

The investment functions of asset managers present unique challenges and complexities that require a deep understanding of both financial markets and regulatory environments. For internal audit functions, navigating this landscape is crucial for ensuring effective risk management and compliance.

This series of whitepapers aims to provide a comprehensive guide to the specialized aspects of auditing investment asset classes or supporting operations, covering unique or critical areas such as portfolio management, valuation practices, regulatory compliance, and operational risk. By exploring these topics, we seek to equip internal audit professionals with the insights and tools necessary to enhance their oversight capabilities and add strategic value to their organizations.

FIXED INCOME - CREDIT ANALYSIS

The credit analysis function is a key element of fixed income investment management, assessing the creditworthiness of issuers and ensuring sound investment decisions. Within a fixed income investment team, credit analysts provide essential insights that drive portfolio construction, risk management, and security selection. Their analysis helps identify both opportunities and risks across a wide range of debt instruments, including corporate bonds, municipal securities, and structured products. By delivering detailed credit opinions and recommendations, the credit analysis team supports the broader investment process, contributing to the optimization of risk-adjusted returns and the preservation of capital.

When Internal Audit is evaluating any asset class managed by the Investment function, start by determining which of the standard investment related internal controls are applicable. For fixed income most of the standard internal controls over investment workflow will be relevant to the portfolio. For example, internal controls to ensure there is an effective mechanism to monitor risk characteristics (such as duration, credit quality, sector/geographic concentrations), perform ongoing risk and performance attribution analysis and rebalance the portfolio against its designated benchmark.

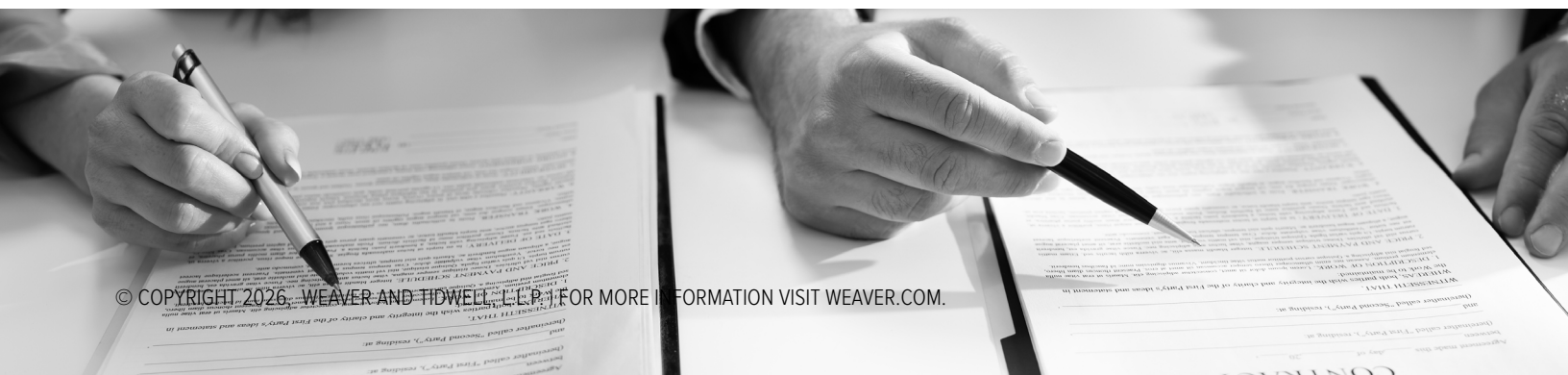
In addition, there are unique characteristics specific to Fixed Income, and specifically Credit Analysis, that should be considered by Internal Audit when assessing risks and developing the scope of the engagement.

- ▶ **Governance:** Typically, the Investment Committee will approve a fixed income policy that defines the types of credits eligible for investment within the portfolio. The fixed income policy normally includes minimum and average credit ratings for investments, a maximum dollar limit, a maximum term limit, concentration limit on sectors and geographies, maturity profile characteristics and eligible instrument types (e.g., sovereign debt, municipal debt, corporate debt, MBS, etc.). In addition, the policy usually includes a list of prohibited investments to ensure the fund does not assume undue risk.

