

Corporate Credit Rating Methodology

This methodology provides a description of Transparency Analytics, Inc.'s (TA) criteria for assigning corporate credit ratings. The methodology applies to corporate borrowers operating in a broad array of industries, focusing on cash flow-based credit principles. It serves as the basis for assigning the Issuer Credit Rating (ICR) to corporate rated entities and related debt instrument credit ratings.

TA's credit rating process consists of assessing financial factors, business factors, financial policy, liquidity, and capital structure.

Financial Assessment. TA reviews the corporate borrower's revenue generation, profitability, cash flow and credit metrics for historical, current and forecasted periods. TA focuses on universal measures of creditworthiness that incorporate a broad suite of financial considerations and employs a forward-looking approach.

Business Assessment. TA reviews broad qualitative factors of business quality impacting the borrower's credit profile, including demand characteristics, business stability profile, competitive position and diversification. Additionally, TA reviews operational and exogenous risk factors that may affect the credit profile.

Financial Policy. TA reviews the borrower's financial policy and governance from the credit perspective to assess potential for volatility of credit measures over time due to corporate actions.

Liquidity. TA reviews available sources of funds and required uses of funds over the following year to assess the borrower's liquidity position.

Capital Structure. TA reviews the borrower's capital structure composition to distinguish relative credit risk of individual debt instruments from the ICR based on the instruments' capital structure positions and assign instrument credit ratings.

While the general corporate methodology is designed for flexibility to rate corporate borrowers in a broad array of industries, TA also provides sector-specific considerations for certain specialized sectors as outlined in Appendix D. Sectors discussed include Retail & Distribution, Nonbank Finance Companies, Regulated Utilities, and REITs & Commercial Real Estate, and may be expanded over time.

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I. OVERVIEW OF METHODOLOGY

Table 1 summarizes factors considered by TA to assign ICR for corporate borrowers.

Table 1	
Corporate Credit Rating Methodology	
Issuer Credit Rating Assessment Summary	
Financial Assessment (Section II)	Weights:
Revenue Scale	15%
EBITDA Margin	15%
Free Cash Flow / Total Debt	25%
Total Debt / EBITDA	25%
Net Debt / EBITDA	10%
EBITDA / Interest	10%
Financial Assessment Outcome	
Business Assessment (Section III)	
Qualitative assessment of credit factors	Adjustment of Financial Assessment Outcome up or down
Preliminary ICR Before Modifiers	
Modifiers	
Financial Policy (Section IV)	Adjustments of Preliminary ICR up or down
Liquidity (Section V)	
Idiosyncratic Factors (Section VI)	
Assigned ICR*	

* Maximum possible difference between the Assigned ICR and the Financial Assessment Outcome is three rating notches.

This methodology document describes TA's approach to each factor used to derive the ICR.

Section II: Financial Assessment

Section III: Business Assessment

Section IV: Financial Policy Assessment

Section V: Liquidity Assessment

Section VI: Idiosyncratic Factors

Section VII: Instrument Rating Assessment describes approach to assessing the borrower's capital structure to derive debt instrument ratings.

Certain background information is provided in Appendices.

Appendix A: Definitions of key metrics and ratios used in the Financial Assessment.

Appendix B: Summary of key analytical adjustments.

Appendix C: Factor weighting and derivations.

Appendix D: Sector-specific financial assessment criteria applicable for certain industries.

II. FINANCIAL ASSESSMENT

The Financial Assessment framework focuses on six core financial metrics, supplemented with other metrics as needed. Table 2 provides core financial metrics ranges applicable for each rating category.

Table 2
Financial Assessment Core Metric Ranges

Metric:	Revenue Scale (\$ bn)	EBITDA Margin	FCF / Total Debt	Total Debt / EBITDA	Net Debt/ EBITDA	EBITDA / Interest
Weight:	15%	15%	25%	25%	10%	10%
AAA	≥60.0	≥50%	≥45%	<0.5x	<0.0x	≥50.0x
AA	\$30.0 – \$60.0	40% – 50%	35% – 45%	0.5x – 1.0x	0.0x – 0.5x	30.0x – 50.0x
A	\$15.0 – \$30.0	30% – 40%	25% – 35%	1.0x – 2.0x	0.5x – 1.5x	15.0x – 30.0x
BBB	\$4.0 – \$15.0	20% – 30%	15% – 25%	2.0x – 3.5x	1.5x – 3.0x	7.0x – 15.0x
BB	\$1.0 – \$4.0	15% – 20%	8% – 15%	3.5x – 5.0x	3.0x – 4.5x	4.0x – 7.0x
B	\$0.1 – \$1.0	10% – 15%	0% – 8%	5.0x – 7.0x	4.5x – 6.75x	1.5x – 4.0x
CCC	\$0.02 – \$0.1	5% – 10%	(8%) – 0%	7.0x – 9.5x	6.75x – 9.25x	1.0x – 1.5x
CC	<\$0.02	<5%	<(8%)	≥9.5x	≥9.25x	<1.0x

Ratio Definitions: Please refer to [Appendix A](#) for discussion of ratio definitions. Please refer to [Appendix B](#) for discussion of key analytical adjustments applied in ratio calculations.

Sector-Specific Factors: Please refer to [Appendix D](#) for criteria for certain specific industries.

Forward-Looking Approach: TA reviews historical, current and forecasted financial performance. Metrics for comparison to ranges in Table 2 are generally calculated based on the following weighting of time periods: 1) trailing twelve months: 40% weight, 2) one-year forward forecast: 40% weight, and 3) two-year forward forecast: 20% weight. Forecast weights are increased in evolving credit situations.

Circumstance-Specific Weighting Adjustments: Credit circumstances may warrant adjustments to the weighting percentages applied to ratios in the framework or to time periods used for the assessment. To the extent such weighting adjustments are made, rationale is explained in the rating publication.

