

# **CRISIL Ratings approach to financial ratios**

June 2023

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## Executive summary

The analysis of a company's financial ratios is core to CRISIL Ratings' rating process as these ratios help understand a company's overall financial risk profile. CRISIL Ratings considers eight crucial financial parameters while evaluating a company's credit quality: capital structure, interest coverage ratio, debt service coverage, networth, profitability, return on capital employed (RoCE), net cash accrual to total debt (NCATD) ratio, and current ratio. CRISIL Ratings considers present as well as future (projected) financial risk profile while assessing a company's credit quality. These parameters give an insight into the company's financial health and are factored into the final rating. However, the final rating assessment involves the interplay of other factors such as financial flexibility; business, project, and management risks; as well as support from a stronger parent, group, or the government. In cases where the linkage to a weaker parent or group puts a strain on the entity's resources, the same is factored in.

## Scope and objective

This article<sup>1</sup> focuses on the key ratios that CRISIL Ratings uses in its rating process for manufacturing companies. These ratios are also used, with minor variations, if necessary, in analysing logistics providers, construction companies, and a majority of services sector entities. However, for some sectors such as traders, real estate, and educational institutions, CRISIL Ratings uses specific financial parameters such as risk coverage ratio, cash buffer ratio, and adjusted debt service coverage ratio (DSCR) to assess financial risk because they capture the nuances of these sectors better. The rating criteria for these sectors is available on CRISIL Ratings' website.

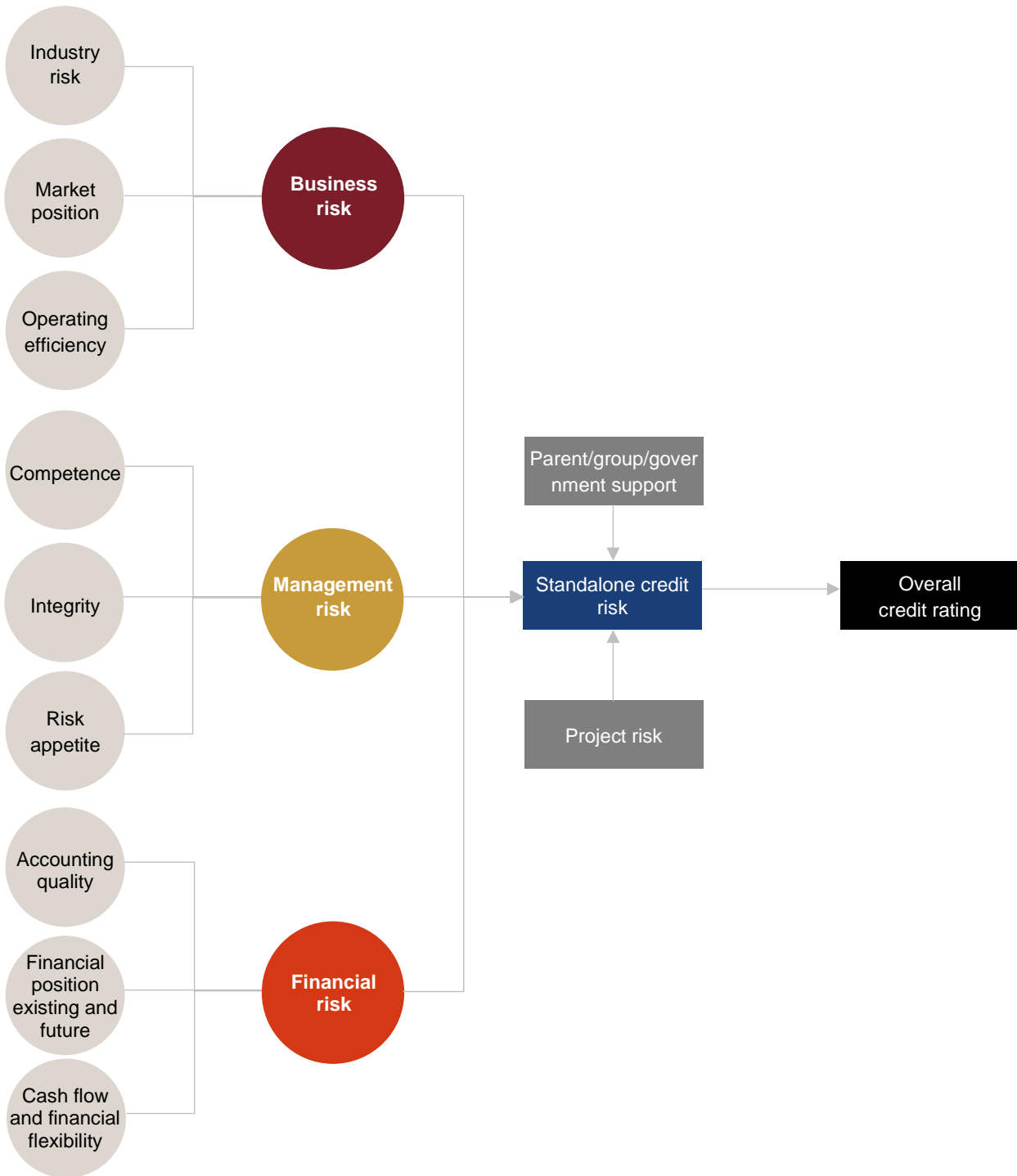
This document explains CRISIL Ratings' approach to financial ratios and the formulae employed to compute them. The financial ratios indicated here, along with other qualitative parameters, are used as inputs in rating financial risk which, in turn, is factored into the overall assessment of a company's credit quality.

