Corporate Credit Strategies Help Overcome Declining Expectations for Fixed Income

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INVESTMENT MANAGEMENT

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Executive Summary

- Fixed income returns relate to risk in a rational way: More risk leads to higher returns.
- If and when historically low interest rates begin to rise, bond portfolios may lose value, suggesting that interest rate risk will not be the best risk to take.
- Investing in lower-quality debt — high yield bonds and senior loans — may help improve fixed income returns and overcome potential losses from rising interest rates.
- Guessing when to buy — or sell — high yield bonds and senior loans is an uncertain and risky strategy predicated on skilled interest rate anticipation.
- Permanent allocations offer total return and risk control benefits; the question is, how much to invest and in what proportions.
- Various methods suggest permanent allocations of 50% high yield/50% senior loans make sense.
- Based on past experience, committing 20–40% of a diversified bond portfolio to a combination of high yield and senior loan strategies appears optimal.

Introduction

Worldwide central bank response to muted economic growth has brought fixed income yields to all-time lows. Many investors are concerned that as growth accelerates and interest rates return to normal, returns on bonds with duration risk — most notably broad market investment grade bonds — will suffer and fail to meet their fixed income investment needs.

Facing the possibility of losses from interest rate risk, investors have sought higher yields and shorter duration — often through opportunistic forays into high yield bonds and/or senior loans. This makes intuitive sense; in the face of rising duration risk, credit spreads represent a reasonable alternative to offset potential losses. Investors are, of course, rightfully concerned with the potential dangers of increased default risk; however, the long-term effects of below investment grade credit risk on a diversified portfolio are not well understood, leading to confusion, avoidable errors and mental anguish as economic data releases drive waves of enthusiasm or fear.

Moreover, periodic lunges into or out of sectors and asset classes is, in effect, market timing, and most investors who try to time the markets tend to guess wrong as often as not. A .500 batting average might be great in baseball, but it is probably not enough when you are making bets on your own financial security.

In this paper, we 1) demonstrate that permanent allocations to both high yield bonds and senior loans may be an attractive option for those who seek higher fixed income returns, and 2) examine the lessons of history as a guide for allocating among investment grade bonds and these two lower-quality debt asset classes.

Risk and Return Tend to Be Rational Across Fixed Income Asset Classes

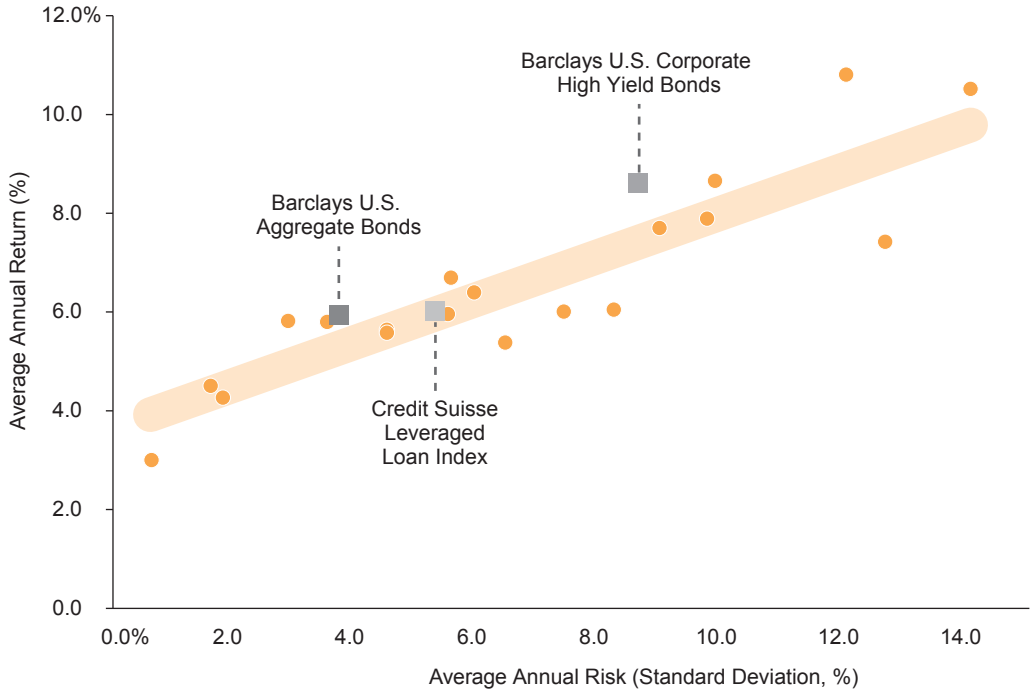
To put senior loans and high yield bonds into a long-term perspective, we began by examining the return and risk profiles of the major fixed income asset classes from January 1992 to the present; this resulted in at least 261 monthly observations for 22 asset classes (or such shorter period as index data are available). Since much of the following analysis relies on returns, risk and correlation for rolling three-year periods, many of the charts cover the period December 1994 through June 2014. A list of the indexes we used as proxies for returns on the various asset classes appears in the Appendix.

