

Prepared for:
Highways Infrastructure Trust ("the Trust")

Highway Concessions One Private Limited
("the Investment Manager")

Valuation as per SEBI (Infrastructure Investment Trusts) Regulations, 2014 as amended

Fair Enterprise Valuation

Valuation Date: 30th June 2023

Mr. S Sundararaman,
Registered Valuer,
IBBI Registration No - IBBI/RV/06/2018/10238

S. SUNDARARAMAN

Registered Valuer

Registration No - IBBI/RV/06/2018/10238

RV/SSR/R/2024/16

Date: 6th October, 2023

Highways Infrastructure Trust

2nd Floor, Piramal Tower,
Peninsula Corporate Park,
Lower Parel, Mumbai – 400 013.

Highway Concessions One Private Limited

(acting as the Investment Manager to Highways Infrastructure Trust)

601-602, 6th Floor, Windsor House,
Off CST Road, Kalina,
Santacruz (East), Mumbai – 400 098

Sub: Financial Valuation as per SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended ("the SEBI InvIT Regulations")

Dear Sir(s)/ Madam(s),

I, Mr. S. Sundararaman ("**Registered Valuer**" or "**RV**" or "**I**" or "**My**" or "**Me**") bearing IBBI registration number IBBI/RV/06/2018/10238, have been appointed vide letter dated 14th July 2023 as an independent valuer, as defined under Regulation 2(zzf) of the SEBI (Infrastructure Investment Trusts) Regulations, 2014 by **Highway Concessions One Private Limited** ("**HC One**" or "**the Investment Manager**") acting as the investment manager for **Highways Infrastructure Trust** ("**the Trust**" or "**Highways InvIT**"), for the purpose of the financial valuation of the Special Purpose Vehicles proposed to be acquired (defined below and hereinafter referred to as "**the SPVs**"). The SPVs is to be valued in accordance with the Master Circular for Infrastructure Investment Trusts vide circular no. SEBI/HO/DDHS/DDHS_Div3/P/CIR/2022/53 dated April 26, 2022 read with the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended and circulars issued by SEBI from time to time.

I am enclosing the Report providing opinion on the fair enterprise value of the SPVs as defined hereinafter on a going concern basis as at 30th June 2023 ("**Valuation Date**").

Enterprise Value ("**EV**") is described as the total value of the equity in a business plus the value of its debt and debt related liabilities, minus any cash or cash equivalents to meet those liabilities. The Report details the valuation methodologies used, calculations performed and the conclusion reached with respect to this valuation.

I have relied on explanations and information provided by the Investment Manager. Although, I have reviewed such data for consistency, those are not independently investigated or otherwise verified. My team and I have no present or planned future interest in the Trust, the SPVs or the Investment Manager except to the extent of this appointment as an independent valuer and the fee for this Valuation Report ("**Report**") which is not contingent upon the values reported herein. The valuation analysis should not be construed as investment advice, specifically, I do not express any opinion on the suitability or otherwise of entering into any financial or other transaction with the Trust.

The analysis must be considered as a whole. Selecting portions of any analysis or the factors that are considered in this Report, without considering all factors and analysis together could create a misleading view of the process underlying the valuation conclusions. The preparation of a valuation is a complex process and is not necessarily susceptible to partial analysis or summary description. Any attempt to do so could lead to undue emphasis on any particular factor or analysis.

Following Special Purpose Vehicles are proposed to be acquired by the Trust:

Sr. No.	Name of the SPVs	Abbreviation	Asset Type	PCOD
1	Gurgaon Sohna Highway Private Limited	GSHPL	HAM	25 th February, 2022
2	H. G. Rewari Ateli Highway Private Limited	RAHPL	HAM	15 th November, 2021
3	H. G. Rewari Bypass Private Limited	RBPL	HAM	25 th May, 2023 31 st January, 2024*

*Expected date of completion

(Hereinafter referred to as "**the SPVs**")

The information provided to me by the Investment Manager in relation to the SPVs included but not limited to historical financial statements, forecasts/projections, other statements and assumptions about future matters like forward-looking financial information prepared by the Investment Manager. The forecasts and projections as supplied to me are based upon assumptions about events and circumstances which are yet to occur.

By nature, valuation is based on estimates and it includes the risks and uncertainties relating to the events occurring in the future. Accordingly, the actual figures in future may differ from these estimates and may have a significant impact on the valuation of the SPVs.

I have not tested individual assumptions or attempted to substantiate the veracity or integrity of such assumptions in relation to the forward-looking financial information, however, I have made sufficient enquiry to satisfy myself that such information has been prepared on a reasonable basis.

Notwithstanding anything above, I cannot provide any assurance that the forward looking financial information will be representative of the results which will actually be achieved during the cash flow forecast period.

The valuation provided by RV and the valuation conclusion are included herein and the Report complies with the SEBI InvIT Regulations and guidelines, circular or notification issued by the Securities and Exchange Board of India ("SEBI") thereunder.

Please note that all comments in the Report must be read in conjunction with the caveats to the Report, which are contained in Section 10 of this Report. This letter, the Report and the summary of valuation included herein can be provided to Trust's advisors and may be made available for the inspection to the public and with the SEBI, the stock exchanges and any other regulatory and supervisory authority, as may be required.

RV draws your attention to the limitation of liability clauses in Section 10 of this Report.

This letter should be read in conjunction with the attached Report.

Yours faithfully,

S. Sundararaman

Registered Valuer

IBBI Registration No.: IBBI/RV/06/2018/10238

Asset Class: Securities or Financial Assets

Place: Chennai

UDIN: 23028423BGYWID5198

Definition, abbreviation & glossary of terms

Abbreviations	Meaning
Capex	Capital Expenditure
CCIL	Clearing Corporation of India Limited
CCM	Comparable Companies Multiples
COD	Commercial Operation Date
Cr	Crores
CTM	Comparable Transactions Multiples
DCF	Discounted Cash Flow
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
ERP	Equity Risk Premium
EV	Enterprise Value
FCFF	Free Cash Flow to the Firm
FDI	Foreign Direct Investment
FY	Financial Year Ended 31 st March
GQ	Golden Quadrilateral
GSHPL	Gurgaon Sohna Highway Private Limited
HAM	Hybrid Annuity Model
ICDS	Income Computation and Disclosure Standards
Ind AS	Indian Accounting Standards
INR	Indian Rupees
Investment Manager/HC One	Highway Concessions One Private Limited
IVS	ICAI Valuation Standards 2018
Kms	Kilometers
MoRTH	Ministry of Road Transport and Highways
MMR	Major Maintenance and Repairs
Mn	Million
NAV	Net Asset Value Method
NH	National Highway
NHAI	National Highways Authority of India
NHDP	National Highways Development Project
NS-EW	North- South and East-West Corridors
O&M	Operation & Maintenance
PPP	Public Private Partnership
RV	Registered Valuer
RAHPL	H. G. Rewari Ateli Highway Private Limited
RBPL	H. G. Rewari Bypass Private Limited
SEBI	Securities and Exchange Board of India
SEBI InvIT Regulations	SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended
SH	State Highway
Sponsor/ Galaxy	Galaxy Investments II Pte. Ltd.
SPV	Special Purpose Vehicle
The Trustee	Axis Trustee Services Limited

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1. Executive Summary

1.1. Background

The Trust

- 1.1.1. Highways Infrastructure Trust ("the Trust" or "InvIT") was established on 3rd December 2021 as an irrevocable trust pursuant to the trust deed under the provisions of the Indian Trusts Act, 1882. The Trust is registered as an Indian infrastructure investment trust with the Securities and Exchange Board of India ("SEBI") with effect from 23rd December 2021, bearing registration number IN/InvIT/21-22/0019, pursuant to the SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time ("the SEBI InvIT Regulations").
- 1.1.2. The units of the Trust were listed on NSE in August 2022 by way of an initial offer of units consisting of a private placement. The object and purpose of the Trust, as described in the Trust Deed, is to carry on the activity of an infrastructure investment trust as permissible under the InvIT Regulations to raise funds through the Trust, to make investments in accordance with the InvIT Regulations and the investment strategy and to carry on the activities as may be required for operating the Trust, including incidental and ancillary matters thereto.
- 1.1.3. The InvIT currently involved in owning, operating and maintaining a portfolio of 6 road projects in the Indian states of Maharashtra, Gujarat, Madhya Pradesh, Telangana, Meghalaya, Tamil Nadu and Rajasthan pursuant to the concessions granted by the National Highways Authority of India ("NHAI"), Ministry of Road Transport and Highways, Government of State of Gujarat, Madhya Pradesh Road Development Corporation Limited and Karnataka Road Development Corporation Limited.
- 1.1.4. The unitholding of the Trust as on the 30th June 2023 is as under :

Sr. No.	Particulars	No. of units	%
1	Galaxy Investments II Pte. Ltd.	37,39,00,000	89.99 %
2	2452991 Ontario Limited	3,12,00,000	7.51 %
3	Others	1,04,00,000	2.50%
Total		41,55,00,000	100.00 %

Source: Investment Manager

The Sponsor

- 1.1.5. Galaxy Investments II Pte. Ltd., Singapore ("the Sponsor" or "Galaxy") has sponsored an infrastructure investment trust under the SEBI InvIT Regulations called "Highways Infrastructure Trust" ("Highways InvIT" or "the Trust"). Galaxy was incorporated on 11th June 2021 in Singapore. Galaxy is involved in investment activities primarily with an objective of earning long term capital appreciation. Galaxy seeks to invest in companies incorporated in India that operate in the "infrastructure" sector.
- 1.1.6. Galaxy is a 100% subsidiary of Galaxy Investments Pte. Ltd., which is majority owned and controlled by KKR Asia Pacific Infrastructure Holdings Pte. Ltd. Galaxy is affiliated with funds, vehicles and/or entities managed and/or advised by affiliates of KKR.
- 1.1.7. Founded in 1976, KKR is a leading global investment firm that offers alternative asset management and capital markets and insurance solutions with approximately US\$ 519 billion of assets under management as of 30th June 2023 that offers alternative asset management as well as capital markets and insurance solutions.
- 1.1.8. Axis Trustee Services Limited ("the Trustee") has been appointed as the Trustee of the Highways InvIT. Highway Concessions One Private Limited ("HC One" or "the Investment Manager") has been appointed as the Investment Manager of the Trust by the Trustee and will be responsible to carry out the duties of such person as mentioned under the SEBI InvIT Regulations

The Investment Manager and the Project Manager

- 1.1.9. Highway Concessions One Private Limited is the current Investment Manager of the Trust. Simultaneously, the Trustee appointed HC One Project Manager Private Limited as the project manager of the Trust.

1.1.10. Shareholding Pattern of the Investment Manager as at 30th June 2023 is as follows:

Sr. No.	Particulars	No. of shares	%
1	Galaxy Investments II Pte. Ltd.	3,76,47,288	100.0 %
2	Vidyadhar S. Dabholkar*	1	0.0 %
Total		3,76,47,289	100.0 %

* as a nominee of Galaxy Investments II Pte. Ltd.

Source: Investment Manager

1.1.11. Shareholding Pattern of the Project Manager as at 30th June 2023 is as follows:

Sr. No.	Particulars	No. of shares	%
1	Highway Concessions One Private Limited	99,999	100.0 %
2	Vidyadhar S. Dabholkar*	1	0.0 %
Total		1,00,000	100.0 %

* as a nominee of Highway Concessions One Private Limited

Source: Investment Manager

1.1.12. I understand that the Investment Manager and the Trustee of the Trust is desirous of undertaking financial valuation of the SPVs proposed to be acquired. In this regards, I have been mandated to determine the fair enterprise value of the SPVs in accordance with the SEBI InvIT Regulations and in this context would like me to carry out valuation of SPVs as on 30th June 2023.

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Scope and Purpose of Valuation

1.2. Financial Asset to be Valued

The financial asset under consideration are valued at Enterprise Value of the following:

Sr. No.	Name of the SPVs	Term
1	Gurgaon Sohna Highway Private Limited	GSHPL
2	H.G. Rewari Ateli Highway Private Limited	RAHPL
3	H.G. Rewari Bypass Private Limited	RBPL

(Hereinafter referred to as “the SPVs”)

I understand that the Trust, which is currently not a publicly offered InvIT is contemplating to acquire 100% equity stake / economic interest in the SPVs from the existing respective shareholders (“**Proposed Transaction**”)

1.3. Purpose of Valuation

As per Regulation 21(8)(a) of the SEBI InvIT Regulations, for any transaction of purchase or sale of infrastructure projects whether directly or through SPVs, for publicly offered InvITs, a full valuation of the specific project shall be undertaken.

I understand that the Investment Manager is proposing to undertake a fair enterprise valuation of the SPVs as on 30th June 2023 for the purpose of Regulation 22(4)(b) of the SEBI (Infrastructure Investment Trusts) Regulations, 2014 (“InvIT Regulations”). As per Regulation 22(4)(b) of the SEBI (Infrastructure Investment Trusts) Regulations, 2014 (“InvIT Regulations”) provides that in case of any transaction, other than any borrowing, value of which is equal to or greater than twenty-five per cent of the InvIT assets shall require approval of the unitholders where votes casted in favour of the resolution shall be more than the votes cast against the resolution (simple majority). The valuation is proposed to be shared with the unitholder for the purpose of undertaking their assessment while voting on the proposed resolution.

In this regard, the Investment Manager and the Trustee have appointed Mr. S. Sundararaman (“Registered Valuer” or “RV” or “I” or “My” or “Me”) bearing IBBI registration number IBBI/RV/06/2018/10238 to undertake the fair valuation at the enterprise level of the SPVs as per the SEBI InvIT Regulations as at 30th June 2023.

Registered Valuer declares that:

- The RV is competent to undertake the financial valuation in terms of the SEBI InvIT Regulations;
- The RV is independent and has prepared the Valuation Report (“the Report”) on a fair and unbiased basis;
- RV has valued the SPVs in accordance with Valuation Standards issued by the Institute of Chartered Accountants of India;

This Report covers all the disclosures required as per the SEBI InvIT Regulations and the valuation of the SPVs is impartial, true and fair and in compliance with the SEBI InvIT Regulations.

1.4. Nature of the Asset to be Valued

The RV has been mandated by the Investment Manager to arrive at the Enterprise Value (“EV”) of the SPVs. Enterprise Value is described as the total value of the equity in a business plus the value of its debt and debt related liabilities, minus any cash or cash equivalents to meet those liabilities.

1.5. Valuation Base

Valuation Base means the indication of the type of value being used in an engagement. In the present case, I have determined the fair value of the SPVs at the enterprise level. Fair Value Bases defined as under:

Fair Value

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the valuation date. It is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal (or most advantageous) market at the measurement date under current market conditions (i.e. an exit price) regardless of whether that price is directly observable or estimated using another valuation technique. Fair value or Market value is usually synonymous to each other except in certain circumstances where characteristics of an asset translate into a special asset value for the party(ies) involved.

1.6. Valuation Date

Valuation Date is the specific date at which the value of the assets to be valued gets estimated or measured. Valuation is time specific and can change with the passage of time due to changes in the condition of the asset to be valued. Accordingly, valuation of an asset as at a particular date can be different from other date(s).

The Valuation Date considered for the fair enterprise valuation of the SPVs is 30th June 2023 (“**Valuation Date**”). The attached Report is drawn up by reference to accounting and financial information as on 30th June 2023. The RV is not aware of any other events having occurred since 30th June 2023 till date of this Report which he deems to be significant for his valuation analysis.

