Indian Road Sector – Geared to ride amidst headwinds?

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The Indian road network carries around 65% of the total freight traffic and plays vital role in the economic development. Road sector has witnessed series of government initiatives to tackle execution woes and resurrect investor confidence over last four years. Increase in pace of award and execution during FY18, acceptability of toll-operate-transfer (TOT) model amongst investors and favorable features of Hybrid Annuity Model (HAM) gave a boost to the investor confidence in the sector. Bidding prudence, progress of ongoing HAM projects and performance of operational toll road projects are also satisfactory. Nevertheless, challenging fund raising environment, limited contractor capacity in India leading to reduced bidding appetite, concerns regarding effective implementation of contractual reforms under HAM on ground, increase in time and cost for land acquisition and contraction in valuations of developers as well as EPC contractors are major headwinds currently faced by the sector.

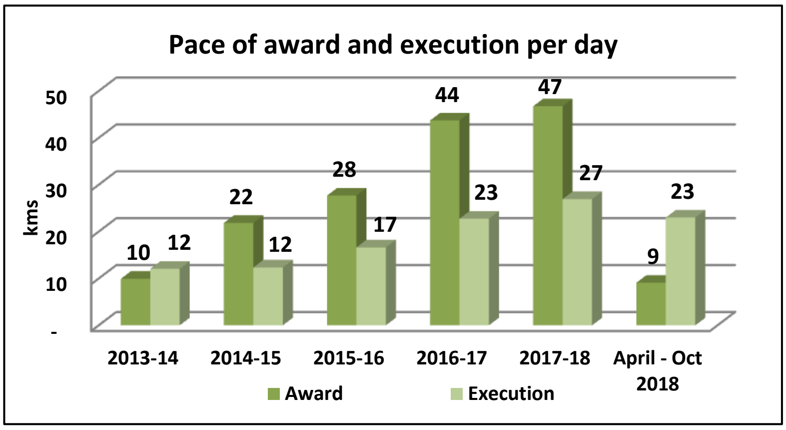
This Report covers,

i) Updates on industry
ii) Comparative analysis of projects awarded across phases
iii) Bidding Analysis of HAM projects
iv) Progress of ongoing HAM projects
v) Updates on financial closure and appointed date
vi) Funding requirement and challenges
vii) Prospects of TOT model
viii) Performance of operational toll roads
ix) Sponsor’s analysis to face headwinds.

Updates on industry - Pace of awards and execution:

Project awarding activity has increased steadily over last five years with highest ever projects award of 17,055 km witnessed by NHAI and MORTH in FY18. However, project award activity witnessed slowdown in April -October 2018. Target set by NHAI and MORTH for FY19 looks ambitious and CARE Ratings expects project award of 5000 km by NHAI as against award of 7,400 km for FY18. It is mainly on account of difficulties faced in achieving financial closure of HAM projects awarded in FY18, reduced bidding appetite of the developers due to their large order book as well as limited contractor capacity and increase in cost of land acquisition. Cost of land acquisition has increased steadily from Rs.1.30 core per hectare in 2015 to Rs.2.80 crore per hectare in 2018 which has also increased funding requirement for NHAI.

Pace of execution has steadily increased and grew by 18% during FY18 as compared to FY17 which continued during April to October 2018 as compared to corresponding period of previous year. It is on account of various reforms initiated to tackle execution woes including declaration of appointed date after availability of 80% land. Execution pace though expected to be lower than target of 45 km per day for FY19 on account of delay in appointed date in the project awarded in FY18, it is expected to increase to 32 km per day in FY19 as against 27 km per day in FY18. It is also on account of change in awarding pattern by NHAI with more focus on HAM which also entail relatively lower equity commitment and improved bidding discipline in current phase. Comparative analysis of the project awarded between FY09-FY12 and FY16-FY18 is presented below:



Comparitive Analysis of Projects awarded between FY09 - FY12 and FY16 - FY18:

Projects awarded in FY09 – FY12	Projects awarded in FY16 – FY18
Many projects were stuck on account of issues in land acquisition	Pace of execution has improved on account of availability of 80% - 90% of the land at the time of declaration of appointed date
Relatively aggressive bidding marked by higher premium payment to NHAI and larger deviations between first two or three bidders	Improved bidding discipline of developers with higher proportion of the projects awarded with adequate cushion above NHAI cost and relatively narrow variations between first two or three bidders
Project developers who were also EPC contractors had flexibility to derive project cost based on project viability which had also resulted in high debt levels	More emphasis on cost based bidding under HAM, award of projects to experienced EPC contractor and lender's cautious approach to mitigate O&M and cash flow risk act as key positives
Relatively risky toll projects with reliance on achievability of optimistic traffic projections for its debt servicing	Relatively less risky HAM projects with inflation indexed annuity to be received from NHAI (rated CARE AAA; Stable)
High equity commitments	Less equity commitments with availability if mobilization advance at bank rate

Updates on journey of HAM projects awarded so far:

1. **Risk assessment parameters and Bidding Analysis of awarded HAM projects:**
CARE Ratings considers sponsor evaluation, complexity in project execution and adequacy of O&M cost as three crucial elements. Sponsor's ability to fund the equity commitment and cost overrun, if any in timely manner is crucial for timely completion of the projects. Further, in many cases, sponsor also acts as an EPC contractor so the sponsors' strength becomes more critical from the project execution point of view. While analyzing HAM projects, CARE Ratings has observed that around 80% - 90% RoW is available at the time of declaration of appointed date for HAM projects which mitigate the execution risk to an extent. However, implementation challenges shall persist for large sized projects undertaken by moderate to weak sponsor and structurally complex project in hilly and dense forest region.

While rigid pavement structure increases BPC, it reduces O&M cost considerably due to lower wear and tear. However, significantly lower bidding in O& M cost can increases challenges in operational period and hence CARE Ratings has bifurcated awarded 73 HAM projects in four categories based on the bidding strategy and analyzed them as tabulated below:

Scenario	Bidding Scenarios	CARE Rating's view
1	BPC > NHAI cost & Adequate bidding for O&M annuity	Adequate cash flow cushion
2	BPC > 1.10 times of NHAI cost & Lower bidding for O&M annuity	Adequate cash flow cushion
3	BPC <= NHAI cost & Adequate bidding for O&M annuity	Moderate cash flow cushion in operational period albeit with execution challenges
4	BPC > NHAI cost and < 1.10 times of NHAI cost(nearer to NHAI cost) & Lower bidding for O&M annuity	Limited cash flow cushion due to increased O&M and execution risk

CARE ratings estimates that around **79%** of aggregate BPC for the sample 73 HAM projects analyzed by CARE Ratings and awarded till March 2018 fall under scenario 1 and scenario 2 and hence considered **as low risk projects.** Further, around **20%** of aggregate BPC for the projects awarded till March 2018 falling under scenario 4 and hence **relatively risky.**

The above analysis is largely in line with our previous analysis and detailed explanation for the same can be found in earlier coverage of CARE Ratings titled: **"Hybrid Annuity Model - The journey so far..."** vide **"Table No. 4: Bidding scenarios and analysis of the scenarios"**.

2. Progress of ongoing HAM projects:

Analysis of sample bid project cost (BPC) of Rs.56,300 crore of HAM projects that has received appointed date reveals that,

