

Non-Profit Hospitals and Health Systems Rating Criteria

Sector-Specific Criteria

This report discusses the financial factors and qualitative measures India Ratings and Research (Ind-Ra) considers in rating a non-profit hospital or health system's creditworthiness. Not all rating factors outlined in this report may apply to an individual rating or rating action. Each specific rating action commentary or rating report will discuss those factors most relevant to the individual rating action. This report represents a sector-specific extension to Ind-Ra "Revenue-Supported Rating Criteria," dated 11 September 2015.

Management and Governance Practices: Management practices and oversight from the board of directors is one of the leading qualitative factors that Ind-Ra evaluates in its credit review process. Ind-Ra will assess how governance oversight and management practices affect historical results to judge expected future performance.

Operating Profile: A hospital's ability to meet its financial obligations is often driven by the business strategy it pursues in the markets it serves. Assessing the organisation, service area, and facilities are key credit factors.

Operational Effectiveness: Ind-Ra analyses utilisation trends, payer mix composition, quality data, state of information technology, and relationship with medical and nursing staff as key elements of operational effectiveness.

Sufficiency of Financial Resources: Ind-Ra analysis of financial performance and profile focuses principally on three core areas: liquidity, profitability, and capital structure. Ind-Ra will review a hospital's liquidity metrics, profitability margins, and leverage ratios in light of the organisation's business strategy.

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Overview

This report represents a sector-specific extension to Ind-Ra “Revenue-Supported Rating Criteria,” dated 11 September 2015, and identifies the key qualitative and quantitative credit factors that influence a non-profit hospital or health system’s ability to meet its financial obligations in full and on schedule. The criteria are organised into three broad categories of analytical focus: governance and management, operational profile, and financial profile.

The weighting of individual credit factors can vary due to changes in the economic, clinical, regulatory, and reimbursement environment that affect the sector. Each specific rating action commentary or rating report discusses those factors most relevant to the individual rating decisions.

Governance and Management

A hospital or health system’s financial position and operating performance is highly influenced by the strategic direction and management oversight exercised by the organisation’s board of directors. Moreover, the effectiveness of the executive management team is critical to the success and long-term viability of any organisation. Yet, the evaluation of governance and management quality is the most subjective part of Ind-Ra rating analysis.

For this reason, a meeting with key board members and/ or senior management is valuable, particularly for new credit ratings. For larger organisations, key senior management is considered to be the CEO, CFO, the chief operating officer, the chief medical officer, the chief nursing officer, and the head of human resources. The purpose of the meeting is to develop an understanding of the organisation’s mission, philosophy, and strategic goals. Ultimately, a borrower’s ability to meet its financial commitments is driven by the business strategy adopted and pursued in the markets it serves. Ind-Ra will attempt to assess the soundness of the business strategy through analysis of historical performance relative to projections, the competitive landscape and payer dynamic, and the regulatory environment.

If a new capital project is being undertaken, Ind-Ra will inquire as to the genesis of the project, the depth of the planning process, and how the board and management have interacted to identify all risks in the project to minimise the probability for unsuccessful execution.

Throughout its credit analysis, Ind-Ra will focus on management best practices and assess the effectiveness of operational tools (e.g. management information systems) in measuring and evaluating performance and efficiency. Management practices are one of the leading qualitative factors that Ind-Ra evaluates.

Operating Profile

Ind-Ra rating methodology includes a review of the operating characteristics of a borrower. Measured in a variety of ways, Ind-Ra’s operations review includes investigations of the organisation’s business strategy, operational effectiveness, and regulatory environment. At the core of this analysis is an examination of internal processes and procedures designed to maximise asset productivity and a review of an organisation’s ability to maintain operating strength in a variety of economic and business conditions. Ind-Ra views favourably those organisations that demonstrate stability in their performance level over time.

Related Criteria

Revenue-Supported Rating Criteria,
September 2015

Figure 1

Attributes: Governance and Management

Strength	Characteristics
Stronger	<ul style="list-style-type: none"> Strong governance practices, a conflict of interest policy, and separate audit committee. Stable management and board of directors with diverse professional backgrounds including representatives from the medical staff. Development of annual operating and capital budgets by management which is reviewed and approved by the board. Timely disclosure practices, which include balance sheet, income statement, statement of cash flows, utilisation data, payer and a management discussion and analysis.
Midrange	<ul style="list-style-type: none"> Generally stable management team and board of directors with regular turnover. Development of annual operating and capital budgets by management. Timely disclosure practices, which include balance sheet, income, and statement of cash flow but no management discussion and analysis or utilisation data.
Weaker	<ul style="list-style-type: none"> Absence of governance policies. Lack of written investment policy, operating, and/or capital budget. Disclosure practices that provide minimum required financial information.