1.7. Premise of Value

Premise of Value refers to the conditions and circumstances how an asset is deployed. In the present case, RV has determined the fair enterprise value of the SPVs on a Going Concern Value defined as under:

Going Concern Value

Going Concern value is the value of a business enterprise that is expected to continue to operate in the future. The intangible elements of going concern value result from factors such as having a trained work force, an operational plant, necessary licenses, systems, and procedures in place etc.

1.8. Summary of Valuation

I have assessed the fair enterprise value of the SPVs on a stand-alone basis by using the Discounted Cash Flow (“**DCF**”) method under the income approach. Following table summarizes my explanation on the usage or non usage of different valuation methods:

Valuation Approach	Valuation Methodology	Used	Explanation
Cost Approach	Net Asset Value	No	NAV does not capture the future earning potential of the business. Hence NAV method is considered only for background reference.
Income Approach	Discounted Cash Flow	Yes	The revenue of the SPVs is mainly derived from the annuity fees and O&M payments that is typically pre-determined with the relevant government authority and cannot be modified to reflect prevailing circumstances, other than annual adjustments to account for inflation and interest rate changes as applicable, as specified in the concession agreements. Accordingly, since the GSHPL and RAHPL are generating income and RBHL is expected to generate income based on pre-determined agreements / mechanism and since the Investment Manager has provided me the financial projections for the balance tenor of the concessions agreements, DCF Method under the income approach has been considered as the appropriate method for the present valuation exercise.
Market Approach	Market Price	No	The equity shares of the SPVs are not listed on any recognized stock exchange in India. Hence, I was unable to apply the market price method.
	Comparable Companies	No	In the absence of any exactly comparable listed companies with characteristics and parameters similar to that of the SPVs, I am unable to consider this method for the current valuation.
	Comparable Transactions	No	In the absence of adequate details about the Comparable Transactions, I was unable to apply the CTM method.

Under the DCF Method, the Free Cash Flow to Firm (“FCFF”) has been used for the purpose of valuation of the SPVs. In order to arrive at the fair EV of the SPVs under the DCF Method, I have relied on Provisional Financial Statements for the Quarter ended 30th June 2023 prepared in accordance with the Indian Accounting

Standards (Ind AS) and the financial projections of the SPVs provided to me by the Investment Manager as at the Valuation Date.

The discount rate considered for the SPVs for the purpose of this valuation exercise is based on the Weighted Average Cost of Capital ("WACC") for the SPVs. As the SPVs under consideration have executed projects under the HAM model, the operating rights of the underlying assets shall be transferred back to the appointing authority after the expiry of the concession period. At the end of the agreed concession period, the operating rights in relation to the roads, the obligation to maintain the road reverts to the government entity that granted the concession by the SPVs. Accordingly, terminal period value i.e. value on account of cash flows to be generated after the expiry of concession period has not been considered.

Based on the methodology and assumptions discussed further, RV has arrived at the fair enterprise value of the SPVs as on the Valuation Date:

Sr. No.	SPVs	WACC	Fair EV (INR Mn)	Fair Adjusted EV (INR Mn)
1	GSHPL	7.48%	3,376	3,601
2	RAHPL	7.48%	2,888	3,298
3	RBPL	7.86%	2,991	2,992
Total			9,254	9,891

(Refer Appendix 1 & 2 for the detailed workings)

Enterprise Value ("EV") is described as the total value of the equity in a business plus the value of its debt and debt related liabilities, minus any cash or cash equivalents to meet those liabilities. The Report details the valuation methodologies used, calculations performed and the conclusion reached with respect to this valuation.

- 1.9. The fair EV of the SPVs is estimated using DCF method. The valuation requires Investment Manager to make certain assumptions about the model inputs including forecast cash flows, discount rate, and credit risk.
- 1.10. Valuation is based on estimates of future financial performance or opinions, which represent reasonable expectations at a particular point of time, but such information, estimates or opinions are not offered as predictions or as assurances that a particular level of income or profit will be achieved, a particular event will occur or that a particular price will be offered or accepted. Actual results achieved during the period covered by the prospective financial analysis will vary from these estimates and the variations may be material.
- 1.11. Accordingly, I have conducted sensitivity analysis on certain model inputs, the results of which are as indicated below:
 1. WACC by increasing / decreasing it by 0.5%
 2. WACC by increasing / decreasing it by 1.0%
 3. Expenses by increasing / decreasing it by 20%

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Sensitivity Analysis of Enterprise Value

1. Fair Enterprise Valuation Range based on WACC parameter (0.5%)

INR Mn							
Sr. No.	SPVs	WACC + 0.5%	EV	Base WACC	EV	WACC - 0.5%	EV
1	GSHPL	7.98%	3,298	7.48%	3,376	6.98%	3,457
2	RAHPL	7.98%	2,819	7.48%	2,888	6.98%	2,959
3	RBPL	8.36%	2,916	7.86%	2,991	7.36%	3,069
Total			9,033		9,254		9,485

2. Fair Enterprise Valuation Range based on WACC parameter (1.0%)

INR Mn							
Sr. No.	SPVs	WACC + 1.0%	EV	Base WACC	EV	WACC - 1.0%	EV
1	GSHPL	8.48%	3,223	7.48%	3,376	6.48%	3,542
2	RAHPL	8.48%	2,754	7.48%	2,888	6.48%	3,034
3	RBPL	8.86%	2,844	7.86%	2,991	6.86%	3,151
Total			8,821		9,254		9,726

3. Fair Enterprise Valuation Range based on Expenses parameter (20%)

INR Mn				
Sr. No.	SPVs	EV at Expenses + 20%	EV at Base Expenses	EV at Expenses - 20%
1	GSHPL	3,171	3,376	3,559
2	RAHPL	2,766	2,888	3,009
3	RBPL	2,826	2,991	3,145
Total		8,764	9,254	9,713

The above represents reasonable range of Fair Enterprise Valuation.

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2. Procedures adopted for current valuation exercise

- 2.1. I have performed the valuation analysis, to the extent applicable, in accordance with ICAI Valuation Standards 2018 ("IVS") issued by the Institute of Chartered Accountants of India.
- 2.2. In connection with this analysis, I have adopted the following procedures to carry out the valuation analysis:
- 2.2.1. Requested and received financial and qualitative information relating to the SPVs;
 - 2.2.2. Obtained and analyzed data available in public domain, as considered relevant by me;
 - 2.2.3. Discussions with the Investment Manager on:
 - Understanding of the business of the SPVs – business and fundamental factors that affect its earning-generating capacity including strengths, weaknesses, opportunities and threats analysis and historical and expected financial performance;
 - 2.2.4. Undertook industry analysis:
 - Research publicly available market data including economic factors and industry trends that may impact the valuation;
 - Analysis of key trends and valuation multiples of comparable companies/comparable transactions, if any, using proprietary databases subscribed by me;
 - 2.2.5. Analysis of other publicly available information;
 - 2.2.6. Selection of valuation approach and valuation methodology/(ies), in accordance with IVS, as considered appropriate and relevant by me;
 - 2.2.7. Conducted physical site visit of the road stretch of the SPVs;
 - 2.2.8. Determination of fair EV and Fair Adjusted EV of the SPVs on a going concern basis at the Valuation Date.

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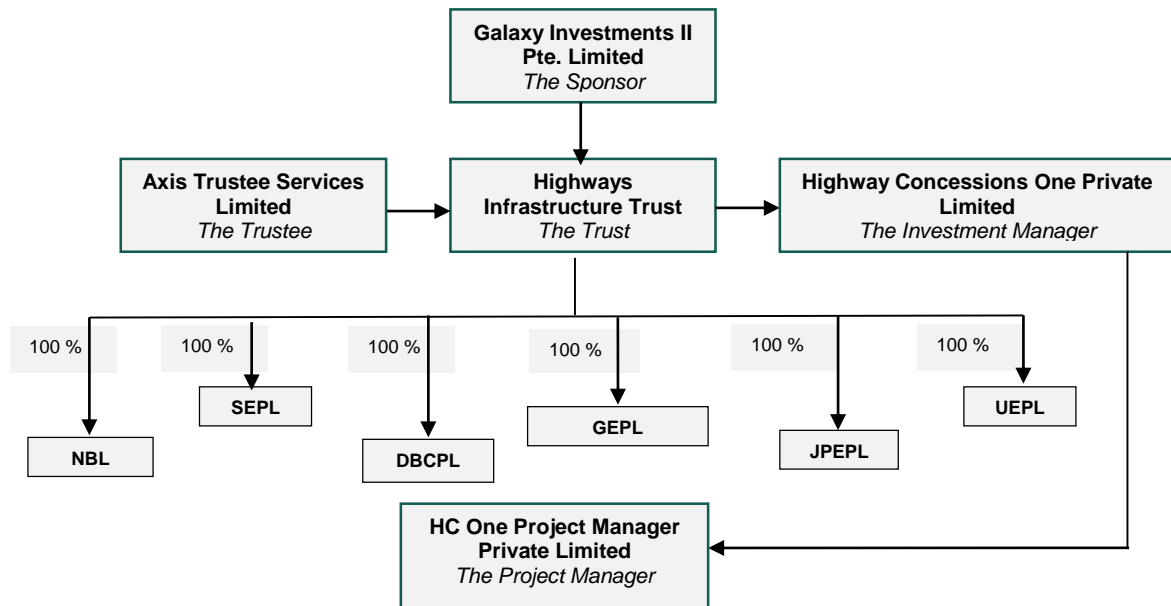
3. Overview of InvIT and SPVs

3.1. The Trust

- 3.1.1. Galaxy Investments II Pte. Ltd. is the Sponsor of the Trust. The Sponsor was incorporated on 11th June 2021 in Singapore. Galaxy is involved in investment activities primarily with an objective of earning long term capital appreciation. Galaxy seeks to invest in companies incorporated in India that operate in the “infrastructure” sector.
- 3.1.2. Galaxy is a 100% subsidiary of Galaxy Investments Pte. Ltd., which is majority owned and controlled by KKR Asia Pacific Infrastructure Holdings Pte. Ltd. Galaxy is affiliated with funds, vehicles and/or entities managed and/or advised by affiliates of KKR.
- 3.1.3. Founded in 1976, KKR is a leading global investment firm, with US\$519 billion in assets under management as of 30th June 2023 that offers alternative asset management as well as capital markets and insurance solutions.
- 3.1.4. Following is the summary of SPVs, held under the trust including the date and cost of acquisition :

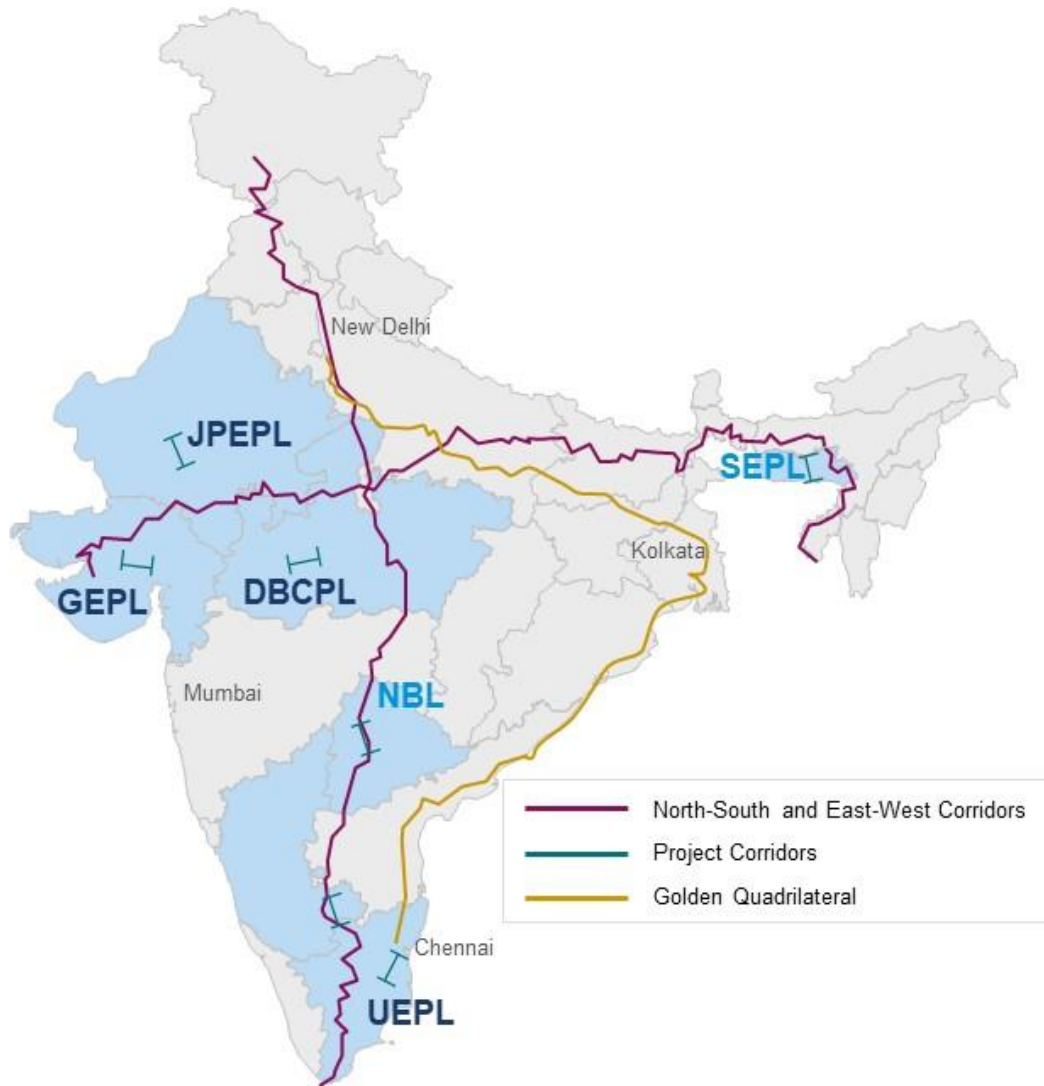
Sr. No.	SPV	Name	Acquisition Date	Acquisition Cost (INR Mn)
1	NBL	Nirmal BOT Limited	22 nd Aug, 2022	354
2	SEPL	Shillong Expressway Private Limited	22 nd Aug, 2022	356
3	DBCPL	Dewas Bhopal Corridor Private Limited	22 nd Aug, 2022	12,969
4	GEPL	Godhra Expressways Private Limited	22 nd Aug, 2022	11,167
5	JPEPL	Jodhpur Pali Expressway Private Limited	22 nd Aug, 2022	3,863
6	UEPL	Ulundurpet Expressways Private Limited	22 nd Aug, 2022	3,005

- 3.1.5. Following is the Structure of the Trust as at 30th June 2023:



Source: Investment Manager

3.1.6. A map depicting the respective location of the existing project SPVs of the Trust is provided below



Background of the SPVs

Gurgaon Sohna Highway Private Limited (“GSHPL”)

- 3.1.7. Gurgaon Sohna Highways Private Limited (GSHPL) was incorporated on 6th April, 2018. GSHPL entered into a concession agreement dated 19th April, 2018 with NHAI. The GSHPL project was awarded to HG Infra Engineering Limited by NHAI on 6th March, 2018 for 15 years of operation & maintenance period along with construction period of 910 days from the Appointed Date i.e. 30th January, 2018 of the GSHPL Project. However, the construction was completed with a period of 1122 days with an extension of 212 days which was duly approved by NHAI. The Project has successfully achieved its COD on 25th February, 2022.
- 3.1.8. The map below illustrates the location of the Project and the corridor it covers:



Source: Investment Manager

- 3.1.9. Summary of project details of GSHPL are as follows:

Parameters	Details
Total Length	12.718 Km
Nos. of Lanes	6 lanes
NH / SH	NH- 248A
State Covered	Haryana
Area (Start and End)	Bhondsi to Sohna, Gurugram
Bid Project Cost	6,060 INR Mn
Project Type	HAM
Concession Granted by	NHAI
PCOD Date	25 th February, 2022
Nos. of Annuities	30
Construction Period	1122 days
Operational Period	15 years

Source: Investment Manager

- 3.1.10. The Project Road is a section of NH-248A which passes mostly from the built up areas of Bhondsi, Ghamroj, Alipur, University area and Sohna in the district Gurugram, Haryana. The project starts at Ch. 11+682 (Design Ch. 9+282) near Sohna and Ends at Ch. 24+400 (Design Ch. 22+000) near Bhondsi, Gurgaon. Length of the Project Road is 12.718 km.

