VIS

Credit Rating Company Limited

TOLL ROADS METHODOLOGY

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SUMMARY OF CRITERIA CHANGES

The Toll Road methodology dated September 2023 has been reviewed, and the fundamental criteria outlined therein remain unchanged.

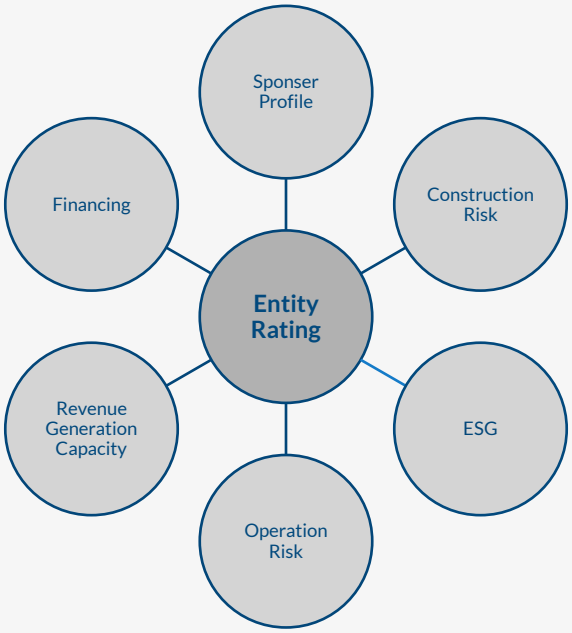
OVERVIEW OF RATING FRAMEWORK

VIS Credit Rating Company Ltd. (VIS) takes into account several risk factors across the project life which includes construction, operation and maintenance. Such projects are usually initiated by either local/federal public institutions under contract construction and management for which contractors seek credit ratings for the debts they raise, or private third parties on a Design, Finance, Build, Operate & Transfer (DFBOT) basis. In local context, a general concept in the public private partnership in the development of infrastructure projects, including toll roads, under a joint (DFBOT) agreement between public and private parties. The toll roads here are generally assumed to be implemented under a concession agreement with the National Highway Authority or relevant provincial authority. Toll road projects are generally implemented through a Special Purpose Company setup for the sole purpose of planning, designing, executing, operation and transfer of identified segment(s) of present or intended roads designated and approved for Concession Agreements by the respective federal or provincial authorities/bodies.

The risk profile of the project is largely impacted by the terms of concession agreements in place with government bodies/ ministries. The primary agreement remains the Concession Agreement which provides a systematic layout covering responsibilities of all involved parties with the project. This includes financing arrangement, minimum toll and/or revenue guarantee, construction timeline, operational & maintenance responsibilities, events of default and cure period pertaining to the same. Furthermore, the agreement lays out the concession period; during this period, the project company has operational rights to the toll road after which the same has to be generally transferred to the provincial/local or federal government. Furthermore, important agreements also include Engineering, Procurement and Construction (EPC), Senior Facility and others impacting debt obligation. Parties involved in the agreements differ based on whether the project is purely public or a Public-Private Partnership (PPP). The credit profile of the project is enhanced with the inclusion of local/provincial government (ministry / body) for regional toll facility and federal government (ministry / body) for national highway network. From credit ratings perspective, public ownership (local or federal) should be in terms of tangible support.

Historical and/or projected traffic data flow is a key determinant in rating evaluation. Historical traffic data flow is analyzed for the following cases: 1) a new road or 2) the rebuilding of an existing stretch of the road. Considering that the entity rating denotes the financial ability to meet debt obligations, it is vital to ascertain the need for the construction/ rebuilding and expected traffic volume. Analysis of historical data for traffic flow on an existing road (or movement in the nearby regions with regard to a new road) also plays an integral part of the analysis. In analysis of historical traffic data flow, it is important to determine the composition of traffic along the scale of light to heavy vehicles to assess the revenue potential of the project.

