Highlights

- A credit rating captures only one element of the risk profile of a corporate debt instrument.
- Where an investment is made in a corporate capital structure is a major consideration, but determining its treatment within the priority of payment queue in the event of a default is not always straightforward.
- We believe augmenting fundamental analysis with legal and structural analysis is critical to identifying attractive opportunities and fully understanding an investment's risk/ reward components.

The dream of finding buried treasure has fascinated humans for centuries. Fortune seekers have scoured the earth's lands and oceans to find diamonds and other precious stones hiding beneath the surface. It can be an arduous task to identify and isolate these commodities from the mineral ore encasing them. It requires knowledge, skill, and patience to effectively screen and separate the valuable from the worthless.

In our view, the prospector's task is similar to active investing in non-investment grade (also known as "high yield") bonds and loans, particularly the corporate debt instruments that carry a "triple C" rating.¹ This paper will explore the potential rewards and pitfalls of investing in this space.

High Yield Bond Ratings: Three Main "Buckets"

The non-investment grade corporate bond and loan markets comprise issuers that have been assigned a rating of "double B" or below. Exhibit 1 shows the non-investment grade ratings systems used by the two most popular credit ratings agencies: Moody's Investors Service ("Moody's") and Standard & Poor's Financial Services ("S&P"). For simplicity, this paper will focus on Moody's data.

Exhibit 1: Non-Investment Grade U.S. Corporate Debt Ratings

Category	Moody's	S&P
Double B	Ba1	BB+
	Ba2	BB
	Ba3	BB-
Single B	B1	B+
	B2	В
	B3	B-
Triple C	Caa1	CCC+
	Caa2	CCC
	Caa3	CCC-
Other	Са	CC
	С	С
Defaulted	D	D

Source: Moody's, S&P.

¹ Moody's Investors Service and Standard and Poor's Financial Services use a different nomenclature for their ratings system. For example, the Moody's equivalent to an S&P rating of CCC+ is Caa1. For purposes of this paper, we shall refer to both such ratings as "triple Cs".

Exhibit 2: High Yield Bond Market Characteristics as of June 30, 2024

	HY Market	Double Bs	Single Bs	Triple Cs
Number of Bond Issues	1881	933	673	275
Market Value (\$Bn)	1,279	655	463	161
Average Yield (worst case) ²	7.84%	6.52%	7.62%	13.84%
Option Adjusted Spread	317	184	290	938
Average Years to Maturity	5.71	6.58	5.02	4.14
Average Coupon	6.25%	5.63%	6.72%	7.23%
Average Duration	3.18	3.49	2.89	2.79

Source: ICE, ICE BofA U.S. High Yield Index.

Exhibit 2 shows select characteristics of each ratings category of the ICE BofA U.S. High Yield Index.

The largest ratings bucket within the high yield universe consists of double B bonds, accounting for approximately half of the entire high yield bond market by market value. Single Bs are second at 36%, with triple Cs representing only around 13% of outstanding high yield bonds by market value.

Each category has distinct features that, in general, tend to influence how the bonds perform during certain market conditions. For example, since investors generally view double B-rated issuers as being of higher credit quality than the other ratings categories, double B issuers are able to issue bonds with longer maturities and lower coupons than the other categories. Such bonds have a high sensitivity to changes in Treasury rates, as reflected by the higher duration. Consequently, during periods of dramatic Treasury rate declines, double B bond returns usually benefit to a greater extent than single B and triple C bonds.

Conversely, triple C bonds generally have shorter maturities and higher coupons (i.e., lower duration) and, therefore, experience less sensitivity to Treasury rate moves, a characteristic that can be particularly attractive to investors during periods of rising rates.

However, triple C bonds have earned their low rating due to the underlying issuer's increased susceptibility to adverse business events, driven either by macroeconomic or company-specific factors that may derail it from making promised interest and principal payments.

Triple Cs Under the Microscope

According to Moody's, a triple C rating signifies that an issuing company's debt is considered "speculative," "of poor standing," and "subject to very high credit risk" concerning the "likelihood of default as well as any financial loss suffered in the event of a default" over the medium term. Moody's ratings are meant to address two distinct concerns: a) the probability that an issuer will default and b) in the event of such a default, how much principal may be lost.

Typically, the credit ratings agencies assign ratings upon the issuance of a new bond or loan and review them periodically. Over time, ratings can be upgraded or downgraded, depending on the operating performance of the issuer.

