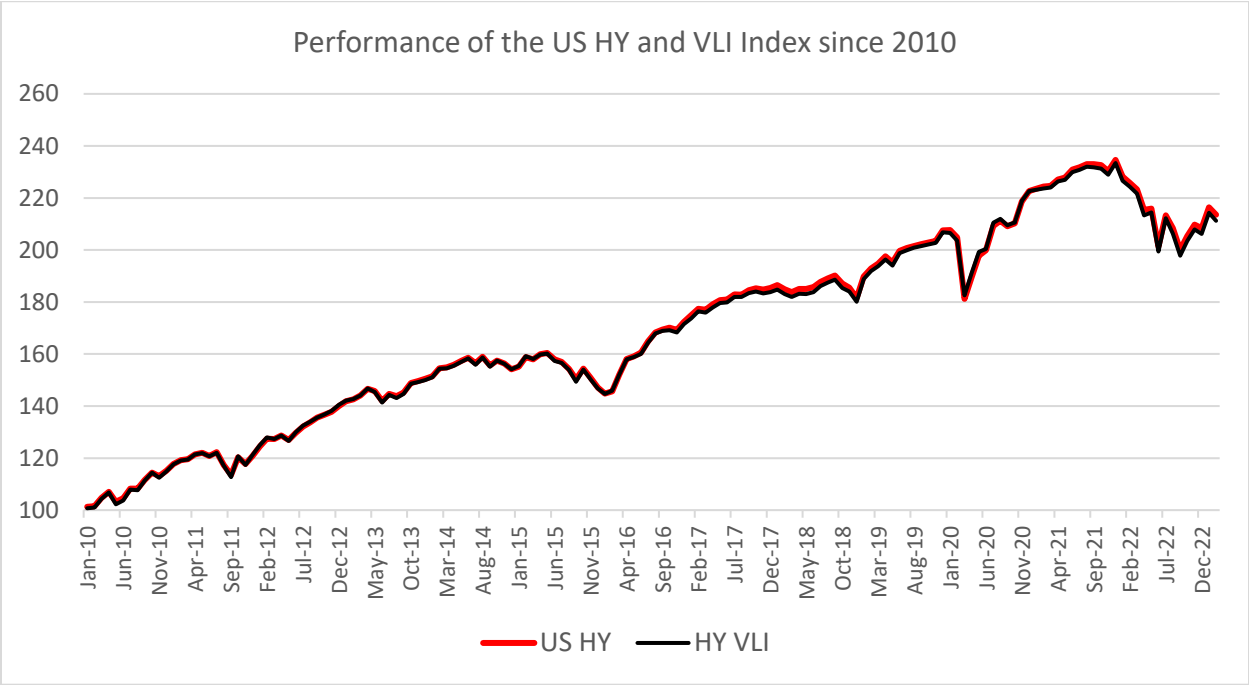
The Bloomberg Very Liquid High Yield Index (VLI)

The Bloomberg US High Yield Very Liquid Index (VLI) is a component of the broad US Corporate High Yield Index that is designed to track a more liquid component of the USD-denominated, high yield, fixed-rate corporate bond market.

The Bloomberg US High Yield VLI uses the same eligibility criteria as the broad HY index but only includes bonds that have a minimum amount outstanding of USD 500mn and which have been issued in the past 5 years. The VLI index, with its additional size and age liquidity screens, has a much-improved underlying liquidity profile while historically showing strong correlations to the broader Bloomberg US High Yield Index (99%).

Figure 11 also shows closely the VLI index has tracked the Broad HY benchmark since 2010 with an annual tracking error of 84bps.

Figure 11: Performance comparison of the US HY and VLI index.



Source: Bloomberg Research

The VLI index, with around half the bond count over the period (1017 to 2017 for the broad index), has averaged an annual return of 6% over the past 13 years (compared to 6.1% for the broad index) with similar levels of volatility. The VLI index has also maintained a similar turnover rate to the broad index (36% annual turnover for VLI vs. 33% for the HY index).

