



CareEdge Global Corporate Rating Methodology

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A. Introduction

CareEdge Global IFSC Limited's (CareEdge Global) Rating Methodology for assessing Corporates details the framework, approach, and factors for assessment.

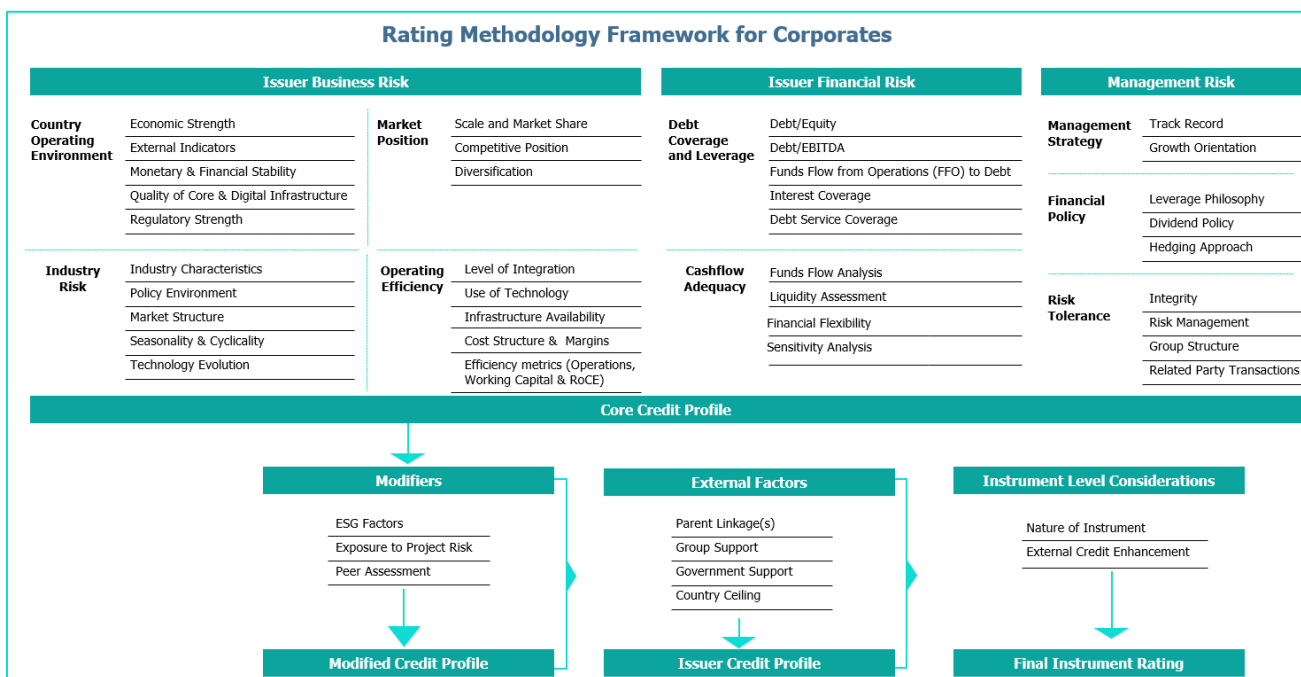
B. Scope

This methodology applies to all manufacturing, industrial and service companies. It includes corporates involved in manufacturing various products and catering to diverse sectors.

C. Overall Framework

There are four key elements in CareEdge Global's assessment of corporate entities. The assessment begins with an evaluation of Core Risk Factors to determine the Core Credit Profile (CCP). Second aspect is the application of modifiers to CCP to arrive at the Modified Credit Profile (MCP). Analysis of any external influence / factors is the third step and finally the instrument level considerations are assessed to arrive at the Final Instrument Rating.

The following chart depicts the Corporates Evaluation Framework used by CareEdge Global:



D. Core Credit Profile

Core Credit Profile assesses the factors that are central to the entity being rated i.e., business risk, financial risk and management risk. There are sub-factors to each of these elements, which are detailed below.

1. Issuer Business Risk

The issuer business risk is evaluated on the basis of Operating Environment of the key country(ies) wherein the entity has majority of its operations, Industry Risk, Market Position and Operating Efficiency.

i. Country's Operating Environment

The Country Operating Environment (COpE) is used while assessing all corporate ratings to evaluate the relative strength of the operating environment of a specific country(ies) that a corporate entity operates in. A healthy operating environment provides corporate entities with necessary ingredients to thrive. However, it may not prevent entities from failing in the most hospitable operating environments. On the other hand a higher-risk environment may constrain an entity's potential and overall credit profile. COpE evaluation is based on the following six broad aspects:

- a. Economic Strength
- b. External Indicators
- c. Quality of Core & Digital Infrastructure
- d. Monetary Stability
- e. Financial Stability
- f. Regulatory Environment

Each of these six aspects are detailed below:

a) Economic Strength

The Economic Strength of a country is an assessment of its size, income level, growth potential and ability to withstand various shocks. The resilience of an economy relies on stable and strong economic growth which determines both competitiveness and employment opportunities. A strong revenue-generating ability translates into higher consumer demand, creating a favorable environment for corporate credit expansion and business growth. Furthermore, a well-diversified economy provides flexibility to withstand various shocks while fostering inclusive and sustainable growth, with capital flows distributed across multiple sectors, thereby mitigating risks. On the other hand, over-reliance on select sectors makes an economy vulnerable to external shocks, reducing competition and concentrating profit margins in limited areas as demonstrated in the pandemic-led disruption.

b) External Indicators

External Indicators include a country's access to foreign funding, trade competitiveness, and external liquidity, which have a significant bearing on the operating environment. In an interconnected global landscape, the external sector may become a risk emerging from global trade tensions, financial contagion, and geopolitical conflicts. However, external indicators such as a comfortable current account position, healthy capital inflows, sustainable external debt, adequate liquidity become increasingly important cushions to offset such risks to businesses. Stable and healthy external indicators helps corporates anticipate market trends, adjust their strategies, and make informed decisions to effectively navigate the economic landscape.

c) Quality of Core & Digital Infrastructure

Availability of quality infrastructure, both physical and digital, is crucial for an economy resulting in growth through supply as well as demand-side channels. Investments in energy, transportation networks, telecommunications etc. directly impact growth since infrastructure availability is an essential input for the production of goods and services. It acts as a catalyst for driving the growth of allied sectors like housing, construction development projects such as roads, power projects etc. Further, a developed infrastructure set-up reduces the cost of production and facilitates the physical mobility of people and products, thereby increasing competitiveness.

While the development of core infrastructure propels physical production, a sound digital infrastructure is necessary for the growth of an economy's services sector. This has become pronounced in recent times, wherein advancements in digital technology have become a determining factor in the economy's growth. Investments in digital infrastructure such as internet availability, modern banking solutions, data centres, artificial intelligence etc. provides the optimal environment to the corporate sector.

d) Monetary Stability

Credible monetary policy helps in attaining low and stable inflation, which fosters business confidence for corporates and contributes to financial stability. Conversely, prolonged episodes of high inflation undermine monetary policy credibility increasing the cost of raising capital for corporates, erode purchasing power, and discourage investment.