Source: Ind-Ra

Business Strategy

A hospital's ability to meet its financial obligations is often driven by the business strategy it pursues in the markets it serves. Assessing the effectiveness of business strategy entails a thorough review of such diverse factors as organisation, service area, and facilities.

Organisation

Ind-Ra assessment begins with gaining an understanding of an organisation's history and scope, evaluated in the context of the hospital's local market. For larger systems, the development of specific markets is less relevant, so the emphasis shifts to the evolution of the system. Business and/or religious affiliations, merger and divestiture activity, joint ventures, acquisitions, and major construction projects all help Ind-Ra assess community support, mission effectiveness, and strategy implementation.

A review of the organisation's component entities is part of this analysis. Ind-Ra assesses the number, type, and location of facilities and the services offered to determine the degree of revenue/profit dispersion, geographic diversification, and community presence an organisation maintains. The greater each of these factors, the stronger Ind-Ra considers the credit to be, Ind-Ra also examines the existence of other operating subsidiaries, which provides information regarding the organisation's mission and strategy, as well as its position in the market. A high degree of integration is viewed positively and indicates a provider's indispensability in the local market, denoting contracting leverage and a strong competitive position.

Figure 2

Service Area Characteristics

Indicator	Significance
Socioeconomic	<ul style="list-style-type: none"> A diversified economy with low unemployment, above-average household income, and population growth factors indicates a greater likelihood of steady demand for and affordability of services.
Market share	<ul style="list-style-type: none"> Higher market share is indicative of patient demand and improved negotiating position with payers.
Certificate of need requirement	<ul style="list-style-type: none"> Certificate of need requirements require regulatory approval for certain capital expenditures which reduces sharp changes in competitive environment.

Source: Ind-Ra

Service Area

Market characteristics and market share are key ingredients emphasised in the rating process. Once the primary and secondary service areas are identified, Ind-Ra analytical effort focuses on demographic and socioeconomic indicators, market share and competition, payer concentration, and opportunities and threats.

Robust population growth, elevated wealth levels, and strong employment indicators are all positive credit factors. Management that is able to formulate specific growth strategies based on this information is viewed favourably. On the other hand, increasing unemployment rates and other deteriorating socioeconomic factors have the potential to lead to unfavourable shifts in payer mix and can negatively affect the rating.

Market share is a primary credit factor and is evaluated both in terms of the absolute level and its movement over time. Higher shares are viewed more favourably than lower shares, but positive trends in share that are observed over a multiyear period are generally better than a higher but declining market share trends. Trends and levels in individual services are also reviewed to identify potential strengths and weaknesses in subspecialties. Demonstrated growth in market share for service lines that have been targeted for investment is viewed positively, especially if utilisation growth occurs in high volume and/or high margin services.

Higher market share, in addition to indicating substantial success in executing overall strategy, can signify that a hospital has a relatively large amount of leverage in negotiating pricing with commercial insurers. A dominant market share (a leading share that is at least two times that of the next competitor) is viewed very positively in the rating process, as it could insulate itself from the impact of an economic downturn in comparison to other health providers with smaller market share.

Facilities

The age and condition of a hospital's buildings and equipment, their distribution within the service area, and the hospital's capital expenditure history and plans can be key drivers of physician preference, patient volumes, and, quite often, financial viability. Through a site visit, Ind-Ra evaluates the existing capital assets of the provider in terms of their curb appeal, capacity, accessibility, and suitability to patient preferences. Hospitals whose facilities are well maintained, appropriately sized, and convenient to population centres and traffic flows are viewed positively. Often, this evaluation is performed relative to the condition and configuration of competing facilities located in or surrounding the service area.

Ratings are often assigned in connection with the financing of a planned capital project. In such cases, Ind-Ra analysis includes a review of how the project fits with the hospital's overall strategy and master facilities plan, the impact on future revenues and expenses, and the expected effect on the hospital's market position. The project's size, complexity, and impact on current operations dictate Ind-Ra level of analysis and review of management's oversight and planning processes. For borrowers contemplating major construction projects, the project team's qualifications and experience are rating considerations. A history of completing similar projects on time and on budget can mitigate credit concern regarding construction risk.