In the aggregate, the CCC-rated segment of the high yield market is an unpopular space to invest. As a result of its higher defaults, greater volatility, and thus poor risk-adjusted returns, many market participants tend to shun this corner of the investable universe. However, for the discerning credit investor, the ability to uncover idiosyncratic opportunities provides the potential for outsized returns relative to the risk incurred.

³ A "default" is defined by Moody's as the failure to promptly pay interest or principal when due but can also include a bankruptcy filing or a distressed exchange. Typically, a company that defaults on an interest payment on a bond has 30 days to cure such default, after which time creditors can elect to pursue remedies, including forcing the issuer into bankruptcy.



² Average Yield (worst case) is a weighted average of Yield to Worst for all bonds comprising the index and each of the sub-indices. Yield to Worst is the lower of the yield to call or yield to maturity.

To do so, an investor needs to recognize that not all CCC-rated issuers are the same.

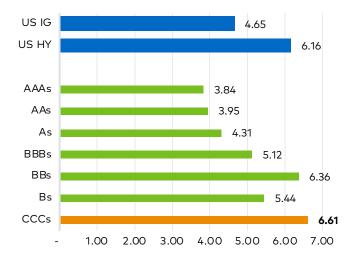
For example, companies rated CCC due to elevated current leverage but with a strong growth profile and high cash flow generation can grow into their capital structure and reduce their debt over time.

Conversely, other companies rated CCC that display reasonable current leverage but are facing secular decline as cash flows deteriorate will likely face greater challenges to their survival. Therefore, active managers can employ their mining tools to sift through the overleveraged companies within the lower tier of the high yield universe and unearth attractive opportunities.

Searching for Sparkling Returns in Triple Cs

As Exhibit 3 shows, over the past 25 years, triple C issues generated the highest total return of all the U.S. investment grade (I.G.) and non-investment grade ratings buckets. Although the high historical returns generated by triple C bonds may shine brightly to investors, our view is that the glitter is mostly illusory. While treasure is often present among the mineral scrap heap, we believe that unearthing the "gemstones" lying within takes special knowledge, experience, and hard work.

Exhibit 3: Annualized Returns (%) of U.S. Investment Grade & High Yield Bonds by Ratings Class (January 1, 1999—June 30, 2024)



Source: ICE, ICE BofA U.S. Corporate Index, and ICE BofA U.S. High Yield Index.

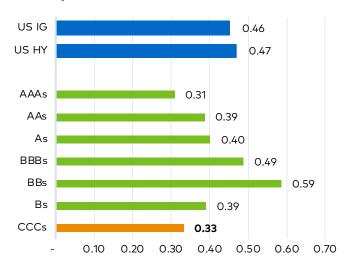
Risk-Adjusting Triple C Returns Reveals Their True Chemistry

It is no secret that high returns attract investors. Furthermore, in our experience, the triple C segment of the market is commonly subject to momentum trading during times of market exuberance (greed) and depression (fear). However, what is often forgotten by those who chase returns and yield is a key pillar of prudent investing, namely, understanding the amount of risk that must be borne to achieve a certain return.

According to Modern Portfolio Theory, the most common definition of investment risk is the standard deviation of the returns generated by an investment, which is a measure of the volatility of those returns. The higher the volatility (standard deviation) of the returns of an investment, the riskier the investment will be, and vice versa. Using standard deviation, investors can compare the return to the risk of an asset, a relationship that is captured in the Sharpe ratio.⁴

Exhibit 4 displays Sharpe ratios for the ratings categories of corporate bonds presented in Exhibit 3. Here, the attractiveness of triple Cs is quite different. When considering the amount of risk, investing in triple Cs may appear to be folly on the surface compared to investments in the other ratings buckets as well as the broader investment grade and non-investment grade universe.

Exhibit 4: Sharpe Ratios of U.S. Investment Grade & High Yield Bonds by Ratings Class (January 1, 1999—June 30, 2024)



Source: ICE, ICE BofA U.S. Corporate Index, and ICE BofA U.S. High Yield Index.

⁴ The Sharpe ratio equals the excess return of an investment over the risk-free rate (typically 3-month Treasury bills) divided by the standard deviation of the investment's returns.



However, just as diamonds can be hidden in worthless-looking rock, we believe that there can be strong risk-adjusted returns generated by investing in triple Cs, as long as the investor has the requisite knowledge and expertise to uncover the value.