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<sup>1</sup> Refer the following link for accessing the previous published rating criteria:

[https://www.crisilratings.com/content/dam/crisil/criteria\\_methodology/criteria-research/archive/CRISILs-approach-to-financial-ratios-jan2022.pdf](https://www.crisilratings.com/content/dam/crisil/criteria_methodology/criteria-research/archive/CRISILs-approach-to-financial-ratios-jan2022.pdf)

**Use of financial risk analysis in rating decisions**



The relative importance of the ratios may vary on a case-to-case basis. CRISIL Ratings does not adopt an arithmetic approach in using these ratios; instead, it makes a subjective assessment of the importance of the ratios for each credit. While some ratios may be part of the business risk analysis, others will be part of financial risk analysis. A detailed discussion on the eight parameters is as follows:

## Capital structure

A company's capital structure – commonly referred to as its gearing, leverage, or debt-to-equity ratio – reflects the extent of borrowed funds in the company's funding mix. The equity component in the capital employed by a company has no fixed repayment obligation; returns to equity shareholders depend on the profits made by the company. Debt, on the other hand, carries specified contractual obligations of interest and principal. These will necessarily have to be honored, in full and on time, irrespective of the volatility witnessed in business.

A company's capital structure is invariably a function of the strategy adopted by its management. Although high dependence on borrowed funds (and thus, weak gearing) may result in a greater return on shareholders' funds, it translates into high fixed costs in terms of the interest burden, which may adversely affect financial position. In fact, in situations of weak business performance, high gearing may affect profitability, thereby constraining a company's ability to repay debt. Gearing, therefore, denotes the extent of financial risk taken by a company: the larger the quantum of debt, the higher the gearing, and the more difficult it will be for the company to meet its debt obligation. A credit rating informs investors about the probability of timely servicing of the rated debt obligation. Therefore, financial risk in the form of high gearing adversely affects an entity's credit rating. The rating also depends on the mix of business and financial risks borne by the company. For instance, entities (sugar and cement companies) that are highly susceptible to industry cycles cannot afford high gearing. On the other hand, companies in stable industries may choose to operate with large debt without unduly straining their financial position.

**CRISIL Ratings computes gearing using the following formula:**

***Gearing = adjusted total debt/adjusted networth***

In adjusted debt, CRISIL Ratings includes all forms of debt, such as short-term and long-term borrowings, off-balance sheet liabilities, preference shares, subordinated debt, optionally convertible debentures, deferred payment credit, and bills discounted. Guarantees, receivables that have been factored, pension liabilities, derivatives, and contingent liabilities are some off-balance-sheet items that are evaluated. In case of guarantees or loans extended, the company may have considerations such as operational linkages or strategic interest, which may drive the level of support to the entity. CRISIL Ratings assesses the likelihood of devolvement of such liabilities and recoverability of exposures, including management intent, while calculating gearing.