Forecast Scenarios: In evaluating projected financial performance, TA focuses on a prudent base case forecast scenario which can involve a conservative adjustment to company management's forecasts. As a secondary analysis, TA may evaluate downside scenarios to develop a view of the company's potential resilience to business shocks or events.

Pro Forma Metrics: In circumstances involving material corporate changes impacting financials at the time of the rating, TA evaluates metrics on a pro forma basis assuming full twelve months of impact from the change. Events requiring pro forma adjustment can include material acquisitions, divestitures, or capital structure changes among others.

Cash Flow Focus: Evaluation of creditworthiness is focused on the borrower's cash flow generation relative to level of indebtedness and therefore ability to repay obligations as scheduled. The high weighting assigned to the Free Cash Flow/Total Debt ratio is reflective of focus on cash flow. Definition of Free Cash Flow is intended to reflect cash flow available to pay debt principal ([Appendix A](#)).

Leverage and Coverage: Debt leverage and interest coverage ratios serve as key measures of level of financial risk. Debt/EBITDA leverage ratios are commonly referenced by market participants for assessing the level of debt incurred by a corporate borrower relative to its earnings generation. EBITDA/Interest coverage is a commonly referenced measure of the company's ability to service its debt from earnings. The broad market acceptance of these measures is valuable for comparability across business profiles. In combination with FCF/Total Debt, these ratios provide a broad overview of relative level of financial risk.

Profitability: Profitability of a business is a significant credit consideration influencing ability to repay debt and withstand adverse business conditions. EBITDA margin ratio is a common measure of profitability. While EBITDA does not capture depreciation and amortization and therefore capital intensity, it is a broadly accepted cash-focused profitability measure and is valuable for comparability.

Capital Intensity: Operating capital intensity of a business including capital expenditures and working capital requirements is an important credit consideration. The high weighting of FCF/Total Debt ratio captures capital intensity in the ratio framework. For highly capital-intensive businesses TA may increase the weighting of the FCF/Total Debt ratio or evaluate supplemental ratios.

Growth Trajectory: The forward-looking approach to assessing financial metrics accounts for projected growth as reflected in a prudent base case forecast. Additionally, the business' revenue growth potential is incorporated as an important aspect of the Business Assessment (specifically, Demand Characteristics and Competitive Position factors).

Additional Factors: When applicable, additional factors are considered:

- **Time Series Length:** While calculation of metrics in Table 2 is generally based on trailing twelve months and two forward years, in some circumstances a longer time series may be important to evaluate. For example, in highly cyclical situations depending on cycle timing it may be relevant to include historical years to derive cycle-average credit metrics. As another example, in high-growth situations longer forecast periods may be relevant to consider.
- **Industry-Specific Ratios:** Ratio framework in Table 2 is intended to be broadly applicable across industries. However, in some industries, other ratios specific to the characteristics of the industry may be important to consider and may alter the rating outcome.
- **Non-Debt Liabilities:** TA considers the effect on financial risk of non-debt liabilities which are not ordinary course operating liabilities and may have a material effect on financial flexibility over time, for example legal and tax judgments or contingencies such as deferred purchase price of assets.
- **Subordinated and Hybrid Instruments:** Certain hybrid debt securities and non-equity shareholder financing can be partially or fully reclassified from debt to equity (please refer to [Appendix B](#)). Preferred stock securities, while not debt claims, in some situations can be added to credit metrics if they have debt-like features such as cash dividends and redemption rights and are expected to be redeemed with proceeds from debt issuance.
- **Asset Value:** TA's methodology is focused on cash flow-based credit principles, however in some cases a borrower's assets may provide additional credit support not fully captured in cash flow analysis. For example, a company may own an asset or shares in another company that are not producing cash flow but have meaningful value and if sold could enhance credit metrics.
- **Third-Party Support:** If a borrower benefits from third-party credit support, the nature and extent of such support is included in analysis. If the third party is required to pay borrower's debt on demand and third party's credit is stronger than borrower's, rating can reflect credit of the third party (credit substitution). Demand instruments that can be eligible for credit substitution include guarantees (which must be full, irrevocable and unconditional), letters of credit and insurance policies.

III. BUSINESS ASSESSMENT

Business Assessment evaluates whether the borrower's business characteristics, on a relative basis, are consistent, stronger or weaker than typical for rated peers at the rating level implied by the Financial Assessment Outcome. The combination of Business Assessment range and Financial Assessment outcome is used to derive the Preliminary ICR Before Modifiers.

Business Assessment consists of a relative evaluation of four broad business credit quality factors:

1. Demand Characteristics
2. Stability Profile
3. Competitive Position
4. Diversification

Table 3 provides an overview of the key considerations that are evaluated for each factor.

Table 3

Business Assessment Key Factors

Demand Characteristics	Stability Profile	Competitive Position	Diversification
Secular growth trends	Cyclical of demand	Market share	Product diversity
Customer preference trends	Customer relationships	Product differentiation	Market diversity
Product/service quality	Volatility of input costs	Pricing power	Customer diversity
Market relevance	Investment requirements	Barriers to entry	Supplier diversity

When applicable, Business Assessment reflects risks of potential disruption to the company's operations, balance sheet or liquidity position from possible operational or exogenous event risks. While such risks can be difficult to quantify or predict, and mitigating factors are considered, if a business is deemed to have elevated exposure it is reflected in the Business Assessment. Table 4 provides an overview of potential risk categories.

Table 4

Operational and Exogenous Risks

Operational Disruption	Legal and Regulatory	Environmental	Event Risks
Labor disputes	Legal judgments	Effect of climate change	Cybersecurity
Supply chain disruptions	Regulatory changes	Extreme weather events	Fraud/criminal activity
Construction overruns	Tax code changes	Remediation costs	Reputational risks
Other operational events	Other government action	Investment requirements	Key management

IV. FINANCIAL POLICY

Financial policy evaluation determines whether the borrower's financial policy, on a relative basis, is consistent, stronger or weaker than typical for rated peers at the Preliminary ICR Before Modifiers rating level. If financial policy is deemed meaningfully stronger or weaker on a relative basis, the ICR is modified accordingly, with magnitude of adjustment determined by rating committee. TA evaluates financial policy, corporate governance and management track record from the credit perspective, which implies focus on their effect on the company's ability to repay debt.