Sr. No.	Salient Features	Units
1	Total Length of the Project Highway	12.718 Km
2	Total length of Service Roads	22.824 Km
3	Widening	Ex. Str. LHS 6.44, RHS 7.983
4	Flexible Pavement for Main carriageway	LHS– 51MSA & RH – 133MSA
5	Toll Plaza	01 no. (24 lanes)
6	Bus Bays / Bus Shelters	06 nos.
7	Truck Lay Bays	02 nos.
8	No of Rest Areas	02 nos.
9	Major Junction	01 no.
10	Minor Junctions	13 nos.
11	No of Vehicular underpasses	02 nos.
12	No of Flyovers	03 nos.
13	Minor Bridges	02 nos.
14	Box/Slab Culverts	11 nos.
15	Elevated Corridor	02 nos.
16	Pipe Culverts	1 no.

Source: Investment Manager

- 3.1.11. The shareholding of GSHPL as on Valuation Date is as follows:

Sr. No.	Particulars	No. of Shares	%
1	H.G. Infra Engineering Limited	6,60,30,000	100.00%
	Total	6,60,30,000	100.00%

*Including nominee shareholders

Source: Investment Manager

I have been represented by the Investment Manager that there is no change in shareholding pattern from the Valuation Date till the date of this Report.

- 3.1.12. My team had conducted physical site visit for GSHPL on 18th August 2023. Following are the pictures of the plant site:



H.G. Rewari Ateli Highway Private Limited (“RAHPL”)

3.1.13. H.G. Rewari Ateli Highway Private Ltd (RAHPL) was incorporated on 8th April, 2019. RAHPL entered into a concession agreement dated 27th June, 2019 with NHAI. The RAHPL project was awarded to H.G. Infra Engineering Ltd. by NHAI for 15 years of operation & maintenance period along with construction period of 730 Days from the Appointed Date i.e. 13th January, 2022 of the RAHPL Project. The Project has successfully achieved its PCOD on 15th November, 2021.

3.1.14. The map below illustrates the location of the Project and the corridor it covers:



Source: Investment Manager

3.1.15. Summary of project details of RAHPL are as follows:

Parameters	Details
Total Length	30.450 km
Nos. of Lanes	4 lane
NH / SH	NH- 11
State Covered	Haryana
Area (Start and End)	Maha Kharia, Rewari to Ateli Mandi, Ateli
Bid Project Cost	5,800 INR Mn (Revised 5,750 INR Mn)
Project Type	HAM
Concession Granted by	NHAI
PCOD Date	15 th November, 2021
Nos. of Annuities	30
Construction Period	671 days
Operational Period	15 years

Source: Investment Manager

- 3.1.16. The Project Road is a Section of NH-11 which starts from Ch. 13+000 and ends at Ch. 44+000 (Design Length 31.000 km) in the state of Haryana. The Project Road has a length of 30.450 km.

Sr. No.	Salient Features	Units
1	Total Length of the Project Highway	30.450 km
2	Total length of Service Roads	34.400 km
3	No of Bypass Roads	0 no.
4	Flexible Pavement for Main carriageway	60 MSA
5	Toll Plaza	01 no.
6	Bus Bays / Bus Shelters	12 nos.
7	Truck Lay Bays	02 nos.
8	No of Rest Areas	02 nos.
9	Major Junction	06 nos.
10	Minor Junctions	18 nos.
11	No of Vehicular underpasses	05 nos.
12	No of Subways	01 no.
13	Pedestrian/Cattle Underpass	10 nos.
14	Minor Bridges	01 no.(de-scoped)
15	Box/Slab Culverts	39 nos.
16	Pipe Culverts	01 no.

Source: Investment Manager

- 3.1.17. The shareholding of RAHPL as on Valuation Date is as follows:

Sr. No.	Particulars	No. of Shares	%
1	H.G. Infra Engineering Limited	3,82,25,000	100.00%
	Total	3,82,25,000	100.00%

*Including nominee shareholders

Source: Investment Manager

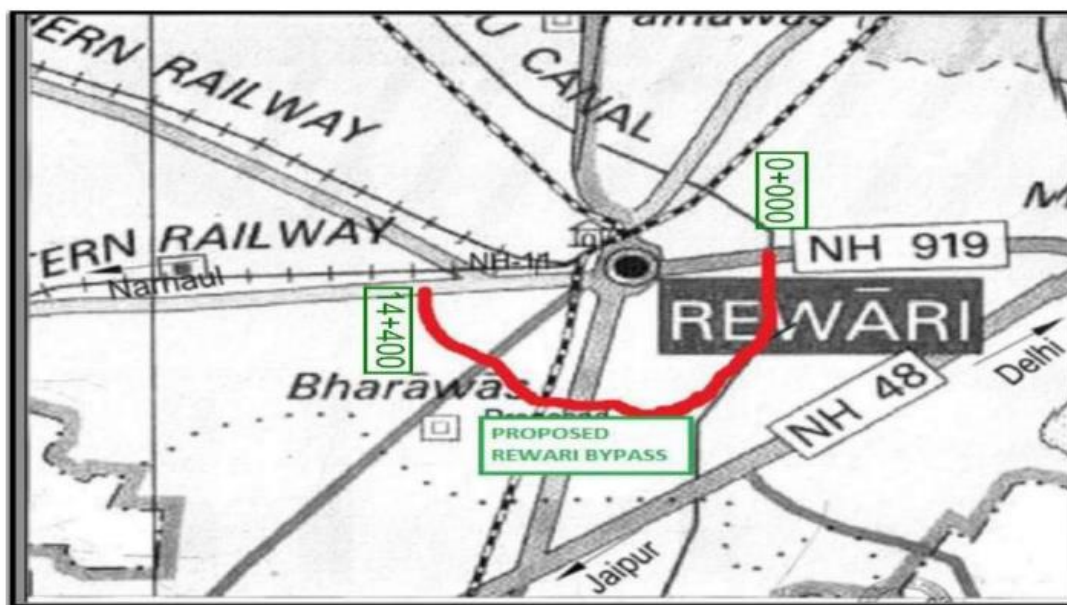
I have been represented by the Investment Manager that there is no change in shareholding pattern from the Valuation Date till the date of this Report.

- 3.1.18. My team had conducted physical site visit for RAHPL on 18th August, 2023. Following are the pictures of the plant site:



Rewari Bypass Private Limited (“RBPL”)

- 3.1.19. Rewari Bypass Private Limited (RBPL) was incorporated on 1st May, 2020. RBPL entered into a Concession Agreement dated 19th June, 2020 with NHAI. The RBPL project was awarded to M/s HG Infra Engineering Limited by NHAI on 15th January, 2021 for 15 years of operation and maintenance period along with construction period of 730 days from the Appointed Date i.e. 15th January 2021 of the RBPL Project, on a Hybrid Annuity Model (HAM).
- 3.1.20. The map below illustrates the location of the Project and the corridor it covers:



- 3.1.21. Summary of project details of RBPL are as follows:

Parameters	Details	Remarks
Total Length	14.400 km	12.493 km completed, 1.907 remaining as per Settlement Agreement dated 1 st September, 2023
Nos. of Lanes	4 lane	
NH / SH	NH -11	
State Covered	Haryana	
Bid Project Cost	5,220 INR Mn	As per concession agreement
Project Type	HAM	
Concession Granted by	NHAI	
PCOD Date	25 th May, 2023	Provisional Completion Certificate date as per Settlement Agreement
Nos. of Annuities	30	
Construction Period	896 days*	After considering extension of time for 12.493 km
Operational Period	15 years	As per concession agreement

Source: Investment Manager

*upto 30th June, 2023 for 12.493 km. Expected date of completion for balance 1.907 km is 31st January, 2024.

- 3.1.22. The Project Road is a Section of NH-11 which is a Feeder Route for the Economic Corridor near Narnaul. The Project Road is a Bypass for the Rewari Town which starts from Desgin Ch. 0+000 and ends at Ch. 14+400. It consists of 2 nos. Interchange at design Ch. 0+000 & Ch. 14+390 and 2 nos. ROBs at Ch. 8+543 & 12+627. The Project Road is a section which is heading towards the Industrial town of Narnaul. The Project Road has a length of 14.40 km.

Sr. No.	Salient Features	Units
1	Total Length of the Project Highway	14.40 km
2	Total length of Service Roads	10.845 km (excluding taper length)
3	Flexible Pavement for Main carriageway	55 MSA
4	Bus Bays / Bus Shelters	02 nos / 04 nos.
5	Truck Lay Bays	02 nos.
6	Railway over Bridge	02 nos.
7	No of Vehicular underpasses	05 nos.
8	Light Vehicular underpass	03 no.
9	No of Flyovers	04 nos.
10	Pedestrian/Cattle Underpass	09 nos.
11	Major Bridges	01 nos.
12	Minor Bridges	07 nos.
13	Box/ Culverts	25 nos.
14	Pipe Culverts	03 Nos.

Source: Investment Manager

The SPV has entered into concession agreement with the NHAI as on 19th June, 2020. According to this agreement, the construction period was initially set at 730 days, commencing from the Appointed Date, 15th January, 2021. However, the project has faced delays since certain portions of the site was not completed within the initially planned timeframe, inter-alia on account of delay in availability of 1.907 km.

On 1st September, 2023, the SPV and NHAI has entered into a Settlement Agreement, wherein NHAI agreed to delink 1.907 km out of a total length of 14.4 km for the issue of a Provisional Completion Certificate. The Provisional Completion Certificate shall be issued by the NHAI w.e.f 25th May 2023.

The concessionaire will be entitled for first annuity 180 days after the date of Provisional Completion Certificate on the basis of the revised BPC (BPC-1) for 12.493 Km which Independent Engineer has communicated as the length completed, tested and Audit Certificate issued. The annuity and interest on Balance Completion Cost will be based on (BPC-1). The concessionaire is also committed to complete the balance scope of work (de-linked portion) by 31st January, 2024.

As represented by Investment Manager, on the date of this Report, 100% of required land has been provided to the SPV by NHAI. For any slippage, delay in construction NHAI has the right to impose damages as per provisions of the concession agreement, provided this slippage is not due to force majeure or reasons attributable to NHAI. On completion of balance work, BPC-2 will be worked out.

Thus on completion of entire work as per the scope of the project, on 2nd Annuity date, the SPV will be entitled to full annuity and O&M and missed annuity (without interest on missed annuity) and interest on balance completion cost on the basis of BPC -1. From third Annuity onwards the Concessionaire will be entitled to annuity, O&M and interest on balance completion cost as per the provisions of the concession agreement.

Investment Manager has represented that control of the SPV will be transferred to the Trust only upon the proper receipt of the completion certificate for the entire length of the project. As a result, the acquisition of the SPV by the Trust is contingent upon the SPV satisfying various conditions including that of receipt of final completion certificate.

3.1.23. The shareholding of RBPL as on Valuation Date is as follows:

Sr. No.	Particulars	No. of Shares	%
1	H.G. Infra Engineering Limited*	13,48,335	100.00%
Total		13,48,335	100.00%

*Including nominee shareholders

Source: Investment Manager

- 3.1.24. I have been represented by the Investment Manager that there is no change in shareholding pattern from the Valuation Date till the date of this Report.
- 3.1.25. My team had conducted physical site visit for RBPL on 18th August, 2023. Following are the pictures of the plant site:



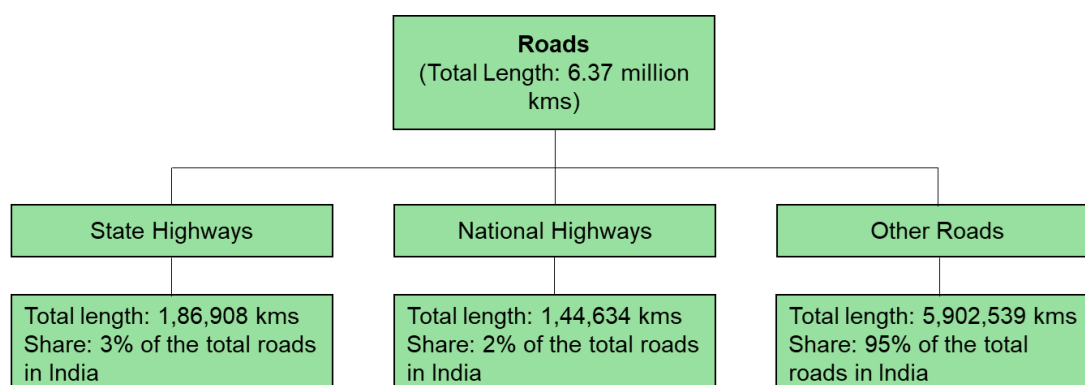
4. Overview of the Industry

4.1 Introduction

- 4.1.1 The road infrastructure is an important determinant of economic growth in India and it plays a significant role in the economy's overall development process.
- 4.1.2 Creation and operation of quality road infrastructure continue to be major requirements for enabling overall growth and development of India in a sustained manner.
- 4.1.3 Bridging of existing infrastructure gaps and creating additional facilities to cater to the increasing population are equally important. Apart from providing connectivity in terms of enabling movement of passengers and freight, roads act as force multipliers in the economy.

4.2 Road Network in India

- 4.2.1 India has the second largest road network in the world, spanning over 6.37 million km. Over 64.5% of all goods in the country are transported through roads, while 90% of the total passenger traffic uses road network to commute.



Source: IBEF Roads Report, February 2023

- 4.2.2 Out of this around 1.41 lakh km are National Highways ("NHs"). Significantly, NHs constitute around 2 per cent of the total road network in the country but carry about 40% of the road traffic. The density of India's highway network at 1.89 km of roads per square kilometer of land – is similar to that of the France (1.98) and much greater than China's (0.49) or USA's (0.68).