The Investment Policy may also require the establishment of a **Credit Research Department** that operates separate from the Investments Department. This became more common across investment advisers in response to the global financial crisis of 2008 to provide investment teams additional information beyond the credit ratings of third party agencies.

- ▶ **Policy:** The policy may also require the establishment of a Credit Research Department that operates separate from the Investments Department. This became more common across investment advisers in response to the global financial crisis of 2008 to provide investment teams additional information beyond the credit ratings of third party agencies. There may also be a separate, fixed income credit policy that sets forth specific requirements for eligible issuers and securities.

- ▶ **Investment Universe:** The Credit Research Department is usually tasked with the creation of an investable universe of issuers. The process for an issuer to be included in the universe typically involves the Investment Department submitting a written request for the inclusion of an issuer. The Credit Research Department will then conduct an in-depth analysis to ensure the issuer satisfies criteria set out in the fixed income investment policy. This introduces increased operational complexity, and these processes should be carefully reviewed including:
 - ▶ Engagement of the Investment Committee, CIO and executive management
 - ▶ Analysis of each issuer's regulatory filings and earnings calls
 - ▶ Corporate access controls
 - ▶ Synchronization of issuers between the investable universe and OMS
- ▶ **House View:** As part of the investment universe, Credit and Investment leadership will assess macroeconomic and microeconomic risks to build a house view that guides strategic decisions on the optimal composition of fixed income assets. The house view often considers geopolitical risks, government monetary policies, sectors and industries analysis and durations.
- ▶ **Qualitative Skills:** Credit research analysts are in high demand. As such, it may be prudent to assess the credit research team's capability, resourcing structure and transparency. Often, junior analysts rely on mechanical credit scoring of quantitative and qualitative factors based on historical data, whereas senior and more sophisticated analysts consider forward looking qualitative research and have separate teams specialized on each individual sub-asset class type.
- ▶ **Valuation:** The pricing of fixed income securities, particularly in emerging markets and for securities below investment grade, can also present a major risk. In certain emerging markets, industry bodies set prices that arguably, do not adequately reflect the inherent credit and liquidity risks of the security. As such, pricing risks on distressed securities and underlying valuation methodologies should be closely reviewed.
- ▶ **Compliance:** Pre-trade compliance for fixed income securities is inherently challenging, as counterparts are often unwilling to guarantee a transaction until an adviser completes their internal compliance checks. To solve for this issue, advisers generally provide traders some degree of flexibility to execute orders contemporaneously when it does not present excessive risk to the fund.
- ▶ **Coverage:** A Credit Research department's coverage should span the entirety of the organization's public and private debt investments but often is leveraged beyond just the issuers. Credit evaluations are often used as part of periodic due diligence for broker dealers and counterparties.
- ▶ **Derivatives:** Derivatives are commonly used in Fixed Income portfolios to manage credit and interest rate risks. Key risks related to derivatives (such as counterparty, collateral, leverage, etc.) are typically the responsibility of functions outside of the Credit Research Department.



FIXED INCOME CREDIT RISK ANALYSIS

When conducting credit risk analysis, Credit Research Departments consider macroeconomic and issuer-specific credit risks. The risk evaluation process for the issuers is relatively similar to that conducted by Equity Analysts when evaluating a security, but with a longer-term focus more consistent with the fixed income market

Macroeconomic Risks

- ▶ **Domicile:** The issuing firm's position and location considering both their geopolitical environment and that of the jurisdiction that could affect debt payment.
- ▶ **Conditions:** The general economic conditions that impact all issuers and borrowers that span general economy, competitive marketplace, business environment, assessing real interest rates and any expected inflation rate premium. Market liquidity has a strong correlation to credit risk.

Currency: The cash-flows of the issuer impacted by exchange rate changes including borrowing outside of the issuer's domicile.

Issuer-specific Risks

- ▶ **Capacity:** The assessment of the issuer's ability to make debt payments on time, assessing stability of operating cash flows, credit lines or tax revenues (sovereign debt). Leverage and reliance on debt financing.
- ▶ **Capital Resources:** The issuing firm's other resources that reduce reliance on debt, these are the general assets of the issuer which all debtors would have claim.
- ▶ **Contractual Terms:** The legal terms and conditions of the debt agreement such as restrictions on financial ratios, financial reporting, additional borrowing, dividend payments, seniority, subordination, collateral, call and put provisions, restrictive covenants and guarantees.
- ▶ **Collateral:** The quality and value of the assets that secure the debt, including pledged assets specific to secured debt in addition to access to unpledged assets.