Financial policy assessment is focused on the evaluation of the following potential corporate actions and policies that may enhance or detract from creditor protections:

1. Leverage targets, deleveraging plans, approach to balance sheet and financial risk levels.
2. Likelihood and magnitude of debt-financed acquisitions resulting in leverage increases.
3. Likelihood and magnitude of capital returns to shareholders impacting credit strength.
4. Management structure and track record, corporate governance and key stakeholder objectives.

TA recognizes that business environments and strategies are fluid, that future strategic opportunities and threats are difficult to predict in advance, and that management teams and corporate boards have a fiduciary duty to maximize returns for all stakeholders. An occurrence of a corporate event resulting in a temporary leverage increase does not in itself warrant a change in assessment of financial policy, particularly if leverage is expected to return to prior levels over a reasonable time period.

However, stability of financial metrics over time and avoidance of repeated elevated financial risk situations are important considerations for credit protections and therefore credit ratings. A strategy of maximizing leverage with high likelihood of corporate events increasing debt levels over time implies a relatively higher level of creditor risk at any given level of financial and business risk.

V. LIQUIDITY

Maintenance of adequate liquidity is a crucial requirement for credit strength. TA evaluates available sources of funds and required uses of funds over the next year to assess the liquidity position as summarized by a Liquidity Ratio calculation. Table 5 provides Liquidity Ratio requirements for key rating thresholds. Additionally, cash liquidity as a credit factor is captured in the Financial Assessment ratio framework through the Net Debt/EBITDA ratio.

Table 5

Liquidity Ratio Requirements for Rating Categories

BBB- or higher	Liquidity Ratio of at least 1.75x is required
BB+ to B-	Liquidity Ratio of at least 1.25x is required

Liquidity Ratio definition: $\text{Liquidity Ratio} = (\text{Free Cash Flow} + \text{Available cash and equivalents} + \text{Available committed credit lines}) / (\text{Debt principal payments and maturities} + \text{other required cash outflows})$. If Free Cash Flow is negative, it is transferred to the denominator as a required cash outflow. Free Cash Flow definition is intended to approximate cash generation available to make principal payments on debt obligations ([Appendix A](#)). Liquidity Ratio is forward-looking, measured over the next year in a prudent base case credit forecast. Calculation generally assumes no access to capital markets and no ability to increase committed credit lines.

Available cash and equivalents: Cash balance captured in the Liquidity Ratio is reduced by minimum cash required to maintain business operations (minimum working capital cash), and does not take into account cash balances that are restricted and not available to pay debt principal. This treatment is consistent with the treatment of cash balances in the Net Debt/EBITDA ratio ([Appendix A](#)). Liquid marketable securities and financial assets viewed as cash equivalents are included in cash balances for the Liquidity Ratio calculation.

Available committed credit lines and covenant restrictions: To be included in the numerator of the Liquidity Ratio, the company's credit lines must be contractually committed and must be available for the entirety of the next year (cannot be maturing within the year). Additionally, if covenant limitations restrict availability of credit lines either entirely or partially, commitment included in the numerator of the Liquidity Ratio reflects only the available amount taking into account covenant restrictions.

Alternate liquidity sources: Infrequently, companies may have alternate liquidity sources available over the course of the following year, such as asset sale proceeds or investments of capital closing within the year. Such sources are included in the Liquidity Ratio if there is high certainty of receipt of funds.

VI. IDIOSYNCRATIC FACTORS

Infrequently, rating committees can choose to adjust the ICR from the level determined by the Financial and Business Assessments after modifiers, due to presence of circumstance-specific considerations or factors. Considerations can include rapidly evolving credit profiles, recent or pending events, or recent or pending strategic changes. An idiosyncratic adjustment can be combined with an assignment of a rating direction indicator such as an outlook or placement of ratings on review.

VII. INSTRUMENT RATINGS

TA derives debt instrument ratings, notched up or down from the corporate ICR, based on instruments' relative security and priority of claim. Notching reflects TA view of relative recovery rates of the instruments in an event of default. For borrowers with ICR or BBB- or higher, notching is infrequent due to preponderance of unsecured debt and is based on debt category's priority of claim or structural position, with secured debt notched up one notch from the unsecured rating, subordinated debt notched down one to two notches, and preferred stock notched down two notches. For borrowers with ICR of BB+ or lower, TA undertakes a recovery analysis using one of the two methods outlined below.

Statistical recovery analysis. TA acknowledges the inherent high uncertainty and difficulty of estimating earnings generation, asset value and capital structure composition in a hypothetical default scenario at a future time for a company that is not close to default. TA generally employs a statistical simulation analysis to account for this uncertainty of outcomes. Derivation assumes an average recovery rate across the entire debt capital structure is normally distributed with a mean of 50% of the total claim balance, and a standard deviation of 25%. For each specific capital structure, a statistical simulation analysis of 1,000 trials is used to derive individual recovery rates for each debt instrument based on their relative positions in the capital structure.

Valuation-based recovery analysis. For borrowers with ICR of B+ or lower, whose earnings and capital structure may be closer to a hypothetical default scenario, TA may elect to derive a recovery analysis based on the greater of estimated going concern enterprise value and asset liquidation value in a hypothetical default scenario. Valuation-based recovery analysis is undertaken if it is deemed to enable a greater precision of evaluation than the statistical recovery analysis. Going concern enterprise value is derived based on estimating earnings generation potential in a hypothetical default scenario (EBITDA) and applying a valuation multiple of EBITDA. Selection of EBITDA multiple is based on the relative business and financial qualities of the company in a hypothetical default situation compared to peer valuations in the industry.