Again, such knowledge and expertise are not common and oftentimes require years of experience to develop. Such acumen involves not only the ability to derive a reliable estimate of the enterprise value of a corporate entity but also, equally as important, a deep understanding of the legal and structural elements of the corporation's debt instruments.

Employing standard deviation and the Sharpe ratio is a common and reasonably effective method to measure the investment risk of an asset and then compare it to another potential investment. However, relying solely on such statistical measurements does not provide an investor a full appreciation of risk, particularly the distinct risk of a debt obligation that is traded over-the-counter as opposed to a stock that is traded on an exchange.

Many stocks are very liquid and trade frequently, providing real-time investor information and sentiment with respect to the risk of investing in that stock. In comparison, bonds and loans are typically less liquid instruments, with some issues, particularly triple Cs, trading infrequently and through a limited number of market makers. Moreover, when triple Cs do trade, there may be wide price variations that have less to do with the relative attractiveness of the issue and more because of the impact of bid/ask spreads and trading illiquidity. Consequently, standard deviation-based metrics, which may be exacerbated by such trading inefficiencies, may reveal only a part of the risk makeup of an investment.

Next, we discuss other methods of risk assessment that can be used to augment standard deviation and the Sharpe ratio.

Default & Recovery Rates

Moody's uses the risk-laden language detailed earlier when describing triple Cs for good reason—in the aggregate, triple C bonds and loans default at a much higher rate than similar investments in the other ratings categories. Exhibit 5 shows default rates by non-investment grade ratings categories, using both the original rating when the debt was first issued and the rating assigned 12 months before the default occurred.

On average, using rating at time of issuance, triple C debt instruments defaulted almost twice as frequently as single Bs and

Exhibit 5: Average Default Rates by Ratings Category, 2001—2023

Default Rate	Double B	Single B	Triple CCC
Using Rating at Time of Issuance	1.1%	2.8%	5.4%
Using Rating 12 Months Before Default	0.4%	2.1%	6.3%

Source: JP Morgan "Default Monitor," June 30, 2024.

nearly five times more often than double Bs. The clear implication from these historical results is that bonds rated triple C have a higher probability of defaulting than bonds in the other ratings buckets. But, as we observed in Exhibit 3, even with more frequently occurring defaults, triple Cs in the aggregate still produced attractive returns relative to the other ratings buckets.

Ostensibly, investors are aware of the increased standard deviation and default risk of triple Cs but nonetheless continue to purchase such bonds. One reason for this seemingly contradictory behavior is the possibility that, like standard deviation, the actual default rate only explains part of the risk framework associated with investing in triple Cs.

Losses from Defaults

In most cases, a company defaulting on its debt obligation(s) portends capital losses, but sometimes the actual losses are either relatively small or, if the position is held over a long enough period, partially or wholly offset by the instrument's coupon payments that are received by the bondholder prior to the eventual default. In some cases, a handsome profit may even be generated by a defaulted triple C. In fact, even though a company can have a high probability of default, the actions that a company takes following its default are typically critical in determining whether an investment will eventually be deemed successful or unsuccessful. For example, in the context of a default and balance sheet restructuring, will the issuer's management team reduce headcount, seek further equity investment, or perhaps discontinue certain operations? Such decisions can significantly affect the ultimate fate of a defaulted investment.

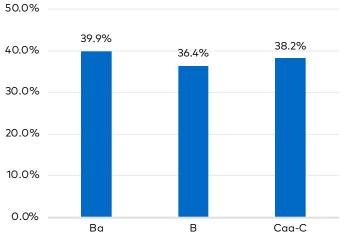
Given the historical data, triple Cs clearly have a higher probability of default than other non-investment grade debt. But when we analyze the final value that an investor eventually recovers from defaulted triple C investments compared with other ratings categories (known as the recovery rate, or the percentage of the initial investment recovered), we have observed a surprising



outcome: There is little difference in recovery rates between the three main ratings buckets.⁵

Exhibit 6 shows recovery rates of defaulted bonds broken down by all non-investment grade ratings categories for the period of 1983 to 2023. Interestingly, dispersion of recovery rates by ratings category during this time period is relatively low.

Exhibit 6: Average Senior Unsecured Bond Recovery Rates One Year Prior To Default, 1983—2023



Source: Moody's Investors Service.