CRISIL Ratings' analysis assesses the true and tangible networth of a company; therefore, revaluation reserves and miscellaneous expenditures that have not been written off are excluded from the reported networth. Intangible assets and goodwill are assessed for their intrinsic worth on a case-specific basis. If the goodwill is generated during an arm's-length transaction (amalgamation or consolidation), then it is amortised over its useful life or five years (whichever is shorter). In case of an acquired intangible such as patents, trademarks, or license, it is amortised over the useful period of life or 10 years (whichever is shorter). Instruments such as compulsorily convertible preference shares, share application money, and fully (and compulsorily) convertible debentures are treated as part of the tangible networth on a case-to-case basis.

CRISIL Ratings excludes provisions for deferred tax liability (DTL) from calculations of tangible networth. The DTL represents timing differences in tax on book profits and on profits computed under the Income Tax Act; these differences are expected to be reversed eventually, and hence constitute an outside liability. Though the timeframe for the reversals is uncertain, CRISIL Ratings believes DTL represents the taxman's funds and not the shareholders.

### **Box 1: Treatment of unsecured loans from promoters**

Computation of debt and equity has its nuances, especially in the context of promoter/family-owned unlisted entities where a sizeable portion of promoter funds deployed in the business could be in the form of unsecured loans.

These loans are infused either by promoters or family members and are usually subordinated to external debt. Over the years, CRISIL Ratings has observed that this source of funds has demonstrated a high degree of permanence in times of distress, with promoters deferring interest payments on these loans in order to prioritize the servicing of external debt. Furthermore, unsecured loans from promoters in case of promoter owned, unlisted entities are largely viewed as promoter source of funding by lenders and considered subordinate to all other forms of external debt.

Hence, even though as per accounting conventions, unsecured loans are considered part of debt, the aforementioned factors render some equity-like characteristics to these instruments.

CRISIL Ratings, as part of its analytical treatment of unsecured loans, classifies them into one of the following:

- Part of overall debt
- May exclude unsecured loans from computation of debt
- In some circumstances, CRISIL Ratings accords partial equity treatment to around 75% of the unsecured loans, while considering the remaining as debt.

The above analytical treatment of unsecured loans depends on the following factors:

1. **Subordination to external borrowings:** This is an important factor taken into consideration when evaluating the analytical treatment of unsecured loans. Having a subordination feature means repaying external debt will be given priority over servicing interest and other obligations on unsecured loans. Hence, this feature provides a cushion to external debt holders to withstand the impact of losses or in the event of liquidation. Unsecured loans that are not subordinate to external borrowings are considered as having debt-like features.
2. **Track record of commitment:** CRISIL Ratings looks at the track record of unsecured loans being retained in the entity to assess their permanence characteristic. It also analyses the factors based on which it evaluates the likelihood of the unsecured loans being retained in the business over the medium term. A long track record of unsecured loans being retained in business and fewer withdrawals, as well as the expectation of the same being continued over the medium term, are features that are considered positive when evaluating the analytical treatment of unsecured loans.
3. **Interest rate:** Interest rate charged on unsecured loans is also an important parameter. Higher the interest rate charged on the unsecured loan, lower is the retention of profits, which affects cushion available to meet external debt obligation. This brings these loans closer to debt than equity. Furthermore, a substantially higher interest rate charged on unsecured loans, compared to the average market borrowing rate of the entity, could indicate the possibility that promoters have availed of external loan to infuse funds into the entity, which strengthens the case for debt-like treatment.
4. **Deferability/plough-back of interest payments:** In times of distress, if promoters have demonstrated the ability to defer interest payment on unsecured loans, it indicates a strong commitment to maintain funds within the entity, which is considered a positive. Furthermore, a track record of promoters having consistently ploughed back interest by infusing additional unsecured loans, as well as the expectation of the same being continued over the medium term, is considered positive.