Referring to Figure 1, it should be apparent that the relationship between risk and return for the selected asset classes has been highly linear for the 20-plus-year period. The overall R-square correlation — the degree to which one variable explains changes in another — between risk and return across the fixed income asset classes was 78%; this indicates that the relationship between them is not only rational, but also consistent in the sense that better returns are achievable mainly by accepting more risk (at least with unlevered, long-only, cash bond portfolios). The question is, "What is the most sensible risk to take?"

The Barclays U.S. Aggregate Bond Index was used to represent the entire investment grade bond market. Over the period of the study the average return for the index was 5.94% and the total risk — as measured by standard deviation — was 3.64%. Thus, the Barclays Aggregate represents a moderate return/low risk performance standard: About half of the fixed income sectors had higher returns, but only 25% had lower risk than the broad market index.

Figure 1. Fixed Income Return Relates to Risk in a Rational Way: More Risk Generates Higher Returns

Returns and Risk of All Major Fixed Income Asset Classes, 1994–2014



Source: FactSet, Voya Investment Management

High Yield Bonds and Senior Loans Are Attractive Below Investment Grade Alternatives

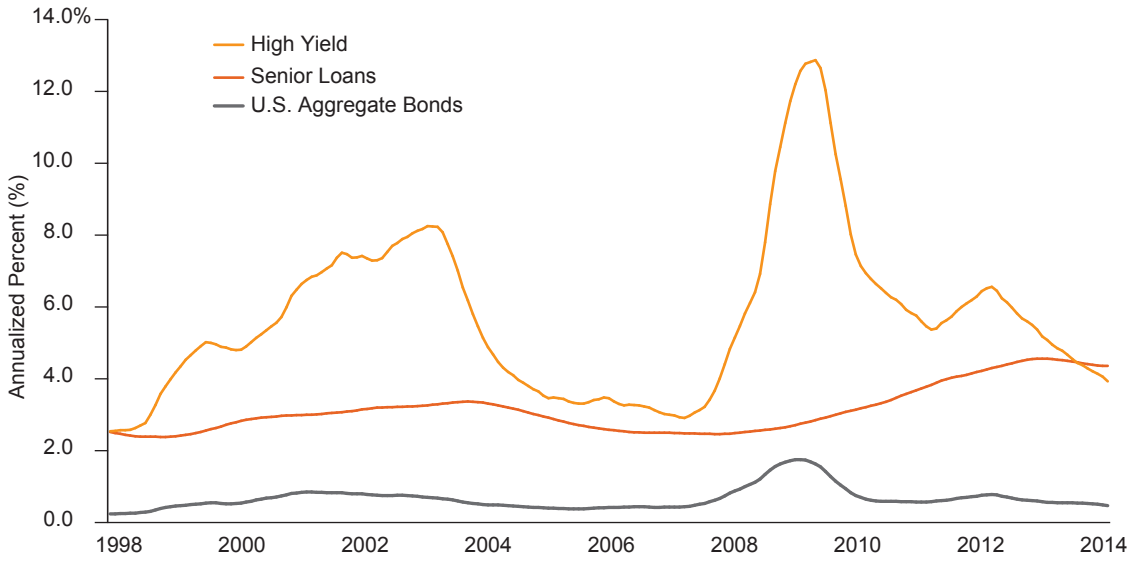
If credit risk is a leading contender to generate the returns needed to overcome other imminent risks like interest rate risk, then high yield bonds and senior loans are the obvious candidates for investment. Note the long-term high yield and senior loan data points in Figure 1. For the period in question, high yield outperformed both the broad market and senior loans by more than 2% annually. The reasons for investing in high yield bonds are fairly obvious: Even after accounting for recessions and the attendant default and liquidity risk, high yield bonds have produced the best returns of any U.S. fixed income asset class. (Both of the outperforming asset classes depicted in Figure 1 reflect emerging markets debt indexes.)