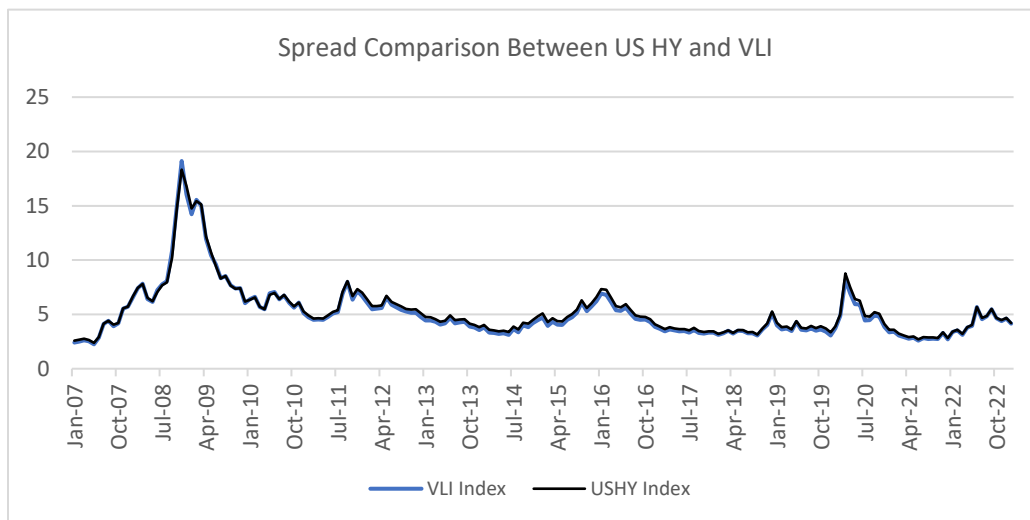
Figure 12: Summary statistics for the US HY and VLI index.

2010-2023	US HY	VLI Index
<i>Average Return</i>	6.1%	6%
<i>Annual Volatility</i>	7.5%	7.7%
<i>SR</i>	0.51	0.49
<i>Avg Bonds Count</i>	2027	1017

Source: Bloomberg Research

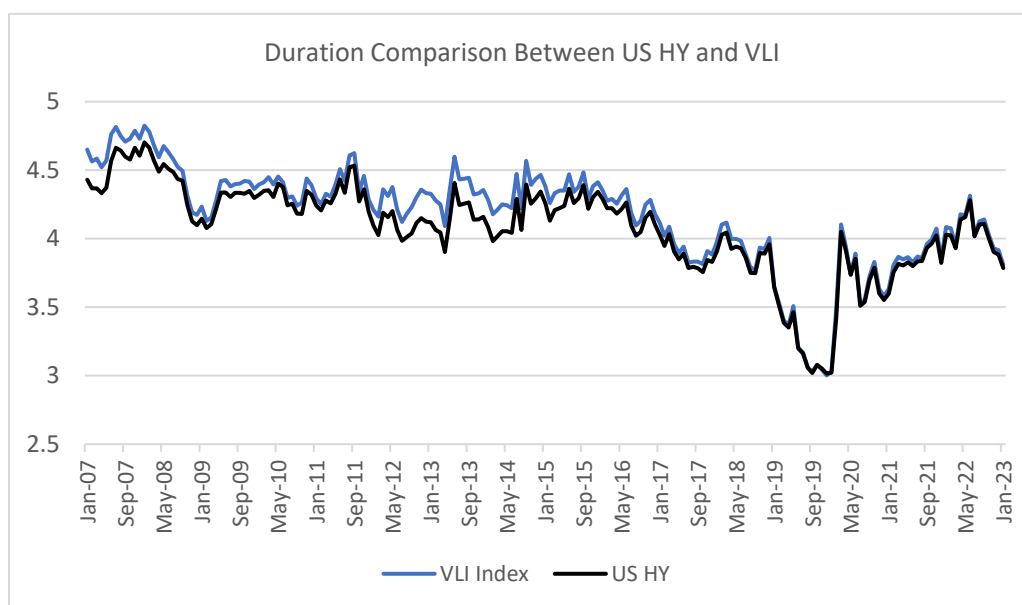
The spread and duration of the VLI index also closely tracked the same analytics for the broad high yield index as figures 13 and 14 illustrate.

Figure 13: Spread comparison between the US HY and VLI index.



Source: Bloomberg Research

Figure 14: Duration comparison between the US HY and VLI index.

