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Calamos High Yield Investment Process

Credit research has been an integral part of the Calamos investment process since the late 1970s, when John P. Calamos, Sr. introduced pioneering strategies to manage risk and enhance returns through the use of convertibles.

Since comprehensive capital structure research is the foundation of our investment expertise, we have readily extended our capabilities across asset classes. We introduced our first high yield portfolio in 1999 and also utilize high yield securities within a range of enhanced fixed income portfolios.

The complexities of the high yield marketplace require a specialized approach. In this paper, we provide an overview of our high yield investment process. The Calamos High Yield credit team focuses on analyzing and forecasting a company's cash flows to ascertain a company's ability to pay back its debt obligations, utilizing rigorous bottom-up fundamental analysis paired with a top-down perspective.

This process is consistently applied across our U.S. and global high yield capabilities, including senior secured leveraged loans, higher quality BB credits, mid-tier B credits, and stressed securities rated CCC and below.

CHARACTERISTICS OF THE CALAMOS HIGH YIELD APPROACH

- Comprehensive capital structure research
- Modeling over entire credit cycle
- Assignment of internal credit rating
- Original investment thesis and exit strategy
- Probability-weighted total return analysis at the security level
- Avoidance of securities with a high probability of default and high severity of loss
- Leveraging Calamos equity analysts for industry themes and security-specific concerns

THE CALAMOS HIGH YIELD INVESTMENT PROCESS

I. CREDIT RESEARCH

Fundamental security selection driven by rigorous analysis

Fundamental Analysis

- Position within industry
- Modeling of cash flow
- Projections of balance sheet
- Full capital structure analysis
- Management assessment
- Assign internal credit rating
- Establish original investment thesis (OIT)

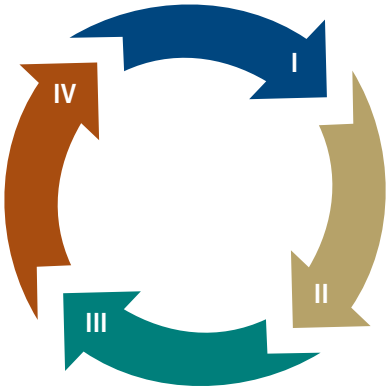
Pricing of Risk

- Stress financial statements
- Recovery analysis
- Unique technical factors
- Probability-weighted total return scenario analysis
- Establish exit strategy (ES)

IV. RISK MONITORING

We continually monitor the portfolio

- Will take loss today to avoid larger loss in the future
- OIT/ES: monitored daily
- Duration: spread and interest rate
- Equity market: early indication something is amiss
- Relative value versus industry and broader market
- Scenario analysis: stress test portfolios in different economic environments



II. PORTFOLIO CONSTRUCTION

Establish the risk framework and identify the performance drivers

- Risk/reward framework: client objectives and guidelines
- Diversification: sufficient industry and company diversity
- Portfolio characteristics: duration, yield to worst, spread
- Top-down view: ensure bottom-up positioning corresponds with macro perspectives
- Liquidity analysis: minimum issue size and sufficient market liquidity
- Guideline compliance: Charles River ensures pre-trade compliance
- Scenario analysis: Stress test at the individual bond level

III. PERFORMANCE ANALYSIS

Attribution that provides full transparency

- Daily attribution at the credit quality, industry and security levels
- Attribution viewed as the proof statement
- Are returns being generated from intended risks?
- Insight into performance drivers

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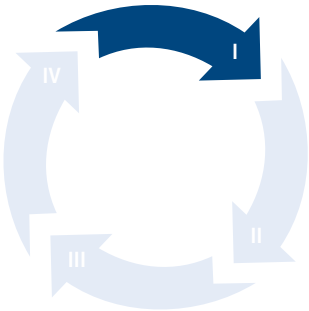
The Calamos high yield investment process is a comprehensive, disciplined process driven by fundamental research. Our process has four steps: credit research, portfolio construction, performance analysis and risk monitoring.

I. CREDIT RESEARCH



Fundamental security analysis is the cornerstone of our investment process, because avoiding losers wins the game for the high yield investor, due to the historically asymmetrical risk/return profile of the asset class. The first step in determining the creditworthiness of an issuer is to analyze all of its historical financial statements (income statement, balance sheet, and cash flow statement). From the historical data, we can assess how the company has performed in the recent past, varying trends, relative performance versus industry peers, and the risk tolerance of management.

Key ratios include, but are not limited to: interest coverage, total leverage, free cash flow as a percentage of debt, cash flow margins, and other industry-specific metrics. The historical financial statements also illustrate how the capital structure of an issuer has changed over the recent past. Is a company adding debt to build the business or for shareholder-friendly initiatives? Is the company delevering by using cash flow to pay down debt? These are important indicators that assist us in making future projections.