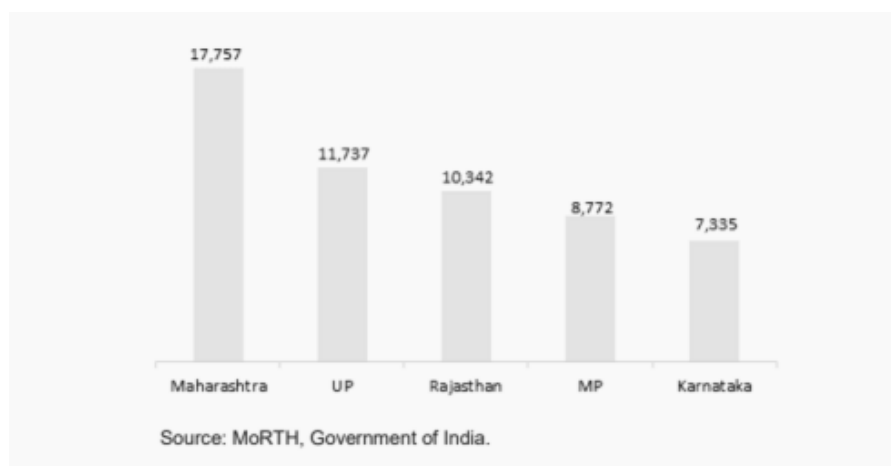
4.3 Government Agencies for Road Development

- 4.3.1 The Ministry of Road Transport & Highway ("MoRTH") is responsible for development of Road Transport and Highways in general and construction & maintenance of National Highways.
- 4.3.2 The National Highways Authority of India ("NHAI") is an autonomous agency of the Government of India, set up in 1988 and is responsible for implementation of National Highways Development Project ("NHDP").
- 4.3.3 The NHDP in the context of NHs is nearing completion- in seven phases. Later, the other highway development programmes like Special Accelerated Road Development Programme for Development of Road Network in North Eastern States (SARDP- NE) and National Highways Interconnectivity Improvement Project (NHIIP) were also taken up by MoRTH. Further, Bharatmala Pariyojana is ongoing. For majority of the projects under NHDP and Bharatmala Pariyojana, NHAI is the implementation agency. Other NH related programmes/works are being implemented through agencies like National Highways Infrastructure Development Corporation Limited (NHIDCL), State Public Works Departments (PWDs), State Road Development Corporations and the Border Road Organization.
- 4.3.4 Roads in the jurisdiction of state governments are under different categories like State Highways ("SHs") and Major District Roads. They are being developed/ upgraded through State PWDs and State Road Development

Corporations. Pradhan Mantri Gram Sadak Yojana is being implemented for rural roads through the Ministry of Rural Affairs with active participation by state governments. Further, roads within urban areas are maintained/ developed mostly with PWDs and Urban Local Bodies.

- 4.3.5 State Governments have a significant role to play in developing the SHs, Major District Roads, Other District Roads to ensure the last mile connectivity. States have varying levels of maturity in terms of road infrastructure development due to issues such as inadequate identification and prioritization of projects, funding shortfall, limited institutional capacity to implement projects, etc.

Top 5 states by length of NHs in India (in Km)

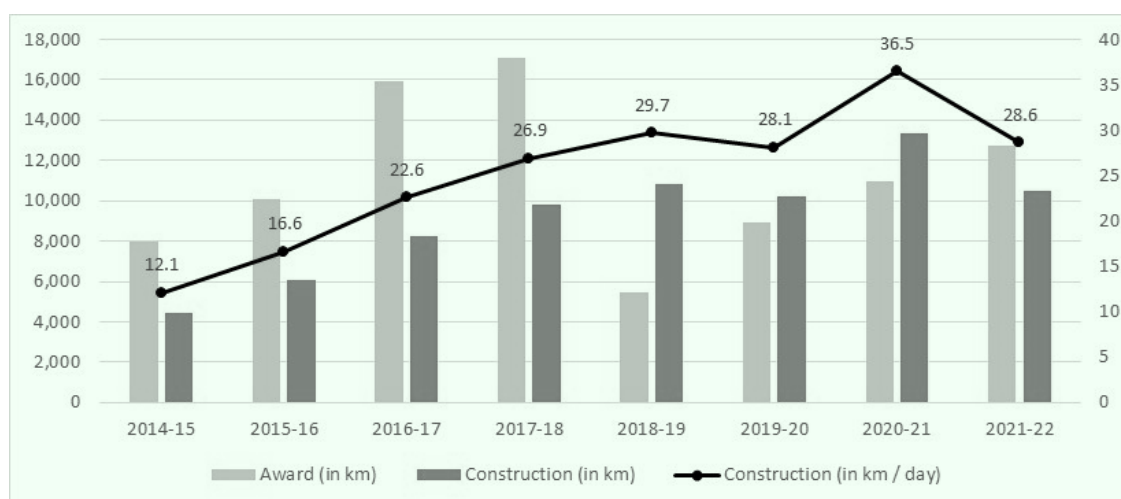


4.4 Trend of Road and Highways Construction

- 4.4.1 The length of National Highways awarded has almost doubled in the years FY15 to FY18 compared to FY11 to FY14.
- 4.4.2 Length of NHs constructed has increased by 70% during the same period. This pace is expected to gain further ground, with the ambitious targets set by the ministry and the implementation of the Bharatmala Pariyojana as MORTH is planning to construct around 83,677 km of national highways at an estimated cost of Rs 10.63 trillion (US\$ 130 billion) after factoring in cost escalations up to December 2021 and is 99% higher than the initial estimates owing to substantial rise in land acquisition cost, and steep increase in input costs.
- 4.4.3 India has become the fastest highway developer in the world with 28.64 kms of highways built each day in 2021-22 and plans to construct 18,000 kilometres of national highways in 2022-23 at a record speed of 50 kms per day.
- 4.4.4 Under the Union Budget 2023-24, the Government of India has allocated Rs. 270,000 crore (US\$ 33 billion) to the Ministry of Road Transport and Highways.
- 4.4.5 The GST on construction equipment has been reduced to 18% from 28%, which is expected to give a boost to infrastructure development in the country.
- 4.4.6 The NHDP is a program to upgrade, rehabilitate and widen major highways in India to a higher standard. The project was started in 1998 to be implemented in 7 phases.
- 4.4.7 With the launch of Bharatmala project, 10,000 km of highway construction left under NHDP was merged with Phase I of the Bharatmala project.
- 4.4.8 The Indian government launched Gati Shakti-National Master Plan, which has consolidated a list of 81 high impact projects, out of which road infrastructure projects were the top priority. The major highway projects include the Delhi-Mumbai expressway (1,350 kilometres), Amritsar-Jamnagar expressway (1,257 kilometres) and Saharanpur-Dehradun expressway (210 kilometres).
- 4.4.9 The main aim of this program is a faster approval process by digitizing the process through a dedicated Gati Shakti Portal.

- 4.4.10 In December 2021, the government set a highway monetization target of Rs. 2 trillion (US\$ 26.20 billion) for the next 3 years.
- 4.4.11 The Ministry of Road Transport and Highways awarded road projects with a total length of 12,731 kms in FY22 as against 10,964 km in FY 21.
- 4.4.12 In FY 22, 10,457 kms of highways have been constructed against 13,298 kms of highway constructed in FY 21 across India.
- 4.4.13 The Government of India has allocated Rs. 111 lakh crore (US\$ 13.14 billion) under the National Infrastructure Pipeline for FY 2019-25. The Roads sector is expected to account for 18% capital expenditure over FY 2019-25.
- 4.4.14 NHAI is planning to raise Rs. 40,000 crore (US\$ 5.72 billion) to monetise its highway assets through Infrastructure Investment Trust (InvIT). The InvIT of NHAI, National Highways Infra Trust, has raised more than Rs 10,200 crore from foreign and Indian institutional investors till December 2022.
- 4.4.15 The development of market for roads and highways is projected to exhibit a CAGR of 36.16% during 2016-2025, on account of growing government initiatives to improve transportation infrastructure in the country.

Details of national highways awarded (by NHAI) and constructed in India (KMs):



4.5 Implementation of important projects and expressways:

4.5.1 Bharatmala Pariyojna

Bharatmala Pariyojana is a new umbrella program for the highways sector that focuses on optimizing efficiency of freight and passenger movement across the country by bridging critical infrastructure gaps through effective interventions like development of Economic Corridors, Inter Corridors and Feeder Routes, National Corridor Efficiency Improvement, Border and International connectivity roads, Coastal and Port connectivity roads and Green-field expressway.

The Bharatmala Pariyojana envisages development of about 26,000 km length of Economic Corridors, which along with Golden Quadrilateral (GQ) and North-South and East-West (NS-EW) Corridors are expected to carry majority of the Freight Traffic on roads.

A total length of 34,800 km in road projects have been proposed to be constructed with an estimated outlay of Rs 5.35 trillion (US\$ 74.15 billion) under Bharatmala Pariyojana Phase-I over a five year period (2017-18 to 2021-22). In Bharatmala Pariyojana, 60% projects on Hybrid Annuity Mode, 10% projects on BOT (Toll) Mode and 30% projects on EPC mode have been envisaged respectively.

Components under Bharatmala Pariyojana Phase-I are as given below:

Component	Length (Km)	Cost (INR Cr)
Economic corridors development	9,000	1,20,000
Inter-corridor & feeder roads	6,000	80,000
National Corridors Efficiency	5,000	1,00,000
Border & International connectivity	2,000	25,000
Coastal & port connectivity roads	2,000	20,000
Expressways	800	40,000
Sub Total	24,800	3,85,000
Other works - under NHDP	10,000	1,50,000
Total	34,800	5,35,000

Source: Ministry of Road Transport and Highways, Government of India

The completion cost of Phase-I is now estimated 10.63 trillion (US\$ 130 billion) after factoring in cost escalations up to December 2021 and is 99% higher than the initial estimates owing to substantial rise in land acquisition cost, and steep increase in input costs. It is expected to be completed in FY2028, a delay of six years from the initial envisaged completion date of FY2022. During the last seven years, around 60% (20,632 km vs 34,800 km) of highway length has been awarded as of December 2021, and ~23% of the total length completed till March 2022

4.5.2 Char Dham Vikas Mahamarg Pariyojna:

This project envisages development of easy access to the four dhams in India – Gangotri, Yamunotri, Kedarnath and Badrinath. Development of this route of 889 km route is expected at an estimated cost of INR 12,000 Crores.

4.5.3 Eastern peripheral and western peripheral expressway

These two projects will connect NH-1 and NH-2 from western and eastern side of Delhi.

4.5.4 Setu Bharatam:

This project aims to replace crossings on NHs with Road Over Bridges and Road Under Bridges. It is projected to construct 174 such structures.

4.5.5 To further augment road infrastructure, more economic corridors are also being planned by Government of India as revealed in Budget 2021-22.

- 3,500 km of National Highway works in the state of Tamil Nadu at an investment of INR 1.03 lakh Crores. These include Madurai-Kollam corridor, Chittoor-Thatchur corridor. Construction will start next year.
- 1,100 km of National Highway works in the State of Kerala at an investment of INR 65,000 Crores including 600 km section of Mumbai Kanyakumari corridor in Kerala.
- 675 km of highway works in the state of West Bengal at a cost of INR 25,000 Crores including upgradation of existing road-Kolkata –Siliguri.
- National Highway works of around INR 19,000 Crores are currently in progress in the State of Assam. Further works of more than INR 34,000 Crores covering more than 1300 kms of National Highways will be undertaken in the State in the coming three years.
- In the Union Budget of 2022-23, the increase in Budget was a whopping 68% compared to the last year and the government plans to complete 25,000 kilometres of National highways.

4.6 Opportunities in road development & maintenance in India

- India has joined the league of 15 of global alliance which will work towards the ethical use of smart city technologies

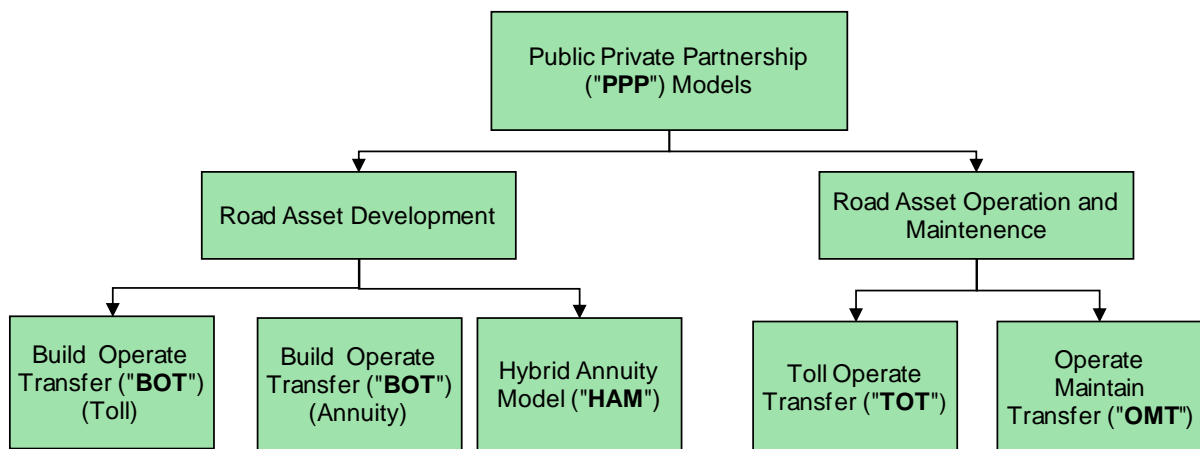
- b. The Government aims to construct 65,000 kms of national highways at a cost of Rs. 5.35 lakh crore (US\$ 741.51 billion).
- c. The government also aims to construct 23 new national highways by 2025.
- d. Road building in India is second least expensive in Asia.
- e. Andhra Pradesh will spend US\$ 296.05 million to build 8,970 kms of roads.
- f. In February 2022, NHAI rolled out a plan to construct 5,795 kilometres of highways that will connect 117 districts. The plan was worth Rs. 1 trillion (US\$ 13.09 billion).

4.7 **Public Private Partnership ("PPP") Models of road development and maintenance in India**

4.7.1 India has a well-developed framework for Public-Private-Partnerships (PPP) in the highway sector. PPP has been a major contributor to the success story of the roads and highway sector in India. With the emergence of private players over the last decade, the road construction market has become fragmented and competitive. Players bidding for projects also vary in terms of size. PPP modes have been used in India for both development and operation & maintenance of road assets.

NHAI is planning to award 500 km of the 6,500 km target for FY23 through BOT mode. It may give minimum toll revenue guarantee to make it easier for contractors to bid for BOT projects.

4.7.2 In August 2020, the Government of India revised the Model Concession Agreement for BOT projects to plug delays by imposing a deadline on the NHAI and incentivising timely work by concessionaires. According to revised norms, the NHAI will have to hand over 90% of the project land (vacant and ready to build) to private developers, thus creating a more market-friendly sector and attracting more private players.



4.7.3 **Road Asset Development Models**

- **BOT Toll**
 - In a BOT toll project, the concessionaire is responsible for designing, building, financing, operating, maintaining, tolling and transferring the project to the relevant authority at the end of the concession period. The concession period is project specific but is usually for 20-25 years. In BOT Toll model, the concessionaire earns revenue primarily in the form of toll revenue which in turns depends on the traffic on the road stretch. Toll rates are regulated by the government through rules.
- **BOT Annuity**
 - Similar to a BOT Toll projects, in BOT Annuity project, the concessionaire is responsible for designing, building, financing, operating, maintaining, tolling and transferring the project to the relevant authority at the end of the concession period. However, in these projects, the right to collect toll on road stretch lies with the government. The concessionaire earns revenue in the form of pre-determined semi-annual annuity payments.