Given the similarity of recovery rates across the ratings buckets as reflected above, it follows that even though Moody's is generally good at reflecting overall credit quality (and hence, the probability of default) in its initial ratings, such ratings may not be as effective a predictive indicator of actual losses that may be realized after a default occurs, particularly for a long-term investor. In their defense, Moody's ratings ultimately do an effective job highlighting the incremental risk of principal loss, mostly because the agency, through its own fundamental credit analysis, assesses the probability of default reasonably well amongst the various ratings categories.

The following example, based on the data set forth in Exhibits 5 and 6 above, supports this conclusion. With respect to triple Cs, if one were to combine the 5.4% default rate with the 38.2% recovery rate (conversely, a 61.8% capital loss) for Caa issues, it would result in an ultimate default loss of roughly \$3.33 for every \$100 invested in Caa issues. By comparison, the default loss for double Bs would be lower, as their default rate of only 1.1% combined with a 39.9% recovery (60.1% capital loss) for Ba issues would result in only \$0.66 of default losses per every \$100 invested. While this example is used for illustrative purposes only, it should come as no surprise

that the higher-rated (and, thus, higher-quality) double B segment of the high yield market, in the aggregate, produces lower default losses than the more risky triple C segment.

With that noted, default losses fail to tell the whole story when assessing the risk of investing in triple Cs, because again, even when these actual losses are factored in, their returns are still attractive relative to the other ratings buckets. This underscores how crucial knowledge and expertise are to finding and exploiting the most favorable reward-versus-risk investment opportunities within this segment of the non-investment grade universe in particular.

The Power of Priority

Corporations typically finance their operations with a combination of debt and equity capital, often by issuing multiple versions, or "tiers" of each, as Exhibit 7 illustrates.

Exhibit 7: The Stratification of a Typical Corporate Capital Structure

Priority of Payment	Tier of Capital Structure	
1st	Bank Line of Credit	
2nd	First Lien Term Loan	
3rd	Second Lien Term Loan	
4th	Senior Unsecured Bonds	
5th	Subordinated Bonds	
6th	Preferred Stock	
7th	Common Stock	

Source: Polen Capital.

Just as miners examine geologic strata to locate and extract value, investors who focus on certain tiers of the capital structure may find that some offer better rewards than others.

For example, investors at the top of the priority of payment queue are typically well protected if a company defaults on a debt obligation and seeks to restructure through the U.S. legal system. In a simple scenario where a company has defaulted on its debt obligation(s) and must be liquidated, the value unlocked through a liquidation would generally be directed to the first-priority creditors until their claim was satisfied. If any residual value remains, payments would then be made to the second-priority creditors, then the third, and so forth, with equity holders at the bottom of any such waterfall (and thus often receiving no value).

⁵ According to Moody's, "three alternative methods are used to derive nominal valuations on these obligors' debts at the time of resolution" with the "method Moody's considers to be the most representative of the actual recovery" used for this analysis.



Unlike the similar recovery rates observed among various ratings buckets in Exhibit 6, the results vary dramatically depending on the layer in which an investment is made. To illustrate, as seen in Exhibit 8, an investment in a 1st lien loan recovers, on average, over 65% of its value after a default, while an investment in a subordinated bond recovers only about 35%. Consequently, to truly assess the risk of a non-investment grade corporate debt instrument, an investor must consider not only the fundamentals of the company, which the corporate rating generally reflects reasonably well, but also the position of the debt instrument within the capital structure. Such a position is not always easy to determine and may be affected by terms and conditions only found deep inside a complicated legal agreement.

A similar assessment takes place when an in-court balance sheet restructuring (as opposed to a complete liquidation) takes place, as the U.S. bankruptcy code acknowledges a similar priority waterfall. From an investor's perspective, understanding the priority of payment position of an investment (i.e., its position in the capital structure) is of critical importance when assessing the risk associated with a potential loss of capital.

Exhibit 8 shows historical recovery rates for the different priority layers of bonds and loans that have defaulted over the period 1983 to 2023. Through this analysis, we can observe a closer relationship between debt characteristics and losses from defaults for all rating classes, not just triple Cs.