Recovery waterfall. Debt instrument recovery rates are assessed based on priority of claim:

- Administrative costs have highest priority and are estimated at 5% of enterprise value.
- Priority liabilities such as asset-based facilities and securitizations are included as second priority.
- Debt instruments are included in priority order of first lien secured, second lien secured, unsecured, and subordinated. Undrawn revolving credit facilities are assumed to be fully drawn at default.
- Debt obligations of operating subsidiaries are deemed to have priority if such subsidiaries do not provide guarantees to the holding company, and deemed pari passu if they do provide guarantees.
- Obligations of a holding company that benefit from subsidiary guarantees are ranked ahead of other obligations of the same class that do not benefit from guarantees.
- Pension obligations, trade payables, operating leases and any relevant non-debt liabilities are included as unsecured claims. Pensions and trade payables are included at current liability amounts. Operating leases are included at the amount of commitment for the next year.
- Preferred stock instruments that do not have a debt claim are not included in the waterfall for calculation of debt instrument recoveries. Rated preferred stocks of companies with ICR of BB+ or lower are notched down to the lower of two notches below the ICR or one notch below the lowest-rated debt tranche.

Recovery analysis notching from ICR. Table 6 summarizes notching of instrument ratings based on recovery estimates.

Table 6

Debt Instrument Rating Notching from ICR Based on Recovery Analysis Results

Instrument Recovery Range	Classification	Instrument Rating Notching
>90%	High Recovery	ICR + 2 notches
70% – 90%	Substantial Recovery	ICR + 1 notch
30% – 70%	Average Recovery	No change
10% – 30%	Modest Recovery	ICR – 1 notch
<10%	Low Recovery	ICR – 2 notches

**APPENDIX A
KEY METRIC AND RATIO DEFINITIONS**

EBITDA MARGIN RATIO**Table 7****Metric Definition: EBITDA**

	Revenue
<i>Minus</i>	Operating expenses
<i>Plus</i>	Depreciation and amortization
<i>Plus</i>	Stock-based compensation
<i>Plus</i>	Non-cash charges, impairments
<i>Plus</i>	Pension expense less service cost
<i>Plus</i>	Equity in earnings of affiliates
<i>Less</i>	Dividends to noncontrolling interests
Equals	EBITDA

- Please refer to [Appendix B](#) for approach to certain analytical adjustments to EBITDA.
- In some cases, TA may choose to add back one-time cash restructuring costs to EBITDA.
- In some cases, TA may choose to add certain credit for expected acquisition synergies to EBITDA.
- In some cases, TA may choose to subtract capitalized operating costs from EBITDA.

Table 8**Ratio Definition: EBITDA Margin**

	EBITDA
<i>Divided by</i>	Revenue
Equals	EBITDA Margin (%)

TOTAL DEBT/EBITDA AND NET/DEBT EBITDA RATIOS**Table 9****Metric Definition: Total Debt and Net Debt**

	Reported Total Debt
<i>Plus</i>	Pension underfunded balance
<i>Plus</i>	Finance leases
<i>Plus</i>	Securitization balances
Equals	Total Debt
<i>Minus</i>	Available cash and equivalents
Equals	Net Debt

Table 10**Ratio Definition: Debt / EBITDA**

	Total Debt
<i>Divided by</i>	EBITDA
Equals	Total Debt / EBITDA (x)
	Net Debt
<i>Divided by</i>	EBITDA
Equals	Net Debt/EBITDA (x)

- Please refer to [Appendix B](#) for approach to certain analytical adjustments to Debt and EBITDA.
- Please refer to [Section V Liquidity](#) for discussion of Available Cash and Equivalents.

FREE CASH FLOW/TOTAL DEBT RATIO**Table 11****Metric Definition: Free Cash Flow (FCF)**

	Reported Cash Flow from Operations
<i>Minus</i>	Capital expenditures
<i>Minus</i>	Dividends: preferred, common, NCI
Equals	Free Cash Flow (FCF)

Table 12**Ratio Definition: Free Cash Flow (FCF) / Total Debt**

	FCF
<i>Divided by</i>	Total Debt
Equals	FCF / Total Debt (%)

- In some cases, TA may subtract other recurring operations-related investing cash flows from FCF.

EBITDA/INTEREST RATIO**Table 13****Metric Definition: Interest Expense**

	Reported Interest Expense (Gross)
<i>Plus</i>	Capitalized or non-cash interest
<i>Plus</i>	Pension interest
Equals	Interest Expense

Table 14**Ratio Definition: EBITDA / Interest**

	EBITDA
<i>Divided by</i>	Interest Expense
Equals	EBITDA / Interest (x)

- Please refer to [Appendix B](#) for approach to certain analytical adjustments to EBITDA and interest expense.

ADJ. NET INCOME / TANGIBLE ASSETS RATIO

Table 15	
Metric Definition: Tangible Assets	
	Reported Total Assets
<i>Minus</i>	Goodwill and Intangibles
Equals	Tangible Assets

Table 16	
Ratio Definition: Adj. Net Income / Avg. Tangible Assets	
	Adjusted Net Income
<i>Divided by</i>	Average Tangible Assets during the period
Equals	Net Income / Avg. Tangible Assets (%)

- In some cases, TA may choose to add back stock-based compensation and one-time costs to Adjusted Net Income.
- In some cases, TA may choose to subtract from Tangible Assets other asset categories not expected to generate earnings.

TANGIBLE COMMON EQUITY / TANGIBLE ASSETS RATIO

Table 17	
Metric Definition: Tangible Common Equity	
	Reported Shareholders Equity
<i>Minus</i>	Goodwill and Intangibles
<i>Minus</i>	Preferred Stock
<i>Minus</i>	Noncontrolling Interest
Equals	Tangible Common Equity (TCE)

Table 18	
Ratio Definition: TCE / Tangible Assets	
	Tangible Common Equity (TCE)
<i>Divided by</i>	Tangible Assets
Equals	TCE / Tangible Assets (%)

- In some cases, TA may choose to subtract from Tangible Assets other asset categories not expected to generate earnings.