- **HAM**

- Similar to a BOT projects, in HAM project, the concessionaire is responsible for designing, building, financing, operating, maintaining, tolling and transferring the project to the relevant authority at the end of the concession period. However, in these projects, the right to collect toll on road stretch lies with the government. The construction period for HAM projects is project specific and a fixed operation period of 15 years.

4.8 Government Investment in the Sector

- 4.8.1 Under Union Budget 2023-24, the Government of India has allocated Rs. 270,000 crore (US\$ 33 billion) to the Ministry of Road Transport and Highways.
- 4.8.2 During 2019-23, NHAI is expected to generate Rs. 1 trillion (US\$ 14.30 billion) annually from toll and other sources.
- 4.8.3 NHAI is planning to raise Rs. 40,000 crore (US\$ 5.72 billion) to monetize its highway assets through Infrastructure Investment Trust (InvIT). Five operational roads with an estimated enterprise value of INR 5,000 crores have been transferred to the NHAI InvIT.

4.9 Growth Drivers

4.9.1 Robust Demand :

Growing domestic trade flows have led to rise in commercial vehicles and freight movement; supported by rise in production of commercial vehicles to 752,022 in FY20 which commands stronger road network in India. Higher individual discretionary spending has led to increased spending on two and four wheelers. Domestic sales of passenger vehicles, three-wheelers and two-wheelers, reached 3,069,499, 260,995, and 13,466,412 units, respectively, in FY22. Road's traffic share of the total traffic in India has grown from 13.8% to 65% in freight traffic and from 32% to 90% in passenger traffic over 1951–2019.

4.9.2 Increasing Investment :

Huge investment have been made in the sector with total investment increasing more than three times from Rs. 51,914 crore (US\$ 7.43 billion) in 2014-15 to Rs. 158,839 crore (US\$ 22.73 billion) in 2018- 19. Between FY16 and FY21, budget outlay for road transport and highways increased at a robust CAGR of 13.10%. In 2019-20. Under the Union Budget 2023-24, the Government of India has allocated Rs. 270, 000 crore (US\$ 33 billion) to the Ministry of Road Transport and Highways.

4.9.3 Policy Support :

100% FDI is allowed under automatic route subject to applicable laws and regulations, standardized process for bidding and tolling. Under Union Budget 2022-23, allocation to the rural roads construction scheme PMGSY raised by 36 per cent to Rs 19,000 crore for the fiscal year 2022-23. Government of India has set up India Infrastructure Finance Company (IIFCL) to provide long-term funding for infrastructure projects.

4.10 Challenges & Issues in the Sector

4.10.1 Land Acquisition Delays & Cost :

- Land acquisition cost has increased more than 30% since 2017, primarily due to enhanced compensation payment requirements as per 'The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013'.
- Delay in pre-construction activities (such as land acquisition, relocation) affects project timelines. Land acquisition for road projects involves various stages. Each stage involves a number of stakeholders and regulatory bodies. Thus processes consume considerable time.

4.10.2 Regulatory Approvals & Disputes :

- Road development process requires a number of approvals such as environmental clearance, forest clearance, railways clearance, etc. Each of these activities takes considerable time and non-adherence to timelines result in cost overruns due to delays.
- Claims arising out of disputes between the concessionaire/ contractor and the government authorities are also a significant cost which can lead to large liabilities.

4.10.3 Operational Issues :

- Uncertainty of toll revenue collection and variation of collected toll revenue compared to projected levels as Actual traffic is much less than the anticipated traffic.
- Often unforeseen weather conditions require unplanned O&M, over and above the routine and periodic maintenance activities. This results in enhanced O&M expenses. The increase in O&M costs is also affecting the project returns.

4.10.4 Financing road construction projects :

- In the case of toll motorways, the challenge of financing construction projects is different but still remains. Traditionally, the construction of toll motorways is a profitable investment but in the times of recession, funding may be rare or nonexistent.
- Powerful national economies may be able to efficiently tackle the problem but weaker economies can hardly find the financing sources for road construction projects.

4.10.5 Climate Change

- The road sector is vulnerable to climate change impacts. Climate change and extreme weather events pose a significant challenge to the safety, reliability, effectiveness and sustainability of road transportation systems. Tsunami waves, wildfires, floods and hurricanes constitute a big risk for passengers, vehicles and goods, as well as for the integrity of the transport infrastructure.
- Since reliable road transport is an essential driver of economic growth and social wellbeing worldwide, national road authorities and motorway operators must adapt the infrastructure to climate change and increase the resilience of road transport to extreme weather

4.10.6 Economy and cost effectiveness :

- Among all transport modes, road transport occupies a significant place in short- and medium distance travel operations. However, the unit cost of transportation (per ton × km), compared with other modes of transport, remains high and is getting higher and cost-ineffective as the travel distance increases.
- Road transport cost comprises direct costs (fuel, capital depreciation, maintenance, motorway tolls, ferry fares and wages) and external costs (noise, congestion, infrastructure damages, health and environmental issues).

4.11 Recent Initiatives by Government

4.11.1 Bhoomi Rashi – Land Acquisition Portal

The ministry has corroborated with the National Informatics Centre, to create Bhoomirashi, a web portal which digitises the cumbersome land acquisition process, and also helps in processing notifications relating to land acquisition online. Processing time, which was earlier two to three months has come down to one to two weeks now.

4.11.2 FASTag – Electronic Toll Collection

National Electronic Toll Collection (NETC) system, has been implemented on pan India basis in order to remove bottlenecks and ensure seamless movement of traffic and collection of user fee as per the notified rates, using passive Radio Frequency Identification (RFID) technology. India saw a 46 per cent growth in electronic toll collection through FASTags on highways in FY 22 from INR 34,778 Crores in FY 21 to INR 50,855 Crores in FY22. In 2021, the total amount collected through electronic toll was Rs 34,778 crore. Similarly, the number of FASTag transactions also witnessed a growth of around 48 per cent in 2022 as compared to that in 2021. The number of FASTag transactions in 2021 and 2022 was 219 crore and 324 crore, respectively.

4.11.3 Revival of languishing projects

Projects which were languishing for a number of years have been attempted to be revived, with the help of a number of policy measures taken by the government. Some of the policy measures like Premium deferment in stressed projects, extension of concession period for languishing projects to the extent of delay not attributable to concessionaires, One Time Capital Support for physical completion of languishing projects that have achieved at least 50 per cent physical progress, through one time fund infusion by NHAI, subject to adequate due diligence on a case to case basis.

4.11.4 Rural development

Under the Union Budget 2022-23, the Government of India allocated Rs. 19,000 (US\$ 2.37 billion) for Pradhan Mantri Gram Sadak Yojana (PMGSY), a 36% rise over the earlier estimate of INR 15,000 in Union Budget 2021-22. Under the Union Budget 2020-21, the Government of India has allocated Rs. 19,500 crore (US\$ 2.79 billion) for Pradhan Mantri Gram Sadak Yojana (PMGSY).

4.11.5 Improve safety standards

In October 2021, the government announced rules to improve road safety, such as fixed driving hours for commercial truck drivers and a mandate to install sleep detection sensors in commercial vehicles. In October 2020, a memorandum of understanding (MoU) has been signed with the National Highways Authority of India (NHAI) by Guru Nanak Dev University (GNDU) to conduct advanced research on various aspects, including highway architecture, protection and revitalisation. The GNDU will undertake studies on ~137 km length of the National Highways passing through Pathankot, Gurdaspur and Amritsar districts.

4.11.6 Portfolios in roads & highways sector

In October 2020, the National Investment and Infrastructure Fund (NIIF) is making progress towards integrating its road and highway portfolio. The NIIF has acquired Essel Devanahalli Tollway and Essel Dichpally Tollway through the NIIF master fund. These road infra-projects will be supported by Athaang Infrastructure, NIIF's proprietary road network, assisted by a team of established professionals with diverse domain expertise in the transport field.

4.11.7 International Tie-ups

In December 2020, the Ministry of Road Transport and Highways signed an MoU with the Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology of the Republic of Austria on technology cooperation in the road infrastructure sector.

4.11.8 Encourage private funding to reduce finance constraints

- From April 2000 to September 2022, the construction sector in India attracted 26 billion U.S. dollars in foreign direct investments (FDI) for construction development. Another 28 billion U.S. dollars went into construction activities. Maif 2 Investments India Pvt. Ltd. became the first-largest foreign investment in Indian roads sector under toll-operate-transfer (TOT) mode worth Rs. 9,681.5 crore (US\$ 1.50 billion).
- In October 2020, the Asian Development Bank (ADB) and the Government of India signed a US\$ 177 million loan to upgrade 450 kms of state highways and major district roads in Maharashtra.
- In January 2021, the Government of India and New Development Bank (NDB) signed two loan agreements for US\$ 646 million for upgrading the state highway and district road networks in Andhra Pradesh.
- In August 2020, the Government of India revised the Model Concession Agreement for BOT projects to plug delays by imposing a deadline on the NHAI and incentivising timely work by concessionaires.
- According to revised norms, the NHAI will have to hand over 90% of the project land (vacant and ready to build) to private developers, thus creating a more market-friendly sector and attracting more private players.

Sources: IBEF Roads Report, February 2023; KPMG Report - Roads and Highway Sector; ICRA reports, website of Ministry of Road Transport and Highways, Government of India.

5. Valuation Methodology and Approach

- 5.1. The present valuation exercise is being undertaken in order to derive the fair EV and Adjusted EV of the SPVs.
- 5.2. The valuation exercise involves selecting a method suitable for the purpose of valuation, by exercise of judgment by the valuers, based on the facts and circumstances as applicable to the business of the company to be valued.
- 5.3. There are three generally accepted approaches to valuation:
 - (a) "Cost" approach
 - (b) "Market" approach
 - (c) "Income" approach

Cost Approach

- 5.4. The cost approach values the underlying assets of the business to determine the business value. This valuation method carries more weight with respect to holding companies than operating companies. Also, cost value approaches are more relevant to the extent that a significant portion of the assets are of a nature that could be liquidated readily if so desired.

Net Asset Value ("NAV") Method

- 5.5. The NAV Method under Cost Approach considers the assets and liabilities, including intangible assets and contingent liabilities. The Net Assets, after reducing the dues to the preference shareholders, if any, represent the value of a company.

The NAV Method is appropriate in a case where the main strength of the business is its asset backing rather than its capacity or potential to earn profits. This valuation approach is also used in cases where the firm is to be liquidated, i.e. it does not meet the "Going Concern" criteria.

As an indicator of the total value of the entity, the NAV method has the disadvantage of only considering the status of the business at one point in time.

Additionally, NAV does not properly take into account the earning capacity of the business or any intangible assets that have no historical cost. In many aspects, NAV represents the minimum benchmark value of an operating business.

Market Approach

- 5.6. Under the Market approach, the valuation is based on the market value of the company in case of listed companies, and comparable companies' trading or transaction multiples for unlisted companies. The Market approach generally reflects the investors' perception about the true worth of the company.

Comparable Companies Multiples ("CCM") Method

- 5.7. The value is determined on the basis of multiples derived from valuations of comparable companies, as manifest in the stock market valuations of listed companies. This valuation is based on the principle that market valuations, taking place between informed buyers and informed sellers, incorporate all factors relevant to valuation. Relevant multiples need to be chosen carefully and adjusted for differences between the circumstances.

Comparable Transactions Multiples ("CTM") Method

- 5.8. Under the CTM Method, the value is determined on the basis of multiples derived from valuations of similar transactions in the industry. Relevant multiples need to be chosen carefully and adjusted for differences between the circumstances. Few of such multiples are EV/Earnings before Interest, Taxes, Depreciation & Amortization ("EBITDA") multiple and EV/Revenue multiple.

Market Price Method

- 5.9. Under this method, the market price of an equity share of the company as quoted on a recognized stock exchange is normally considered as the fair value of the equity shares of that company where such quotations are arising from the shares being regularly and freely traded. The market value generally reflects the investors' perception about the true worth of the company.

Income Approach

- 5.10. The income approach is widely used for valuation under "Going Concern" basis. It focuses on the income generated by the company in the past as well as its future earning capability. The Discounted Cash Flow Method under the income approach seeks to arrive at a valuation based on the strength of future cash flows.

DCF Method

- 5.11. Under DCF Method value of a company can be assessed using the Free Cash Flow to Firm Method ("FCFF") or Free Cash Flow to Equity Method ("FCFE"). Under the DCF method, the business is valued by discounting its free cash flows for the explicit forecast period and the perpetuity value thereafter. The free cash flows represent the cash available for distribution to both, the owners and creditors of the business. The free cash flows in the explicit period and those in perpetuity are discounted by the WACC. The WACC, based on an optimal vis-à-vis actual capital structure, is an appropriate rate of discount to calculate the present value of future cash flows as it considers equity-debt risk by incorporating debt-equity ratio of the firm.

The perpetuity (terminal) value is calculated based on the business' potential for further growth beyond the explicit forecast period. The "Constant Growth Model" is applied, which implies an expected constant level of growth for perpetuity in the cash flows over the last year of the forecast period.

The discounting factor (rate of discounting the future cash flows) reflects not only the time value of money, but also the risk associated with the business' future operations. The EV (aggregate of the present value of explicit period and terminal period cash flows) so derived, is further reduced by the value of debt, if any, (net of cash and cash equivalents) to arrive at value to the owners of the business.

Conclusion on Cost Approach

- 5.12. The existing book value of EV of the SPVs comprising of the value of its Net fixed assets, Net intangible assets and working capital based on the provisional financial statements as at 30th June 2023 prepared as per Indian Accounting Standards (Ind AS) are as under :

SPVS	Book EV (INR Mn)
GSHPL	3,577
RAHPL	2,552
RBPL	2,563*
Total	8,692

* RBPL is expected to incur a capital expenditure (Capex) of approximately INR 250 Mn to 300 Mn. This Capex is expected to be incurred during the period 30th June 2023 to 31st January, 2024 in order to complete the remaining portion of the project and hence the same is not reflected in the current financial statement of RBPL. As represented by the Investment Manager, the mentioned Capex will be borne by the Seller of the SPV under the agreed purchase price mechanism between the buyer and seller. Accordingly, the Capex is not considered in this valuation exercise based on the above representation from the Investment Manager.

- 5.13. In the present case, the SPVs operates and maintains the project facilities in accordance with the terms and conditions under the relevant concession agreement. During the concession period, the SPVs operates and maintains the road asset and earns revenue through annuity payments that are pre-determined as per the respective concession agreement. In such scenario, the true worth of the business is reflected in its future earning capacity rather than the cost of the project. Accordingly, I have not considered the cost approach for the current valuation exercise.

Conclusion on Market Approach

- 5.14. The present valuation exercise is to undertake fair EV of the SPVs engaged in the road infrastructure projects for a predetermined tenure. Further, the tariff revenue and expenses are very specific to the SPVs depending on the nature of their geographical location, stage of project, terms of profitability. In the absence of any exactly comparable listed companies with characteristics and parameters similar to that of the SPVs, I have not considered CCM method in the present case. In the absence of adequate details about the Comparable Transactions, I was unable to apply the CTM method. Currently, the equity shares of the SPVs are not listed on any recognized stock exchange of India. Hence, I was unable to apply market price method.