CRISIL Ratings also looks at the total indebtedness ratio while analysing capital structure. This ratio becomes especially important when a large quantum of an entity's liabilities is non-fund based – such as letter of credit facility to pay off creditors. CRISIL Ratings also considers this ratio while analysing companies that have relatively weaker bargaining power with their suppliers. Such entities are limited in their ability to stretch payables. Term as well as current liabilities are accounted while assessing total indebtedness. Hence, CRISIL Ratings looks at indebtedness ratio to get a more holistic picture of the entity's capital structure. CRISIL Ratings computes the total indebtedness ratio as follows:

***Total indebtedness ratio = adjusted total outside liability/adjusted networth***

## Interest coverage ratio

Interest coverage ratio represents the extent of cushion a company has for meeting its interest obligation through surplus generated from operations. This ratio is important to the rating process because the rating reflects the entity's ability to meet debt obligation in a timely manner. This implies that the company should generate adequate income to service interest obligation, even if business prospects were to turn adverse. Thus, companies with a higher interest coverage ratio can absorb more adversity, are more likely to pay interest on time, and are hence less likely to default. Interest coverage ratio is a consequence of a company's profitability, capital structure, and cost of borrowings.

For businesses that have an intrinsically low profit margin, a high interest burden – either on account of weak gearing or high cost of funds, or both – may adversely affect interest coverage ratio, and therefore the rating.

CRISIL Ratings computes interest coverage ratio as follows:

***Interest coverage ratio = profit before depreciation, interest, and tax (PBDIT<sup>1</sup>)/interest and finance charges***

Interest and finance charges refer to the total interest payable by a company during the financial year under assessment; this includes the interest component of lease liabilities, non-funded capitalised interest<sup>2</sup>, and preference dividend.

## DSCR

The DSCR indicates a company's ability to meet its debt obligation, both principal and interest, through earnings generated from operations. The textbook definition of DSCR assumes that debt repayment gets higher priority over working capital expansion. In practice, however, the priority is often reversed: working capital funding takes priority over other payments. Hence, CRISIL Ratings uses a modified version of the ratio: the cash debt service coverage ratio (CDSCR). This ratio assumes that 25% of the incremental net working capital will be funded through cash accrual prior to meeting debt obligation; it is assumed that the remainder will be financed through working capital borrowings from banks.

<sup>1</sup> CRISIL Ratings, in its computation of PBDIT, includes recurring non-operating income, but excludes one-time, extraordinary income or expense.

<sup>2</sup> Non-funded capitalised interest relates to financing costs due to borrowed funds attributable to construction or acquisition of fixed assets for the period up to the completion of construction or acquisition, which are not funded as part of the project cost. Typically, these arise when the project faces time and cost overruns, and the contingencies built into the project cost are exhausted.

According to the definition of DSCR, a ratio greater than 1 time implies that an entity would be able to repay its debt in a particular year from cash accrual generated during that period. On the other hand, an entity with a ratio less than 1 time may have insufficient accrual to meet all debt obligation, and hence has a higher probability of default. CRISIL Ratings, however, views a low DSCR in conjunction with the company's financial flexibility, because:

Debt contracted for a project is often of a shorter tenure than the payback period of the project. This implies that the company will refinance maturing debt with fresh debt, and not necessarily with cash accrual.

A growing company will constantly require debt to meet its business needs. The company may not use all of the cash it generates to repay debt, but would, instead, plough part of it back to expand capacities or business. The company will then use fresh debt (or equity) not only to refinance maturing obligation but also to finance part of the capacity expansion. This is particularly true for Indian companies that are in rapid expansion mode.

Temporary shortfalls in cash accrual in a year may result in a DSCR of less than 1 time. However, the company may tide over the exigency by using its financial flexibility to borrow fresh loans to repay existing loans. CRISIL Ratings recognizes that companies need to refinance debt. Hence, low DSCRs may not necessarily have an unfavorable impact on ratings; the company's ability to replace its existing debt with fresh funds may act as a balancing factor.

The equation for calculating CDSCR is as follows:

$$\text{CDSCR} = \frac{[\text{profit after tax} + \text{depreciation} + \text{interest charges} - 25\% \text{ of incremental net working capital}]}{[\text{debt payable within one year} + \text{interest and finance charges}]}$$

Debt payable within a year primarily constitutes the present portion of long-term debt (the portion that is slated to mature during the ongoing year) and short-term debt obligation (debt that has an original tenure of less than one year, but excluding debt that is normally rolled over, such as working capital bank borrowings and commercial papers).

