Restructuring

Credit Analysis

Step-by-Step Guide to Understanding Credit Analysis

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What is Credit Analysis?

Credit Analysis is the process of evaluating the creditworthiness of a borrower using financial ratios and fundamental diligence (e.g. capital structure).

Often, some of the more important contractual terms in the financing arrangements that lenders pay close attention to include debt covenants and the collateral pledged as part of the signed contract.

Credit Metrics	Formula	Explanation
Total Leverage Ratio	Total Debt / EBITDA	• Measures Total Debt to EBITDA • Common Maintenance Covenant
Net Debt Leverage Ratio	Net Debt / EBITDA	• Measures Total Debt Less Cash to EBITDA • Nets Cash Against Debt
Senior Debt Leverage Ratio	Senior Debt / EBITDA	• Measures Just the Senior Debt to EBITDA • Frequent Maintenance Covenant
EBIT Coverage Ratio	EBIT / Interest Expense	• Ability of EBIT to Service Interest • Useful if Cyclical (i.e., D&A Fluctuates)
EBITDA Interest Coverage Ratio	EBITDA / Interest Expense	• Ability of EBITDA to Service Interest • Adds-Back D&A – But Misleading For Capital-Intensive Industries
Capex-Adjusted Coverage Ratio	(EBITDA – Capex) / Interest Expense	• Ability of EBITDA Less Capex to Service Interest • Useful if Capital-Intensive (Cyclical Capex)
Cash Interest Coverage Ratio	EBITDA / Cash Interest Expense	• Ability of EBITDA to Service Cash Interest • Used if Debt has PIK Interest
Fixed Charge Coverage Ratio	(EBITDA – Capex – Cash Taxes) / (Cash Interest Expense + Mandatory Repayment)	• "FCCR" Compares FCF Proxy to Fixed, Non-Discretionary Debt Obligations
A/R Days	(AR / Revenue) × 90 Days	• Average # of Days to Collect Credit Payments (Quarterly)
A/P Days	(AP / COGS) × 90 Days	• Average # of Days to Pay Suppliers / Vendors for Credit Purchases (Quarterly)
Inventory Days	(Inventory / COGS) × 90 Days	• Average # of Days to Sell Off Inventory Balance (Quarterly)
Cash Conversion Cycle ("CCC")	A/R Days + Inventory Days – A/P Days	• Average # of Days to Convert Inventory into Cash from Sales

Credit Analysis 101: Financial Risk Ratios

Each lender has its own standardized approach in performing diligence and gauging the credit risk of the borrower. In particular, the inability of the borrower to meet its financial obligations on time, which is known as default risk, represents the most concerning outcome to lenders.

When the downside potential for a borrower is far greater than that of traditional borrowers, the importance of in-depth credit analysis increases because of the uncertainty.

If the lender has determined to extend a financing package, the pricing and debt terms should reflect the level of risk associated with lending to the particular borrower on the other side of the transaction.

Credit Analysis Ratios: Financial Due Diligence

The following table contains some of the more common credit analysis ratios used to assess the default risk of borrowers, at the brink of insolvency (i.e. near financial distress).

Credit Metrics	Formula	Explanation
• Total Leverage Ratio	• Total Debt ÷ EBITDA	• Measures Total Debt to EBITDA Common Maintenance Covenant
• Net Debt Leverage Ratio	• Net Debt ÷ EBITDA	• Measures Total Debt Less Cash to EBITDA Nets Cash

		Against Debt
• Senior Debt Leverage Ratio	• Senior Debt ÷ EBITDA	• Measures Senior Debt to EBITDA Frequent Maintenance Covenant
• EBIT Coverage Ratio	• EBIT ÷ Interest Expense	• Ability of EBIT to Service Interest • Useful if Cyclical (i.e., D&A Fluctuates)
• EBITDA Interest Coverage Ratio	• EBITDA ÷ Interest Expense	• Ability of EBITDA to Service Interest • Adds-Back D&A – But Misleading For Capital-Intensive Industries
• Capex-	• (EBITDA – Capex) ÷ Interest	• Ability of EBITDA Less Capex to Service Interest • Useful if Capital-Intensive (Cyclical Capex)
		• Ability of EBITDA to Service Cash Interest • Used if Loan or Bond has PIK Interest
		• FCCR Compares FCF Proxy to Fixed, Non-Discretionary Debt Obligations
		• Average # of Days to Collect Credit Payments (Quarterly)
• A/P Days	• (AP ÷ COGS) × 90 Days	• Average # of Days to Pay Suppliers / Vendors for Credit Purchases (Quarterly)
• Inventory Days	• (Inventory ÷ COGS) × 90 Days	• Average # of Days to Sell Off Inventory Balance (Quarterly)
• Cash Conversion Cycle ("CCC")	• A/R Days + Inventory Days – A/P Days	• Average # of Days to Convert Inventory into Cash from Sales