In this regard, a flexible exchange rate regime allows the Central Bank to conduct independent monetary policy and manage inflation efficiently. This adaptability helps

mitigate economic disruptions, reduce systemic risks, stabilize financial markets, and maintain a stable operating environment for corporate entities.

e) Financial Stability

To evaluate the stability of a country's financial system, we assess trends in asset prices, performance of financial institutions, and effectiveness of interest rate transmission. A stable and deep financial system can enhance the government and private sector's ability to raise funds domestically, thus contributing to efficient capital allocation, improved liquidity and eliminating financial stress.

Healthy asset quality and adequate capital buffers are the primary elements for a strong financial system. On the other hand, a weakness in asset quality of the banking system can undermine the stability and soundness of the financial system. This may adversely impact credit availability to the corporates, thus weighing on the performance of the real economy.

f) Regulatory Environment

The strength of a country's institutions and effective policymaking contribute to overall economic stability. Strong institutions also make an economy less vulnerable to various shocks (economic, financial, and political), fostering policy stability, transparent and effective enforcement of regulations, and low corruption. Transparency of the regulatory framework, independence from political interference and effectiveness of an independent legal body for arbitrating disputes also contribute to a strong regulatory environment. This creates a predictable business environment, reduces operational risks, and boost investor confidence.

ii. Industry Risk

The industry risk is the evaluation of the risk profile of the sector in which the entity is operating, which may influence its financial and operational performance. This evaluation also helps to determine the company's ability to sustain its performance and future cash flow generation, which is the primary source of repayment of its borrowings.

Industry Risk Assessment involves the process of identifying, analyzing, and evaluating potential threats and opportunities that may affect an industry's performance, thereby affecting the participating companies. We assess the parameters that could potentially impact an entity's competitive position over the medium to long term. This could be attributed to changes in industry business cycles, market trends, change in technology, and regulatory changes (easing or tightening of barriers to entry or changes in the

compliance requirement), which may result in a corresponding impact on revenues or operating profit margin for the companies in the sector.

We evaluate the industry risk using five broad aspects:

- a. Industry Characteristics
- b. Policy Environment
- c. Market Structure
- d. Seasonality & Cyclicalities
- e. Technology Evolution

Each of these five aspects are detailed below:

a) Industry Characteristics:

Linkage to economy: While assessing the industry characteristics, we evaluate how closely the industry's performance is tied to the overall economy. Industries that have very low or no correlation to the economy tend to do well not just during an economic upturn, but during an economic downturn as well. Such industries are less affected by economic conditions. Their performance is driven almost entirely by industry specific or company specific factors, rather than the state of the overall economy.

On the other hand, industries with a very high correlation to the economy are extremely sensitive to economic conditions. Their performance closely mirrors the overall economy. Industries that are highly dependent on the economy tend to do well only when the economy is booming and perform poorly when the economy is in a downturn.

Size of the Industry: It refers to the total revenue generated by all companies within the industry. A larger industry size is perceived favourably as it is often characterised by a large number of employees, substantial revenues, and a broad geographic presence and have a significant impact on the global economy due to its size and reach.

On the other hand, smaller industries might be those in niche markets, emerging industries, or industries with lower revenues. Companies in niche industries offer specialised products or services that cater to the needs of their target audience. Emerging industries such as 3-D printing, internet of things, blockchain, AI etc. are those that are either new or in the early stages of development. These industries may

involve innovative technologies or business models and have the potential for growth. However, they face significant risks due to uncertainties in the market, pace of technology change, or regulatory environment.

Industry Growth Rate: Industry growth rate is the rate at which the industry is expanding or contracting. New age/ evolving industries have a potential to grow at a higher rate. On the other hand, an industry that is growing at a slower rate might be in a mature or saturated market, and/ or might be facing challenges that limit their growth.

Capital Intensity: Capital intensity refers to the amount of capital investment required to operate in the industry. CareEdge Global assesses the gross fixed assets to capital employed to gauge the capital intensity of an industry. Industries that require significant capital investment may pose barriers to entry for smaller or newer businesses. A higher percentage of gross fixed assets to capital employed indicates reliance on physical assets like large-scale machinery, equipment, or infrastructure. Investment may also be in the form of intellectual capital for new-age or technology driven industries.

Conversely, industries with very low capital intensity have lower gross fixed assets to capital employed and this indicates a minimal reliance on physical assets, with the majority of capital employed in other forms.

Barriers to Entry: Barriers to entry refers to impediments for new players from entering an industry, and high barriers to entry can protect existing companies from new competition. High barriers to entry is present in industries such as airlines, pharmaceuticals, oil and gas exploration, etc. thus protecting the market from new competitors, reducing the risk of increased competition. These industries are characterised by high upfront investment towards machinery and / or research & development (R&D). Low barriers to entry allow new competitors to enter the market easily, thus increasing competition and posing a high risk to existing market share.

b) Policy Environment:

This refers to the policies, regulations and laws governing the industry. Stable, transparent and consistent regulations lead to predictability in policy environment. This kind of environment help the corporates to make sound investment decisions.

Frequent changes in policy environment and/or ambiguous policies can pose challenges for businesses, particularly if changes are unpredictable or not well-defined. Industries with a very high policy environment risk have a very high potential for regulatory changes that could significantly impact the industry. It is typically associated with industries that are heavily regulated and subject to frequent and unpredictable policy and regulatory changes. On the other hand, industries with very low policy environment risk indicates minimal potential for policy or regulatory changes that could negatively impact the industry and is perceived favourably. This is generally associated with industries that are less regulated or have stable and well-established policies. Furthermore, regulations and policies that are supportive of an industry and its players is viewed positively. Typically, entities that offer an essential commodities like electricity, water, and gas are regulated. Such businesses are typically shielded from competition and are governed by regulator that oversees their tariff, service quality etc.

c) Market Structure:

Competitive Dynamics: It refers to the degree and nature of competition among the players operating in a market and is usually characterized by number of players and distribution of the market share amongst them. It can be highly concentrated among a few primary players or be fragmented among a large number of competitors. Market structure can be defined as a monopoly, an oligopoly, a perfect competition, or a monopolistic competition.

Market Demand and Supply: This refers to the balance between the demand and supply within the industry. Imbalances between demand and supply can impact prices and profitability. Industries with balanced demand and supply are ideal for the market, where resources are allocated efficiently and there is no deficit or surplus. With a balanced demand and surplus, prices tend to be stable, which can reduce uncertainty for businesses. However, it also means there may be limited opportunities for above-average profits.

Alternatively, industries with low demand and supply are generally a shrinking or stagnant market. Businesses in these industries face the risk of declining sales and profits. It might be necessary to spend on innovation and diversification to simulate demand or to exit the market.

However, industries with higher demand and low supply are in the best-case scenario as it implies that the industry has the ability to dictate the prices of the

products/services and can accordingly use the opportunity to make above-average profits.