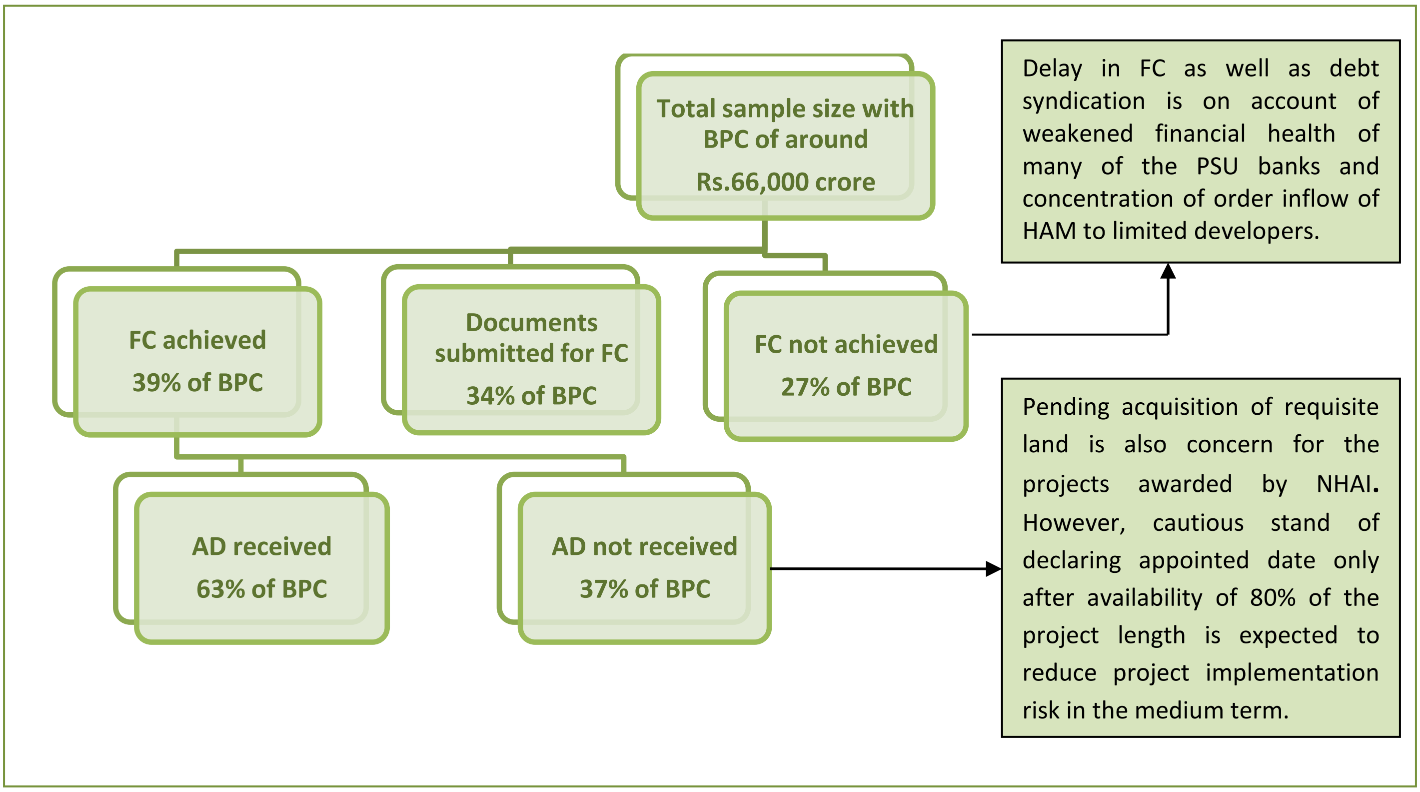
- Projects with 15% of BPC have achieved three or more than three milestone in timely manner and some of them are also expected to be qualified for early completion bonus.
- NHAI has timely released construction annuity along with inflation indexation which is positive for the sector.
- Projects with around 15% of BPC have been delayed with around half of them have been delayed from initial milestone itself. Delay in the execution is mainly attributed to weak or modest credit profile of sponsor and non-availability of partial land as well as clearances.

Project Execution Status	% of sample BPC	
	On time	Delayed
Achieved PCOD	1%	-
Achieved 4 milestones	6%	-
Achieved 3 milestones	8%	
Achieved 2 milestones	9%	3%
Achieved 1 milestone	25%	4%
Awaiting for the first milestone	34%	8%

Contractual feature to issue final COD while de-scoping of the land not available within 180 days from appointed date is positive from credit perspective. Nevertheless, implementation of contractual reforms on site is awaited as most of the projects are awaiting green signal of de-scoping for un-available land despite lapse of more than 180 days from appointed date. Furthermore, some of the projects have also faced hindrances to work on the available land for execution post appointed date and delay in shifting the large utilities. Quick action on these matters is crucial to boost lender's confidence.

3. Status of completion of Financial Closure (FC) and receipt of Appointed Date (AD) for the HAM projects:

Status of completion of FC and receipt of AD based on the analysis of HAM projects upto December 2018 with sample size of aggregate BPC of around Rs.66,000 crore is tabulated below:



4. Challenges in tie-up of Bank Guarantees (BG):

- Apart from securing sanction for term loans, availing BG is also a bigger challenge for the construction companies considering their large order book. Requirement of non-fund based limits is estimated at around 15% of the order value.
- Availability of BG has also been constrained due to weaker health of PSU banks and increased risk perception of banks for non-fund based limits. It is on account of unconditional nature of BGs, large exposure of construction companies to non-fund based limits as compared to fund based limits and limited cash flow cushion available to honor BGs in case of its invocation.
- Furthermore, DSRA BG also reflects commitment of the sponsor to support the project in case of financial exigencies. CARE Ratings expects increase in margin requirement especially for small to mid-sized construction companies due to their large order book and moderate financial flexibility.