Conclusion on Income Approach

- 5.15. The SPVs operates under a HAM based concession agreement with NHAI.
- 5.16. Currently, the GSHPL and RAHPL are completed and generating revenue. RBPL has already received PCOD for 94.69% and is expected to generate revenue on the completed part of the project. Further, balance portion of RBPL is expected to get completed by 31st January, 2024. The revenue of the SPVs is based on tenure, annuity and O&M payments, operations and other factors that are unique to the SPVs. The revenue of the SPVS is mainly derived from the annuity payments (annuity fees), interest income on balance annuity payments (which is linked to bank rate) and O&M payments (adjusted for inflation), that is defined under respective Concession Agreement for operation period.

- 5.17. The annuity fees are typically pre-determined with the relevant government authority (NHAI in this case) and cannot be modified to reflect prevailing circumstances. Interest on balance annuity payments are linked to bank rate, which is changed by RBI based on prevailing market conditions. The rights in relation to the underlying assets of the SPVs shall be transferred after the expiry of the Concession Period. Accordingly, since the SPVs are generating income based on pre-determined agreements / mechanism and since the Investment Manager has provided me with the financial projections of the SPVs for the balance tenor of the concession agreements, DCF Method under the income approach has been considered as the appropriate method for the present valuation exercise.

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6. Valuation of the SPVs

- 6.1. In the present exercise, my objective is to determine the Fair Enterprise Value of the SPVs as per the DCF Method. EV is described as the total value of the equity in a business plus the value of its debt and debt related liabilities, minus any cash or cash equivalents to meet those liabilities. Accordingly, in the present case, I have considered it appropriate to consider cash flows at FCFF (Free Cash Flow to Firm) level i.e., cash flows that are available to all the providers of capital (equity shareholders, preference shareholders and lenders). Therefore, cash flows required to service lenders and preference shareholders such as interest, dividend, repayment of principal amount and even additional fund raising are not considered in the calculation of FCFF.
- 6.2. While carrying out this engagement, I have relied extensively on the information made available to me by the Investment Manager. I have considered projected financial statement of the SPVs as provided by the Investment Manager. I have not tested individual assumptions or attempted to substantiate the veracity or integrity of such assumptions in relation to the forward-looking financial information, however, I have made sufficient enquiries to satisfy myself that such information has been prepared on a reasonable basis. Notwithstanding anything above, I cannot provide any assurance that the forward looking financial information will be representative of the results which will actually be achieved during the cash flow forecast period.
- 6.3. Following are the major steps I have considered in order to arrive the EV of the SPVs as per the DCF Method:
- Determination of Free Cash Flows to Firm which included:
 - a. Obtaining the financial projections to determine the cash flows expected to be generated by the SPVs from the Investment Manager;
 - b. Analyzed the projections and its underlying assumptions to assess the reasonableness of the cash flows;
 - Determination of the discount rate for the explicit forecast period; and
- Applying the discount rate to arrive at the present value of the explicit period cash flows and for arriving at the terminal value.
- 6.4. The key assumptions of the projections provided to me by the Investment Manager are:

Key Assumptions:

6.4.1. Revenue cash flows

The Cash flow for the SPVs can be divided into two segments:

Payment from NHAI during the Construction Period:

The SPVs are eligible to receive 40% of the Bid Project Cost (BPC), adjusted for the price index multiple, in 5 installments of 8% each during the construction period. I have been represented by the Investment Manager that SPVs have received the agreed portion of the inflation adjusted bid project cost (of 40%) as per the respective concession agreements.

Payment by NHAI during the Operation Period: Accordingly, the revenue of the SPVs would mainly consists of the following receipts:

- a. **Annuity payments:** The Bid Project Cost remaining, adjusted for the price index multiple, to be paid in pursuance of the respective concession agreements (i.e. the Balance Completion Cost) is eligible to be received by the respective SPVs by way of specified biannual installments as mentioned in their respective concession agreement for the balance period of operations.
- b. **Interest:** As per the concession agreements, the SPVs is entitled to receive interest on reducing Balance Completion Cost equal to applicable Bank Rate (as decided by the Monetary Policy Committee and published by the Reserve Bank of India) + 3.00% spread. Such interest is due and payable along with each of the biannual installments as mentioned above; and
- c. **Operation and Maintenance Revenue:** In lieu of O&M expenses to be incurred by SPVs, SPVs is eligible for certain O&M income (as defined in the respective concession agreement) at each biannual installment date, duly adjusted for an appropriate inflation rate.

6.4.2. Expenditure:

Since the SPVs are operational on the Valuation Date, following are the major costs incurred by the SPVs:

Operation and Maintenance Costs (Routine) ("O&M Costs")

These are routine costs incurred every year. These costs are related to the normal wear and tear of the road and hence involve repairing the patches damaged mainly due to heavy traffic movement. O&M Costs also includes staff salaries, project management fees, professional fees, insurance, security expenses, electricity, etc. The primary purpose of these expenses is to maintain the road as per the specifications mentioned in the respective concession agreement. SPVs are responsible for carrying out operation and maintenance activities at its road during its concession period. Within the scope of such operation and maintenance obligations, the SPVs may be required to undertake routine maintenance of project roads, maintain and comply with safety standards to ensure safe traffic movement, deploy adequate human resources for incident management, maintain proper medical and sanitary arrangements for personnel deployed at the site, prevent any unauthorized entry to and exit from the project as may be required.

The Investment Manager has provided the estimated O&M costs for the projected period and I have corroborated the said expenses with the Technical Due Diligence report of the respective SPVs prepared by the external professional agency (Resotech Consulting Services Private Limited) for estimating major maintenance expenses and O&M Costs for the projected period.

I understand from the Investment Manager that after acquisition of the SPVs, the Project Manager of the Trust will be supervising and managing the operations & maintenance of the Project Road, which will be undertaken through the O&M contractors at the SPV level.

Major Maintenance and Repairs Costs (“MMR Costs”)

Estimating the MMR Costs

Major maintenance expenses will be incurred on periodic basis. These are the costs incurred to bring the road assets back to its earlier condition or keep the road assets in its normal condition as per the concession agreement terms. These expenses are primarily related to the construction or re-laying of the top layer of the road. Accordingly, such costs include considerable amounts of materials and labour.

The Investment Manager has provided the estimated MMR cost for the projected period and I have corroborated the said expenses with the Technical Due Diligence report of the respective SPVs prepared by the external professional agency (Resotech Consulting Services Private Limited) for estimating major maintenance expenses and O&M Costs for the projected period.

Capital Expenditure (“Capex”): As represented by the Investment Manager, regarding the maintenance Capex, the same has already been considered in the Operation & Maintenance expenditure and Major Maintenance and Repairs expenditure for the projected period. RBPL is expected to incur a capital expenditure (Capex) of approximately INR 250 Mn to 300 Mn. This Capex is expected to be incurred during the period 30th June 2023 to 31st January, 2024 in order to complete the remaining portion of the project. As represented by the Investment Manager, the mentioned Capex will be borne by the Seller of the SPV under the agreed purchase price mechanism between the buyer and seller. Accordingly, the Capex is not considered in this valuation exercise based on the above representation from the Investment Manager.

Direct Taxes: As per the discussions with the Investment Manager, the new provisions of Income Tax Act, 1961 (Section 115BAA) have been considered for the projected period of the SPVs. The SPVs have been filing its income tax returns on the basis of IND AS Income, adjusted for adjustments prescribed by Income Computation and Deduction Standards IV i.e Revenue Recognition and ICDS III i.e. Construction Contracts which can be substantiated from the income tax returns of the SPVs.

6.4.3. Working Capital:

The Investment Manager has provided projected financial information on biannual basis for the SPVs. The biannual period are based on the annuity dates of the SPVs. The amount of O&M expenses payable to O&M Contractor by the SPVs on the basis of its O&M Agreements is also due and payable on the basis of the annuity amount and date on which annuities are received. Hence, for the SPVs where annuity payments are material component of revenue, there are no receivables and payables estimated to be outstanding at their respective annuity dates during the biannually prepared projected period. Other working capital items outstanding as at the Valuation Date mainly represents the advance income tax, GST input tax (and cash) credit, prepaid expenses, etc. that are separately adjusted in the calculation of the enterprise values of the SPVs. The Investment Manager has provided projected Working Capital information for the SPVs. I have relied on the same.

6.4.4. GST Claim: The Investment Manager has informed us that due to the changes in extant provision of the Goods & Services Tax (“GST”) laws, the SPVs are eligible to receive GST claim from NHAI which are as follows:

- i. **On Annuity:** As per the Annexure IV of the Policy circular of Ministry of Road Transport & Highways as on 23rd December 2022, SPVs are eligible to claim reimbursement of GST on annuity, considering change in law, after adjusting GST input credit lying with the SPVs.
- ii. **On Interest on Annuity:** As per the Ministry of Finance circular dated 17th June 2021, GST will be applicable on annuity (deferred payments) paid for construction of roads i.e. annuity plus interest, additionally Ministry of Road Transport & Highways issued clarification dated 17th June 2021 that the SPVs will be eligible to claim reimbursement of GST on interest.
- iii. **Change in GST rates:** Ministry of Finance vide notification no. 03/2022 dated 13th July 2022, increased the GST rates applicable on road construction services from 12% to 18%. As per the Policy circular of Ministry of Road Transport & Highways as on 23rd December 2022, the above increase in GST rates are eligible for reimbursement from NHAI as it is considered as change in law (i.e. change of rate).

6.5. **Impact of Ongoing Litigation on Valuation**

As on 30th June 2023, there are no ongoing litigations as informed by the Investment Manager.

6.6. **Calculation of Weighted Average Cost of Capital for the SPV**

6.6.1. **Cost of Equity:**

Cost of Equity (CoE) is a discounting factor to calculate the returns expected by the equity holders depending on the perceived level of risk associated with the business and the industry in which the business operates.

For this purpose, I have used the Capital Asset Pricing Model (CAPM), which is a commonly used model to determine the appropriate cost of equity for the SPVs.

$$K(e) = R_f + [ERP * Beta] + CSRP$$

Wherein:

K(e) = cost of equity

R_f = risk free rate

ERP = Equity Risk Premium

Beta = a measure of the sensitivity of assets to returns of the overall market

CSRP = Company Specific Risk Premium (In general, an additional company-specific risk premium will be added to the cost of equity calculated pursuant to CAPM).

For valuation exercise, I have arrived at adjusted cost of equity of the SPVs based on the above calculation (Refer Appendix 2).

6.6.2. **Risk Free Rate:**

I have applied a risk free rate of return of 7.09% on the basis of the zero coupon yield curve as on 30th June 2023 for government securities having a maturity period of 10 years, as quoted on the website of Clearing Corporation of India Limited.

6.6.3. **Equity Risk Premium ("ERP"):**

Equity Risk Premium is a measure of premium that investors require for investing in equity markets rather than bond or debt markets. The equity risk premium is estimated based on consideration of historical realised returns on equity investments over a risk-free rate as represented by 10 year government bonds. Based on the aforementioned, a 7% equity risk premium for India is considered appropriate.

6.6.4. **Beta:**

Beta is a measure of the sensitivity of a company's stock price to the movements of the overall market index. In the present case, I find it appropriate to consider the beta of companies in similar business/ industry to that of the SPVs for an appropriate period.

For the valuation of the SPVs, I find it appropriate to consider the beta of MEP Infrastructure Developers Limited, Bharat Road Network Limited and IRB InvIT fund for an appropriate period. The beta so arrived, is further adjusted based on the factors of mentioned SPVs like completion of projects, revenue certainty, past collection trend, lack of execution uncertainty, etc. to arrive at the adjusted unlevered beta appropriate to the SPVs.

I have further unlevered the beta of such companies based on market debt-equity of the respective company using the following formula:

$$\text{Unlevered Beta} = \text{Levered Beta} / [1 + (\text{Debt} / \text{Equity}) * (1 - T)]$$

Further I have re-levered it based on debt-equity at 70:30 based on the industry Debt: Equity ratio of HAM based projects using the following formula:

Re-levered Beta = Unlevered Beta * [1 + (Debt / Equity) * (1-T)]

Accordingly, as per above, I have arrived at re-levered betas of the SPVs. (Refer Appendix 2)

6.6.5. **Company Specific Risk Premium (“CSRP”):**

Discount Rate is the return expected by a market participant from a particular investment and shall reflect not only the time value of money but also the risk inherent in the asset being valued as well as the risk inherent in achieving the future cash flows. In the present case, considering the counter-party risk for the SPVs, considering the length of the explicit period for the SPVs, and basis my discussion with Investment Manager, I found it appropriate to consider following CSRP for the SPVs:

SPV	CSRP
GSHPL	0%
RAHPL	0%
RBPL	1%

In case of RBPL, the SPV has achieved only 94.69% completion as on 31st May, 2023 as mentioned in settlement agreement and is eligible to receive commissioning certificate for 94.69% of total project. However, to complete the remaining portion of the project, the SPV is obligated to finish the pending work by 31st January, 2024. Any delay in meeting this deadline may result in damages or penalties. Also, the Balance Completion cost has been worked out on a provisional basis as the SPV is yet to receive the first annuity. These factors introduces uncertainty into the project's timeline, potentially impacting its revenue generation and overall financial performance. Accordingly, I have considered CSRP of 1% to account for this uncertainty in the project's valuation.

6.6.6. **Cost of Debt:**

The calculation of Cost of Debt post-tax can be defined as follows:

$K(d) = K(d) \text{ pre-tax} * (1 - T)$

Wherein:

$K(d)$ = Cost of debt

T = tax rate as applicable

For valuation exercise, pre-tax cost of debt has been considered as 8.35%, 8.35% and 8.50% for GSHPL, RAHPL and RBPL respectively as represented by the Investment Manager.

6.6.7. **Weighted Average Cost of Capital (WACC):**

The discount rate, or the WACC, is the weighted average of the expected return on equity and the cost of debt. The weight of each factor is determined based on the company's optimal capital structure.

Formula for calculation of WACC:

$WACC = [K(d) * \text{Debt} / (\text{Debt} + \text{Equity})] + [K(e) * (1 - \text{Debt} / (\text{Debt} + \text{Equity}))]$

Accordingly, as per above, I have arrived the WACC for the explicit period of the SPVs.

(Refer Appendix 2 for detailed workings).

6.6.8. **Cash Accrual Factor (CAF):**

Discounted cash flow require to forecast cash flows in future and discount them to the present in order to arrive at present value of the asset as on Valuation Date. To discount back the projections we use the Cash Accrual Factor (“CAF”). The Cash Accrual Factor refers to the duration between the Valuation date and the point at which each cash flow is expected to accrue.

In the present case, the annuities are received bi-annually at a predetermined date and the concession agreement provides that the annuities would be realized in 15 days from the annuity date. Hence we have considered the annuity realizations date for the purpose of determination of the CAF

Accordingly, the cash flows during each year of the projected period are discounted back from the respective annuity realization to Valuation Date.

6.6.9. **Discounting Factor**

Discounted cash flow is equal to sum of the cash flow in each period divided by present value factor, where the present value factor is determined by raising one plus discount rate (WACC) raised to the power of the CAF.

$$DCF = [CF1 / (1+r)CAF1] + [CF2 / (1+r)CAF2] + \dots + [CFn / (1+r)CAFn]$$

Where,

CF = Cash Flows,

CAF = Cash accrual factor for particular period

R = Discount Rate (i.e. WACC)

- 6.7. At the end of the agreed concession period, the rights in relation to the underlying assets, its operations, the obligation to maintain the road reverts to the government authority that granted the concession. Hence, the SPVs is not expected to generate cash flow after the expiry of their respective concession agreements. Accordingly, I found it appropriate not to consider terminal period value, which represents the present value at the end of explicit forecast period of all subsequent cash flows to the end of the life of the asset or into perpetuity if the asset has an indefinite life, in this valuation exercise.