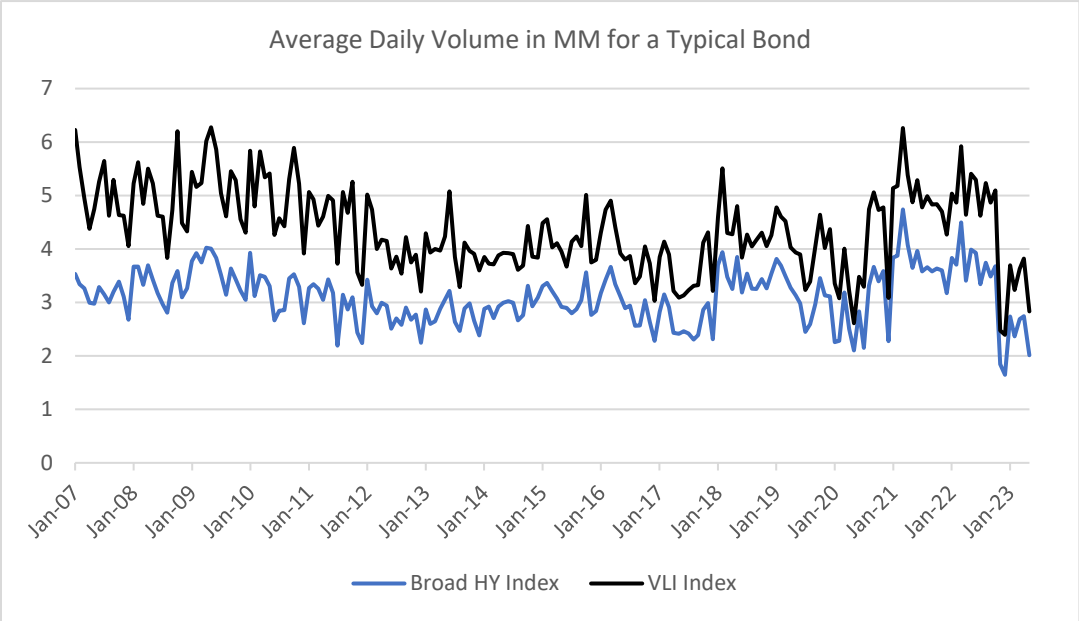


Source: Bloomberg Research

The main difference between the two indices, however, lies in their liquidity profiles. The broad high-yield index includes many securities that, for various reasons, are relatively illiquid and trade infrequently. In contrast, securities in the VLI index have shown much-improved liquidity characteristics. The average daily volume of institutional trades for an average bond the VLI basket is 60% greater than the daily volume of a comparable bond in the broader universe (4.6MM average vs. 2.9MM) as shown in Figure 15. The daily

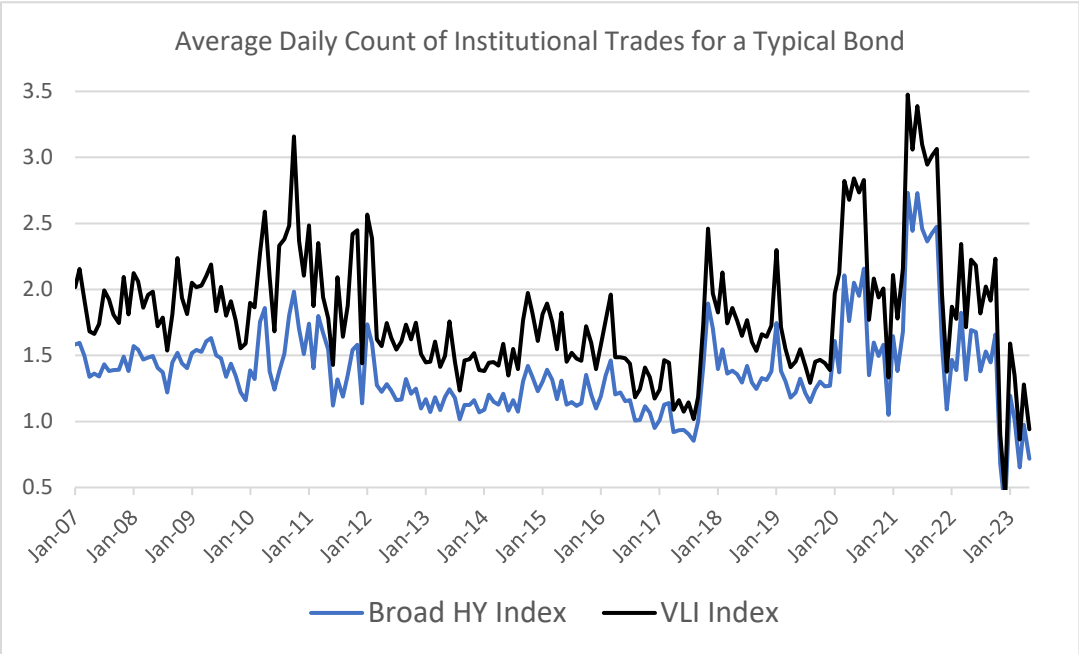
number of institutional trades (defined as 250K or greater) for bonds in the VLI index averaged 2.1 trades per day (vs. 1.5 for the broad high yield starting universe).