FFO/TOTAL DEBT RATIO

Table 19	
Metric Definition: Funds From Operations (FFO)	
	Reported Cash Flow from Operations
<i>Plus/Minus</i>	Changes in Working Capital
Equals	Funds From Operations (FFO)

Table 20	
Ratio Definition: FFO / Total Debt	
	FFO
<i>Divided by</i>	Total Debt
Equals	FFO / Total Debt (%)

- Please refer to [Appendix B](#) for approach to certain analytical adjustments to Total Debt.
- For application of the FFO/Total Debt ratio to nonbank finance companies, FFO is adjusted to subtract net charge-offs.
- In some cases, TA may choose to add back one-time costs to FFO.

FFO-DIVIDENDS/TOTAL DEBT RATIO

Table 21	
Metric Definition: FFO minus Dividends	
	Funds From Operations (FFO)
<i>Minus</i>	Dividends
Equals	FFO – Dividends

Table 22	
Ratio Definition: FFO – Dividends / Total Debt	
	FFO – Dividends
<i>Divided by</i>	Total Debt
Equals	FFO – Dividends / Total Debt (%)

- Please refer to [Appendix B](#) for approach to certain analytical adjustments to Total Debt.

FFO+INTEREST/INTEREST

Table 23	
Metric Definition: FFO plus Interest	
	Funds From Operations (FFO)
<i>Plus</i>	Interest Expense
Equals	FFO + Interest

Table 24	
Ratio Definition: FFO + Interest / Interest	
	FFO + Interest
<i>Divided by</i>	Interest Expense
Equals	FFO + Interest / Interest (x)

- Please refer to [Appendix B](#) for approach to certain analytical adjustments to Interest Expense.

**APPENDIX B
KEY ANALYTICAL ADJUSTMENTS**

A. LEASES

Operating Leases: TA generally captures operating leases as an operating expense reducing EBITDA if they are so classified in the company's financials. In most industries, an adjustment to capitalize operating leases does not result in a material change to the credit metrics, and in fact can sometimes reduce leverage ratios for highly levered companies. However, for certain industries or companies with large operating lease expenses representing a material portion of the operating expense base, TA can choose to make adjustments to capitalize operating leases, as outlined in Table 25.

Table 25**Operating Lease Capitalization Adjustment of Key Financial Assessment Metrics**

EBITDA	Increased by the amount of operating lease expense
Debt	Increased by the amount of reported operating lease liability
Interest Expense	Increased by the amount of interest expense on the operating lease liability capitalized
FCF	Unchanged

Industries in which TA generally makes the adjustment to capitalize operating leases include: Retail & Distribution, Hospitality, Foodservice, Gaming & Leisure, and Healthcare Services. In other industries, while operating leases are generally treated as an operating expense, specific situations can be considered for operating lease capitalization depending on magnitude and nature of operating leases.

Finance Leases: Finance leases are added to debt balances in calculation of debt metrics for used in financial assessment ratios. Interest expense associated with the finance leases is included in interest expense used for the calculation of EBITDA/Interest and other interest coverage ratios.

B. DEFINED BENEFIT PENSION PLANS

Defined benefit pension plan liabilities reported on a company balance sheet that reflect underfunded obligations under the pension plans are treated as debt-like liabilities because of contractual nature and legal requirements, and are included in adjusted debt metrics. Overfunded plans are not captured in the adjustment because excess funding in some plans cannot be used to satisfy obligations in other plans.

To conform to the capitalization approach, reported defined benefit pension expenses (or income) with the exception of the service cost component are treated as non-operating expenses (income), and EBITDA and other income statement metrics are adjusted accordingly. Interest expense is increased assuming the pension liability has a borrowing cost consistent with the company's cost of debt.

On the cash flow statement, any employer contributions to the defined benefit pension plans in excess of the service cost are reclassified from operating cash flow to financing cash flow, consistent with treatment as a debt principal payment. As a result, the adjustment increases the FCF metric.

Table 26**Defined Benefit Pension Plan Adjustments of Key Financial Assessment Metrics**

EBITDA	Increased (decreased) by amount of pension expense (income) in excess of service cost
Debt	Increased by the amount of pension liability on the balance sheet
Interest Expense	Increased by the amount of interest expense attributed to the pension liability
FCF	Increased by any employer contributions reclassified to financing cash flows

C. SECURITIZATIONS AND FACTORING FACILITIES

On-balance sheet facilities: Securitization facilities treated as on-balance sheet liabilities in the company's financial statements are added to debt balances in the calculation of debt metrics for use in the financial assessment ratios. Interest expense associated with the securitizations is included in the interest expense metric used for the calculation of EBITDA/Interest and other interest coverage ratios.

Off-balance sheet arrangements: TA views off-balance sheet securitization and factoring arrangements as secured borrowings. When such an arrangement is treated as an asset sale and therefore does not appear on the company's balance sheets, TA makes an adjustment to reverse this treatment and adds outstanding balances to debt. Cash flow metrics such as FCF are adjusted for movements in off-balance sheet securitization or factoring funding resulting in treatment consistent with changes in working capital.

D. HYBRID INSTRUMENTS

TA considers a debt instrument to be a hybrid instrument if it can absorb losses in a stress scenario without causing a default, and if it is available for a sufficiently long time period. If an instrument is determined to have the required loss absorption features and availability, it can be eligible for full or partial reclassification from debt to equity. Potential for such full or partial reclassification of hybrid instruments to equity is available only for corporate issuers rated BBB- or higher. Required loss absorption features that could allow a hybrid instrument to be eligible for equity credit include:

- Deferral of coupon;
- Write-down of principal balance; and
- Conversion of principal balance into equity or another hybrid instrument.

Table 27 summarizes TA's requirements for a hybrid instrument to receive equity credit.