The experience and expertise of the company to adequately complete the construction of the project, keeping in consideration both the quality of the work and the construction timeline is an important rating consideration. In addition, ESG considerations can also affect the viability, risk profile, and profitability of a project.



Two key material parts of information are the Feasibility Report and Financial Model for the toll road project. The former, built using historical traffic flow data and cost estimations for the construction of the project allow senior lenders (primarily banks) to determine the viability of the project in line with amount of financing required and the overall project layout. The latter takes into account several key assumptions such as inflation, discount rate, assumed toll, periodical toll increase, traffic flow data amongst others. Using these, the financial model determines potential revenue in medium to long term, costs to be incurred and expected profit. The financial model holds greater significance owing to the fact that debt servicing is built into the model and that certain revenue targets are required to be met to ensure compliance with debt obligations. Sensitization of the financial model is important in determining the ratings to be assigned to the project. Consideration of minimum toll and/or revenue guarantee from the Concessioner along with the mechanism of their triggering is important.

RATING FACTORS

In assessment of the risk profile of the toll road projects, the following would be the major areas of coverage;

A. SPONSORS PROFILE

The evaluation of sponsors is of foremost importance in the toll road projects. Where a public private partnership is being undertaken, while the sponsors financial profile would be matched with the magnitude of the capital expenditure required for the project, experience in infrastructure projects, and proficiency pertaining to the same is also considered important from a ratings perspective. Sponsors profile of projects sponsored by para state organizations would need to be assessed both on their own financial strength and the level of support they can obtain from the State.

B. CONSTRUCTION RISK

The importance of the terms of the EPC agreement cannot be understated while analyzing the construction schedule; gauging the same through accomplishment of major milestones over timelines agreed. It is vital to mitigate risks associated with construction that can stem from delays, performance levels and cost overruns. The adequacy of the

performance guarantees obtained from the third-party contractors in various fields or the main EPC contractor is important along with the extent of liquidated damages the sponsors can recover from their contractors in case of specification variation and time delays

Operational history and completion prowess of the EPC contractor is analyzed in order to determine completion risk. An experienced design team typically has the ability to address a complex road project that is built on tough terrain or one which further includes bridges / crossovers / tunnels etc. Any prior relationships that the project company has with designers specializing in such work can both improve their bid and reduce risk levels associated with the construction phase. Cushion in the construction budget and ability to absorb costs overruns is evaluated under completion risk. The use of a Master contractor with overall responsibility can be advantageous from the construction point of view, rather than multiple contractors. It allows for improved efficiency levels, especially if the contractor has a history of completing such projects.

C. OPERATIONAL RISK

Operational expertise of the toll road can be managed directly by the project company or can be outsourced to a third party on a contract basis. Overall, operational requirements are limited as the use of labor is mostly minimal in nature. A limited workforce is required for managing the toll stations, security and emergency services. In most cases, the latter two are contracted out. The use of automated toll systems along with tracking software allows a system to monitor traffic flow conducting relevant data analysis and using time variances to determine if any delays are present along the route. The system also improves revenue tracking with automated token printing.

VIS tracks the operational arrangements in place with regards to the project. If the same is contracted to a third party, tenure of the same is gauged further. Over a period of time, the operations can achieve significant efficiency levels resulting in reducing costs. As such, contracts should be medium term in nature (2-5 years) with suitable clauses in place with regards to non-compliance of duties by the contracted party. The revenue collection arrangements with third parties could be on minimum guaranteed amount collection basis or best effort basis. The former needs to be secured by way of performance guarantees and quick exit clauses in case of persisting shortfalls; the latter is only used where a fairly firm traffic flow is present and can be independently tracked.

The road maintenance schedule is also determined in advance. The wear and tear that roads receive through the traffic and heavy axle weight vehicles traveled eventually can result in depressions and potholes. As such, the project company should schedule a complete overhaul of the road after a certain amount of time (approximately 5 years post start of commercial operations) to ensure quality of travel and frequency of travelers. The company's plans to finance the overhaul is important with regards to the operational feasibility of the project. The presence and quantum of periodic maintenance reserve in the financial plan is important from the rating perspective.