5. **Expected Equity Commitment and its source of funding:**
   - It is estimated that aggregate pending equity commitment for the sample HAM projects with aggregate BPC of Rs.1,13,000 crore during FY19-FY21 stands at around Rs.10,000 crore.
   - Flexibility to raise funds through QIP/IPO has become difficult currently in light of moderation in valuation of sponsors while InVIT could not get envisaged success due to possibilities of raising additional debt while adding asset base, interest rate risk, lower participation from retail segment and traffic risk. Pace of release of arbitration claim is also not impressive due to difficulties in availing bank guarantees especially for moderate to weak sponsor and longer judicial process after declaring award by arbitration tribunal. All these have increased reliance on cash accruals, stake sale, up-streaming of surplus cash flow from operational projects and sponsor level debt for funding equity commitment.
   - However, relatively lower equity commitment under HAM with flexibility to avail mobilization advances from NHAI is expected to provide some cushion to sponsors. While track record of stake sale deal during construction phase is positive for the sponsors who have demonstrated execution track record, materialization of stake sale deal of operational assets shall pave way for unlocking capital of existing developers to fund new projects.

Toll – Operate – Transfer (TOT) Model:

NHAI has introduced TOT model with the objective to monetize existing operational PPP projects for longer tenor of 30 years as these projects derive strength in terms of healthy future toll receivables. TOT model is expected to attract long-term investor interested in operating assets in India and raise upfront funds for NHAI. Initial Estimated Concession Value (IECV) calculated by discounting net free cash flow for 30 years is the bidding parameter.

Positives of TOT:

- TOT projects have zero construction risk. Hence, it is expected to attract long-term investors like sovereign funds, pension funds in India having vast experience in operating assets globally.
- Bundling of the projects is also expected to result in revenue diversity with pooling of cash flows from multiple stretches.
- Concession agreement has provision to increase the concession period upto 10 years or reduce concession period upto five years depending upon achievement of target toll collection. However, no change in concession period is permitted for shortfall or surplus in toll collection upto 20% as compared to target toll collection and hence to that extent exposes the developers to traffic risk.

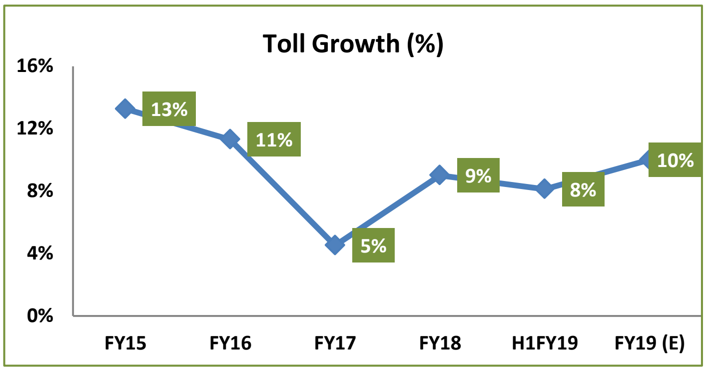
Challenges in TOT:

- Difficulties in achieving first year traffic and achieving envisaged growth rate for 30 years.
- Testing period of target toll collection for extending concession period is on 10th anniversary post appointed date, while substantial amount of debt is required to be repaid in the first 10 years. Hence, project is susceptible to cash flow risk in the interim period and refinancing risk at the later stage of concession.
- Latent defect on the project stretch due to irregular maintenance by earlier developer can increase major maintenance requirements.

While first TOT has been secured at 54% above NHAI IECV, bidding appetite has reduced in second TOT with highest bidder emerged with quoting around 14% lower than NHAI IECV. It is on account of location of the project stretches awarded under second round, difficulties in correct estimation of first year toll revenue, risk related to 100% underwriting in current scenario and higher upfront equity commitment. However, TOT projects is expected to offer good opportunity for global developers and investors in India as they have strong financial flexibility to fund the project with low leverage while retaining O&M work with domestic O&M partners.