Table 27

Hybrid Instrument Equity Credit Requirements

Equity Credit	Security Features
100% Equity Credit	<ul style="list-style-type: none"> • Mandatory conversion to common equity within 3 years
50% Equity Credit	<ul style="list-style-type: none"> • Optional skip of coupons for at least 5 years • No features that restrict the optional skip of coupons • Remaining time to maturity of 10 years; not callable for 5 years • Subordinated to the senior obligations of the company
No Equity Credit	<ul style="list-style-type: none"> • Any debt security that does not contain the specific features listed above, including subordinated debt with payment in kind provisions

Preferred stock or similar equity instruments that do not offer security holders creditor rights in bankruptcy and do not include terms that enable security holders to trigger bankruptcy generally receive 100% equity credit. In some situations, preferred stocks can be included in credit metrics if they have debt-like features or are expected to be redeemed with proceeds from debt issuance.

E. NON-EQUITY SHAREHOLDER FINANCING

Financing provided by shareholders (such as financial sponsors) to owned companies in form other than common equity, such as shareholder loans or preferred stock, is eligible for equity treatment if:

- Shareholder financing provider controls the company, creating a dis-incentive to trigger a default;
- Financing does not contain provisions that could trigger an event of default;
- Financing does not require any cash payments while the company's other debt instruments are outstanding; and
- Financing is unsecured and subordinated to the company's other debt instruments.

**APPENDIX C
FACTOR WEIGHTING / DERIVATIONS**

This Appendix describes the process of deriving the Financial Assessment Outcome by weighting the results derived for each of the core financial metrics listed in Section II, Table 2.

First, the letter score results for each of the core financial metrics are converted to numeric form based on numeric values shown in Table 28.

Table 28
Numeric Values of Letter Scores for Weighting Derivation

Letter:	AAA	AA	A	BBB	BB	B	CCC	CC
Numeric:	1	3	6	9	12	15	18	20

Second, the numeric form scores for each of the core financial metrics are weighted based on the weighting percentages shown in Table 2, incorporating any adjustments to weighting percentages as described in Section II, Circumstance-Specific Weighting Adjustments, deriving the combined weighted numeric score.

Third, the resulting combined weighted numeric score is converted back to letter form, based on ranges shown in Table 29, to derive the Financial Assessment Outcome.

Table 29
Numeric Score Ranges of Letter Scores

Letter	Numeric Low	Numeric High
AAA	0	1.5
AA+	1.5	2.5
AA	2.5	3.5
AA-	3.5	4.5
A+	4.5	5.5
A	5.5	6.5
A-	6.5	7.5
BBB+	7.5	8.5
BBB	8.5	9.5
BBB-	9.5	10.5
BB+	10.5	11.5
BB	11.5	12.5
BB-	12.5	13.5
B+	13.5	14.5
B	14.5	15.5
B-	15.5	16.5
CCC+	16.5	17.5
CCC	17.5	18.5
CCC-	18.5	19.5
CC	19.5	25.0

**APPENDIX D
SECTOR-SPECIFIC FACTORS**

Characteristics of certain industries necessitate sector-specific considerations and financial assessment ratios and thresholds, which are outlined in this Appendix.

A. RETAIL & DISTRIBUTION INDUSTRY

The Retail & Distribution Industry includes companies that are primarily engaged in the purchase of products from manufacturers or wholesalers and sale of these products to consumers or businesses.

Table 30 provides Financial Assessment thresholds for companies in the Retail and Distribution Industry.

Table 30
Retail and Distribution Industry: Financial Metric Ranges for Credit Rating Categories

<i>Metric:</i>	Revenue Scale (\$ bn)	EBITDAR Margin	FCF / Total Debt	Total Debt / EBITDAR	Net Debt/ EBITDAR	EBITDAR / Interest
<i>Weight:</i>	15%	15%	25%	25%	10%	10%
AAA	≥\$100.0	≥30%	≥45%	<0.5x	<0.0x	≥50.0x
AA	\$50.0 – \$100	25% – 30%	35% – 45%	0.5x – 1.0x	0.0x – 0.5x	30.0x – 50.0x
A	\$30.0 – \$50.0	20% – 25%	25% – 35%	1.0x – 2.0x	0.5x – 1.5x	15.0x – 30.0x
BBB	\$15.0 – \$30.0	15% – 20%	15% – 25%	2.0x – 3.5x	1.5x – 3.0x	7.0x – 15.0x
BB	\$7.0 – \$15.0	5% – 15%	8% – 15%	3.5x – 5.0x	3.0x – 4.5x	4.0x – 7.0x
B	\$1.0 – \$7.0	2% – 5%	0% – 8%	5.0x – 7.0x	4.5x – 6.75x	1.5x – 4.0x
CCC	\$0.5 – \$1.0	1% – 2%	(8%) – 0%	7.0x – 9.5x	6.75x – 9.25x	1.0x – 1.5x
CC	<\$0.5	<1%	<(8%)	≥9.5x	≥9.25x	<1.0x

Operating Lease Adjustment. Retail businesses often require incurrence of operating lease liabilities significant in size relative to earnings and debt capital structures. TA's financial assessment metric calculations for the Retail & Distribution industry include adjustments to capitalize operating lease liabilities as debt. Please refer to [Appendix B](#) for discussion of this adjustment.

Revenue Scale. Retail and distribution businesses' economic value added to customers and role in the supply chain is often predicated upon aggregating products from many providers for consolidated and efficient distribution to customers. This economic role of the industry necessitates and in practice often involves operating at a meaningfully higher revenue scale than typical for product or service providers. Accordingly, TA's rating category revenue scale requirements for Retail & Distribution are meaningfully higher than those used for general corporate financial assessment.

EBITDAR Margin. Retail and distribution business model generally involves a price markup on purchased products for aggregation, efficiency of supply and working capital management. Operating at a large scale (as discussed above) and meaningfully lower profit margins, the business model can be highly cash flow generative, supporting financial leverage. Accordingly, TA's profit margin requirements for rating thresholds are set at lower levels than those used for general corporate financial assessment.

Total Debt/EBITDAR and Net Debt/EBITDAR. The Retail & Distribution industry's relative ability to support financial leverage is viewed as largely in line with the general corporate profile. Within this in-line industry leveragability profile there can be variance among individual companies based on business characteristics, which are typically captured in the Business Assessment.