Credit Risk Knowledge Panel

Note, when a borrower is at risk of default, the metrics used are on a short-term basis, as seen in the working capital metrics and cash conversion cycle. But for non-distressed borrowers, extended time horizons would be used for calculating working capital metrics.

Short-term models are commonly seen in restructuring models, most notably the Thirteen Week Cash Flow Model (TWCF), which is used to identify operational weaknesses in the business model and to measure short-term financing needs.

Credit ratings can also be insightful, but rating agencies require time to adjust ratings, and because of this time lag, rating downgrades can be a bit behind the curve and serve more as a confirmation of existing concerns in the markets.

Leverage Ratios

Leverage ratios place a ceiling on debt levels, whereas coverage ratios set a floor that cash flow relative to interest expense cannot dip below.

- **Total Leverage Ratio**: The most common leverage metric used by corporate bankers and credit analysts is the total leverage ratio (or Total Debt / EBITDA). This ratio represents how many times the obligations of the borrower are relative to its cash flow generation capacity.
- **Net Leverage Ratio**: Another common metric is the net leverage ratio (or Net Debt / EBITDA), which is like the total debt ratio, except the debt amount is net of the cash balance belonging to the borrower. The reasoning is that cash on the balance sheet could theoretically help pay down the debt outstanding.
- **(EBITDA – Capex) Leverage Ratio**: Meanwhile, EBITDA, despite its shortcomings, is the most widely used proxy for cash flow. For cyclical industries where EBITDA fluctuates because of inconsistent capex patterns and financial performance, other metrics can be used such as EBITDA less Capex.

Coverage Ratios

While leverage ratios assess whether the borrower has an excess level of leverage on its balance sheet, the coverage ratios confirm whether its cash flows can cover its interest expense payments.

- **Interest Coverage Ratio**: The most frequently used coverage ratio is the interest coverage covenant (or EBITDA / Interest), which represents the cash flow generation of the borrower relative to its interest expense obligations coming due. Lenders desire a higher interest coverage ratio in all cases as it represents more “room” to meet its interest payments, especially for borrowers operating in more cyclical industries.
- **FCCR and DSCR**: Other common coverage ratios are the fixed charge coverage ratio (FCCR) and debt service coverage ratio (DSCR). Certain creditors pay more attention to these ratios due to how the denominator can include principal amortization and leases/rent.

Credit Analysis Diligence Topics

The higher the default risk, the higher the required yield is, as investors require more compensation for the additional risk being undertaken.

Default Risk	• The measurement of the default risk is assessing the probability of the borrower missing an interest expense payment and/or being unable to repay the principal on the due date
Loss-Given-Default Risk (“LGD”)	• LGD calculates the loss potential in the event of default and takes into consideration such as liens on the debt obligations (i.e., collateral pledged as part of the lending agreement)
Maturity Risk	• The maturity risk is about how the lender requires greater returns the longer the maturity date is, as the potential for default increases alongside the length before maturity

Debt Covenants in Credit Analysis

Debt covenants represent contractual agreements from a borrower to refrain from certain activities or an obligation to maintain certain financial thresholds.

These legally binding clauses can be found in credit documentation such as loan agreements, credit agreements, and bond indentures, and are requirements and conditions imposed by the lenders that the borrower agrees to abide by until the debt principal and all associated payments are paid.

Intended to protect the interests of lenders, **covenants establish parameters that encourage risk-averse decisions** through avoidance of activities that could place the timely payment of interest expense and principal on the date of maturity into question.