Even with solid planning efforts and prior experience, hospital projects can and do get delayed and modified, resulting in cost overruns. The credit quality of bonds that fund projects can be improved with the presence of capitalised interest funds to fund interest costs until the project ramps up and produces revenue. Additionally, Ind-Ra views favourably a contingency built into the project budget in the event of overruns or scope changes.

A project's expected funding sources can affect the credit rating positively or negatively, depending on the mix of debt, equity, and philanthropy. Ind-Ra reviews the timing, availability, and assumptions regarding expected equity contributions, as well as their effect on the borrower's balance sheet. A material depletion of balance sheet resources and excessive reliance on future philanthropy without a strong history of fundraising are viewed negatively.

Operational Effectiveness

Successfully meeting financial commitments is predicated on effectively conducting the daily activities of running a hospital or health system. Maintaining a facility that is conducive to physician referrals, efficiently processing patients, ensuring that supplies and personnel are

sourced and deployed, providing high-quality and appropriate care, and maximising collections for services rendered are all critical aspects of hospital operations. Ind-Ra analysis seeks to identify processes that continually improve the effectiveness of major operational functions, with particular focus on management's ability to assess operational constraints and inefficiencies, monitor progress, and maximise financial and strategic results.

Utilisation

Ind-Ra considers several indicators when evaluating hospital utilisation trends, from broad measures of patient activity such as inpatient discharges or total outpatient visits, to specific service or ancillary activity that may disproportionately influence profitability. A declining trend may indicate market share loss to a competitor, weakening physician relationships, or deteriorating demographics and is generally viewed negatively. However, initial observations are augmented by a review of overall market utilisation patterns to better discern underlying competitive or technology shifts; stable utilisation in a declining market can indicate market share growth, which is viewed positively.

Volume changes for individual services, such as surgeries, emergency room cases, clinic visits can yield insights into competitive developments in the service area, the relative success of investments in selected product lines, and shifts in technology or regulation. Ind-Ra examines these factors to determine what credit impact they may have, if any.

Average length of stay (ALOS) measured in conjunction with case mix index is a direct reflection of case management practices. Unless patient acuity is increasing, a rising ALOS suggests problems with patient throughput and the excessive expenditure of resources in providing care. Effective ALOS management increases a provider's effective capacity and lends credit strength.

Payer Mix

The composition of a hospital's sources of payment for services provided usually reflects the service area's socioeconomics and has a high correlation with a hospital's financial performance. There is a broad range of payment rates and terms among the various payer groups. Ind-Ra reviews trends in payer composition as well as the profitability and collection cycle for each. Payment rates for commercial insurers are usually high, so a higher proportion of commercial payers is viewed positively in the rating process. Management's negotiation experience with commercial payers is examined, and the length, rates, and other provisions of contracts are reviewed. Contract exclusivity within a market is a positive credit factor, as it indicates a provider's essentiality to an insurer's provider network. High concentration of revenue from a single commercial payer can be viewed negatively unless governed by a long-term agreement providing attractive rates.

High concentrations of governmental payers can have both positive and negative effects on credit ratings. While an agreement with the government on both providing in- and out-patient services has a positive impact on revenue, unprofitable payment rates under these programs would affect the credit ratings. Similarly, certain specialty reimbursement programs such as disproportionate share, graduate medical education, and indirect medical education can make hospitals vulnerable to budgetary pressures and policy-driven payment-rate changes.

Medical Tourism

In recent times, India has become one of the preferred destinations for medical tourism due to cost advantage. Many medical institutions have a sizeable proportion of their revenues originating from providing health care (mainly surgery). Attractiveness of a hospital for medical tourism depends on the quality of medical professionals, medical facilities offered by them and tie-up with agencies/ hospitals in foreign countries.

Quality and Patient Safety

The increasing requirements for tracking and reporting quality and safety indicators by healthcare providers have important implications for reimbursement and competitive positioning. Performance in this area is a key credit factor. As an element of the overall assessment of creditworthiness, Ind-Ra will review the organisation's publicly available information on quality of services in conjunction with its overall commitment to establishing a culture centred on delivering safe, high-quality care. This comparison with those of competing facilities is also a component of Ind-Ra analysis. Consistent improvement across industry-standard measurement categories and superior results compared to competing hospitals are viewed favourably in the rating process. Boardlevel emphasis on improving patient outcomes, demonstrated by regular and effective reporting and consideration, is also a credit strength.