D. REVENUE GENERATION CAPACITY

The primary risk factor facing the project company is revenue generation, a combination of volume and price. This refers to both the volume of traffic traveling the toll road and the project company's ability to revise toll rates over the concession period. The goal of all projects remains to generate adequate revenue to be able to service debt obligations. The same are predetermined based on historical data, as per both the feasibility report and the financial model, with the project company having to achieve these targets. Alongside core revenue generated through traffic, secondary sources

of revenue through Weighbridge, outsourcing of Service areas and Right of Way exist which can potentially help boost the project company's cash flows.

D. (i) Volume:

Prior to the construction of the project, a detailed feasibility report is developed based on historical traffic trends on the road. This includes seasonal movement, demographic concentration in the adjoining areas and availability of alternate routes. In cases of Greenfield projects, the data has to be assumed from similar projects built in the adjoining region while greater emphasis is placed on demographic concentration and the saving of travel time the toll road will provide.

Traffic data analysis for all projects further contains type-of-vehicle traffic to capture the proportion of commercial heavy vehicles traveling on the road. The greater potential use of the road for commercial activity exposes revenue risk to business cycles (seasonal with regards to agriculture) and economic downturns. The project company establishes its financial model based on historical traffic data analysis noting any variance in the same when actual numbers are realized.

Volume assumptions are important as lead to revenue generation in the financial model and any significant negative variance can impact the financial profile of the project company.

From a rating point-of-view, variance in volume directly affects revenue generation and the project company's ability to meet debt servicing obligations. Thus, it needs to be determined whether traffic volume assumptions placed in the model are realistic as compared to the actual figures realized after commencement of the commercial activity. The project company may sensitize volume assumptions for the initial years of commercial activity and establish the financial model on the same.

Another element which needs to be analyzed is the price elasticity of traffic flow. The change in volume is directly affected by the competitive position of the toll road along with its travel time benefits, service areas along the road and macroeconomic conditions at the time of change. In such cases, a project company will have to find a balance between price and volume in order to increase revenue generation. Protection in concession agreement with respect to competitive roads being not constructed in the vicinity of the project road need to be studied carefully.

D. (ii) Price:

Based on the initial financial model, a certain base price is assumed as the starting point for toll of different vehicle classes (classes are segregated based on the number of axels). Regulatory approval is required on the same from either a provincial / local or federal body. A project company's ability to alter toll road prices and the process to achieve the same is also factored into the analysis.

Under the terms of the Concession Agreement, the project company determines fair toll road pricing (based on rates for vehicles classes on similar projects) taking into account revenue generation targets and the need to meet debt obligation requirements. Furthermore, the process for revaluation of rates is further predetermined and approved by all signing parties. This will include proposed rate of growth and the interval period after which rates may be revised. Adjusting toll prices to annual inflation or periodically in the Concession Agreement is taken positively during analysis as it ensures that steady revenues are not absorbed by increasing costs on account of inflation but instead are passed on to the consumer

Other elements that add to revenue generation are weighbridge operations and right of way. These revenues are supplementary in nature and support earnings generation as development along the toll road occurs. Weighbridge

revenue is viewed as a penalty for overload on commercial vehicles. Violation of the weight limit results in a fine / penalty charged or a prohibition for entry on the vehicle.

Right of Way is generated through infrastructure development along the road. The development can come in the form of petrol stations, rest houses, diners / restaurants amongst others. During the concession period, operators of these establishments must pay rent to the project company. Further restrictions can be made such as first-right-of-refusal with regards to the construction of these establishments.

E. FINANCING:

VIS focuses on the agreements encompassing the arrangement between the senior lenders (primarily composing of banks) and the project company for the financing of the project. This includes the protections provided to senior lenders through financial covenants, funding support from third parties, impact on the agreement from changes in interest rate and other financing details.