When banks lend to corporate borrowers, they are looking first for their loan to be repaid with a low risk of not receiving interest or principal amortization payments on time.

Whether structuring a secured senior loan or other forms of debt lower in the capital structure, covenants are negotiations between the borrower and the creditor to facilitate an agreement that is satisfactory to both parties.

If a borrower were to breach a debt covenant in place, this would constitute a default stemming from the violation of the credit agreement (i.e., serving as a restructuring catalyst). But in most cases, there will be a so-called "grace period", whereby there may be monetary penalties as stipulated in the lending agreement but time for the borrower to fix the breach.

How Covenants Impact Debt Pricing (and Credit Risk)

Senior debt lenders prioritize capital preservation above all else, which is accomplished by strict debt covenants and placing liens on the assets of the borrower. As a general rule, strict covenants signify a safer investment for creditors, but at the expense of reduced financial flexibility from the perspective of the borrower.

Covenants to senior lenders (e.g., banks) are crucial factors when structuring a loan to ensure:

- The borrower can service its debt commitments with an adequate "cushion"
- Protections are in place for the worst-case scenario (i.e., liquidations in restructuring), so if the borrower defaults, the lender has the legal right to seize those assets as part of the agreement

In return for this security (and collateral protection), bank debt has the lowest expected return, while unsecured lenders (similar to equity shareholders) demand higher returns as compensation for the additional risk taken on.

The more debt placed on the borrower, the higher the credit risk. In addition, the less collateral that can be pledged; hence, borrowers have to seek riskier debt tranches to raise more debt capital after a certain point. For the lenders that do not require collateral and are lower in the capital structure, collectively these types of creditors will require higher compensation as higher interest (and vice versa).

Types of Debt Covenants

There are three primary types of covenants found in lending agreements.

1. Positive Covenants
2. Negative Covenants
3. Financial Covenants (Maintenance and Incurrence)

1. Affirmative Covenants

Affirmative (or positive) covenants are specified tasks that a borrower must complete throughout the tenor of the debt obligation. In short, affirmative covenants ensure the borrower performs certain actions that sustain the economic value of the business and continue its "good standing" with regulatory bodies.

Many of the requirements listed below are relatively straightforward, such as the maintenance of required licenses and the filing of required reports on time to comply with regulations, but these are signed as standard procedures.

Affirmative Covenant Examples

1. Federal and State Tax Payments
2. Maintenance of Insurance Coverage
3. Filing of Financial Statements on a Periodic-Basis
4. Auditing of Financials by Accountants
5. Maintenance of "Business Nature" (i.e., Cannot Abruptly Change the Business Properties with Completely Different Product/Service Offerings)
6. Compliance Certificates (e.g., Required Licenses)

Failure to pay taxes or to file its financial statements, for example, would certainly harm the economic value of the business from potential legal problems arising.

2. Negative Loan Covenants

Negative covenants restrict borrowers from performing actions that might damage their creditworthiness and impair lenders' ability to recover their initial capital.

Often called restrictive covenants, such provisions place limitations on the borrower's behavior to protect lender interests. As expected, negative covenants can confine a borrower's operational flexibility.

1. **Limitations on Indebtedness:** The ability of the borrower in raising debt capital is restricted unless certain conditions are met or approval is received
2. **Limitations on Liens:** Restricts the ability of the borrower to incur secured indebtedness and allows a lien against unencumbered assets (i.e., protects their seniority)
3. **Limitations on M&A (or Acquisition Size):** Disallow the borrower from selling assets, especially the core assets that have historically been responsible for cash flows; there are usually workarounds for this provision, but the use of proceeds from any asset sales are strictly governed
4. **Limitations on Asset Sales:** Prevents the reduction in the collateral available to them since these sales could lower the liquidation value, but the funds from the sale could be used to pay down debt or reinvest into the business (and have a positive impact)
5. **Limitation on Restricted Payments:** Prevents the return of capital to less senior claim holders such as shareholders, through the payment of dividends or share repurchases

3. Financial Covenants

Maintenance covenants have generally been associated with senior tranches of debt whereas incurrence covenants are more common for bonds. Financial covenants are designed to track key credit metrics to ensure the borrower can adequately meet interest payments and repay the original principal.