Information Technology

Ind-Ra credit analysis includes a survey of the provider's health information technology status and development plans. Top performing hospitals have invested extensively in information technology, especially in clinical information systems and electronic health records, with objectives that include improving patient outcomes, increasing operating efficiencies, and responding favourably to payment incentives tied to information technology requirements.

Medical Staff

Since doctors control a high proportion of utilisation for many hospitals, the analysis of medical staff is a key component of Ind-Ra credit rating process. Positive credit factors include strong growth in active staff, effective recruitment activities and practice succession planning, a broad distribution of admissions among the staff, and physician participation in hospital decision making. Rapidly increasing costs, reimbursement limitations and incentives, technology advances, quality imperatives, and market competitiveness underscore the need for hospitals to develop and maintain effective partnerships with their medical staffs. Hospitals' activities in this regard are closely examined.

Physician employment and alignment by hospitals or hospital-related organisations is increasing significantly in many markets to aid in recruitment, improve patient throughput, build market share, secure referral streams, and to more effectively manage care delivery. Ind-Ra views the employment model favourably when there is a clear strategy behind employing physicians, and contractual incentives exist to foster productivity and other organisational goals. The need to fund losses from physician activities, a common situation in the sector, is compared to the strategic benefits realised by the hospital. The ability to manage such losses and justify the on-going support by the benefits obtained are positive credit factors.

Nursing Staff

Ind-Ra views a hospital's ability to recruit and retain nurses as a management best practice, as the quality of nursing care is a primary determinant of patient satisfaction and effective case management. For standalone hospitals, Ind-Ra considers vacancy and turnover rates, average age, and the use of agency staff, which is much more expensive than employed staff but can add flexibility to adjust to variations in patient volumes.

Quality nurses and other health professionals are often in short supply. Ind-Ra labour analysis could include the identification of shortages in specific markets and hospitals' measures for coping with them. Strategies that are viewed favourably include regular compensation studies and market adjustments, employee benefits packages that reduce turnover and enhance retention, affiliation and collaboration with area educational institutions to train and provide internships for scarce disciplines, and employee empowerment programs that enhance job satisfaction.

Financial Reporting

The frequency, timeliness, and thoroughness of financial reporting are important rating considerations. Both audited and interim financial statements are primary sources of information on what credit analysis is based. Auditor management letters and management's discussion and analysis of results are requested and reviewed. A pattern of late audits, material restatements or audit adjustments, or insufficient notes and disclosures are viewed negatively in the rating process.

Of particular importance in India Ratings analysis are the covenants and performance pertaining to on-going disclosure. Disclosure should include balance sheet, income statement, cash flow statement, operating statistics, and management discussion and analysis. Deficiencies in meeting these criteria are viewed negatively.

Financial Profile

Financial metrics contribute significantly to ratings determinations. Ind-Ra evaluates quantitative assessments of liquidity, profitability, debt burden, debt structure, and the historical trends of such measures. However, Ind-Ra believes that financial performance is a product of the qualitative and strategic factors. Expectations for future financial performance and, ultimately, the credit rating, are informed by assessments of those factors. As long as a borrower's underlying strategic position remains sound, a certain amount of variability in financial performance should not affect the rating on the bonds.

The revenue size of the hospital or health system is taken into account when evaluating an organisation's financial profile. Ind-Ra believes that the financial performance of hospitals with small revenue bases is inherently more volatile as small changes in medical staffs and/or clinical volumes can result in major variances in financial performance.

Both historical and management's projected financial results are considered. The best indicator of future financial performance is the recent track record of the borrower, its management team, and its market. If future performance is expected to track differently than historical results due to significant project plans, environmental changes, or management initiatives, Ind-Ra will examine the detailed assumptions that drive projected results. Forecasts that rely on aggressive volume growth, market share capture, rate increases, or expense reductions will be viewed with analytical conservatism in the rating process. Ind-Ra may request sensitivity analyses stressing major forecast assumptions to gauge the importance of such factors in achieving projected results.

Ind-Ra typically uses consolidated audited financial statements in its credit analysis. Ind-Ra will analyse and evaluate the legal, financial, operational, and managerial factors between the obligated group and the non-obligated affiliate. In addition, Ind-Ra would likely comment on results for both the obligated group and consolidated entity.