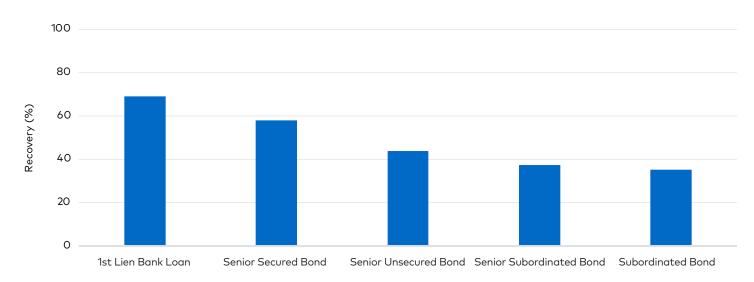
Mining the Layers of a Capital Structure

For many short-term or liquidity-oriented investors, where buy or sell decisions may be heavily influenced by volatile price swings, outright avoidance of triple Cs, which often trade with far less liquidity than higher-rated bonds, can make rational sense. But for long-term investors less concerned with short-term price volatility and the necessity to liquidate an investment at a moment's notice, there may be attractive opportunities in select issues at the low end of the ratings ladder.

By augmenting fundamental credit analysis with commensurate legal and capital structure analysis, we believe that a prudent manager can identify triple C-rated bonds that provide the potential for strong risk-adjusted returns.

Corporate debt obligations are accompanied by legal documents outlining the specific terms and conditions of the obligation, as well as the rights of the issuer and its creditors. Furthermore, to the extent that a capital structure has more than one secured debt tranche, an intercreditor agreement will generally outline the many features of how the creditors will interact under certain (typically adverse) scenarios. Understanding these contractual rights and remedies is crucial in assessing a bond's expected recovery rate in the event of a default.

Exhibit 8: Recovery Rate by Position in Capital Structure, 1983—2023



Source: Moody's Investors Service Moody's Investors Service.

- 6 Data cited is for the time period between 1983 and 2023.
- 7 It may be, however, difficult to infer too much from Exhibit 8 without more data about the capital structure of any given issue. Understanding the specific composition of the corporate structure is necessary to fully appreciate and assess risk amongst different layers of potential investment opportunities.



For example, while some layers are characterized as "senior secured," the associated legal documents may contain very wide allowances permitting the issuer to layer on more such debt (or, in some cases, debt that is more senior in nature), an option that is not in the investor's control and which could ultimately dilute the value of that position in a downside scenario. In this case, the "actual" priority layer may not be, in practicality, the one advertised.

Likewise, an unsecured layer may include legal provisions that prohibit any further debt issuance above it, thus protecting the creditor class from potentially adverse action by the issuer. The key takeaway is that an investor simply cannot read the cover page of a bond indenture to know exactly where a debt class sits in terms of priority of payment. Rather, investors must often dig into voluminous legal documentation to accurately assess structural or legal risk.

Like the patience of a prospector combing through worthless minerals to find a valuable gem, the depth of an investor's due diligence is essential.

Key Takeaways

In this paper, we have demonstrated that triple Cs have historically offered higher returns than most other corporate debt classes. At the same time, we have also seen that the risk profile of triple Cs (using commonly accepted measures of risk) is so high that the risk-versus-reward relationship of this asset class appears to be patently unattractive, especially to an investor focused on the short and even medium term. A closer examination of other factors, however, including recovery rates over the longer term, as well as priority of payment, can make the case for a more nuanced view of triple Cs. In this respect, each credit must be analyzed in full for an investor to properly evaluate whether the anticipated reward of investing in a triple C debt instrument sufficiently compensates one for the associated risks.

In our view, for investors to successfully sift through prospects in order to reliably and repeatedly identify a nugget of triple C value as opposed to only a hunk of low-grade junk, a deep knowledge base coupled with extensive experience is critical.

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Polen Capital is a team of experienced investment industry professionals who share an unwavering commitment to our clients, investors, community, and each other. We have been dedicated to serving investors by providing concentrated portfolios of what we believe are the highest-quality companies for more than three decades. At Polen Capital, we have built a culture of results, and in this, an inherent belief in going beyond what's expected for the people and communities we serve.

We adhere to a time-tested process of researching and analyzing companies around the globe—seeking only the best to build highly concentrated portfolios. Then, we invest for the long haul and with a business owner's mindset, giving these companies time to grow.

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The ICE BofA U.S. High Yield Index tracks the performance of U.S. dollar denominated below investment grade corporate debt publicly issued in the U.S. domestic market. The ICE BofA U.S. Corporate Index tracks the performance of U.S. dollar denominated investment grade rated corporate debt publicly issued in the U.S. domestic market. Please note that one cannot invest in the index.