Risk Assessment of operational road projects:

1. **Growth in toll collection:** Based on studies of CARE Ratings, operational road projects had witnessed healthy growth in toll collection of 11% per annum during FY16. Although toll collection witnessed moderate growth of 4.52% during FY17 due to exemption of toll collection for 23 days during demonetization, excluding the same, average daily toll collection (ADTC) witnessed healthy growth of 11.87% during FY17. Despite subdued hike in toll rates in these years, increase in traffic on connecting roads and replacement of three axle vehicles by multi axle vehicles are the prominent reasons for this phenomenon.



   Projects located in the north and east India and Telangana has witnessed healthy growth in toll collection due to increasing developmental activity in these locations. Growth in toll collection continued to remain stable at 9% during FY18 despite interim disruption due to GST implementation. Toll collection is expected to grow by 10% during FY19. Going forward over next 1 year, traffic growth of 6-7% is expected which is expected to result in around 10-11% growth in toll collection.

2. **Regulatory risk for State highway projects:** Over last three years, state highways has become more susceptible to political and regulatory risk on account of toll exemption of cars and state transport buses announced by two state governments. Although both the states have announced compensation policy considering force majeure nature of the event, delay in the receipt of the compensation has increased the reliance on sponsor for the uninterrupted operations of the SPVs.

3. **Risk analysis of operational toll projects:** For analyzing performance of operational toll road projects, CARE Ratings have reviewed their ability to generate cash surplus based on waterfall mechanism as a key parameter. It is observed that DSRA has been created mostly in the non-funded based form while the surpluses generated if any, were advanced to sponsors in the interim period. Responsibility of renewal of such non-fund based reserves largely lies with the sponsor. Therefore sponsor's ability to support the project cash flows in case of exigency and renew bank guarantee in timely manner is very crucial. Hence, we have analyzed project's ability to generate cash surplus against the sponsor's strength.

Promoter Strength / Cash flow risk	% sample debt
Low risk	69%
Moderate risk	5%
High risk	26%

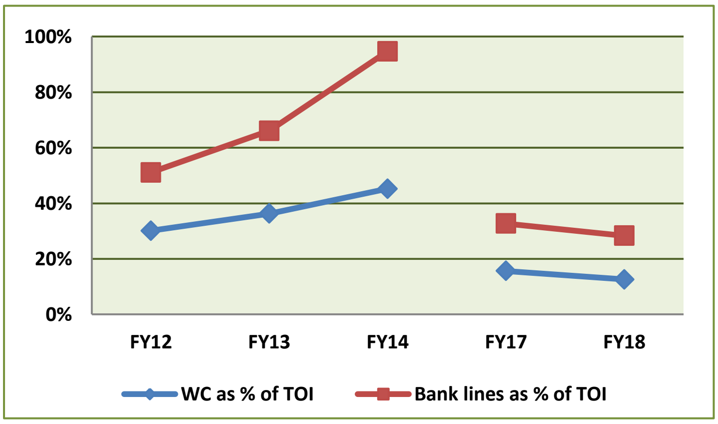
Based on our analysis, 69% of project debt out of total sample debt of around Rs.49,000 crore for sample projects is at low cash flow risk currently, as compared to 60% project debt at low cash flow risk around 2 years ago which indicate improving operating performance attributed to growth in toll collection, reduction in interest rate, premium deferment by authority and refinancing of the existing loan with longer tenor loan.

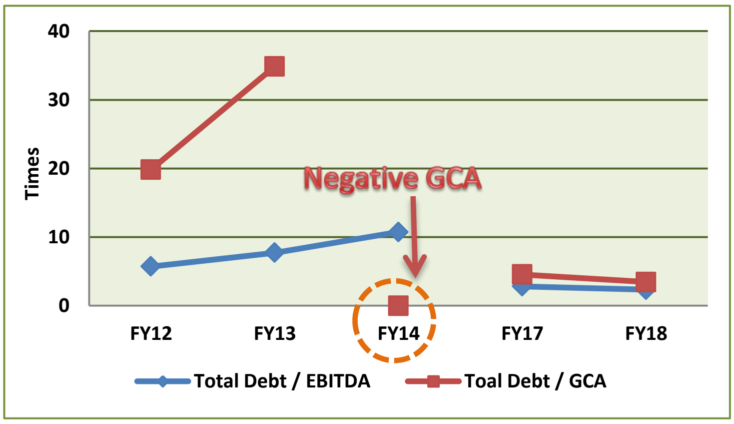
The performance matrix also includes project debt of Rs.12,500 crore (26% of sample debt) requiring relatively greater sponsor support indicating weaker cash flow generating ability and therefore riskier. Significant deviation in toll collection as compared to estimated collection based on traffic study and exemption of toll of cars in state highways projects are major reasons in these projects.