Along with the quantitative historical financial statement analysis, we examine qualitative factors to determine the key fundamental drivers of a business. What is the issuer's competitive position within its industry? Are they a price seeker or price taker? Is there risk of technological obsolescence? Often, we speak with management teams, customers, suppliers, and competitors to get a better assessment of the industry and company dynamics.

Once we have a thorough understanding of the key drivers for a particular company, we can begin to model our forward-looking projections of the financial statements and, most importantly, cash flow. We blend our view of industry dynamics and a company's positioning within that industry to make forecasts, including revenues, margins, interest expense, capital expenditures, free cash flow, cash balances, and total debt. Given that the market is forward looking, we project a minimum of 12 to 18 months into the future to determine how the market may price the security based on projected underlying fundamentals.

Once we have a thorough understanding of the key drivers for a particular company, we can begin to model our forward-looking projections of the financial statements and, most importantly, cash flow.

From these projections, we then assign an internal credit rating to the issuer based on our 12 to 18 month outlook. This internal credit rating utilizes many of the same metrics that rating agencies use, as well as other industry-specific measures, but our ratings are forward looking. The rating agencies are typically slow to react to fundamental changes and typically rate through the entire credit cycle, which often leads to market inefficiencies. For example, if we can pinpoint those issuers that are going to cross over to investment grade from high yield as a "rising star" prior to when the agencies upgrade them, this has historically resulted in more than 400 basis points of excess return in the three months prior to the agency upgrade. Similarly, if we can avoid those companies whose fundamentals are deteriorating and will lead to agency downgrades, we can avoid the forced selling that occurs due to the rating agency's action.

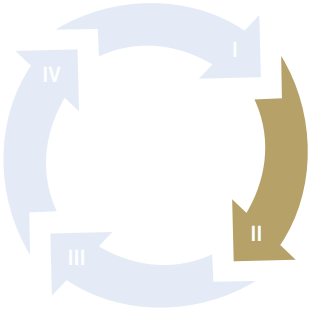
In the final step of our bottom-up fundamental analysis, we examine the probable recovery of a security in the event of a bankruptcy. Only by knowing the downside of a security can we assess whether we are being adequately compensated for the inherent risk. The recovery analysis utilizes a "waterfall" approach to the capital structure by assigning a value to each of an issuer's assets and summing them to an overall enterprise value, and then comparing this to all of the outstanding claims against those assets.

In the event of a bankruptcy, under the standard "waterfall" approach, professional fees and administrative claims are paid first. Then, first-lien secured holders must be paid in full before unsecured holders (high yield investors) receive any compensation. Over the past 30 years, recovery rates for high yield unsecured bondholders have averaged nearly 40 cents on the dollar. However, in some instances, a bankruptcy filing causes recovery to be greater than par for bondholders if the security is senior enough in the capital structure and receives interest throughout the workout process. This analysis is a critical step in assessing the risk/return profile of each individual security.

Once we have our financial projections and internal rating, we then "price" the security, determining the required return that we must achieve in a given bond over the next year to compensate us for the inherent risks of that bond. To do this, we compare similarly rated companies, adjusting for maturities, qualitative factors, and covenants, to assign a required return. We then compare this required return to an expected return that we predict utilizing a probability-weighted scenario analysis at the individual bond level.

Our pricing of risk serves as an important differentiator versus many of our peers. Merely looking at a yield or spread versus the rating, as many of our peers do, misses many nuances of a bond. These nuances included covenant differences, call features, seniority in the capital structure, issue size, key holders, or other factors that may be overlooked absent the bond-specific scenario analysis.

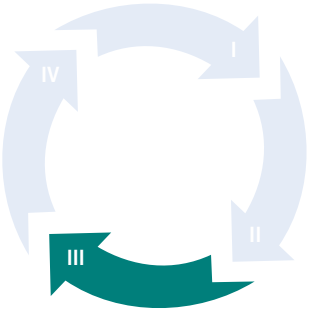
II. PORTFOLIO CONSTRUCTION



In our portfolio construction process, we establish a risk framework and identify performance drivers. Conviction level and variability of projected returns determine individual security weightings. In particular, we avoid securities with a high probability of default and high severity of loss (as measured by recovery rate). We consider risk/reward framework, diversification, portfolio characteristics, alignment with top-down views, liquidity analysis, guideline compliance and scenario analysis.

Our scenario analysis includes an upside, base and downside case. These different scenarios not only determine an expected return, but also provide a variability of expected returns that assists us in sizing positions within the portfolio. In our process, we seek to maximize returns for a given level of risk: Our position sizes reflect how confident we are that a particular security can add to the portfolio's overall risk-adjusted return. Two securities that have identical expected returns will have materially different weightings if one has a much higher variability of possible outcomes.