Loans produced about the same average returns as the Barclays Aggregate. But senior loans offer advantages beyond these nominal returns:

- Senior loans are not really "fixed" income at all; they are floating rate debt instruments with very low correlations to most other debt investments (high yield bonds being the main exception), making them an excellent diversifier against all the risks in conventional fixed income securities.
- Returns on senior loans are inversely correlated with interest rate risk. Their income component rises with rising rates, making them an attractive hedge against losses from interest rate risk.
- Owing to their extremely short duration and senior status in the capital structure, they can also aid in reducing risks inherent in high yield bonds — like default risk — even though both may be classified as "below investment grade".

Ultimately, a major attraction of lower-quality debt investments is their potential for greater yield. Today, the yield spreads on both high yield bonds and senior loans remain well in excess of those available on investment grade debt, a boon to investors bent on reducing duration risk or dependent on investments to generate income.

Figure 2. Average Yield Spreads for High Yield and Senior Loans are Compelling
Option-Adjusted Yield Spreads, 1998–2014

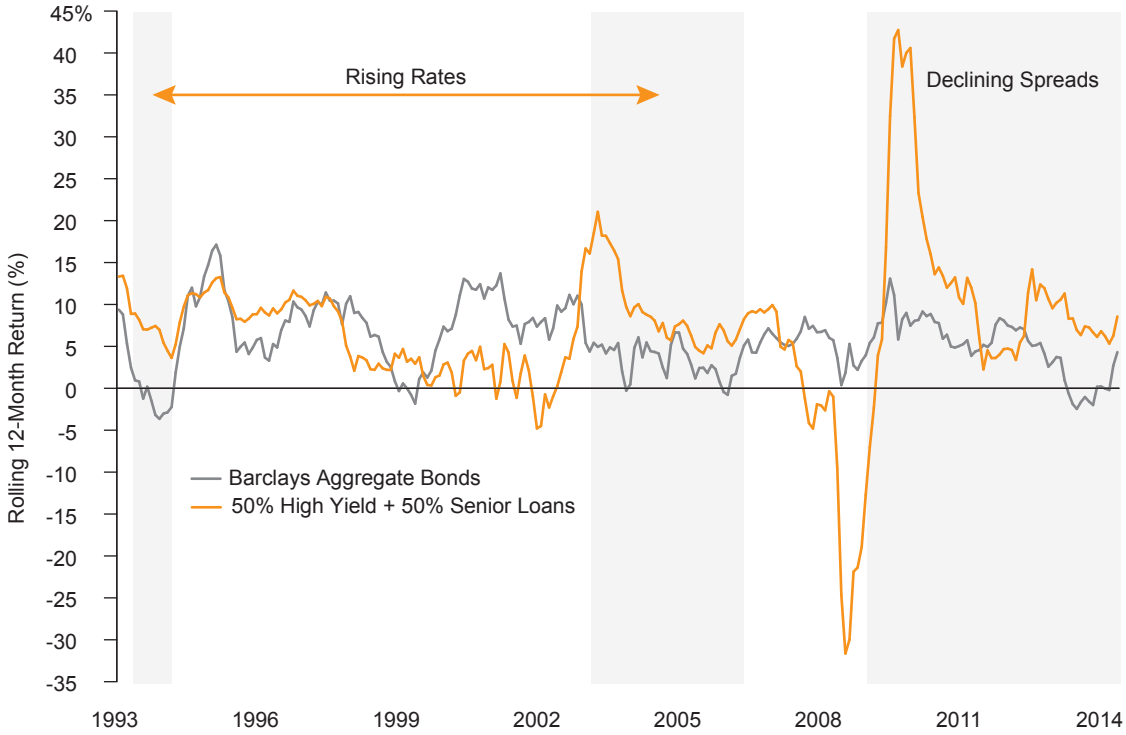


Source: BarCap Live, Voya Investment Management

Nevertheless, even if we accept the possibility of high income and superior long-term performance potential, guessing when to take the plunge into lower-quality credit is unlikely to produce satisfying results. As Figure 3 shows, market leadership changes as credit cycles come and go. A mix of 50% high yield bonds and 50% loans outperformed investment grade bonds 60% of the time, producing an average annual excess return of about 1.25% over the last 20 years. Of course, that means that investment grade bonds were the leaders 40% of the time.