The evaluation and scoring methodology used by the Credit Research team are captured in an Issuer Evaluation that allows the investment teams to compare and contrast different issues for alignment with their portfolio needs and the organization's house view.

Issuer Evaluations

The Issuer Evaluation will likely consider many of the elements listed below and Internal Audit can gain a deeper understanding of the credit team's approach to assessing the financial stability and creditworthiness of prospective issuers.

Understanding these elements allows Internal Audit to assess whether the credit analysis process is robust, properly documented, and aligned with the organization's risk management framework. Additionally, it helps identify potential areas for audit focus, such as the consistency of credit rating methodologies, adherence to investment policies, and the effectiveness of controls in mitigating credit risk.



Evaluation Criteria

- ▶ Credit Agency Ratings: Collected from a number of agents and presented together
- ▶ Internal Financial Statement Analysis: Specific ratios are evaluated by credit and additional details are provided in the *Financial Statement Ratios*.
 - ▶ Income Sheet Analysis & Ratios
 - ▶ Balance Sheet Analysis & Ratios
 - ▶ Cash Flow Analysis
 - ▶ Debt Structure and Coverage Ratios
 - ▶ Schedule of debt maturities, tranches,
 - ▶ Ratio of earnings before interest to interest expenses
 - ▶ Debt service coverage ratio
- ▶ Historical Performance: Past defaults and credit history
- ▶ Stress & Sensitivity Testing
- ▶ Qualitative Analysis
 - ▶ Alignment with house view of debt issuers
 - ▶ Assessment of the quality of management
 - ▶ Macro and microeconomic evaluation (GDP, inflation, unemployment, and political stability)
 - ▶ Industry analysis – competition, regulation, and trends

Financial Statement Ratios

Key quantitative financial ratios that may be used by Credit Research to assess the creditworthiness of an issuer include the following:

Liquidity Ratios

- Current Ratio: $\text{Current Assets} / \text{Current Liabilities}$
- Quick Ratio: $(\text{Current Assets} - \text{Inventory}) / \text{Current Liabilities}$
- Cash Ratio: $\text{Cash and Cash Equivalents} / \text{Current Liabilities}$

Leverage Ratios

- Debt-to-Equity Ratio: $\text{Total Debt} / \text{Total Equity}$
- Debt-to-Assets Ratio: $\text{Total Debt} / \text{Total Assets}$
- Interest Coverage Ratio: $\text{EBIT} / \text{Interest Expense}$
- Fixed Charge Coverage Ratio: $(\text{EBIT} + \text{Fixed Charges}) / (\text{Fixed Charges} + \text{Interest Expense})$

Profitability Ratios

- Net Profit Margin: $\text{Net Income} / \text{Revenue}$
- Return on Assets (ROA): $\text{Net Income} / \text{Total Assets}$
- Return on Equity (ROE): $\text{Net Income} / \text{Total Equity}$

Solvency Ratios

- Debt Service Coverage Ratio (DSCR): $\text{Net Operating Income} / \text{Total Debt Service}$
- Debt-to-EBITDA Ratio: $(\text{Total Debt} - \text{Cash and Cash Equivalents}) / \text{EBITDA}$

Cash Flow Ratios

- Operating Cash Flow Ratio: $\text{Operating Cash Flow} / \text{Current Liabilities}$
- Free Cash Flow to Debt Ratio: $\text{Free Cash Flow} / \text{Total Debt}$

The evaluation of credit worthiness is a key control that should part of the considerations when assessing the risks and controls for an internal audit of a fixed income investment team or asset class. Weaver's dedicated Asset Management Consulting team specializes in conducting internal audits of investment asset classes and supporting operation and compliance functions. For more information contact us.

KEY CONTACTS:

BRUCE MILLS, CIA, CFE

PARTNER
ASSET MANAGEMENT CONSULTING SERVICES
O: 832.320.3211
BRUCE.MILLS@WEAVER.COM

MICHAEL BARAKAT

DIRECTOR
INVESTMENT ADVISER COMPLIANCE
O: 832.320.3249
MICHAEL.BARAKAT@WEAVER.COM