Liquidity

The amount of financial flexibility exhibited by the borrower is a key factor reflected in the bond's rating. The most direct and immediate measurement of financial flexibility is liquidity, which describes the level of financial resources held by a borrower that can fund working capital requirements, cushion adverse changes in operating cash flow, provide funds to respond to opportunities and threats, and allow on-going capital replacement.

Ind-Ra liquidity analysis focuses on unrestricted cash and investments, supplemented with funds designated by the board for capital replacement. Stability or growth in these funds relative to cash expenditure levels, especially growth derived from consistent operating surpluses, is a positive credit factor. Declines due to investment losses, capital expenditures, or other specific uses may be viewed negatively depending on the magnitude and reasons for the losses. A multiyear decline due to a pattern of operating deficits is invariably a negative credit factor. Key liquidity metrics include day's cash on hand, cushion ratio, and cash to debt.

A hospital's investment portfolio and asset allocation policy have a significant bearing on creditworthiness, given the importance of financial reserves to the on-going operations of the hospital and to the hospital's credit rating. Allocations to long-dated fixed-income or traditional equity securities that pose market risk, to alternative investments that limit accessibility, hinder price transparency, or require future capital commitments are viewed negatively if the extent and nature of such holdings could compromise the overall liquidity position in an unfavourable investing environment. Ind-Ra will inquire about and make an assessment as to how quickly the various asset classes can be liquidated.

Rating concerns regarding allocations to market-sensitive and alternative investments may be mitigated by the following:

- Sufficient holdings in cash, cash equivalents, and high-quality, short-term, fixed-income securities are maintained such that ample financial cushion remains even in periods of sustained market downturn.
- A board-adopted investment policy exists stating allocation targets and limits, permitted investments, and policy goals.
- Alternative investments are diversified and limited as to type and manager.
- Cash flows from operations are consistently strong.

Profitability

Ind-Ra views operating profitability as the engine that drives long-term viability. Consistent, positive operating results are viewed favourably because they improve balance sheet strength, suggest a strong competitive position in the local market, and allow reinvestment in strategic assets. Operating profitability can be materially affected by the level of integration with the physician staff (e.g. employment) and the existence of a health insurance plan. Ind-Ra will incorporate those influences into its credit analysis. Regardless, consistently weak operating profitability, inconsistent performance, or a declining trend in operating performance are a credit weakness, unless mitigated by a history of subsidisation from a large and well-managed endowment. For borrowers with multiple operating locations, revenue and profit dispersion across the enterprise is viewed positively.

As part of the profitability analysis, Ind-Ra assesses hospitals' non-patient sources of revenue, both in terms of stability and in hospitals' reliance on such streams to achieve healthy coverage of debt service and excess margins.

Reliance on investment income to fund operations is a negative credit factor, unless the investment policy is such that stable positive returns are quite likely or unless cash reserves are so large that reasonably expected volatility in investment earnings would have negligible effect on the ability to service debt. Profitability measures used by Ind-Ra include operating margin, excess margin, and operating earnings before interest, taxes, depreciation, and amortisation (EBITDA) margin.

Debt Load

The actual and expected debt a borrower carries — the par amount, amortisation, and type — is a key element of the financial profile. A hospital's debt is evaluated in the context of the size, profitability, and liquidity of the organisation. Metrics based on debt service requirements usually use maximum annual debt service (MADS) over the life of all outstanding debt. Occasionally, due to debt amortisation patterns that are not level, Ind-Ra may use an alternative debt service figure to provide a more accurate assessment of debt burden, but will disclose its methodology and rationale for its approach.

Coverage calculations typically exclude bullet maturities, which are analysed discretely in the context of borrowers' individual plans and circumstances. Payments made under operating leases are considered to be capital-related costs and may be included in debt-load metrics if such items are material. Primary capital related metrics analysed by Ind-Ra include debt

service coverage by EBITDA and operating EBITDA, debt service as a percentage of net revenue, debt to operating EBITDA, and debt to capitalisation.

Ind-Ra analysis addresses the following rating considerations:

- The ability of operating earnings before capital costs to cover principal and interest requirements.
- Debt service requirements in relation to the size of the organisation.
- The availability of balance sheet resources to help meet financial obligations if necessary.

Ind-Ra reviews defined benefit pension funding as part of its analysis of debt and long-term liabilities; however, the unfunded pension liability is not included as long-term debt. Pension funding requirements represent a more variable commitment to future payments than bonded debt to the extent that they can be significantly influenced by a variety of actuarial, accounting, investment, and other policy decisions of the sponsor.