Lower-quality debt may outperform during periods of rising rates (as seen below in both 1994 and 2004–06) or, even more dramatically, when credit spreads decline (as illustrated in the period from October 2008 to the present). However, other conditions — notably "credit stress" periods marked by actual or anticipated recessions (such as 2000–02 and 2007–08) — cause investors to lose confidence in lower-quality companies, and their securities prices are punished relative to high-quality issues. In light of this "boom or bust" potential, a strategy that combined broad market bonds and lower-quality debt in such a way as to improve returns without throwing caution to the wind would be valuable for many investors.

Figure 3. Lower-Quality Debt Outperformed the Broad Bond Market 60% of the Time
Broad Market Bonds vs. High Yield/Senior Loans, 1993–2014



Note: Rolling returns for a hypothetical portfolio of 50% high yield bonds and 50% senior loans, for illustration only. Outperformance based on returns for rolling 12-month periods.

Source: BarCap Live, FactSet, Voya Investment Management

Lower-Quality Debt Offers Appealing Diversification Benefits

Perhaps surprisingly, lower-quality debt also offers significant risk control benefits, the secret of which lies not only in their relative return advantage but in the dissimilar pattern of their returns vis-à-vis the broad bond market. As seen in Figures 4 and 5, the long-term rolling correlation of senior loans' returns compared to investment grade bonds is -0.08% while high yield offers a low 0.27% correlation. Unlike return differentials, which may fluctuate widely, low correlation is a relatively enduring characteristic, which argues forcefully for permanent allocations to these asset classes.

Figure 4. Senior Loans Have a Negative Correlation to the Broad Bond Market...
Correlation: Senior Loan vs. Bond Market, Rolling Three-Year Periods, 1994–2014

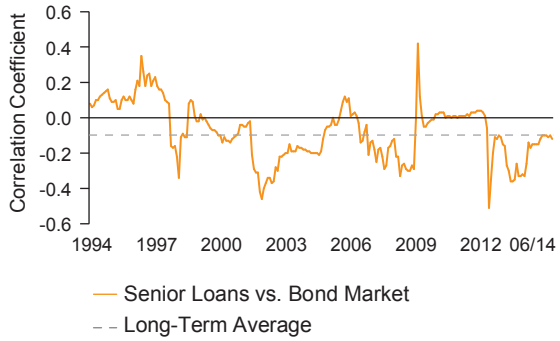
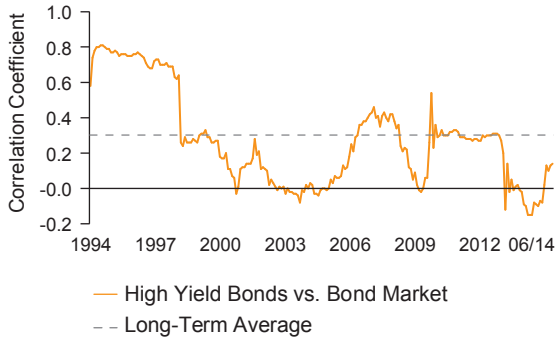


Figure 5. ...While High Yield's Is Only 0.27%
Correlation: High Yield vs. Bond Market, Rolling Three-Year Periods, 1994–2014



Source: FactSet, Voya Investment Management

While these correlation figures are indicative of potential diversification benefits, we should approach the long-term averages with caution. Correlation reflects the direction of returns for two return series but is insensitive to the magnitude of the returns. While the rolling periods above make the historical correlation discernable and the long-term average is a convenient single descriptor, you can see that the correlations vary significantly over time; for example, both show a spike in correlation in 2008 — exactly when markets were in a tailspin and the diversification benefits were needed most.

"Optimal" Results Based on Investor Objectives

In discussing asset allocations it's worthwhile to reiterate the purpose and limitations of this study. We are examining the lessons of history for evidence of possibly profitable strategies. While past experience can never guarantee future success, over fairly long time periods it is reasonable to assume that returns will relate to risk in a rational way and that historical experience over a sufficiently long period is a valid if not infallible guide to future expectations.