## Box 2: Refinancing risk

Assessing the ability to refinance involves evaluating the fundamental credit profile of an entity. This assessment considers factors such as business and financial strength, cash flow generation, debt servicing capability, and overall creditworthiness. However, in addition to these fundamental aspects, CRISIL Ratings also takes into account practical considerations when assessing the ability to refinance.

In case of presence of large repayment obligations, which are expected to be refinanced, CRISIL Ratings understands the refinance plan from the management. CRISIL Ratings will also factor in forex risk in case of refinancing from overseas market. The refinancing plan is required to be credible and one that enables the issuer to meet the obligations well in time. The plan is tracked closely for the timely progress and adherence to the same. Failure to demonstrate a credible refinancing plan as one moves closer to the bond/term debt maturity could lead to downside rating pressure. In such a situation, CRISIL Ratings may take appropriate rating action.

## Networth

A company's networth represents shareholders' funds that do not have fixed debt obligation, thus providing cushion against adverse business conditions. As explained earlier, CRISIL Ratings calculates adjusted networth after



adjusting for revaluation reserves and miscellaneous expenditure that have not been written off. The adjusted networth, therefore, represents the true equity that is available for absorbing losses or tiding over temporary financial problems. CRISIL Ratings believes a company's networth is a reflection of its size: a large networth usually denotes strong market position and economies of scale, and also enhances financial flexibility, including the company's ability to access capital markets. A strongly capitalised company will thus be more resilient to economic downturns. In CRISIL Ratings' experience, all other parameters remaining the same, a large company is less likely to default than a smaller one.

### **Box 3: Impact of share buyback**

Share buyback involves a company buying back its shares from existing shareholders, thereby reducing equity float in the market. Companies initiate buyback for many reasons, such as sending a signal to market about stock being undervalued, rewarding investors in a tax-efficient way, and warding off potential takeover threat.

To buy back shares, a company utilises its available liquidity through either the tender route (fixed price) or the exchange route (market-determined prices). From a financial risk perspective, buyback has the following implications:

- Networth decreases
- Leverage levels may increase
- Financial flexibility could reduce, since regulations do not allow a company that has opted for a buyback to reissue similar kind of shares within six months of completion of buyback. While regulations do not allow companies to borrow funds from banks and financial institutions for the purpose of buyback, companies can contract capital market debt to fund buyback
- However, RoCE is likely to increase as capital base reduces

On account of the aforementioned factors, if a company opts for buyback, its financial risk profile could get impacted. The magnitude of this impact would depend on several factors – quantum of shares being bought back, cash outflow, and nature of funding adopted by the company. However, it is usually the financially strong companies that opt for share buyback. Therefore, share buyback or its announcement does not necessarily result in a rating action. It will be evaluated on a case-specific basis, considering the existing cash flows of the company, its cash-generating ability, plans to fund the buyback, and management's philosophy regarding buyback. Through aspects such as quantum and frequency of buyback, CRISIL Ratings tries to ascertain if the management is prioritising shareholders' interests over debt holders' and factors the same in the entity's management risk.

## **Profit margin**

Profit margin broadly indicates both a company's competitive position in an industry, and the segment's characteristics in terms of strength of competition, pricing flexibility, demand-supply scenario, and regulation. A company's profit performance is a strong indicator of its fundamental health and competitive position. Profit margin, observed over a period of time, also indicates whether a company can sustain its present cash accrual. A profitable company exhibits the ability to generate internal equity capital, attract external capital, and withstand business adversity. From a rating point of view, profit after tax (PAT) margin (ratio of PAT to operating income) is an important profitability ratio. Although other ratios such as operating profit before depreciation, interest, and tax

(OPBDIT) to operating income, or operating profit before tax (OPBT) to operating income are also evaluated, these ratios tend to be influenced by industry-specific characteristics, and hence do not lend themselves to comparison across industries. A high PAT margin offsets, to some extent, the effect of business risk and the corresponding financial risk. However, when used in evaluating low value-added industries such as trading, PAT margin also tends to have industry-specific characteristics. This is appropriately factored in while analysing such industries.