The debt structure of the project is important in these discussions as the greater the proportion of equity involved in the project, the greater risk the project company has assumed and conversely lower is the financing risk. Financing tenor is assessed on the basis of it matching the revenue flows over the timeline of outstanding debt as mismatched tenures increase the risk of default. Furthermore, in the case of Greenfield projects, flexibility should be available for forecasting risk. Negative variances on realized revenue figures can impact the periodical debt servicing ability of the project company. Assuming sizeable portion of the project cost is funded through debt, VIS sensitizes cushion for debt servicing as drastic increase in interest rates may hamper its repayment ability.. As such the rating agency monitors the debt service coverage ratio and FFO / long term debt to determine the debt servicing ability of the project company. VIS draws comfort from presence of debt servicing reserve account where periodic cash entrapment or cushion due to availability of advance installment(s) deposited in the bank account facilitates in timely debt servicing.

F. CREDIT ENHANCEMENT:

Provisions for credit enhancements such as federal and provincial government guarantees are generally viewed positively while evaluating overall financial risk. Other credit enhancements (such as minimum revenue guarantee to compensate for shortfall in debt servicing) extended by the sponsors for timely debt servicing, either through specific covenants in the underlying agreement or financial support are considered important. All these credit enhancements should have a specific timeframe mechanism and may kick in before the grace period expires.

G. ESG ASSESSMENT

VIS ESG assessment of Toll Road projects spans over design, finance, construction, and operation of such projects. VIS believes that given ESG perspective design of a toll road focuses on minimizing environmental impact, its financing prioritizes sustainable sources, while construction adheres to strict standards, and operation includes ongoing sustainability and ethical governance. This holistic ESG performance evaluation ensures Toll Road Project compliance with regulations as well as its long-term viability. A review of Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) are key factors for VIS rating evaluation.

Jahangir Kothari Parade (Lady LLoyd Pier) Inspired by Her Excellency, The Honorable Lady Lloyd, this promenade pier and pavillion was constructed at a cost of 3 Lakhs and donated to the public of Karachi by Jahangir Kothari to whose genrosity and public spirit the gift is due. Foundation stone laid on January 5, 1920. Opened by Her Excellency, The Honorable Lady Lloyd on March 21, 1921.

Dome: A roof or vault, usually hemispherical in form. Until the 19th century, domes were constructed of masonry, of wood, or of combinations of the two, frequently reinforced with iron chains around the base to counteract the outward thrust of the structure.

Origins: The dome seems to have developed as roofing for circular mud-brick huts in ancient Mesopotamia about 6000 years ago. In the 14th century B.C. the Mycenaean Greeks built tombs roofed with steep corbeled domes in the shape of pointed beehives (tholos tombs). Otherwise, the dome was not important in ancient Greek architecture. The Romans developed the masonry dome in its purest form, culminating in a temple built by the emperor Hadrian. Set on a massive circular drum the coffered dome forms a perfect hemisphere on the interior, with a large oculus (eye) in its center to admit light.

VIS Credit Rating Company Limited is committed to the protection of investors and offers a blend of local expertise and international experience to serve the domestic financial markets. With its international reach, VIS is positioned to aim for an international mark. In this regard, the global experience of our international affiliates and partners have been invaluable towards adding depth to our ongoing research endeavors, enriching us in ways, that enable us to deliver our responsibilities to the satisfaction of all investors. The edifice of the Jahangir Kothari Parade has stood proudly through the years and is a symbol of our heritage. Its 'Dome' as the most stable of building structures, exemplifies architectural perfection. Committed to excellence, VIS continues its endeavour to remain an emblem of trust.

INTERNATIONAL

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Islamic International Rating Agency – **Bahrain –** iira.com
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Collaborations

Japan Credit Rating Agency, Ltd. - **Japan**
China Chengxin International Credit Rating Company Limited - **China**

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