An example of a rational return-risk relationship: High yield bonds are by nature riskier than senior loans, and as a result they are likely (but not certain) to deliver higher returns. Over rolling ten-year periods since December 1991, high yield outperformed senior loans 90% of the time. If the investment world is rational, we would expect that relationship could persist over the next ten or 20 years. But it is hardly a foregone conclusion.

Ultimately, making choices among high yield bonds, senior loans and the broad bond market must depend on each investor's objectives. The conventional assumption is that rational investors seek the highest possible return given

their risk tolerance (or, in mathematical parlance, the highest return per unit of risk). We can visualize these tradeoffs in terms of actual historical experience in Figure 6 below. Over the last 20 years, the allocation between high yield bonds and senior loans that produced the highest return per unit of risk was 75% senior loans and 25% high yield.

Figure 6. Optimal Risk/Return Portfolio Is 75% Loans and 25% High Yield...

Return/Risk of Blended High Yield/Senior Loan Portfolios, Rolling Three-Year Periods, 1994–2014

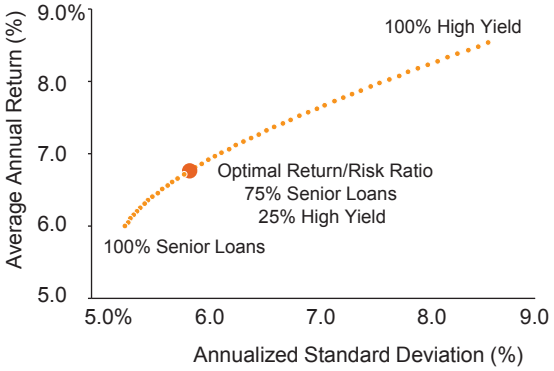
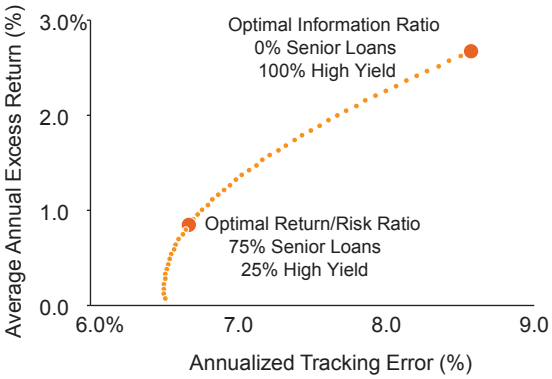


Figure 7. ...Yet Those Seeking High Excess Returns Would Clearly Prefer High Yield Bonds

Excess Returns/Tracking Error of Blended High Yield/ Senior Loan Portfolios, Rolling Three-Year Periods, 1994–2013



Source: FactSet, Voya Investment Management

On the other hand, it is unlikely that investors' objectives would encompass just the relationship between loans and high yield bonds while ignoring opportunities available in other fixed income assets. If we designate the Barclays U.S. Aggregate Bond Index as a proxy for the bond market and assume an objective to produce the highest possible return in excess of the market return, the allocations would look very different indeed. In fact, as shown in Figure 7, a portfolio of 100% high yield bonds and 0% senior loans would have produced the highest excess return per unit of tracking error over the same 20-year period.

We can refine the allocation possibilities between the two extremes illustrated above based on a new set of assumptions. If we confined ourselves to only the high yield and senior loan asset classes — and if we had the perfect foresight to select the allocation with the highest return/risk ratio every month for over 20 years — we would find that, while the allocations vary over time, on average, an optimal allocation would have been 75% to senior loans and 25% to high yield bonds.

A Note on Our Research

The analysis in this study is not intended to serve as a basis for predictions, probabilistic forecasts or formal recommendations based on any specific facts or circumstances. We have implicitly assumed that investment horizons are by nature very long; however, risk experience and ultimate outcomes depend heavily on the length of time that any investment is to be held or asset allocation maintained. Actually, if we were looking forward over any long period, we might choose very different methods and assumptions — for instance, compounded average returns (not arithmetic averages) — and returns adjusted to reflect auto-serial correlation in order to avoid underestimating investment risk. And in addition to examining the discrete history of returns describing past events, we would also consider the continuous probability distribution of possible returns to assess what could have happened. Information on the potential effects of such adjustments on our analysis is available on request.