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7. Valuation Conclusion

- 7.1. The current valuation has been carried out based on the discussed valuation methodology explained herein earlier. Further, various qualitative factors, the business dynamics and growth potential of the business, having regard to information base, management perceptions, key underlying assumptions and limitations were given due consideration.
- 7.2. I have been represented by the Investment Manager that there is no potential devolvement on account of the contingent liability as of valuation date; hence no impact has been factored in to arrive at fair EV of the SPVs.
- 7.3. Based on the above analysis, the fair EV as on the Valuation Date of the SPVs are as mentioned below:

SPVs	Approximate Balance Period	WACC	Enterprise Value	INR Mn
				Adjusted Enterprise Value
GSHPL	~13 Years 8 Months	7.48%	3,376	3,601
RAHPL	~13 Years 5 Months	7.48%	2,888	3,298
RBPL	~14 Years 23 Months	7.86%	2,991	2,992
Total			9,254	9,891

(Refer Appendix 1 for detailed workings)

- 7.4. EV is described as the total value of the equity in a business plus the value of its debt and debt related liabilities, minus any cash or cash equivalents to meet those liabilities.
- 7.5. Adjusted Enterprise Value is described as the Enterprise Value plus any closing cash or cash equivalents as at the date of valuation.
- 7.6. Adjusted Enterprise Value ("Adj. EV") is described as the Enterprise Value plus any closing cash or cash equivalents as at the date of valuation.
- 7.7. The fair EV of the SPVs are estimated using DCF method. The valuation requires Investment Manager to make certain assumptions about the model inputs including forecast cash flows, discount rate, and credit risk.
- 7.8. Valuation is based on estimates of future financial performance or opinions, which represent reasonable expectations at a particular point of time, but such information, estimates or opinions are not offered as predictions or as assurances that a particular level of income or profit will be achieved, a particular event will occur or that a particular price will be offered or accepted. Actual results achieved during the period covered by the prospective financial analysis will vary from these estimates and the variations may be material.
- 7.9. Accordingly, I have conducted sensitivity analysis on certain model inputs, the results of which are as indicated below:
1. WACC by increasing / decreasing it by 0.5%
 2. WACC by increasing / decreasing it by 1.0%
 3. Expenses by increasing / decreasing it by 20%

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4. Fair Enterprise Valuation Range based on WACC parameter (0.5%)

INR Mn							
Sr. No.	SPVs	WACC + 0.5%	EV	Base WACC	EV	WACC - 0.5%	EV
1	GSHPL	7.98%	3,298	7.48%	3,376	6.98%	3,457
2	RAHPL	7.98%	2,819	7.48%	2,888	6.98%	2,959
3	RBPL	8.36%	2,916	7.86%	2,991	7.36%	3,069
Total			9,033		9,254		9,485

5. Fair Enterprise Valuation Range based on WACC parameter (1.0%)

INR Mn							
Sr. No.	SPVs	WACC + 1.0%	EV	Base WACC	EV	WACC - 1.0%	EV
1	GSHPL	8.48%	3,223	7.48%	3,376	6.48%	3,542
2	RAHPL	8.48%	2,754	7.48%	2,888	6.48%	3,034
3	RBPL	8.86%	2,844	7.86%	2,991	6.86%	3,151
Total			8,821		9,254		9,726

6. Fair Enterprise Valuation Range based on Expenses parameter (20%)

INR Mn				
Sr. No.	SPVs	EV at Expenses + 20%	EV at Base Expenses	EV at Expenses - 20%
1	GSHPL	3,171	3,376	3,559
2	RAHPL	2,766	2,888	3,009
3	RBPL	2,826	2,991	3,145
Total		8,764	9,254	9,713

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8. Additional Procedures to be complied with in accordance with InvIT regulations

8.1. Scope of Work

The Schedule V of the SEBI InvIT Regulations prescribes the minimum set of mandatory disclosures to be made in the valuation report. In this reference, the minimum disclosures in valuation report may include following information as well, so as to provide the investors with the adequate information about the valuation and other aspects of the underlying assets of the InvIT.

The additional set of disclosures, as prescribed under Schedule V of InvIT Regulations, to be made in the valuation report of the SPVs are as follows:

- List of one-time sanctions/approvals which are obtained or pending;
- List of up to date/overdue periodic clearances;
- Statement of assets;
- Estimates of already carried as well as proposed major repairs and improvements along with estimated time of completion;
- Revenue pendencies including local authority taxes associated with InvIT asset and compounding charges, if any;
- On-going material litigations including tax disputes in relation to the assets, if any;
- Vulnerability to natural or induced hazards that may not have been covered in town planning/ building control.

8.2. Limitations

This Report is based on the information provided by the representatives of the Investment Manager. The exercise has been restricted and kept limited to and based entirely on the documents, records, files, registers and information provided to me. I have not verified the information independently with any other external source.

I have assumed the genuineness of all signatures, the authenticity of all documents submitted to me as original, and the conformity of the copies or extracts submitted to me with that of the original documents.

I have assumed that the documents submitted to me by the representatives of Investment Manager in connection with any particular issue are the only documents related to such issue.

I have reviewed the documents and records from the limited perspective of examining issues noted in the scope of work and I do not express any opinion as to the legal or technical implications of the same.

Analysis of Additional Set of Disclosures for the SPVs

A. List of one-time sanctions/approvals which are obtained or pending:

The list of sanctions/ approvals obtained by the SPVs till the date of this Report is provided in Appendix 3.1. As informed by the Investment Manager, there are no applications for government sanctions/ licenses by the SPVs for which approval is pending as on 30th June 2023.

B. List of up to date/ overdue periodic clearances:

The Investment Manager has confirmed that the SPVs are not required to take any periodic clearances and hence there are no up to date/ overdue periodic clearances as on 30th June 2023.

C. Statement of assets included:

The details of assets in INR Mn of the SPVs as at 30st June 2023 are as mentioned below:

Sr. No.	SPVs	Net Fixed Assets	Non-Current Assets	Current Assets
1	GSHPL	0	3114	785
2	RAHPL	0	2065	930
3	RBPL	0	2173	543

Total	0	7352	2258
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Source: Investment Manager

* Non-Current Assets for Annuity SPVs includes Non-Current Financial Assets in the form of Annuity Receivable from respective counterparties.

D. **Estimates of already carried as well as proposed major repairs and improvements along with estimated time of completion:**

I have been informed that maintenance is regularly carried out by SPVs in order to maintain the working condition of the assets.

Historical Major Repairs

I have been informed by the management that no historical Major Repairs have been undertaken by the SPVs in the Historical Period.

Forecasted major repairs

GSHPL

								INR Mn
SPV	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31
GSHPL	25	-	-	8	-	-	396	-

SPV	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37		
GSHPL	-	8	-	-	226	-		

RAHPL

								INR Mn
SPV	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31
RAHPL	28	-	-	12	-	640	-	-

SPV	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37		
RAHPL	-	9	-	-	338	-		

RBPL

								INR Mn
SPV	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31
RBHPL	7	-	-	7	-	-	314	-

SPV	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38		
RBHPL	-	-	7	-	-	162	-		

Source: Investment Manager

E. **Revenue pendencies including local authority taxes associated with InvIT asset and compounding charges, if any:**

Investment Manager has informed me that there are no material dues including local authority taxes (such as Municipal Tax, Property Tax, etc.) pending to be payable to the government authorities with respect to the SPVs (InvIT assets).

F. **On-going material litigations including tax disputes in relation to the assets, if any:**

As informed by the Investment Manager, the status of arbitration matters and status of tax assessments are updated in Appendix 4. Investment Manager has informed us that majority of the cases are having low to medium risk and accordingly no material outflow is expected against the litigations. Hence, I have relied on the Investment Manager with respect to the current status of the above mentioned cases

G. Vulnerability to natural or induced hazards that may not have been covered in town planning/ building control:

Investment Manager has confirmed to me that there are no such natural or induced hazards which have not been considered in town planning/ building control.

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9. Sources of Information

- 9.1. For the Purpose of undertaking this valuation exercise, I have relied on the following sources of information provided by the Investment Manager:
- i. Audited Financial Statements of the SPVs for Financial Year ("FY") ended 31st March 2021, 31st March 2022 and 31st March 2023.
 - ii. Provisional Financial Statements for Quarter ended 30th June 2023.
 - iii. Projected financial information for the remaining project life for the SPVs;
 - iv. Details of projected Major Maintenance & Repairs (MMR) Expenditure and Capital Expenditure (Capex);
 - v. Technical Due Diligence Study Report dated 31st May, 2023 prepared by Resotech Consulting Private Limited for the SPVs;
 - vi. Details of Written Down Value (WDV) (as per Income Tax Act) of assets as at 31st March 2023;
 - vii. Concession Agreement of the SPVs with the respective authority;
 - viii. List of licenses / approvals, details of tax litigations, civil proceeding and arbitrations of the SPVs;
 - ix. Shareholding pattern as on 30th June 2023 of the SPVs and other entities mentioned in this Report;
 - x. Management Representation Letter by the Investment Manager dated 4th October 2023;
 - xi. Relevant data and information about the SPVs provided to us by the Investment Manager either in written or oral form or in the form of soft copy;
- 9.2. Information provided by leading database sources, market research reports and other published data.
- 9.3. The information provided to me by the Investment Manager in relation to the SPVs included but not limited to historical financial statements, forecasts/projections, other statements and assumptions about future matters like forward-looking financial information prepared by the Investment Manager. The forecasts and projections as supplied to me are based upon assumptions about events and circumstances which are yet to occur.
- 9.4. I have not tested individual assumptions or attempted to substantiate the veracity or integrity of such assumptions in relation to the forward-looking financial information, however, I have made sufficient enquiries to satisfy myself that such information has been prepared on a reasonable basis.
- 9.5. Notwithstanding anything above, I cannot provide any assurance that the forward looking financial information will be representative of the results which will actually be achieved during the cash flow forecast period.

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10. Exclusions and Limitations

- 10.1. My Report is subject to the limitations detailed hereinafter. This Report is to be read in totality, and not in parts, in conjunction with the relevant documents referred to herein.
- 10.2. Valuation analysis and results are specific to the purpose of valuation and is not intended to represent value at any time other than the valuation date of 30th June 2023 ("Valuation Date") mentioned in the Report and as per agreed terms of my engagement. It may not be valid for any other purpose or as at any other date. Also, it may not be valid if done on behalf of any other entity.
- 10.3. This Report, its contents and the results are specific to (i) the purpose of valuation agreed as per the terms of my engagements; (ii) the Valuation Date and (iii) are based on the financial information of the SPVs till 30th June 2023. The Investment Manager has represented that the business activities of the SPVs have been carried out in normal and ordinary course between 30th June 2023 and the Report Date and that no material changes have occurred in the operations and financial position between 30th June 2023 and the Report date.
- 10.4. The scope of my assignment did not involve me performing audit tests for the purpose of expressing an opinion on the fairness or accuracy of any financial or analytical information that was provided and used by me during the course of my work. The assignment did not involve me to conduct the financial or technical feasibility study. I have not done any independent technical valuation or appraisal or due diligence of the assets or liabilities of the SPVs or any of other entity mentioned in this Report and have considered them at the value as disclosed by the SPVs in their regulatory filings or in submissions, oral or written, made to me.
- 10.5. In addition, I do not take any responsibility for any changes in the information used by me to arrive at my conclusion as set out here in which may occur subsequent to the date of my Report or by virtue of fact that the details provided to me are incorrect or inaccurate.
- 10.6. I have assumed and relied upon the truth, accuracy and completeness of the information, data and financial terms provided to me or used by me; I have assumed that the same are not misleading and do not assume or accept any liability or responsibility for any independent verification of such information or any independent technical valuation or appraisal of any of the assets, operations or liabilities of the SPVs or any other entity mentioned in the Report. Nothing has come to my knowledge to indicate that the material provided to me was misstated or incorrect or would not afford reasonable grounds upon which to base my Report.
- 10.7. This Report is intended for the sole use in connection with the purpose as set out above. It can however be relied upon and disclosed in connection with any statutory and regulatory filing in connection with the provision of SEBI InvIT Regulations. However, I will not accept any responsibility to any other party to whom this Report may be shown or who may acquire a copy of the Report, without my written consent.
- 10.8. It is clarified that this Report is not a fairness opinion under any of the stock exchange/ listing regulations. In case of any third party having access to this Report, please note this Report is not a substitute for the third party's own due diligence/ appraisal/ enquiries/ independent advice that the third party should undertake for his purpose.
- 10.9. Further, this Report is necessarily based on financial, economic, monetary, market and other conditions as in effect on, and the information made available to me or used by me up to, the date hereof. Subsequent developments in the aforementioned conditions may affect this Report and the assumptions made in preparing this Report and I shall not be obliged to update, revise or reaffirm this Report if information provided to me changes.
- 10.10. This Report is based on the information received from the sources as mentioned in Section 9 of this Report and discussions with the Investment Manager. I have assumed that no information has been withheld that could have influenced the purpose of my Report.
- 10.11. Valuation is not a precise science and the conclusions arrived at in many cases may be subjective and dependent on the exercise of individual judgment. There is, therefore, no indisputable single value. I have arrived at an indicative EV based on my analysis. While I have provided an assessment of the value based on an analysis of information available to me and within the scope of my engagement, others may place a different value on this business.
- 10.12. Any discrepancies in any table / appendix between the total and the sums of the amounts listed are due to rounding-off.