Availability of Substitutes: Substitute products and services includes the assessment of the availability of substitutes and product differentiation. Industries or entities within an industry with no available substitutes have a high degree of market power, that may lead to higher profitability. On the other hand, industries with easily available substitutes face high competition. Consumers are likely to switch to these substitutes quickly, leading to a potential loss in market share.

d) Seasonality & Cyclicity:

Seasonality refers to the predictable changes in demand that occur throughout the year. Industries that are highly seasonal may face challenges in managing inventory and cash flow and pose a high risk as these industries are more susceptible to demand fluctuations, thus increasing risks in inventory management and affecting revenue stability. Industries with no or limited seasonality pose lower risk as they experience steady demand throughout the year, reducing the risk associated with fluctuating sales patterns.

Cyclicity refers to the fluctuations in industry's performance in terms of demand, prices etc. that occur in a predictable pattern, but not limited to seasonality. Some industries are highly cyclical, which means the companies within this industry tend to perform well for a certain period followed by a period with low performance. The variation in performance across cycles may be influenced by various factors. While seasonal effects are typically observed within one calendar year, cyclical effects may span shorter or longer than a calendar year.

For example, Steel is a cyclical industry, strongly correlated to economic cycles since its key users, viz., construction, infrastructure, automobiles, and capital goods are heavily dependent on the state of the economy. Apart from the cyclicity of the end-user industries, heavy capital investment and a long gestation period for a new plant also contribute to the cyclicity in the steel industry. This results in several steel projects coming on stream simultaneously leading to demand-supply mismatch. Besides local factors, the global demand supply situation is major factor impacting the local steel prices. The producers of steel products are essentially price-takers in the market, which directly expose their cash flows and profitability to volatility in the steel prices.

e) Technology Evolution:

It refers to the stage of technological evolution within and beyond the industry. The assessment also involves evaluation of potential for new technologies to disrupt the existing business models within the industry. Industries that are highly susceptible to technological disruptions may face significant risks. Companies within this field are at the cutting edge of technology, and they need to be leading innovators to survive and thrive.

Industries with a very low risk of technological disruption are least likely to be affected by the onset of new technologies. This is typically associated with industries where the technology is mature, and changes are incremental.

iii. Market Position

We evaluate the market position of a company in an industry setup and the ability to maintain this position in the foreseeable future. The framework undertakes this assessment by identifying the key success factors for a company and its ability to preserve or improve them. This is done by evaluating factors like the ability of a company to preserve or grow its market share, withstand competitive pressures, and expand its product portfolio and geographic footprint.

For issuers with multiple businesses, a weighted average is employed on the basis of EBITDA, percentage of income generated from each business, or the presence of assets employed for each business.

The market position is assessed using three broad aspects:

- a. Scale and Market Share
- b. Competitive Position
- c. Diversification

a) Scale and Market Share:

Entities of a large size generally enjoy benefits like economies of scale, higher bargaining power, and the ability to access diverse markets; as against small-size entities, which are generally present in selected market segments that exhibit lower resilience in margin protection, especially under adverse market conditions. Therefore, ceteris paribus, a larger size is usually considered to be a credit positive. That said, smaller sized entities may have advantages such as greater adaptability and faster innovation.

Size is also viewed in relation to an entity's current market share and the trends in market share in the past, which are important indicators of the competitive strengths of the entity. An entity with a small size but a reasonably good market share vis-à-vis its peers may have better bargaining power than a large-sized entity operating in an industry driven by global market dynamics.

A sustained leadership position leads to better revenue visibility and cash generation capability over the long term. Generally, the market leader has financial resources to meet competitive pricing challenges and exhibits flexibility to pass on any rise in the input prices. A high percentage share in the market indicates dominance and competitive advantage within the industry, relative to its peers. This suggests strong brand recognition, customer loyalty, and/ or economies of scale. A high market share typically implies lower risk, as the company benefits from a strong market presence, pricing power, and stability.

A low percentage share in the market indicates a smaller presence relative to competitors. This suggests potential challenges in achieving economies of scale, lower brand recognition, and/ or limited pricing power. A low market share implies higher risk, as the entity may struggle with competitive pressures and has less influence in the market.

b) Competitive Position:

Ratings being a relative assessment, it is important to assess the performance of a company in relation to its peers. CareEdge Global assesses the performance of a company with the comparable peer set present in its Industry and Sub-Industry. In some cases, CareEdge Global may also expand the peer comparison to different industries and sectors. As part of the competitive position assessment, we evaluate the current position of the business and the ability to sustain its competitive position.

Vulnerability to Price Changes: We assess how vulnerable a product's price is with changes in the market dynamics. It is the degree to which any particular product's price changes in response to changes in its demand or supply. Entities that are more exposed to price competition often see their profitability decline during economic downturns, or when the supply of their products or services exceeds demand.

Product Differentiation: Entities with highly differentiated products pose low risk as it makes it difficult for competitors to offer similar products or services, thus reducing the threat of substitutes and preserving market share. However, entities with a low

level of product differentiation pose a high risk as it means that products are similar which makes it easy for customers to switch between products. This increases the threat to market share significantly.

Brand Equity: A strong brand equity is assessed favourably as the business is likely to enjoy steady revenue streams, customer loyalty, and the resilience to weather ups and downs in the market. It is the additional value that a company's brand brings to the products or services. This can stem from the customers' belief in the brand's superior quality, dependability, or uniqueness. A strong brand equity can let a company price its products or services at a premium, leading to more revenue. Customers are generally willing to spend more on a brand that they would recognize and trust. Brand equity can also help businesses with customer loyalty even if there is strong competition in the market, thus leading to stability in the revenue streams.

Sustenance of Competitive Position: In addition to the current competitive position of a business, CareEdge Global also assesses the sustenance of its competitive position. Sustaining a competitive position is a dynamic and multifaceted process. It involves continuously adapting to market changes, innovating, and improving products or services, and maintaining strong relationships with customers. Additionally, companies that strategically invest in research and development to stay ahead of industry trends and technological advancements are perceived positively.

To assess the sustenance of competitive position within the market, we assess an entity's capabilities for innovation and development of new products. It is important to determine the extent of a company's tangible investment on research and development. We assess the amount spent by the company on research and development as a proportion of revenue. This involves assessing the allocation of resources towards these endeavours, along with the effectiveness of the investments in driving innovation and product development.

We also assess the number of new products that a company has developed within a certain timeframe. This includes examining the pace at which they can develop and bring new products from the conceptual stage to the market. This allows us to assess the company's efficiency and productivity in product innovation. We also assess the impact of sales from these new products on the company's overall sales performance. This involves analysing the proportion of total sales that can be attributed to new products, and the rate at which these new product sales are growing. This can provide valuable insights into the company's ability to innovate and successfully launch new

products in the market. CareEdge Global looks at the benefits derived from the patents filed by the company to assess the innovation and development capabilities of a business. This includes an assessment of the patents that they own. The value of these patents can often be a significant factor in a company's forward-looking competitive position.

c) Diversification:

Product Diversification: A highly diverse company operates in multiple sectors, markets, or product lines. This reduces dependence on any single source of revenue and spreads risk across different areas. Entities operating in diversified business segments generally exhibit a higher degree of sustainability in cash flows and are assessed more favourably. For diversified entities, each major business segment's income, profitability, and its contribution to the overall business is analysed. Customer and supplier diversification is also considered favourably by CareEdge Global, as dealing with diversified counterparties mitigates the risk of an entity getting affected in case of liquidity issues with any counterparties.