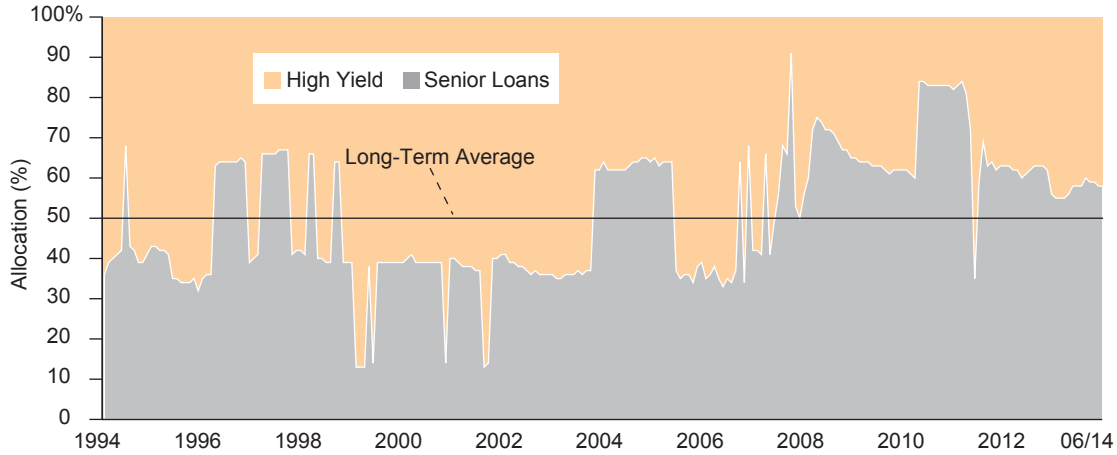
Alternatively, we could assume objectives more closely aligned with real-world goals for fixed income investors. Most investors would not accept the greater risk of below investment grade bonds (or loans) unless they expected to earn higher returns than the bond market as a whole. If we once again assume perfect foresight and retrospectively select the monthly allocations that would have produced the highest excess return per unit of tracking error — the information ratio — relative to the Barclays U.S. Aggregate Bond Index, the results differ substantially. In this instance, the average for all the historical periods is about 85% high yield and 15% senior loans.

Yet the greatest concern for many investors in below investment grade debt would likely be controlling downside risk; that is, attempting to limit the probability of losses. The traditional approach is to strive to minimize the occurrence of negative returns, but since the incidence of negative returns in fixed income is relatively low, in this study our definition of downside risk was the standard deviation of the worst 15% of returns (some of which may be greater than zero) within the historical distribution. Based on an objective of maximizing returns per unit of downside risk, the average allocation for all the historical periods was 47% in high yield and 53% in senior loans.

As a practical matter, none of these hypothetical allocation histories could have satisfied all investors. Few of them would have been likely to optimize allocations between loans and high yield bonds on a monthly basis, and some would be uncomfortable with a concentrated allocation to either asset class. However, by averaging the results of the three allocation methods and applying realistic constraints to assure diversification, it's a straightforward matter to develop an allocation guideline that can serve as a starting point for long-term decision making.

Figure 8 shows the results of such an exercise. The long-term average allocation indicated by this procedure is 50% high yield and 50% senior loans. Still, it is not our intention to suggest that this is a recommendation suitable for all. The point is to strike a reasonable balance among the allocation options that is respectful of a range of possible investor objectives — from risk-aversion (25% high yield/ 75% senior loans) to high excess returns (85% high yield/15% senior loans) to downside risk control (47% high yield/53% senior loans). As it happens, the latter objective comes closest to the long-term outcome.

Figure 8. Balancing Return and Risk Objectives Resulted in 50% High Yield/50% Loan Allocations
Historical Allocations, High Yield and Senior Loans, Average of Three Objectives, 1994–2014



Source: FactSet, Voya Investment Management

Allocations to lower-quality bonds shouldn't suggest an abandonment of prudence. Figure 9 summarizes the performance characteristics of a range of possible fixed income allocations, assuming the lower-quality component consists of an equal 50%/50% commitment to high yield and senior loans. It may surprise some to see that all the allocations (except the 60%/40% portfolio) have lower total volatility than the U.S. Aggregate Index alone — and all have higher return-to-risk ratios. The 20%/80% portfolio statistics are highlighted because that allocation has the highest return-to-risk ratio and is therefore optimal by that standard. Of course, risk efficiency may not be paramount for some investors; those seeking the highest possible total returns may be attracted to more concentrated portfolios.