4. **Credit profile of operational toll projects:** Credit profile of the operational projects rated in *"A"* category and above continued to remain stable over last one year. These are the matured projects with established track record of toll collection supported by liquidity support mechanism like DSRA, MMRA, etc. While no downward rating transitions are observed from *"A"* category and above during last one year, 17% of rated operational projects moved from *"BBB"* category to *"sub- investment grade"* due to weakening of credit profile of sponsor and significantly lower toll collection as compared to traffic estimates resulting into higher reliance on sponsor support.

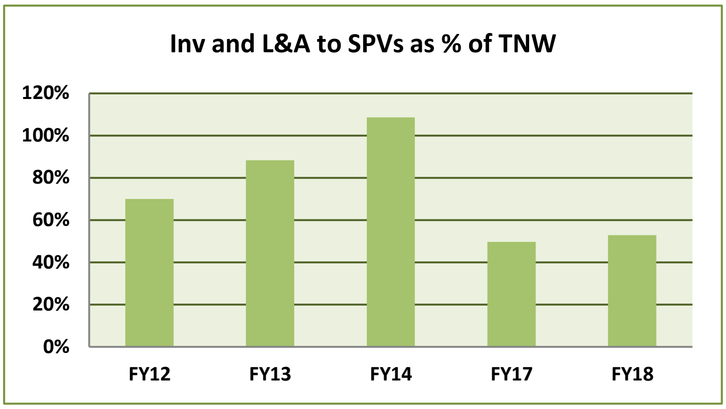
Comparison of major sponsors across two phases:

Analysis of the major sponsors with almost comparable average scale of operations during FY12 – FY14 (hereinafter referred to as "Earlier phase sponsors") and FY17 – FY18 (hereinafter referred to as "Current phase sponsors") shows that the aggregate debt coverage indicators of earlier phase sponsors is inferior as compared to current phase sponsors mainly on account of high leverage of the earlier phase sponsors due to significantly higher working capital intensity, upfront large equity commitment and their exposure to non-core ventures. While current phase sponsors on aggregate basis have relatively better resilience to face headwinds due to their relatively low to moderate reliance on bank lines in comparison to scale of operations and moderate level of gross operating cycle.





Nevertheless, exposure to BOT projects in the form of investment and loans advances as percentage of tangible net worth (TNW) is expected to increase from current moderate level due to upfront equity commitment for HAM projects. Hence, materialization of fund raising plans (including up-streaming of cash flow of operational projects and enhancement in their working capital limits) and timely execution of ongoing HAM projects with envisaged cash accruals are crucial for current sponsors to withstand headwinds.



Conclusion:

CARE ratings expects decline in project award activity during FY19 as compared to last year while EPC shall be preferred mode of award till improvement in fund raising environment and bidding appetite of the developers. Sponsors with demonstrated execution capability are expected to complete the ongoing HAM projects within time or ahead of schedule which in-turn is expected to boost pace of execution for NHAI. However, quick action on the matter of de-scoping of un-available land is crucial to enhance lender's confidence.

CARE ratings expects the financial closure of 75% - 80% of pending HAM projects over next three months albeit with relatively stricter terms which in turn is expected to increase working capital requirement for EPC contractors and contractual commitment for sponsors. Furthermore, funding requirement inform of margin money for non-fund based limits is expected to increase especially for small to mid-sized construction companies due to their large order book and moderate financial flexibility. However, sponsors with good project execution capability, low leverage and good financial flexibility to raise funds are better placed to face current headwinds and have shining prospects considering ample opportunities and expected moderation of competition in the sector. While for other sponsors, deleveraging of the balance sheet through materialization of fund raising plans and timely execution of large order book is crucial from credit perspective.

Based on our analysis, 69% of debt of operational toll road projects, out of total debt of around Rs.49,000 crore for sample projects is at low cash flow risk currently due to growth in toll collection, reduction in interest rate, refinancing of the existing loan with longer tenor loan and premium deferment by authority. Credit profile of operational toll road projects rated in "A "category and above have higher resilience due to track record of stable toll collection, adequate debt coverage indicators and presence of various liquidity support mechanism.

Outlook on the sector is **"STABLE"**.

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