High diversification implies lower risk, as the company is better insulated from sector-specific downturns and economic fluctuations. On the other hand, a company with low diversification operates in a limited number of sectors or markets. This makes it more vulnerable to downturns in its core areas of operation. Low diversification implies higher risk, as the company is more exposed to sector-specific and market fluctuations.

CareEdge Global also assesses the product mix of a company. A varied sales mix helps an entity mitigate the risks associated with changes in demand for a single product or service. Typically, higher dependence on a single product or service implies a higher risk. Any changes in the market such as shifts in customer preferences, advancements in technology, or competitive pressures can influence the demand for certain products or services in the sales mix. Lower demand for one product can be balanced by a higher demand for another, thus benefiting from a varied sales mix. Additionally, if specific products in the sales mix depend heavily on certain suppliers or raw materials, any disruptions in the supply chain can affect the availability of these products, which can increase the risk if an entity is dependent on only one product. Thus, a diverse sales mix that can adapt to market changes is looked at positively.

Geographic Diversification: In addition to segmental diversification, geographical diversification is also evaluated. An entity having a presence in diversified markets

through its distribution network is viewed positively. Geographic diversification is a strategic approach used by businesses to spread their risks and opportunities across multiple geographical locations, thus reducing dependence on any single market. It helps mitigate risks associated with economic downturns, political instability, or other region-specific issues. CareEdge Global positively assesses entities that have a higher geographic diversification and have businesses spread across the globe. This provides protection against regional economic downturns and enhances growth opportunities. Extensive geographic diversity implies lower risk, as the company is less vulnerable to local market fluctuations.

However, entities that operate in a single geographic region are exposed to changes in the economy, making them vulnerable to local economic conditions and market fluctuations. Limited geographic diversity implies higher risk, as the entity can face exposure to regional risks and limited growth opportunities outside its primary market.

iv. Operating Efficiency

Manufacturing or service delivery cost and an entity's ability to control the costs provides it with a high degree of flexibility to withstand competitive pressures or economic downturns. CareEdge Global assesses the fixed and variable cost structure of an entity and benchmarks the same against its peer group.

Operating efficiency is an entity's ability to produce at competitive costs which are sustainable. In a manufacturing entity, operating efficiency can be gauged by capacity utilization levels, flexibility in the production process, input cost per unit, inventory levels, control and availability of resources, technology including R&D adopted, and level of integration of operations. Superior cost efficiency and operational excellence indicates that the company operates with optimal cost management and highly effective operational processes. It suggests better financial health, competitive advantage, and the ability to sustain profitability even in challenging conditions. Superior efficiency implies lower risk, as the company can manage costs effectively and maintain high operational standards.

Poor cost efficiency and operational excellence indicates that the business has issues with cost management and operational processes, suggesting possibility of financial strain and potential operational challenges. Poor efficiency and performance imply higher risk, as the company is likely to face profitability issues and operational difficulties.

We assess the Operating Efficiency using the following factors:

- a. Level of Integration
- b. Use of Technology
- c. Infrastructure Availability
- d. Cost Structure & Margins
- e. Efficiency Metrics

a) Level of Integration

Integration is a strategy of extending operations across the value chain either by own manufacturing or acquisitions. High level of integration can result in improving operational efficiencies, thereby influencing the profitability positively. On the other hand, companies that have lower levels of integration are dependent on other suppliers for products or services at various stages of the value chain. This can impact the operating efficiency negatively.

b) Use of Technology

CareEdge Global evaluates the technological resources available within an entity. Entities that demonstrate industry-leading technology are perceived more favourably in comparison to those with older technology. Presence of cutting-edge technology and state-of-the-art facilities supports innovation and efficiency, thus providing the entity with a competitive advantage. This usually implies lower risk, as the company is well-equipped to adapt to changes and maintain operational effectiveness and mitigates the risk of technological obsolescence.

c) Infrastructure Availability

Availability of infrastructure is pivotal for an entity to operate efficiently and thereby generate higher margins and profits. A business that operates with underdeveloped infrastructure can hinder performance, efficiency, and competitiveness. Underdeveloped infrastructure imply higher risk, as the entity may struggle with operational inefficiencies. Generally, manufacturing entities operating in designated industrial areas are able to avail better infrastructure facilities such as transportation network, common sewage treatment plant, lower power costs etc. Further, a developed infrastructure set-up reduces the cost of production, thereby increasing competitiveness.

d) Cost Structure & Margins

To evaluate an entity's Cost Structure & Margins, CareEdge Global employs indicators such as EBITDA (Earnings Before Interest, Tax, Depreciation, and Amortization)

Margin, Profit Margin, and Volatility in Profitability. The profitability is assessed in relation to the industry it operates in and the company's competitive position within the industry. Additionally, the company's profitability is compared with its peer group to validate its market position.

EBITDA Margin: A high EBITDA margin suggests strong operating performance and profitability before accounting for non-operational or non-cash expenses. This indicates robust business operations, efficient cost management, and the ability to generate substantial earnings from core activities. An entity with high EBITDA implies lower business risk relative to its peers.

On the other hand, a low EBITDA indicates weaker operational performance and profitability. This can result from high operating costs, low sales, or inefficiencies in business operations..

$$\text{EBIDTA} = \text{Profit After Tax} + \text{Interest} + \text{Taxes} + \text{Depreciation} + \text{Amortization}$$

$$\text{EBIDTA margin} = \text{EBIDTA} / \text{Operating Revenue}$$

EBITDA margin is generally used for comparison of entities within a particular industry, as the ratio may vary across industries. A higher or lower EBITDA may also result from difference in capital intensity.

Profit Margin: As EBITDA considers only the operating expenses, it does not indicate an entity's ability to translate these profits to the shareholders as accruals. Since non-operating expenses such as interest, depreciation and amortisation are not considered in EBITDA, profits at operating level may not necessarily indicate net profitability, which is available for distribution. Therefore, we also consider the net profit/ PAT margin of an entity.

A high profit margin is seen as a positive indicator as it suggests that a company is effectively converting its revenue into profit. It suggests that the company has effective cost control measures in place and is able to generate a higher amount of profit for the revenue that it earns. Conversely, a low profit margin could suggest that an entity is not able to effectively convert its revenue into profit. This could be due to high operating costs, pricing pressures, or ineffective cost management. A low profit margin can be concerning as it leaves the company with less profit to reinvest in the business, pay off debts, or distribute to shareholders. This could increase business

risk as the company may have less financial flexibility to manage unexpected costs or downturns.

$$\text{PAT margin} = (\text{Profit After Tax}) / \text{Operating Revenue}$$

Volatility in Profitability: The volatility in profitability is assessed by reviewing the historical data. High volatility in profitability means that a company's earnings fluctuate significantly over time. This can be due to factors such as market conditions, operational issues, or dependency on cyclical industries.