Figure 9. Fixed Income Portfolios With Equal Allocations to High Yield and Senior Loans Were Less Risky Than Might Be Assumed

A variety of outcomes of a range of High Yield and Senior Loan allocations, 1994–2014

	U.S. Aggregate Bond Index	Allocations of 50% High Yield + 50% Senior Loan/U.S. Agg			
		10%/90%	20%/80%	30%/70%	40%/60%
Standard Deviation %	3.58	3.37	3.31	3.42	3.67
Average Total Return %	6.16	6.24	6.33	6.41	6.49
Return/Risk Ratio	1.72	1.86	1.91	1.87	1.77
Annual Alpha %*	NA	0.56	1.13	1.69	2.26
Beta*	1.0	0.92	0.84	0.76	0.69
R-Square*	1.0	0.96	0.83	0.64	0.44
Tracking Error %*	NA	0.74	1.48	2.22	2.96
Information Ratio*	NA	0.11	0.11	0.11	0.11

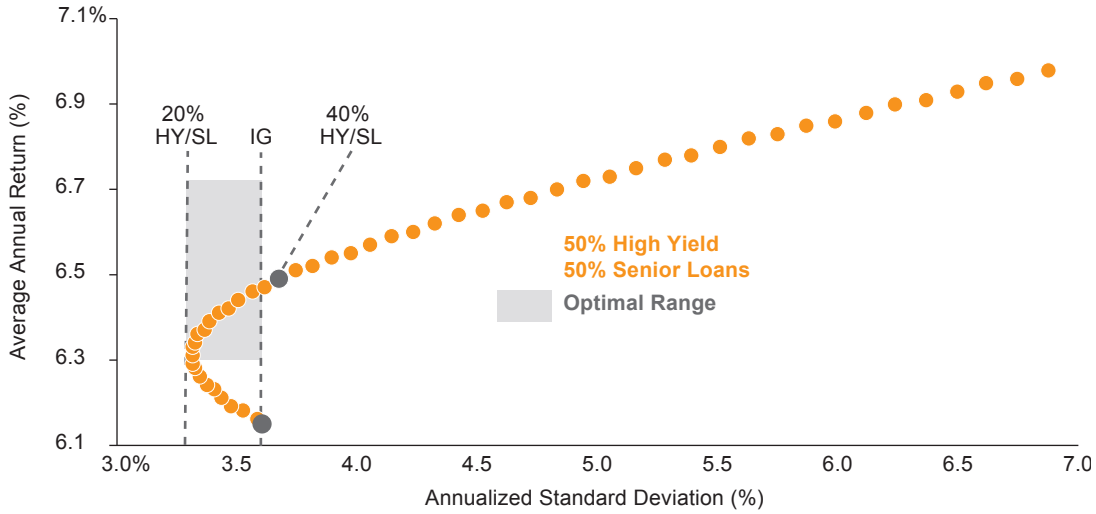
*Characteristics relative to the Barclays U.S. Aggregate Bond Index

Source: FactSet, Voya Investment Management

In Figure 10 we can see a graphic depiction of the risk and return relationships for selected portfolio allocations over the 20-year study period. Looking at this chart from left to right, we see the effect of allocating progressively more to the lower-quality components and less to the Barclays U.S. Aggregate Bond Index. Most notable is that allocating up to 30% of fixed income to high yield and senior loans produced results with less risk than investment grade bonds alone. All the data points to the left of the vertical line labeled "IG" have lower risk and higher returns than the Aggregate Bond Index — a virtual free lunch that occurs when assets' returns are poorly correlated with one another.

Assuming return/risk ratios as the yardstick for optimality, the optimal allocations fall between 20% and 40% to the below investment grade assets. As a result, we can conclude that for investors seeking both higher returns from fixed income as well as a broadly diversified portfolio that performs in line with the overall bond market, below investment grade allocations in the range of 20–40% seem appropriate.