Business Assessment. The Business Assessment analysis for the Retail & Distribution industry involves evaluation of the factors described in [Section III](#) for the general corporate assessment, with additional focus on the following considerations:

- Impact of ongoing shift of customer engagement from in-store format to online;
- Underlying cyclical and seasonality of demand for the key product categories sold; and
- Exposure to secular changes and variability in consumer preferences and product designs.

B. NONBANK FINANCE COMPANIES

Nonbank finance business models include lending or other activities with high usage of the balance sheet, where assets on the balance sheet are a key source of funds for debt repayment and funding costs are operating expenses in their nature. Businesses with lower balance sheet usage and cash flow as a source of funds for debt repayment are rated under the general corporate criteria. Businesses that are regulated as banks and have access to deposit funding are not rated under this methodology.

Financial Assessment. Table 31 provides thresholds applicable for nonbank finance companies.

Table 31

Nonbank Finance Companies: Financial Metric Ranges for Credit Rating Categories

<i>Metric:</i>	Revenue Scale (\$ bn)	Net Income / Avg. Tangible Assets	Net Charge-Offs / Gross Loans	Adj. FFO / Total Debt	TCE / Tangible Assets
<i>Weight:</i>	15%	15%	15%	15%	40%
AAA	≥60.0	≥30%	<0.0%	≥50%	≥60%
AA	\$30.0 – \$60.0	11% – 30%	0.0% – 1.0%	30% – 50%	40% – 60%
A	\$15.0 – \$30.0	8% – 11%	1.0% – 1.5%	20% – 30%	30% – 40%
BBB	\$4.0 – \$15.0	5% – 8%	1.5% – 2.5%	10% – 20%	20% – 30%
BB	\$1.0 – \$4.0	2% – 5%	2.5% – 5.0%	5% – 10%	10% – 20%
B	\$0.1 – \$1.0	0% – 2%	5.0% – 10.0%	0% – 5%	5% – 10%
CCC/CC	<\$0.1	<0%	≥10%	<0%	<5%

Business Assessment. The Business Assessment analysis for nonbank finance companies involves evaluation of the factors described in [Section III](#) for the general corporate assessment, with additional focus on considerations specific to nonbank finance companies outlined below.

- **Asset Quality.** Because nonbank finance companies often have significant assets on their balance sheet relative to their earnings generation and often rely on these assets as source of funds for the ultimate repayment of outstanding debt, the quality of their asset base is an important credit consideration. Elevated loss levels can impact capitalization and reduce ability to service debt. Business factors influencing historical and projected trends in asset quality are considered. Relative charge-off rates and historical trends in charge-offs are evaluated, and projected trends in charge-offs and their potential impact on credit measures are considered. Loan loss reserves are reviewed for adequacy relative to charge-off rates.
- **Diversification.** Nonbank finance companies often have meaningful exposure to the credit cycle and concentration in narrow loan categories that can have volatility of performance through the credit cycle. Diversification of asset portfolio across loan categories with limited correlation of credit risk is viewed as positive. Diversification of revenues with contribution from sources other than interest income, for example fee income or transaction-based revenues, is viewed as positive.
- **Funding.** Nonbank finance companies rely on wholesale funding which can exhibit cyclicity and volatility, a potential disadvantage compared to bank competitors with more stable and lower-cost deposit funding. Effectiveness of funding strategy, diversity of funding sources, sufficiency or funding capacity, funding cost levels and trends, and track record of successful execution in the wholesale funding markets are important credit considerations for nonbank finance companies.

Liquidity. Liquidity is particularly important for nonbank finance companies due to their reliance on wholesale funding.

- **Corporate Available Liquidity Compared to Debt Maturities.** Because nonbank finance companies can operate with negative free cash flow as they invest in productive assets and utilize asset-based funding, repayments of their corporate (unsecured) debt maturities can rely on refinancing or availability of corporate liquidity. TA evaluates the difference between corporate debt and cash balances (corporate net debt or net cash position) and coverage ratio of available corporate cash balances and committed credit lines to corporate debt maturities over the upcoming 12-18 months.
- **Unencumbered Assets.** Productive assets such as loans that are not encumbered by secured debt can be used to generate liquidity if necessary to support the corporate credit, for example through monetization of the assets or through secured borrowing against the assets. A greater proportion of productive assets that are not encumbered by secured debt is viewed as positive for the liquidity profile and for the credit profile generally.

C. REGULATED UTILITIES

The Regulated Utilities industry includes companies that are primarily engaged in operating rate-regulated electric and gas utilities selling electricity and/or gas to retail customers. Companies are rate-regulated if the rates they charge their customers are determined by regulators. Diversified companies that own other types of operations can be rated as regulated utilities if a material majority of their cash flows and assets are derived from regulated utility operations.

Financial Assessment. Table 32 provides thresholds applicable for companies in the Regulated Utilities industry.

Table 32
Regulated Utilities Industry: Financial Assessment Core Metric Ranges

Metric:	EBITDA Margin	FFO / Total Debt	FFO – Dividends / Total Debt	FFO + Interest / Interest
Weight:	10%	45%	25%	20%
AAA	≥60%	≥40%	≥35%	≥10.0x
AA	50% – 60%	25% – 40%	20% – 35%	6.5x – 10.0x
A	45% – 50%	17% – 25%	12% – 20%	4.5x – 6.5x
BBB	35% – 45%	10% – 17%	5% – 12%	3.0x – 4.5x
BB	25% – 35%	5% – 10%	0% – 5%	2.0x – 3.0x
B	15% – 25%	0% – 5%	(5%) – 0%	1.0x – 2.0x
CCC/CC	<15%	<0%	<(5%)	<1.0x

Business Assessment. The Business Assessment analysis for the Regulated Utilities industry involves evaluation of the factors described in [Section III](#) for the general corporate assessment, with additional focus on considerations specific to the Regulated Utilities industry outlined below.