Once we determine a security offers an expected return that exceeds the required return, our team defines an original investment thesis and exit strategy. The original investment thesis outlines the specific reasons a particular security should exceed its required return. The exit strategy includes an upside and downside rationale. The upside point is where the security no longer offers the needed return for the inherent risk; the downside point defines the key risks that would cause us to eliminate the issuer from the portfolio, were they to materialize.

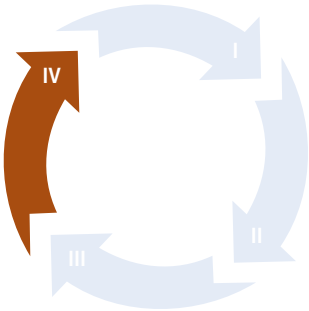


III. PERFORMANCE ANALYSIS

Our goals as investment managers are to outperform the stated benchmark over the entire credit cycle with less risk and consistently rank in the top quartile of a representative peer group. Through ongoing performance analysis, we assess which investment decisions are helping us to achieve these goals and which decisions are not. Our efforts are designed to provide full transparency and insight into performance drivers.

By examining industry breakdowns, duration buckets, quality characteristics, and spread analysis, we receive confirmation of our past performance and determine if returns are being driven from intended risks. We leverage this analysis to ensure our portfolio positioning aligns with Calamos' top-down macro views.

By examining the relative performance of our portfolio over the entire credit cycle, we can ascertain our value creation as the investment manager. We recognize that we may underperform at points, and we rely on our attribution efforts to provide context for this. We will use periods of underperformance to determine if portfolio adjustments are necessary as we migrate through the credit cycle. However, we do not believe short-term underperformance should derail a discipline in which we have high conviction. If our underperformance makes sense to us, we will stay the course–for example, if we believe an outperforming segment is overpriced and therefore carries uncompensated risk.



IV. RISK MONITORING

We typically do not hold securities to maturity. As part of our daily monitoring process, we are constantly scanning the market for better opportunities. If another security exhibits better risk/return characteristics than a position we own, we will not hesitate to swap an existing position for a new one. We do not have "core" holdings. Every position must meet daily scrutiny to ensure its place in an optimal portfolio. The most important aspect of the daily monitoring process is that it forces us to detect those names whose investment thesis has broken before the market does.

In this regard, we believe we benefit immensely from our collaboration with the larger Calamos investment organization. Often, the equity market will alert us to something before the high yield bond market reacts. Equity prices, volume changes, short interest ratios, earnings revisions, analyst downgrades all act as warning signals that we may need to examine a specific issuer further to determine if an investment thesis is breaking down.

Additionally, we can utilize many of the same tools created by the Calamos equity team to monitor our positions, including the credit barrier price and a Merton model-based analysis. Due to the asymmetric risk/return profile of the high yield asset class, it is imperative to mitigate downside risk. We will not hesitate to take a five-point loss to avoid another 15 points of downside.

> Only by knowing the downside of a security can we assess whether we are being adequately compensated for the inherent risk.

CONCLUSION

Throughout our history, the Calamos investment process has combined fundamental bottom-up analysis with a firm-wide top-down macro view. Our four-step iterative high yield investment process applies this model across our U.S. and global high yield strategies to leveraged loans, higher quality and mid-tier credits, and stressed securities rated CCC and below. Since the high yield investment universe is characterized by a high degree of idiosyncratic risk, it is imperative that we maintain a disciplined and comprehensive investment process. We believe that our process allows us to construct the most optimal portfolio given a client's risk tolerance, with the ultimate goal of outperforming our high yield peer group with less risk over the entire credit cycle.

ABOUT THE AUTHORS

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Jeremy Hughes is a senior vice president and co-portfolio manager at Calamos. He contributes 21 years of high yield experience and also serves on the firm's Investment Committee. Prior to joining Calamos, he was a portfolio manager at Aviva Investors. He has also held high yield portfolio management and trading roles at ABN AMRO, Allstate, Citigroup and Van Kampen. He is a CFA charterholder and a member of the CFA institute. He earned a B.S. in finance from Miami University of Ohio.

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High yield securities possess increased credit and liquidity risks.

Ratings are relative, subjective and not absolute standards of quality, represent the opinions of the independent Nationally Recognized Statistical Rating Organizations (NRSRO). Ratings are measured using a scale that typically ranges from AAA (highest) to D (lowest). The security's credit rating does not eliminate risk. Additional information on ratings methodologies are available by visiting the NRSRO websites; www.standardandpoors.com,www.moodys.com, and www.fitchratings.com.

The **interest coverage ratio** measures how easily a company can pay interest on its outstanding debt. **Total leverage ratios** measure how a easily a company can meet its financial obligations. **Free cash flow as percent of debt** compares free cash flow to debt (operating cash flow minus the amount used for capital expenditures, divided by total debt) **Cash flow margins** measure a company's profitability. The **Merton Model** is a model used to evaluate the credit risk of a corporation's debt.

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