Figure 10. Optimal Allocations to Below Investment Grade Debt Fall in the Range of 20–40%
Historical Return/Risk of Blended Portfolios, Investment Grade + High Yield and Senior Loans, 1994–2014



Source: FactSet, Voya Investment Management

Implementation

Some investors are inclined to leave allocations to lower-quality debt to the discretion of their core plus bond managers; however, our research indicates that the typical allocations to below investment grade credit within core plus products — at around 20% — not only are sub-optimal to generate significant excess returns, but often include more emerging market debt than senior loans. Another approach might be to select a single fund or manager that allocates opportunistically between high yield and senior loans. Once again, though, a survey of exposures across the below investment grade asset classes in high yield and senior loan funds/strategies shows that the typical high yield allocations within leveraged loan funds or loan allocations in high yield funds — to the extent they are included at all — average about 5% and exceed 10% in less than one out of ten instances. Token allocations to below investment grade credit in multi-asset strategies appear to be sub-optimal; investors would likely be better off selecting the best high yield manager and the best senior loan manager and assigning them equal positions in asset-pure strategies.

Summary and Conclusions

- Allocating funds to corporate below investment grade assets — high yield bonds and senior loans are the most common — has added value across market environments.
- Below investment grade bonds outperformed their investment grade counterparts about 60% of the time. High yields led the way when yield spreads compressed; senior loans outdistanced conventional bonds when interest rates rose.
- Tactical, opportunistic investing in high yield and/or senior loans requires skillful interest rate anticipation, which is a daunting challenge.
- To eliminate the guesswork, permanent allocations to high yield bonds and senior loans can potentially add meaningful excess returns.
- The potential contributions of high yield bonds and senior loans are complementary. High yield is an excellent source of excess returns, while senior loans offer valuable diversification benefits.
- Relatively low correlation between high yield bonds, senior loans and investment grade bonds allows allocation of about 30% to lower-quality debt without increasing portfolio volatility — at least over long time periods.
- Based on past experience, a reasonable apportionment between high yield bonds and senior loans is in the neighborhood of 50%/50%.
- Similarly, analysis of return-to-risk ratios shows that an optimal permanent allocation to below investment grade debt would be 20–40% of the total fixed income allocation.
- The benefit of separate and equal allocations to skilled high yield and senior loan managers outweighs the benefit of token 5–10% allocations at the discretion of a single manager.

Appendix

Returns for bond sectors are represented by the following index proxies		
Barclays U.S. Aggregate	Barclays Global Aggregate	Barclays U.S. High Yield
Barclays U.S. Government Long	Barclays Global Aggregate ex-U.S.	Credit Suisse Leveraged Loan
Barclays U.S. Government/MBS	Barclays 1-3 Year Gov/Credit	S&P/LSTA Leveraged Loan
Barclays U.S. Aggregate Corporates	U.S. Treasury Bill 3-Month	JPMorgan EMBI+
Barclays U.S. Mortgage Backed	U.S. Treasury 2-Year	JPMorgan CEMBI Diversified
Barclays U.S. Municipal Bonds	U.S. Treasury 5-Year	U.S. Treasury 30-Year
Barclays U.S. Corporate Long	U.S. Treasury 10-Year	JPMorgan GBI-EM Global Diversified
Barclays U.S. TIPS		

Source: FactSet

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General Risk(s): All investments in bonds are subject to market risks. Bonds have fixed principal and return if held to maturity, but may fluctuate in the interim. Generally, when interest rates rise, bond prices fall. Bonds with longer maturities tend to be more sensitive to changes in interest rates.

All equity investing involves risks of fluctuating prices and the uncertainties of rates of return and yield inherent in investing. Foreign Investing does pose special risks including currency fluctuation, economic and political risks not found in investments that are solely domestic. Emerging Market stocks may be especially volatile. Stock of an issuer in the Fund's portfolio may decline in price if the issuer fails to make anticipated Dividend Payments because, among other reasons, the issuer of the security experiences a decline in its financial condition. Securities of Small- and Mid-Sized Companies may entail greater price volatility and less liquidity than investing in stocks of larger companies.

There are no guarantees a diversified portfolio will outperform a non-diversified portfolio.

Past performance is no guarantee of future results.

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