The PAT margin is defined as follows:

***PAT margin = profit after tax/operating income***

## **RoCE**

The RoCE indicates the returns generated by a company on the total capital employed in the business. The ratio comprehensively indicates how well the company is run by its managers and is unaffected by the extent of its leveraging or by the nature of its industry. A consistently low RoCE reflects the company's poor viability in the long term.

The RoCE is computed as:

***RoCE = profit before interest and tax (PBIT) / [total debt + adjusted networth + deferred tax liability]***

## **NCATD ratio**

The NCATD ratio indicates the level of cash accrual from a company's operations in relation to its total outstanding debt. Looked at from a different perspective, the inverse of this ratio reflects the number of years a company will take to repay all its debt at present cash generation levels. The ratio is computed as follows:

***NCATD = [PAT - dividend + depreciation] / adjusted total debt (short and long term, including off-balance sheet debt)***

CRISIL Ratings may also consider the debt-to-PBDIT ratio, on a case-to-case basis, to assess debt protection.

***Debt/PBDIT = Adjusted total debt / PBDIT***

## **Current ratio**

Current ratio indicates a company's overall liquidity. It is widely used by banks in making decisions regarding the sanction of working capital credit to their clients. Current ratio broadly indicates the matching profiles of short- and long-term assets and liabilities. A healthy current ratio indicates that all long-term assets and a portion of the short-term assets are funded using long-term liabilities, ensuring adequate liquidity for a company's normal operations.

Current ratio is computed as follows:

***Current ratio = current assets (including marketable securities)/current liabilities (including current portion of long-term debt, that is CPLTD)***

Besides these ratios, CRISIL Ratings also considers inventory and receivables days. Inventory days indicate time required for a company to convert its inventory into sales, whereas receivables days represent the company's collection period. CRISIL Ratings also analyses gross current assets (GCAs), which is another important financial parameter. It is an indicator of working capital intensity and represents how quickly a company is able to convert its current assets into cash. CRISIL Ratings computes GCAs as follows:

***GCAs = total current assets related to operations/operating income***

#### **Box 4: Analytical treatment on account of migration to Indian Accounting Standards (Ind AS)**

The migration to Ind AS, which was initiated in fiscal 2017, has led to better disclosures and brought financial statements closer to economic reality. These accounting changes have, however, not impacted business fundamentals and the underlying cash flows of an entity. CRISIL Ratings has always made adequate analytical adjustments to the reported financials of rated entities to reflect their accurate financial position and factored them in its analysis.

For a more detailed understanding on the impact of Ind AS, please refer to CRISIL Ratings' article titled 'Ind AS Impact' available at [www.crisilratings.com](http://www.crisilratings.com)

## **Conclusion**

While the eight parameters mentioned above are crucial in analysing a company's credit quality, they do not by themselves capture the company's financial health in its entirety. To assess a company's overall financial risk profile, CRISIL Ratings also takes into account its track record and projections on a number of other financial parameters. Strong financial flexibility, the ability to access capital markets, and stable cash flows may, to an extent, compensate for poor financial ratios. On the other hand, a company's strong financial risk profile may be overshadowed by a weak or declining business risk profile. CRISIL Ratings' analysis considers these aspects while assigning credit ratings. However, CRISIL Ratings does not perform a forensic analysis of financial statements, audited results from the starting point for credit assessments. The final rating assessment, therefore, is a complex exercise and involves an assessment of not just financial risks but also of other key risk elements such as business, project, parentage, and management.

### **About CRISIL Ratings Limited (A subsidiary of CRISIL Limited)**

CRISIL Ratings pioneered the concept of credit rating in India in 1987. With a tradition of independence, analytical rigour and innovation, we set the standards in the credit rating business. We rate the entire range of debt instruments, such as, bank loans, certificates of deposit, commercial paper, non-convertible / convertible / partially convertible bonds and debentures, perpetual bonds, bank hybrid capital instruments, asset-backed and mortgage-backed securities, partial guarantees and other structured debt instruments. We have rated over 33,000 large and mid-scale corporates and financial institutions. We have also instituted several innovations in India in the rating business, including rating municipal bonds, partially guaranteed instruments and infrastructure investment trusts (InvITs).

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