Ind-Ra views favourably entities that have well-funded pension plans and consistently fund the annual required contribution. In cases where the unfunded liability is sizable, Ind-Ra views positively actions or plans to reduce it over time. Concerns arise if the liability level is high or increasing.

Figure 3

Attributes: Select Financial Metrics

Strength	Debt service coverage	MADS as % of revenues	Days cash on hand	Operating EBITDA margin
Stronger	Coverage above 4.0x indicates strong profitability and/ or leverage providing solid bondholder security.	Less than 2.5% indicates a modest debt burden allowing for greater variability in operating profitability.	Greater than 200 days cash on hand indicates considerable financial flexibility to meet changes in operating results.	Strong: Reflects strong cash flow generation from core operations available to cover debt service, fund growth and/or build liquidity.
Midrange	Coverage between 2.5x and 4.0x indicates adequate profitability and/ or moderate leverage providing moderate bondholder security.	Ratios between 2.5% and 3.5% indicate a moderate to high debt burden with less room for compression in operating profitability.	Between 125 and 200 days cash on hand indicates a reasonable level of cash reserves to meet changes in operating results.	Moderate: Reflect adequate cash flow generation from core operations to cover debt service, reinvest in plant and/ or add to liquidity.
Weaker	Less than 2.5x coverage indicates limited bondholder security and little cushion for unexpected revenue shortfalls.	Above 3.5% reflects a heavy debt burden with little flexibility for compression in operating profitability.	Less than 125 days cash indicates less financial flexibility but may acceptable if debt burden is light.	Weak: May indicate high cost structure or weak payer mix resulting in modest cash flow generation.

Source: Ind-Ra

Debt Profile

The size and composition of a hospital or health system's debt structure can have a material influence on Ind-Ra overall assessment of creditworthiness. The purpose of a planned financing, the total amount of debt outstanding, and various characteristics of a borrower's debt structure are all analysed in Ind-Ra credit review process.

If debt is being issued to fund a new capital project, Ind-Ra will make an assessment if planned capital investments are justified by capacity constraints, projected market growth, or competitive opportunities. In addition to Ind-Ra own research and analysis, Ind-Ra considers issuers' methods to monitor industry growth patterns and their relative market position, if appropriate, in addition to conducting its own analysis of these factors.

Ind-Ra will review the composition a borrower's capital structure. Generally, Ind-Ra views fixed-rate, fully amortising debt positively. For borrowers that use variable-rate debt, Ind-Ra examines their ability to manage and absorb the inherent interest rate and liquidity risk and considers mitigating factors, such as balance sheet liquidity.

Peer Comparisons

Peer comparison is performed in two ways. First, a borrower's metrics are compared to median financial ratios. Ind-Ra expects the borrower's metrics to exhibit relative consistency with those of the rating category being considered, although variations may be supported by nonfinancial credit strengths or weaknesses.

The second approach provides a more focused analysis by comparing the metrics of a borrower to the financial profiles of a set of other entities with similar business and credit characteristics. The borrower's rankings for each of several different financial metrics are prepared and assessed for comparability. As in the first approach, general consistency is expected, but deviations may be deemed acceptable if significant non-financial credit factors are identified.

The two approaches described above should not be construed to mean that definitive financial metric values exist that prescribe rating levels. The ranges over which financial metrics vary can be broad, and there is considerable overlap among rating categories for certain metrics. Furthermore, ratings are forward looking and imply an expectation of future financial metrics rather than historical levels. Nevertheless, taken in the aggregate, the financial profile's comparison to medians or peers is an important rating driver, and improvement or deterioration in such comparisons over time may result in positive or negative rating pressure.

Financial Metrics

Financial results correlate reasonably well with credit ratings, and although of limited value as leading indicators of creditworthiness, certain financial metrics, taken individually and in aggregate, can provide guidance as to suitable levels of liquidity, profitability, and debt load by rating category.

Ind-Ra notes that median financial ratios vary over time because of performance variability and cyclicity, and that no absolute floors or ceilings are prescribed for individual metrics to qualify for a particular rating level. Also, strong performance in one metric may or may not compensate for poor performance in another, depending on the metrics involved and other circumstances of the borrower. Finally, qualitative factors and expectations for future performance often result in ratings for borrowers that may have one or several metrics that diverge from the medians.