Figure 15: Average daily volume in the US HY and VLI index.



Source: Bloomberg Research

Figure 16: Average number of institutional trades in the US HY and VLI index.

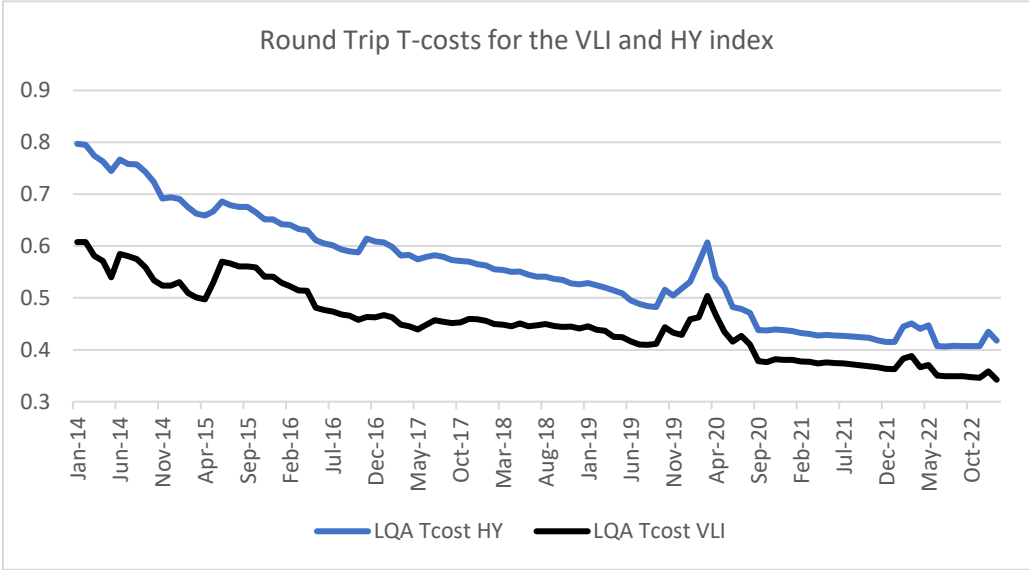


Source: Bloomberg Research

The increased daily volume and higher number of institutional trades of bond in the VLI universe were also associated with lower round trip transaction costs historically. Bonds in the liquid universe were on average 28% cheaper to trade over the 2007-2023 period than their counterparts in the broad index.

As of June 2023, it costs 35 bps to make a round trip transaction for an average bond in the VLI universe (compared to 42 bps) according to the Bloomberg Liquidity Assessment (LQA) metrics.

Figure 17: Round trip transaction costs the US HY and VLI index.



Source: Bloomberg Research

Designed to track the most liquid instruments in the high-yield market, the BBG USD VLI index has served as leading benchmark since its inception, supporting a broad trading ecosystem via exchange-traded funds and derivatives.

ETFs intended to offer exposure to the USD high market track the BBG VLI index to facilitate trading. Their comparatively low expense ratio is directly linked to the improved liquidity and low turnover of the VLI index.

Fallen Angels in the High Yield Market

Because of its large number of issuers, the importance of idiosyncratic risk and the large dispersion of returns, the high yield market can be a fertile ground for factor and systematic strategies. As evidenced by our prior research¹, style factors such as momentum, value and low-risk have largely outperformed the broad HY market over the past 20+ years. These strategies still show strong outperformance after accounting for transaction costs in high-yield markets.

Another prevalent systematic strategy in the high yield markets is “fallen angels”. A fallen angel is a bond that was initially given an investment-grade rating but has since been downgraded to high yield status because of deterioration in the financial conditions of its issuer. These bonds have, historically, delivered higher returns compared to their peers in high yield markets despite the fact they have lower yields and credit spreads.