High profitability volatility indicates unpredictable earnings which can affect cash flow stability, investor confidence, and financial planning. The entity may face challenges in managing expenses and maintaining consistent performance.

Low volatility in profitability means that the company's earnings are stable and predictable over time. This can result from steady demand for its products or services, stable market conditions, and efficient operations. Low volatility in profitability suggests that the entity is able to manage its finances more effectively, plan for the future with greater certainty, and maintain investor confidence.

e) Efficiency metrics

Asset Turnover: Asset turnover measures the efficiency of a company in generating revenue from its assets. A higher asset turnover ratio indicates that a company is using its assets efficiently to generate sales, which is looked at positively. It suggests that the company has effective operations. On the other hand, a lower asset turnover ratio may indicate that a company is not using its assets effectively to generate revenue. This could signal operational inefficiency, which increases the risks associated with the business.

We also look at other efficiency metrics such as working capital cycle i.e., debtors days plus inventory days minus creditor days, which is a measure of cash turnaround rate.

Return on Capital Employed (RoCE)

A high RoCE indicates that the company is effectively using its capital to generate profits. It reflects efficient management of resources and strong financial performance relative to the capital invested. High RoCE suggests lower risk, as the company is generating significant returns on its investments, which supports financial stability and growth potential.

A low RoCE indicates that the company is less efficient in generating profits from its capital investments. This can result from underperforming assets or ineffective use of capital. Low RoCE also may suggest higher risk, as the company may face challenges in attracting investment or financing.

$$\text{RoCE} = (\text{Profit Before Interest and Tax}) / \text{Average Capital Employed}$$

2. Issuer Financial Risk

CareEdge Global assesses Financial Risk profile of an Issuer combining its Debt Coverage & Leverage indicators and Cashflow Adequacy. This involves evaluation of the past, current and expected financial performance with an emphasis on assessment of the adequacy of cash flows towards debt servicing. Financial ratios are used to make a holistic assessment of the financial performance of an entity which also factors the quality of entity's accounting practices, and to see the entity's performance with respect to its peers within the industry.

i. Debt Coverage and Leverage Ratios

Debt Coverage and Leverage are measures of an entity's dependence on external borrowed funds. Lower the dependence on borrowings, better is the entity's leverage. When an entity borrows, it is obligated to pay both interest as well as principal to the lenders, thus increasing the fixed cost burden on the borrowing entity and increases the financial risk. CareEdge Global also evaluates the forecasted cash flows/ accruals against total repayment obligations (encompassing reported and any off-balance sheet liabilities) to gauge the financial risk profile of an issuer.

While CareEdge Global considers the following ratios to evaluate corporate entities, suitable analytical adjustments are made, wherever required, to ensure comprehensive and relative assessment. The primary ratios used in CareEdge Global's Financial Risk assessment framework are as follows:

a) Debt to Equity Ratio

This ratio measures the degree to which an entity is financing its operations with debt rather than its own resources and equity. The ratio is used to evaluate an entity's financial leverage and is calculated by dividing its total debt (including current liabilities) by its shareholders' equity. A higher debt to equity ratio suggests more risk from a credit perspective. While a particularly low one may indicate lower financial risk, it may also reflect that the entity is not taking advantage of debt financing to scale up. A high or low debt to equity could also be a function of its management's financial policy and risk tolerance level.

Debt to Equity Ratio = Total Debt / Shareholder's Equity

b) Debt to EBITDA Ratio

This ratio is a measure of an entity's earnings generated (before interest, taxes, depreciation, and amortization expenses), which can be used to pay debt. A lower ratio indicates that the entity has lower debt relative to its earnings, suggesting better

ability to service its debt. This implies lower financial risk, greater financial flexibility, and better overall financial health.

A high Debt to EBITDA ratio would generally indicate that the entity's debt is relatively high and reflects higher financial risk. While stable businesses can sustain high debt to EBITDA, for cyclical businesses this ratio should be relatively lower. It is important to compare debt to EBITDA ratio with peers within the same industry for a comparable assessment.

c) Funds Flow from Operations (FFO) to Debt Ratio

Funds Flow from Operations (EBITDA – cash taxes paid – cash interest) to Debt is a leverage ratio that measures the proportion of cash flows available for debt repayment relative to an entity's debt. It assesses the entity's ability to generate sufficient operating cash flows to service its debt obligations. A high FFO to Debt ratio would generally indicate that an entity has sufficient cashflows corresponding to its debt obligations and is viewed positively.

d) Interest Coverage Ratio

This ratio measures the number of times an entity's EBITDA is able to cover its interest and financing charges. A higher interest coverage ratio indicates that the entity is generating sufficiently high earnings than its interest expenses. This suggests strong earnings to service interest obligations, indicating lower financial risk. A lower ratio suggests that the entity has less earnings relative to its interest expenses, indicating inability of the entity in meeting its interest obligations.

Interest Coverage Ratio = $\text{EBITDA} / (\text{Interest and Finance costs})$

e) Debt Service Coverage Ratio

DSCR is a key metric to measure an entity's ability to meet its debt service obligations from its operational cash flows. This helps to assess the entity's financial resilience. This ratio is particularly relevant when an entity's debt is non-amortizing or ballooning in nature, as typically seen in projects involving significant capital expenditure. Though a high DSCR is desirable, a ratio of less than unity is not always indicative of financial stress as the entity may have various avenues such as sufficient liquidity, refinancing capability and high financial flexibility to service its debt obligations in a timely manner.

$$\text{DSCR} = (\text{Profit After Tax} + \text{Interest} + \text{Depreciation}) / \text{Total debt service obligations}$$

(includes principal, interest, hedging and other finance costs)

ii. Cashflow Adequacy

Evaluation of an entity's cash flow adequacy includes assessing its fund flow requirements and availability, combined with the financial flexibility it enjoys. This is critical to determine the ability of an entity to generate cash flows for servicing its debt obligations by carrying out the fund flow analysis and assessing the entity's financial flexibility.

a) Funds Flow Analysis

The Fund Flow Analysis includes the evaluation each component of an entity's cash flow i.e., cash flow from operations, cash flow from investing activities and cash flow from financing activities. Working capital changes are adjusted to FFO to arrive at cash flow from operations (CFO). The cash flow from investing activities is calculated to assess the entity's investing needs in terms of investment in fixed assets (regular as well as unplanned capital expenditure like cost over-runs) and financial support provided to group entities, if any. Assessment of cash flow from financing activities is undertaken to evaluate the entity's financing avenues (debt/equity), its repayment obligations, lease liabilities, etc. Cash flows from short-term sources and long-term sources are also evaluated and mapped against their appropriate end use.