Legal Provisions

Ind-Ra analyses several legal factors, which may include indenture provisions such as security pledges, rate covenants, events of default, additional bonds tests, reserve requirements, and bank bond provisions for variable-rate demand debt. While Ind-Ra believes that bond covenants are clearly important to overall investor security, the degree to which they influence ratings varies. For high rated borrowers, operating performance will have a greater effect on the rating than legal provisions. However, the lower an issuer's rating, the more important legal provisions may be to the final rating, with weak security provisions resulting in lower ratings compared to a similar borrower with stronger security provisions.

Bond Indenture

The legal provisions of a bond issuance provide a framework for the establishment of funds and, ultimately, the repayment of the obligation. As such, Ind-Ra analyses indenture provisions, such as the pledge of revenues, rate covenant, additional bonds test, debt service reserve fund, and flow of funds to determine the relative strength of the security.

Pledge of Revenues

Typically bondholders are granted a security interest in the gross revenues of the obligated group. Ind-Ra does not distinguish between a pledge of gross and net revenues, as all systems must fully cover annual operating expenses and debt service from total revenues.

Mortgage Lien

Depending on the lending environment, a first mortgage lien on the property and physical assets of the borrower may be granted to the trustee for the benefit of bondholders. Ind-Ra views a mortgage interest in property as a positive credit factor.

Rate Covenant

The rate covenant requires a borrower to generate a minimum operating cushion to meet maximum or annual debt service requirements. Ind-Ra views it as an element of financial cushion. Generally, Ind-Ra expects a rate covenant of at least 1.20x to be tested annually.

Additional Bonds Test

The terms of the additional bonds test are typically based on historical or projected compliance with a rate covenant. The strongest tests include both a historical and projected debt service coverage test and limit the period for calculating net revenues to the 12 months immediately preceding the issuance of additional debt.

Transfer of Assets

The ability of a borrower to transfer assets to a non-obligated entity is typically limited to a percentage of total assets or gross property, plant, and equipment annually. Ind-Ra will review the transfer of assets language to determine the dollar value of assets that can be transferred annually. A limit on the transfer of cash and investments separate from the definition of assets is viewed favourably.

Debt Service Reserve Fund

The establishment and funding of a debt service reserve fund (DSRF) is a positive credit factor.

Figure 4
Key Financial Ratios

Ratio	Calculation	Significance
Capital structure and cash flow		
Debt service coverage by EBITDA	EBITDA/MADS.	Indicates the net revenue available to meet MADS requirements.
Debt service coverage by operating EBITDA	Operating income + interest, taxes, depreciation, and amortisation expense/MADS.	Indicates the net revenue available from core operations (excludes non-operating income) available to meet MADS requirements.
MADS as % of total revenue	MADS/total revenues.	Indicates the relative burden of debt service relative to total revenues. Higher percentages indicate less room for operating profitability variance.
Debt to capitalisation	(Total debt)/(total debt +unrestricted net assets).	Indicates the size of debt compared to the adjusted net worth of the entity.
Capital expenditures as % of depreciation expense	Net purchase of property, plant, and equipment/annual depreciation expense.	Indicates the level of capital reinvestment into the facility.
Variable-rate debt/total debt.	Variable-rate debt/total debt.	Provides context for an issuer's exposure to variable rate debt.
Liquidity		
Days cash on hand	Unrestricted cash and investments/(cash operating expenses/365).	Indicates financial flexibility and cushion against decline in operating profitability.
Cash to debt	Unrestricted cash and investments/total debt.	Indicates financial flexibility and cushion against decline in operating profitability.
Cushion ratio	Unrestricted cash and investments/MADS.	Indicates financial flexibility and cushion against decline in operating profitability.
Profitability		
Operating margin	Total operating revenue-total operating expenses/total operating revenue.	Provides an indication of a borrower's profitability from core operations.
Operating EBITDA margin	Income from operations before interest, taxes, depreciation, and amortization/total operating revenue.	Provides an indication of the cash flow from core operations which is available for the payment debt service.
EBITDA margin	EBITDA/total operating revenue + non-operating revenue.	Provides an indication of cash flow from operating and non-operating (primarily investment income) which is available for the payment of debt service.
Personnel costs as % of total operating revenues	Salaries, wages, benefits, and professional fees/total operating revenue.	Provides an indication of how efficient labour is being used.

Source: Ind-Ra

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