Historically, senior debt has come with strict maintenance covenants while incurrence covenants were more related to bonds. But over the past decade, however, leveraged loan facilities have increasingly become "covenant-lite" – meaning, senior debt lending packages comprise covenants that increasingly resemble bond covenants.

There are two distinct categories of financial covenants:

1. Maintenance Covenants
2. Incurrence Covenants

Maintenance vs. Incurrence Covenants

Maintenance covenants require the borrower to maintain remain in compliance with certain levels of credit metrics and are tested periodically. Typically on a quarterly basis and using trailing twelve months ("TTM") financials.

Maintenance Covenant Examples

- Total Leverage cannot exceed 6.0x EBITDA
- Senior Leverage cannot exceed 3.0x EBITDA
- EBITDA Coverage cannot fall below 2.0x
- Fixed Charge Coverage Ratio ("FCCR") cannot fall below 1.0x

Conversely, incurrence covenants are tested after certain "triggering events" occur to confirm that the borrower still complies with lending terms.

Incurrence Covenant Examples ("Triggering" Events)

1. Raising Additional Debt
2. Mergers and Acquisition (M&A)
3. Divestitures
4. Cash Dividends to Shareholders
5. Share Repurchases

Simply put, the borrower may NOT undertake a certain action if it causes the borrower to violate the allowed threshold. This is often through the form of a financial covenant (e.g., Debt / EBITDA).

For example, a company cannot raise debt or complete a debt-funded acquisition if doing so would bring its total leverage ratio above 5.0x.

Collateral Coverage and Credit Risk

The existing liens and provisions found in inter-creditor lending terms regarding subordination need to be examined because they are very influential factors in the recoveries of claims.

Similar to distressed investors, lenders of all types should prepare for the worst-case scenario: a liquidation.

The collateral coverage calculates the value of the liquidated collateral to see how far down the claims it can cover.

The collateral of the debtor (i.e., the troubled company) directly affects the rate of recoveries by claim holders, as well as the existing liens placed on the collateral.

Claims held by other creditors and terms in their inter-creditor agreements, especially senior creditors, become an important factor to consider in both out-of-court and in-court restructuring.

But in the case the lender can recover most (or all) of its initial investment even in a liquidation scenario, the riskiness of the borrower could be within an acceptable range.

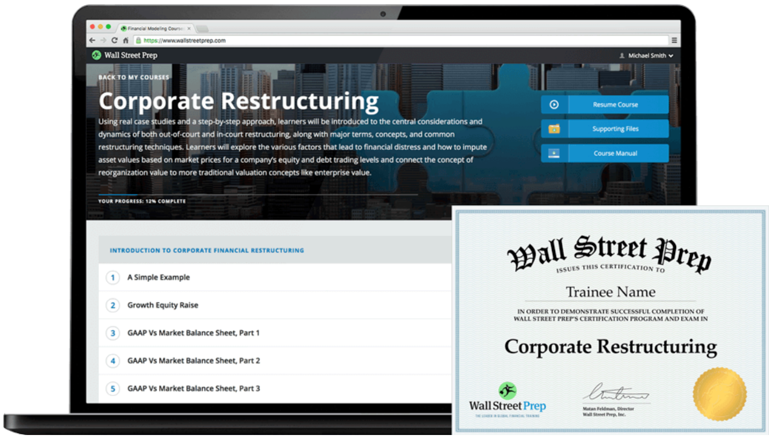
Reorganization vs. Liquidation Recovery Rates

One requirement in Chapter 11 is the comparison of recoveries under a liquidation versus the plan of reorganization (POR). This directly affects the liquidation value and priority of claims waterfall, which sees how far down the capital structure the asset value can reach down before running out.

The more senior lenders there are, the more difficult it could be for lower priority claims to be paid in full, as senior lenders such as banks are risk-averse; meaning capital preservation is their priority.

For Chapter 11 bankruptcies, the influence of creditor committees can be a useful proxy for the complexity of the reorganization such as legal risks and disagreements among creditors.

But even a higher number of unsecured claims can add to the difficulty of an out-of-court process, as there are more parties to receive approval from (i.e., the “hold-up” problem).



concepts, and common restructuring techniques.

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