CareEdge Global carries out an impact analysis of the possible liabilities devolving upon the entity. If an entity has dealings in foreign currency by way of exports, imports, investments, loans, advances, or otherwise, an impact analysis of changes in foreign exchange rates is done to assess the impact of adverse fluctuations in foreign exchange rates on the entity's profitability and debt servicing capabilities. CareEdge Global considers the foreign exchange risk policy and hedging policy adopted by the entity to mitigate the foreign exchange risk, if available. An entity having sizeable revenues and/or expenses in foreign currencies is highly sensitive to currency movements in case the foreign exchange position is not adequately hedged.

b) Liquidity Assessment

Liquidity is a crucial factor determining an entity's ability to meet its obligations in the near-term (typically the next one year) from its accruals and any external available sources. An entity's obligations may include debt servicing, working capital requirements, capital expenditure plans, investment plans, dividend payments, share buybacks, etc., in addition to devolvement of reserve for any contingent liabilities. The analysis assesses the potential for an entity breaching covenant linked tests.

c) Financial Flexibility

Financial flexibility refers to the availability of any alternative sources of liquidity available to an entity as and when required. Some of the key factors which are analysed to assess the financial flexibility of an entity include access to multiple funding avenues, such as bank borrowings and capital market instruments at competitive rates.

Typically, entities belonging to large groups or conglomerates demonstrate better financial flexibility during testing times. Flexibility is a cornerstone of sustainable growth and operational resilience reflecting an entity's ability to manage funding challenges and economic uncertainties effectively. Unencumbered liquid investments, timely monetisation of non-core assets, flexibility to defer capital expenditure etc., are viewed favourably.

d) Sensitivity Analysis

We carry out sensitivity analysis to assess an entity's resilience under different stress scenarios. By changing certain assumptions, such as decline in revenue, lower capacity utilisation, higher operating costs, higher interest rates etc., the analysis evaluates how these factors affect an entity's ability in servicing its debt obligations. Sensitivity analysis helps identify vulnerabilities and provides insights into potential volatility of cash flows. This helps ensure that the entity's financial structure is strong enough to withstand unfavourable circumstances while maintaining solvency and creditworthiness.

3. Management Risk

A company's ownership and management governs its future growth and credit profile. It also influences both its business and financial risk. We assess it using the following three main parameters:

- a. Management Strategy
- b. Financial Policy
- c. Risk Tolerance

These parameters are the main constituents of an entity's management risk assessment. The management's experience and track record, including its risk management practices, transparency, and control systems are critical to evaluating the management risk associated with an entity.

a) Management Strategy

Management strategy is a comprehensive plan with set of actions businesses adopt for achieving their long-term objectives. It involves goal setting, resource allocation and guiding the entity's overall direction. Execution of business plans and management's track record of adhering to stated plans are key factors in assessment of management strategy.

i. Track Record

The track record of management team is a crucial indicator of its ability to navigate complex challenges. The management's experience in the industry, capabilities in managing crises and navigating economic/ industrial cycles in the past provides confidence in their ability to continue to do so. Management's track record of balancing the interests of shareholders, creditors and other stakeholders is also evaluated to understand its business strategy.

ii. Growth Orientation

It is important to assess the management's approach and philosophy towards growth as it shows their strategic vision and focus. A measured approach to growth i.e., avoiding riskier opportunities, often reflects a conservative strategy focused on maintaining stability. We evaluate the management's growth orientation by assessing its mode of financing past acquisitions, success in introducing new projects and its stated philosophy towards growth and its funding. We also evaluate the entity's inorganic growth pattern, in comparison to industry peers.

b) Financial Policy**i. Leverage Philosophy**

We typically evaluate the management's leverage philosophy by assessing its gearing level and cash flows metrics observed over a period of time and the trends expected over the medium term based on their plans, and any defined financial policy elements, such as dividend payments, reliance on debt funding, mode of acquisition spending etc.

However, it may be possible that the entity's financial policies can change its financial risk profile over a longer time horizon, based on management's appetite for incremental risk or, conversely, management's plans to reduce leverage, through proactive disposal of non-core assets, equity raise etc. We monitor any changes to the management's leverage philosophy and factor the same in our assessment.

ii. Dividend Policy

An entity may reinvest its profits back into the business and/ or distribute a portion of it to shareholders via dividend pay-outs, share buybacks etc. While ploughing back the profits into business would aid the entity in growing faster, regular and healthy dividend pay-out is beneficial from shareholder's perspective. Generally, management tries to maintain a balance among these options. Irrespective of the path chosen, it is desirable to have a stated dividend policy approved by the entity's board with consent of majority of shareholders.

iii. Hedging Approach

The management's approach to effectively managing financial risks through hedging strategies is essential. We assess various strategies devised by management to mitigate risks, specifically by using effective hedging strategies to reduce exposure to certain risks, such as fluctuations in foreign currencies, interest rates, or commodity prices.

c) Risk Tolerance**i. Integrity**

The management's integrity is broadly defined as its conduct and approach to all stakeholders including minority shareholders, debt holders, employees, etc. We also evaluate governance structure by parameters such as effectiveness of the board, presence of independent directors on board, ownership structure etc.

Transparency and disclosures are also important elements of this assessment. The stated policies of an entity, particularly regarding financial and accounting policies, transparency and disclosures, are critical. These disclosures provide stakeholders with a comprehensive view of the entity's financial health and operational performance in a

timely manner. Evaluating these aspects offers insights into the management's commitment to robust reporting and governance practices. Ensuring reliable information is essential for maintaining trust among all stakeholders.

Further, consistency in decision making and articulation of policies enhances the integrity of management. For this purpose, we look at the past track record of management's adherence to policies, meeting various obligations in a timely manner and resolution of disputes with stakeholders.

ii. Risk Management

An entity's risk management strategy is reflected in its ability to effectively handle and manage credit, market and operational risks through measurable indicators that provide insights into its risk profile. These indicators, observed over time, reveal the entity's willingness and capacity to manage risk across its operations. Understanding an entity's risk profile involves examining its stated risk objectives and how external and market conditions influence its risk management strategies. A strong risk management strategy integrates disciplined growth, effective diversification, and proactive responses to emerging risks, ensuring that the entity remains resilient across varying economic and market conditions.

iii. Group Structure

Complex group structure makes it difficult to assess and understand the risk factors faced by the group. While simpler group structures are easier to evaluate and also conveys management's intent of transparency.

iv. Related Party Transactions

We evaluate the type of related party transaction entered by an entity with its other group concerns to determine the management's governance practices. While it is generally preferred to have minimal or limited number of such transactions, the entity may need to engage in related party transactions as part of its business operations and financing practices for example case of holding companies, investing companies etc. However, these need to be done on an arm's length basis.

E. Modified Credit Profile

We adjust the CCP derived earlier by applying the below modifiers suitably to arrive at Modified Credit Profile (MCP). Typically, modifiers are factors which may not be applicable for all entities and in some cases may not be adequately quantifiable. These modifiers include ESG Factors, Liquidity Assessment and Exposure to Project Risk. In addition, we may also use the outcome of Peer Assessment as a modifier.

1. Environment, Social and Governance (ESG) Factors

Environment and Social factors encompass a wide range of factors that can impact an entity's performance, reputation, and sustainability. Environmental risks pertain to climate change, resource scarcity, pollution, and natural disasters. Social risks involve issues like labour practices, human rights, community relations, and diversity. Governance factors are largely covered in our management and corporate governance structure. This modifier is also applied based on the criticality of each of the sub-factors (environmental and social) on a particular industry.