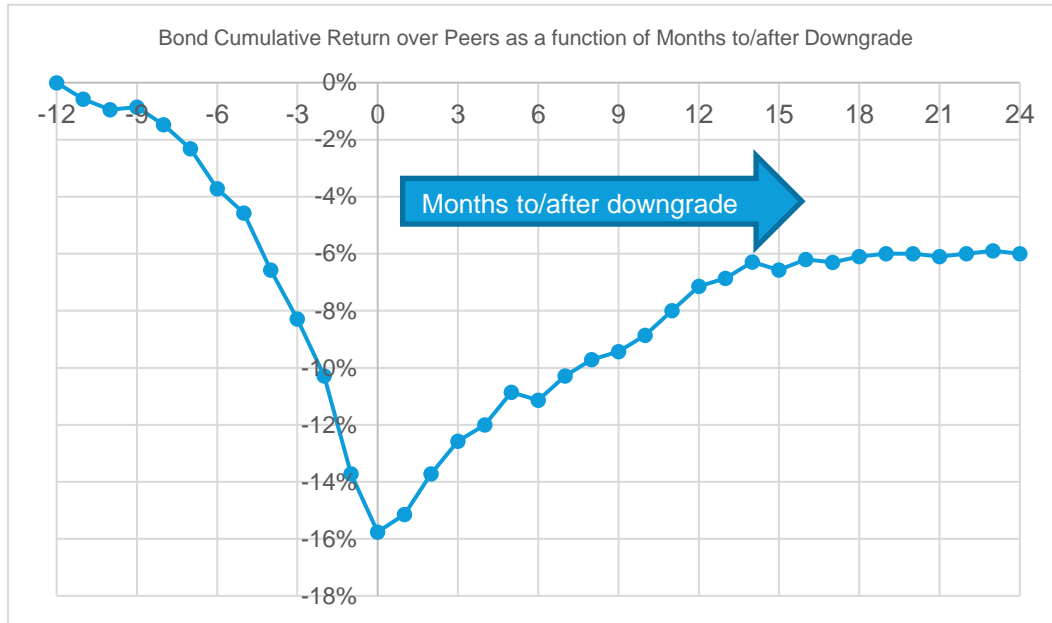
This outperformance is largely due to inefficient market dynamics: Fallen Angels suffer ‘forced selling’ from passive investment grade accounts when downgraded to high yield as most these investors are required to sell. This selling typically takes place in a short window overwhelming the demand in the smaller high yield market. This causes disproportionate spread widening and price declines around the downgrade month, which often reverts once trading activity normalises. Systematically investing in these undervalued bonds has been a source of outperformance for fallen angel investors historically, while also resulting in higher overall credit quality relative to the broad high yield market as measured by the BBG High-yield index.

Figure 18 illustrates the average performance of a fallen angel bond compared to its peer group over the one year prior to two years after the downgrade to High yield. The peer group is defined as bonds with similar industry, rating and duration. The relative performance of a fallen starts to significantly deteriorate 9 months prior to the downgrade bottoming out on the month of the downgrade at -15.4%. Soon after, the relative performance of a fallen angels improves, and the outperformance continues up to 13/14 months after the downgrade before normalizing.

Fallen angels underperformed IG peers by 15.4% (on average) in the downgrade month and preceding year before outperforming their new HY peers 7.6% over the two-year following the downgrade.

¹ Performance of style portfolios in US and Euro IG and HY markets (Oct 2018)

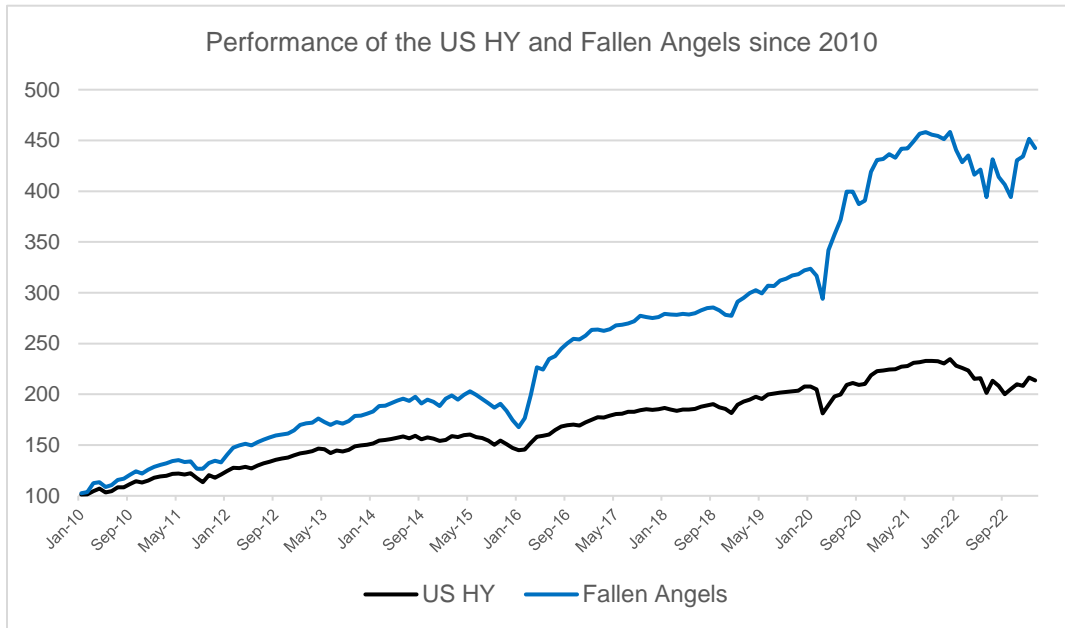
Figure 18: Fallen angels' relative performance to peers from 1Y prior to 2Y after downgrade