- **Regulatory Framework.** Markets with more consistent, predictable and supportive regulatory rate-setting environments are credit positive. Rate-setting processes that are procedural, technical and transparent balancing assurance of reliable service and reasonable cost are positive, while processes that involve material intervention by legislation or public officials second-guessing regulators or preventing cost recovery by the utility are negative. The relative level of regulatory and political support a utility receives over time can be influenced by its ability to effectively time and stage its rate increase proposals, efficiently provide high quality service, and operate in alignment with regulatory and political priorities in its area.
- **Cost Recovery and Returns.** Regulated utility's ability to recover costs on a timely basis and earn an appropriate return on invested capital directly affects its ability to service debt obligations, as utilities often operate with negative cash flow (due to high capital expenditures and dividends) and rely on capital markets to fund investments. Mechanisms for periodic adjustment of rates without filing rate cases are positive, as is track record of favorable rate proceeding outcomes. Conversely, material regulatory disallowances or lag in earning returns are credit negative. Regulator-determined return on equity (ROE) and equity proportion of rate base are key determinants of return sufficiency, and their levels and trends are important credit factors.
- **Market Considerations.** Territories with stronger economic conditions and larger more diverse customer bases can absorb rate increases with lower political interference and can spread costs over more rate payers. Solidly growing electricity demand environment supports the utility's investment recovery over time. Residential and commercial load is more stable than industrial load which is more cyclical and can seek alternatives. Growing incursions into the utility's monopoly such as self-generation (e.g. rooftop solar) or distributed generation with net metering can present risks. Territories with material exposures to extreme weather and/or catastrophic events such as wildfires can involve substantial additional risks for a utility.
- **Portfolio Mix and Diversification.** Business portfolios diversified across regulatory regimes and lines of business with higher stability are viewed as credit positive. Electricity transmission is viewed as lowest risk due to its essential nature and small proportion of customer rates, while electricity distribution and gas transmission/distribution are viewed as average risk. Power generation is viewed as higher risk because of its high capital cost and recovery risks, construction and operating risks, exposure to fuel costs, and regulatory/political risks. For generation operations, long-term relative competitiveness of assets (fuel, efficiency) is a key consideration. Material cash flow contribution from unregulated businesses is credit negative.

D. REITS AND COMMERCIAL REAL ESTATE COMPANIES

The REITs and Commercial Real Estate industry includes companies that are primarily engaged in the ownership and operation of real estate properties for long-term investment. The Corporate Credit Rating Methodology applies to corporate debt issued by the companies (secured or unsecured), and does not apply to mortgage debt secured by individual properties (typically non-recourse and relying on the individual real estate collateral for repayment).

Financial Assessment. Table 33 provides thresholds applicable for companies in the REITs and Commercial Real Estate industry.

Table 33

REITs and Commercial Real Estate Industry: Financial Assessment Core Metric Ranges

<i>Metric:</i>	Gross Asset Scale (\$ bn)	Total Debt / Gross Assets	Net Debt/ EBITDA	EBITDA / Interest
<i>Weight:</i>	20%	30%	30%	20%
AAA	≥60.0	<10%	<1.0x	≥10.0x
AA	\$20.0 – \$60.0	10% – 20%	1.0x – 3.0x	7.0x – 10.0x
A	\$10.0 – \$20.0	20% – 35%	3.0x – 5.0x	4.5x – 7.0x
BBB	\$2.0 – \$10.0	35% – 55%	5.0x – 7.0x	2.5x – 4.5x
BB	\$0.75 – \$2.0	55% – 70%	7.0x – 9.0x	2.0x – 2.5x
B	\$0.1 – \$0.75	70% – 85%	9.0x – 11.0x	1.5x – 2.0x
CCC	\$0.05 – \$0.1	85% – 95%	11.0x – 13.0x	1.0x – 1.5x
CC	<\$0.05	≥95%	≥13.0x	<1.0x

Business Assessment. The Business Assessment analysis for the REITs and Commercial Real Estate industry involves evaluation of the factors described in [Section III](#) for the general corporate assessment, with additional focus on considerations specific to the REITs and Commercial Real Estate industry outlined below.

- **Real Estate Asset Quality.** Stronger asset quality and earnings stability profile is viewed as credit positive, while weaker value or stability is viewed as credit negative. Key considerations include relative ability to command strong rent rates, duration of the lease portfolio, lease renewal rates, occupancy rates, volatility of occupancy through cycles, and tenant credit strength. These qualities of a real estate portfolio are often driven by the relative quality of asset locations, differentiation of assets in their respective markets, physical quality of the properties, maintenance and sustainability characteristics of the properties, and brand recognition.
- **Market Quality and Positioning.** Stronger market real estate environment and the company's market positioning are viewed as credit positive, while weaker market environment and positioning are viewed as credit negative. Key considerations include market macroeconomic conditions, market demographic and societal trends, demand environment for comparable properties in the market, supply and zoning dynamics for comparable properties in the market, the company's market positioning and market share dynamics, liquidity of the property market enabling efficient buying and selling of properties, and regulatory and tax considerations.
- **Real Estate Asset Portfolio Diversification.** Greater diversity of asset portfolio is viewed as credit positive, while high portfolio concentration is viewed as credit negative. Portfolio diversification is evaluated along several dimensions, including degree of concentration of asset value in top owned properties, concentration of asset value in individual geographic markets, concentration of asset value in individual tenant industries, and concentration of rent revenue in top tenants.
- **Access to Capital.** Because REITs are required to distribute a high percentage of taxable income as dividends for tax reasons, they typically rely on access to financing and capital markets for repayment of debt maturities. Stronger ability to raise capital is viewed as credit positive, while weaker ability to raise capital is viewed as credit negative. Key considerations include diversity of available funding sources and capital markets access, track record of accessing capital markets at attractive terms through cycles, lending relationship diversity and tenor, relative encumbrance level of the assets, and relative marketability of the assets.