2. Exposure to Project Risk

Implementing large projects may involve periods of strain on an entity's liquidity position. CareEdge Global analyses factors such as the rationale for implementing the project, size of the project vis-à-vis the current scale of operations, the entity's net worth, and the project's funding pattern. CareEdge Global also assesses the risks involved with implementation, which includes achievement of financial closure, status of regulatory approvals, agreements with equipment suppliers, track record of the entity/contractors in executing similar projects, project progress vis-à-vis scheduled implementation, cost or time over-runs, project cost vis-à-vis industry benchmarks, etc. This apart, post implementation risks like the resolution of teething issues, tie-ups with raw material suppliers, arrangements for fuel, tie-ups for sales, marketing arrangements, etc., are also examined. We will evaluate entities for project risk, where the project size is typically more than 25% of the entity's current asset base.

3. Peer Assessment

The analysis of management, business and financial risk is used to arrive at the entity's standalone assessment. Since ratings are a relative assessment, peer group comparison is done to assess the relative financial performance and creditworthiness of an entity. This is done by comparing an entity to its peers within the same country or operating in countries having similar economic risks and operating environments. This analysis involves selecting a group of entities that share similar characteristics such as size, business model, and geographic location. The entity is then compared on various parameters, both financial and non-financial to its peers. Key metrics and ratios are then compared across these peers to evaluate these factors.

Benchmarking against peers can identify trends, strengths, and weaknesses specific to the entity being evaluated, providing a better context for assigning a credit rating. This comparative approach helps in understanding the competitive positioning of the entity

within its industry and contributes to making informed decisions regarding its financial health and stability. We apply the modifier if the outcome of the Peer Assessment indicates that the entity's credit profile necessitates a refinement.

These factors are analysed based on their impact on the entity's financial performance and the CCP is modified accordingly.

F. Issuer Credit Profile

1. External Factors

The MCP is adjusted for parent group or sovereign support to arrive at the Issuer credit profile (ICP). Factors which are external to issuer/entity is looked at such as parent linkage, group support and government support.

a) Parent Linkage

The assessment of parent linkage is critical to analyse the ability and willingness of the parent entity of the entity to assist it, during periods of financial stress or crisis. There are several factors including parent's obligations as per loan documents, under which support can be provided. Further, past instances of support can establish precedents that affect stakeholders' expectations of future support. Access to liquidity is also essential, as it determines the ability to inject capital or provide emergency funding swiftly.

b) Group Support

This encompasses (i) exceptional backing provided by a larger group within which the entity operates and (ii) an entity within a group providing support to another group entity / parent. This support enhances the entity's credit profile by leveraging the group's collective resources, diversified business segments and strong financials.

The organizational framework and hierarchy within a group of entities play a decisive role in determining the flow of support. Centralized structures with clear lines of authority and consolidated financial resources may facilitate more effective support mechanisms. Conversely, decentralized structures or loosely affiliated subsidiaries may face challenges in coordinating and deploying support swiftly and effectively. The ease with which financial resources can be transferred or utilized across different entities within the group is essential. Factors such as local regulatory restrictions, currency exchange controls, and tax implications can affect the fungibility of resources.

An entity operating in diverse jurisdictions may encounter barriers that limit its ability to mobilize funds or provide timely support to other group entities facing financial difficulties.

Similarly, entities with operations in multiple countries must navigate varying legal, regulatory, and economic environments. These differences can impact the feasibility and speed of providing support across borders.

In both parent linkage and group support, strategic importance and moral obligations play a vital role. Operational criticality to the parent/ group and its contribution to the parent/ group's consolidated income and profits displays the strategic importance. The linkage of the entity with its parent/ group creates a strong incentive for the parent/ group to support the entity in times of distress to preserve the integrity of its corporate identity.

c) Government Support

We factor Government Support for public sector/ government owned/ government controlled entities where day-to-day support is expected from the government.

Certain large groups/ institutions may be critical to the functioning of the economy, and their failure could have ripple effects. Government intervention plays a major role in stabilizing such group/ entities during periods of financial stress. A stable operating environment underpins economic growth and development, making government support vital in times of crisis.

d) Country Ceiling

The sovereign ceiling serves as a benchmark for rating entities within a country, reflecting the intertwined nature of sovereign and corporate credit risks. It refers to the highest possible credit rating that can usually be assigned to an entity within a country. This concept reflects the influence of a country's economic, financial, and political stability on the creditworthiness of entities operating within its borders. However, there can be situations when the rating of an entity within a country is one to four notches higher than the sovereign's credit rating.

G. Instrument Rating

The final instrument rating is based on the Nature of the Instrument and External Credit Enhancement, if any. As a result of these factors, the instrument rating may be different from the issuer credit profile.

1. Instrument Level Considerations

a) Nature of Instrument

Certain specific instrument level features can reflect a differential relative risk and priority level associated with such debt instruments issued by the entity. This requires an analysis of such characteristics to arrive at the final rating for each instrument.

The credit rating approach outlined assigns the higher rating to the most senior debt obligations, aligning them with the entity's Issuer credit profile (ICP). In contrast, other instruments, which follow the senior debt in priority for repayment, may be rated one or more notches below the ICP. This lower rating reflects their subordinate position in the creditor hierarchy or presence of certain other features that may add to the risk profile of the specific instrument being rated.

b) External Credit Enhancement

External credit enhancement (ECE) refers to mechanisms or instruments provided by third parties to reduce the risk profile of an instrument, thus leading to an improvement in its credit profile. By reducing the risk for investors, ECE enhances the entity's ability to access funding on more favourable terms.

Some of the major forms of External Credit Enhancement include Third-Party Guarantees wherein a higher rated entity (e.g., a parent company, sovereign, or multilateral agency) guarantees part or all the obligations of the financial institutions. These guarantees can cover principal, interest, or both, and are often provided by development banks or export credit agencies. Similarly, Credit Insurance in the form of Insurance policies from highly rated insurers protects against specific risks, such as default or political instability and these are normally used for cross-border transactions.

Annexure - 1

Key factors for rating assessment of Regulated Utilities Engaged in Electricity Distribution Business

A. Introduction

Regulated Utilities engaged in Electricity Distribution Business are entities primarily involved in the business of electricity distribution to customers across various categories (retail, industrial etc.) under a regulatory framework that covers most aspects of the business including tariffs & returns.

B. Scope

This annexure covers CareEdge Global's assessment of regulated utilities engaged in electricity distribution. These entities may be operated by a government owned/ government controlled or privately managed entity. Irrespective of its ownership, these utilities remain governed by the respective regulator for their designated service area.

C. Approach

The rating assessment for Regulated Utilities broadly aligns with the approach followed by CareEdge Global for rating Corporate Entities (covered in CareEdge Global Corporate Rating Methodology) except certain changes in the Industry Risk, Market Position and Operating Efficiency. These changes help us to assess the regulatory aspect of the business.