Source: Bloomberg Research

Figure 19 illustrates how a fallen-angels portfolio has outperformed the overall high yield market since 2010. The outperformance has been sustained throughout the past 13 years. Since 2010, the broad High yield market, as measured by the BBG LF98 index, had a 116% cumulative return whereas a portfolio composed of fallen angels held until the 1-year mark after the downgrade had 342% cumulative return over the same period. This translated to an additional 5.8% return a year of outperformance over the back-test period.

Figure 19: Performance of the fallen angels and the US HY since 2010

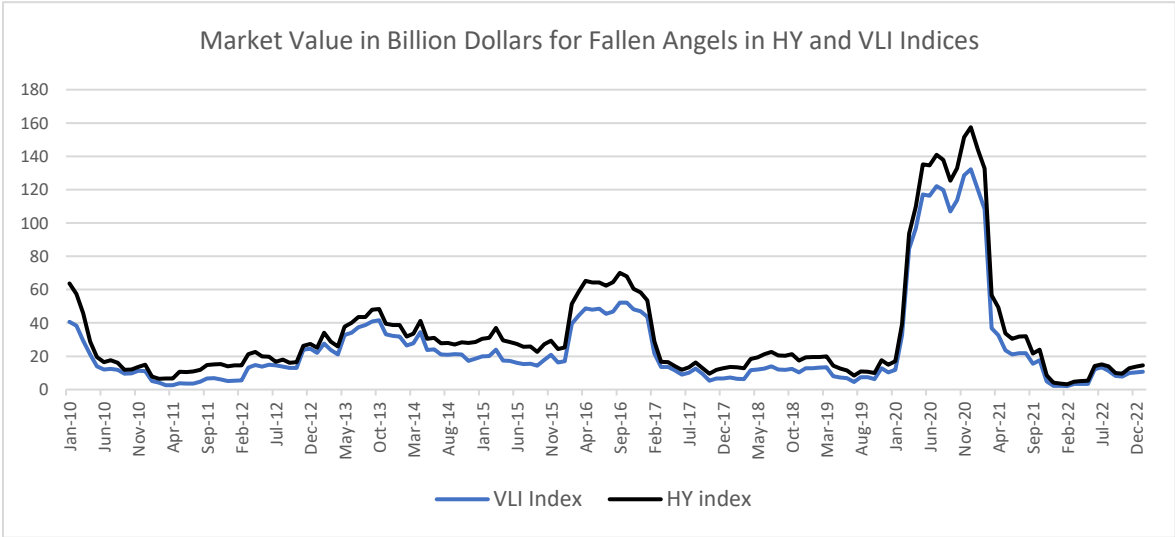


Source: Bloomberg Research

On average, the fallen angels’ basket contained around \$33 billion worth of investment-grade bonds downgraded to high yield over the 2010-2023 period.

Most recently as the global pandemic hit in 2020, many businesses were forced to shut down and oil prices plummeted. Credit rating agencies were quick to downgrade more than 30 issuers across a wide range of industries including airlines, rental car companies, cruises and energy drillers. As a result, the fallen angels portfolio market value peaked at around \$160 billion in late summer 2020.

Figure 19: Market value in billions of fallen angels in the HY and VLI indices



Source: Bloomberg Research

The VLI index, with its additional amount outstanding and age liquidity screens, has still managed to capture a large relative proportion of fallen angels in high yield. Most of downgraded bonds came from established investment grade companies with large issue size which exceeded the required \$500MM to be included in the VLI index. The market value weight of fallen angels in the BBG VLI index has averaged 9.4% vs. 8.1% for the broad high yield index.

For follow up on the licensing of High yield indices, please contact your Bloomberg Index specialist.

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