Regulatory Risk replaces the Industry Risk of Corporate Rating Methodology to factor sector specific nuances. Similarly, Market Position and Operating Efficiency sections are replaced with 'Industry & Market Characteristics' and 'Operating Effectiveness' sections respectively. In addition to the existing financial ratios, Debt to Regulated Asset Base (RAB) is also considered for evaluating the utility's financial risk profile. For other sections factored in the assessment, please refer to the 'CareEdge Global Corporate Rating Methodology'. The highlighted portions in the chart below indicate the factors specifically used for assessing Regulated Utilities in Electricity Distribution Business.



1. Maturity & Consistency of Regulations:

A utility operating in a mature and stable regulatory environment typically fares better than a utility operating in an unpredictable regulatory.

Regulatory environment greatly influences the stability of a distribution utility's cashflows. Higher control limits flexibility for the utility.

Support from Government: CareEdge Global also evaluates the timeliness and adequacy of subsidy support from the government to distribution utilities, given any delay is likely to impact the utility's liquidity position.

3. Tariff Structure including Determination Process & Attractiveness:

CareEdge Global factors the track record in timeliness of tariff determination by the regulator. Availability of an objective framework, along with the timely issuance of tariff orders by the regulators for a pre-defined control period and timely true-up for previous years is viewed favourably. Further, delays in tariff determination process due to various reasons such as delays in tariff petition filing by utility, tariff order issuance by regulator etc. is a credit concern for the distribution utilities.

4. Timeliness and Extent of Cost Recovery:

We factor the adequacy of tariff in conjunction with the utility's average cost of supply. In case of any revenue deficit at the approved tariff, amortisation schedule for recovery is considered. While such deficit may arise to avoid any tariff shock to the end consumers, it usually leads to distribution utilities depending on external borrowings to fund these unrecovered costs. Such delays result in built-up of regulatory assets and may have an adverse impact on the utility's cash flows in case not liquidated in a timely manner. Time-bound recovery of such costs remains critical from a credit perspective.

E. Industry & Market Characteristics

This section is used to assess the specific characteristics of the market that the utility is operating in. The factors are Market Structure, Growth Potential and Customer Profile and Capital Expenditure Intensity.

1. Market Structure:

We assess the market structure of each utility to evaluate the extent of competition and relative market position of the respective utility within its service area. Operations of a regulated utility may or may not be in an exclusive zone as allowed by the regulator. However, it must be noted that the service area is defined by the regulator and addition of any new utility is subject to regulator's approval.

2. Growth Potential and Customer Profile

Key considerations for a utility's market are its growth potential and consumer mix i.e., residential, commercial, industrial, agricultural etc. Additionally, infrastructure quality, service and reliability offered, natural population growth etc. are important factors for determining the growth potential of a service area.

Typically, a higher proportion of power supply to commercial and industrial (C&I) consumers is seen favourably vis-à-vis other categories. Due to better metering and lower thefts, billing and collection efficiency is generally better for C&I customers, thereby resulting in lower AT&C losses. On the flipside, a significant industrial exposure in a service area with industries operating in cyclical sectors may result in volatility in the utility's cashflows.

In case of an integrated utility, such as an entity involved in electricity generation, transmission and distribution, proportion of revenue from regulated segment is factored to assess growth potential and customer profile. We also consider a utility's revenue potential from other sources such as wheeling charges (charges levied for using the utility's network infrastructure), acquiring new customers etc.

3. Capital expenditure intensity

Evaluation of the Market's capital expenditure (capex) requirement is a key factor. Quality of infrastructure has a bearing on the operational efficiency. Utilities with aging assets/grids etc. may witness operational inefficiencies. Given the continuous increase in power demand, utilities need to continuously invest in their infrastructure incurring substantial capex. Regulator's approval for cost overruns is also an important factor since large capex programs typically witness cost and/or time overrun. Utilities with modern assets generally require a limited maintenance thereby reducing the capex intensity and is viewed positively over utilities executing complex and large-scale programs, that would have higher execution and funding challenges.

F. Operating Effectiveness

This section is used to assess the operating efficiency of the utility. The factors are Cost Structure and Margins, Level of Integration, Efficiency Metrics, Scale and Market Share, Diversification.

1. Cost Structure and Margins:

Please refer to the section on Cost Structure and Margins of the CareEdge Global Corporate Methodology. In terms of cost, Power Purchase Cost is a significant factor Regulated Utilities in Electricity Distribution Business.

Power Purchase Cost: Given the power purchase cost is the most significant expense for a distribution utility, efficient management of power procurement through optimum mix of long-term and short-term sources is crucial. Therefore, a utility's ability to procure sufficient quantum of power at minimum prices (whether through own generation or external purchase) is a critical rating determinant. This is more significant in an open access regime, wherein

consumers have the option of buying power from different sources. A utility with high power procurement cost risks losing its customers to more efficient and cost-competitive players.

2. Level of Integration:

Integrated utilities are those that own electricity generation, distribution and transmission assets. Such entities are typically engaged in all aspects of electricity value chain. They may build own power plants, procure fuel, generate power, build and maintain the grid providing power to end customers in its service area. Typically, utilities with high levels of integration benefit from efficiencies. However, higher proportion of under construction assets poses risk of inadequate and delayed recovery of incurred costs.

3. Efficiency Metrics

AT&C Losses: This is the most important operational efficiency parameter for a distribution utility. It factors both the billing efficiency and the collection efficiency of the utility.

The billing efficiency indicates the fraction of energy purchased that is billed to the customer. It is a function of coverage and accuracy in metering, reading, high-voltage distribution, network upgradation etc. Collection efficiency indicates the fraction of revenue actually collected from consumers upon sale of power to the amount billed by the utility. It depends on the utility's recovery initiatives, payment digitisation, ability to realise subsidies on time (if applicable) etc.

Downtime is the period when the utilities' services are unavailable. The downtime may be planned or unplanned. Downtime impacts revenue generation and therefore the returns.

4. Scale and Market Share:

Scale gives the utility, the benefit of efficiencies. It also aids in the capital expenditure planning.

We also evaluate the market share of the regulated utility within its service area in case regulator allows multiple utilities to operate in the same region.

5. Diversification:

Diversification helps in mitigating the potential risks and impact on the utility's cashflows emanating from economic cycles, commodity price movements etc. Economic activity also plays a key role in the rate of customer growth in the service territory. For utilities involved in electric generation, diversity in the fuel source can mitigate the impact of changes in commodity prices, thereby affecting operations and cost economics.

In addition, a regulated utility's geographical diversification is also evaluated. Though typically, utilities operate in their designated service area, there are utilities having operations in multiple service areas/ jurisdictions, each governed by the respective area regulator. Such diversification is viewed positively as it reduces dependence on any single area.

G. Issuer Financial Risk

In addition to the factors used for assessment of Issuer Financial Risk in the CareEdge Global Corporate Methodology, we additionally use the following factor:

1. Debt to Regulated Asset Base

Regulated Asset Base indicates the investments made in the regulated region by the utility. This ratio measures the degree to which an entity is financing its investments with debt rather than its own resources and equity.

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