- 10.13. Valuation is based on estimates of future financial performance or opinions, which represent reasonable expectations at a particular point of time, but such information, estimates or opinions are not offered as predictions or as assurances that a particular level of income or profit will be achieved, a particular event will occur or that a particular price will be offered or accepted. Actual results achieved during the period covered by the prospective financial analysis will vary from these estimates and the variations may be material.
- 10.14. I do not carry out any validation procedures or due diligence with respect to the information provided/extracted or carry out any verification of the assets or comment on the achievability and reasonableness of the assumptions underlying the financial forecasts, save for satisfying ourselves to the extent possible that they are consistent with other information provided to me in the course of this engagement.
- 10.15. My conclusion assumes that the assets and liabilities of the SPVs, reflected in their respective latest balance sheets remain intact as of the Report date.
- 10.16. Whilst all reasonable care has been taken to ensure that the factual statements in the Report are accurate, neither myself, nor any of my associates, officers or employees shall in any way be liable or responsible either directly or indirectly for the contents stated herein. Accordingly, I make no representation or warranty, express or implied, in respect of the completeness, authenticity or accuracy of such factual statements. I expressly disclaim any and all liabilities, which may arise based upon the information used in this Report. I am not liable to any third party in relation to the issue of this Report.
- 10.17. The scope of my work has been limited both in terms of the areas of the business & operations which I have reviewed and the extent to which I have reviewed them. There may be matters, other than those noted in this Report, which might be relevant in the context of the transaction and which a wider scope might uncover.
- 10.18. For the present valuation exercise, I have also relied on information available in public domain; however the accuracy and timelines of the same has not been independently verified by me.
- 10.19. In the particular circumstances of this case, my liability (in contract or under any statute or otherwise) for any economic loss or damage arising out of or in connection with this engagement, however the loss or damage caused, shall be limited to the amount of fees actually received by me from the Investment Manager, as laid out in the engagement letter for such valuation work.
- 10.20. In rendering this Report, I have not provided any legal, regulatory, tax, accounting or actuarial advice and accordingly I do not assume any responsibility or liability in respect thereof.
- 10.21. This Report does not address the relative merits of investing in InvIT as compared with any other alternative business transaction, or other alternatives, or whether or not such alternatives could be achieved or are available.
- 10.22. I am not an advisor with respect to legal, tax and regulatory matters for the proposed transaction. No investigation of the SPV's claim to title of assets has been made for the purpose of this Report and the SPV's claim to such rights have been assumed to be valid. No consideration has been given to liens or encumbrances against the assets, beyond the loans disclosed in the accounts. Therefore, no responsibility is assumed for matters of a legal nature.
- 10.23. I have no present or planned future interest in the Trustee, Investment Manager or the SPVs and the fee for this Report is not contingent upon the values reported herein. My valuation analysis should not be construed as investment advice; specifically, I do not express any opinion on the suitability or otherwise of entering into any financial or other transaction with the Investment Manager or SPVs.
- 10.24. I have submitted the draft valuation report to the Trust and Investment Manager for confirmation of accuracy of the factual data used in my analysis and to prevent any error or inaccuracy in this Report.

Limitation of Liabilities

- 10.25. It is agreed that, having regard to the RV's interest in limiting the personal liability and exposure to litigation of its personnel, the Sponsor, the Investment Manager and the Trust will not bring any claim in respect of any damage against any of RV personally.
- 10.26. In no circumstances RV shall be responsible for any consequential, special, direct, indirect, punitive or incidental loss, damages or expenses (including loss of profits, data, business, opportunity cost, goodwill or indemnification) in connection with the performance of the services whether such damages are based on breach of contract, tort, strict liability, breach of warranty, negligence, or otherwise, even if the Investment

Manager had contemplated and communicated to RV the likelihood of such damages. Any decision to act upon the deliverables (including this Report) is to be made by the Investment Manager and no communication by RV should be treated as an invitation or inducement to engage the Investment Manager to act upon the deliverable(s).

- 10.27. It is clarified that the Investment Manager will be solely responsible for any delays, additional costs, or other liabilities caused by or associated with any deficiencies in their responsibilities, misrepresentations, incorrect and incomplete information including information provided to determine the assumptions.
- 10.28. RV will not be liable if any loss arises due to the provision of false, misleading or incomplete information or documentation by the Investment Manager.
- 10.29. Further, this Report is necessarily based on financial, economic, monetary, market and other conditions as in effect on, and the information made available to me or used by me up to, the date hereof. Subsequent developments in the aforementioned conditions may affect this Report and the assumptions made in preparing this Report and I shall not be obliged to update, revise or reaffirm this Report if information provided to me changes.

Yours faithfully,

S. Sundararaman

Registered Valuer

IBBI Registration No.: IBBI/RV/06/2018/10238

Asset Class: Securities or Financial Assets

Place: Chennai

UDIN: 23028423BGYWID5198

Appendix 1 – Valuation of SPVs as on 30th June 2023

Abbreviations	Meaning
EBITDA	Operating Earnings Before Interest, Taxes, Depreciation and Amortization
MMR	Major Maintenance and Repair Expenses
Capex	Capital Expenditure
Wcap	Incremental Working Capital
FCFF	Free Cash Flow to the Firm
CAF	Cash Accrual Factor
DF	Discounting Factor
PVFCFF	Present value of Free Cash Flow to the Firm

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Appendix 1.1 – Valuation of GSHPL as on 30th June 2023 under the DCF Method

INR Mn															
Period	Financial Income	Changes in Financial Asset	O&M Income	Total Inflow from NHAI	Routine O&M Exp	Cash EBITDA	Major Maintenance Expenses	Capex	Change in WC	Tax	FCFF	Cash Accrual Factor	WACC	DF	Present Value of FCFF
A	B	C	D=A+B+C	F	G=D-F	H	I	J	K	L=G-H-I-J-K	M	N=L*M			
Aug-23	352	-89	35	298	38	260	-		(47)	48	260	0.19	7.48%	0.99	256
Feb-24	132	105	64	301	42	259	25		(42)	47	230	0.70	7.48%	0.95	218
Aug-24	128	134	35	297	37	261	-		(47)	46	262	1.20	7.48%	0.92	240
Feb-25	122	141	35	298	36	261	-		(47)	45	263	1.70	7.48%	0.88	233
Aug-25	117	138	38	293	39	254	-		(41)	43	253	2.20	7.48%	0.85	216
Feb-26	112	146	37	295	39	256	-		-	43	213	2.70	7.48%	0.82	176
Aug-26	107	144	40	290	40	250	-		-	41	209	3.20	7.48%	0.79	166
Feb-27	101	143	47	291	40	251	8		-	40	203	3.70	7.48%	0.77	156
Aug-27	96	149	42	287	43	244	-		-	38	206	4.20	7.48%	0.74	152
Feb-28	90	155	42	288	43	245	-		-	37	208	4.70	7.48%	0.71	148
Aug-28	85	155	45	284	45	239	-		-	35	204	5.20	7.48%	0.69	140
Feb-29	78	161	45	284	45	239	-		-	34	205	5.70	7.48%	0.66	136
Aug-29	73	-237	444	280	48	232	396		30	32	(226)	6.20	7.48%	0.64	(145)
Feb-30	81	151	47	280	48	232	-		(30)	31	231	6.70	7.48%	0.62	142
Aug-30	76	150	50	276	51	225	-		-	29	196	7.20	7.48%	0.59	117
Feb-31	70	155	50	275	51	225	-		-	27	197	7.70	7.48%	0.57	113
Aug-31	64	154	53	271	54	218	-		-	25	193	8.20	7.48%	0.55	107
Feb-32	59	159	53	271	54	217	-		-	24	193	8.70	7.48%	0.53	103
Aug-32	53	158	57	267	57	210	-		-	22	189	9.20	7.48%	0.51	97
Feb-33	47	155	64	265	57	209	8		-	20	181	9.71	7.48%	0.50	90
Aug-33	41	161	60	262	61	201	-		-	18	184	10.20	7.48%	0.48	88
Feb-34	35	166	60	260	60	200	-		-	16	184	10.71	7.48%	0.46	85
Aug-34	29	162	64	254	64	190	-		-	13	177	11.20	7.48%	0.45	79
Feb-35	23	162	63	247	64	183	-		-	12	172	11.71	7.48%	0.43	74
Aug-35	17	163	67	246	68	178	-		-	9	169	12.20	7.48%	0.41	70
Feb-36	10	-55	293	249	68	181	226		8	7	(60)	12.71	7.48%	0.40	(24)
Aug-36	13	158	71	242	72	170	-		(8)	5	173	13.21	7.48%	0.39	67
Feb-37	7	175	52	233	53	181	-		(24)	2	202	13.71	7.48%	0.37	75
Enterprise Value															3,376
Adjustments:															
Cash & Cash Equivalents															226
Adjusted Enterprise Value															3,601

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Appendix 1.2 – Valuation of RAHPL as on 30th June 2023 under the DCF Method

INR Mn															
Period	Financial Income	Changes in Financial Asset	O&M Income	Total Inflow from NHAI	Routine O&M Exp	Cash EBITDA	Major Maintainanc e Expenses	Capex	Change in WC	Tax	FCFF	Cash Accrual Factor	WACC	DF	Present Value of FCFF
A	B	C	D=A+B+C	F	G=D-F	H	I	J	K	L=G-H-I-J-K	M	N=L*M			
Mar-24	149	74	67	289	41	248	28		(40)	44	216	0.42	7.48%	0.97	210
Sep-24	145	106	35	286	37	249	-		(45)	42	252	0.92	7.48%	0.94	236
Mar-25	138	114	35	287	37	250	-		(45)	41	254	1.42	7.48%	0.90	229
Sep-25	133	113	37	283	39	244	-		(44)	40	248	1.92	7.48%	0.87	216
Mar-26	126	122	37	284	39	245	-		(1)	39	207	2.42	7.48%	0.84	174
Sep-26	120	122	39	281	41	240	-		-	37	202	2.92	7.48%	0.81	164
Mar-27	112	118	51	282	40	241	12		-	37	193	3.42	7.48%	0.78	151
Sep-27	107	130	41	278	43	235	-		-	35	200	3.92	7.48%	0.75	151
Mar-28	99	138	41	279	43	236	-		-	34	202	4.42	7.48%	0.73	147
Sep-28	92	141	44	276	45	231	-		-	32	199	4.92	7.48%	0.70	139
Mar-29	84	-491	684	276	45	231	640		74	31	(514)	5.42	7.48%	0.68	(348)
Sep-29	111	115	46	272	48	225	-		(40)	29	236	5.92	7.48%	0.65	154
Mar-30	104	122	46	273	48	225	-		(33)	28	230	6.42	7.48%	0.63	145
Sep-30	98	122	49	270	51	219	-		-	26	193	6.92	7.48%	0.61	117
Mar-31	91	130	49	269	50	219	-		-	25	194	7.42	7.48%	0.59	114
Sep-31	84	130	52	266	53	213	-		-	23	190	7.92	7.48%	0.56	107
Mar-32	77	137	52	266	53	213	-		-	22	191	8.42	7.48%	0.54	104
Sep-32	70	138	55	263	57	207	-		-	20	187	8.92	7.48%	0.53	98
Mar-33	62	136	64	262	56	206	9		-	18	178	9.42	7.48%	0.51	90
Sep-33	54	146	59	259	60	199	-		-	16	183	9.92	7.48%	0.49	89
Mar-34	46	153	59	258	60	198	-		-	15	184	10.42	7.48%	0.47	87
Sep-34	38	152	62	253	63	189	-		-	12	177	10.92	7.48%	0.45	81
Mar-35	30	155	62	247	63	184	-		-	11	173	11.42	7.48%	0.44	76
Sep-35	21	159	66	246	67	179	-		-	8	171	11.92	7.48%	0.42	72
Mar-36	12	-167	404	249	67	183	338		28	6	(189)	12.42	7.48%	0.41	(77)
Sep-36	22	152	70	243	71	172	-		(28)	4	196	12.92	7.48%	0.39	77
Mar-37	13	203	20	236	21	215	-		(13)	2	227	13.43	7.48%	0.38	86
Enterprise Value															2,888
Adjustments:															
Cash & Cash Equivalents															410
Adjusted Enterprise Value															3,298

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Appendix 1.3 – Valuation of RBPL as on 30th June 2023 under the DCF Method

INR Mn															
Period	Financial Income	Changes in Financial Asset	O&M Income	Total Inflow from NHAI	Routine O&M Exp	Cash EBITDA	Major Maintenance Expenses	Capex	Change in WC	Tax	FCFF	Cash Accrual Factor	WACC	DF	Present Value of FCFF
A	B	C	D=A+B+C	F	G=D-F	H	I	J	K	L=G-H-I-J-K	M	N=L*M			
Mar-24	148	63	33	244	28	217	-		(39)	40	216	0.46	7.86%	0.97	208
Sep-24	145	78	29	252	30	222	7		(39)	42	212	0.96	7.86%	0.93	197
Mar-25	140	91	28	259	30	230	-		(41)	41	230	1.46	7.86%	0.90	206
Sep-25	136	89	30	256	31	224	-		(40)	40	225	1.96	7.86%	0.86	194
Mar-26	131	96	30	257	31	226	-		(41)	38	228	2.46	7.86%	0.83	189
Sep-26	127	94	32	253	33	220	-		(40)	38	221	2.96	7.86%	0.80	177
Mar-27	121	94	39	254	33	221	-		(2)	36	186	3.46	7.86%	0.77	144
Sep-27	117	99	34	250	35	215	7		-	36	172	3.96	7.86%	0.74	128
Mar-28	112	105	34	251	35	216	-		-	34	182	4.46	7.86%	0.71	130
Sep-28	107	105	36	248	37	211	-		-	33	177	4.96	7.86%	0.69	122
Mar-29	101	111	36	248	37	211	-		-	32	179	5.47	7.86%	0.66	118
Sep-29	95	110	38	244	39	205	-		-	31	174	5.96	7.86%	0.64	111
Mar-30	89	-196	352	245	39	205	-		-	29	176	6.47	7.86%	0.61	108
Sep-30	100	100	41	241	42	199	314		21	28	(163)	6.96	7.86%	0.59	(96)
Mar-31	94	106	41	241	42	199	-		(21)	26	194	7.47	7.86%	0.57	110
Sep-31	89	105	43	237	44	193	-		-	25	168	7.96	7.86%	0.55	92
Mar-32	84	110	43	237	44	193	-		-	23	170	8.47	7.86%	0.53	89
Sep-32	78	110	46	234	47	187	-		-	22	165	8.96	7.86%	0.51	84
Mar-33	72	116	46	233	47	186	-		-	20	166	9.47	7.86%	0.49	81
Sep-33	66	115	49	230	50	180	-		-	19	161	9.96	7.86%	0.47	76
Mar-34	60	113	55	229	49	179	-		-	17	162	10.47	7.86%	0.45	73
Sep-34	55	119	52	225	53	172	7		-	16	150	10.96	7.86%	0.44	66
Mar-35	48	124	51	224	52	171	-		-	14	158	11.47	7.86%	0.42	66
Sep-35	42	124	55	220	56	165	-		-	12	153	11.96	7.86%	0.40	62
Mar-36	36	127	55	217	56	161	-		-	10	151	12.47	7.86%	0.39	59
Sep-36	29	122	58	210	59	151	-		-	8	142	12.97	7.86%	0.37	53
Mar-37	23	-33	220	210	59	151	-		-	6	145	13.47	7.86%	0.36	52
Sep-37	24	143	44	211	61	150	162		2	-	(14)	13.97	7.86%	0.35	(5)
Mar-38	17	145	44	205	61	144	-		(2)	-	146	14.47	7.86%	0.33	49
Sep-38	9	183	5	198	61	136	-		(11)	-	147	14.97	7.86%	0.32	48
Enterprise Value															2,991
Adjustments:															
Cash & Cash Equivalents															1
Adjusted Enterprise Value															2,992

*RBPL is expected to incur a capital expenditure (Capex) of approximately INR 250 Mn to 300 Mn between 30th June 2023 and 31st January, 2024 in order to complete the remaining portion of the project. As represented by the Investment Manager, the mentioned Capex will be borne by the Seller of the SPV under the agreed purchase price mechanism between the buyer and seller.

Appendix 2 – Weighted Average Cost of Capital of the SPV as on 30th June 2023

Particulars	GSHPL	RAHPL	RBPL	Remarks
Risk Free Rate (Rf)	7.09%	7.09%	7.09%	Risk Free Rate has been considered based on zero coupon yield curve as at 30 th June 2023 of Government Securities having maturity period of 10 years, as quoted on the website of Clearing Corporation of India Ltd (CCIL)
Equity Risk Premium (ERP)	7.00%	7.00%	7.00%	Based on historical realized returns on equity investments over a risk free rate represented by 10 years government bonds, a 7% equity risk premium is considered appropriate for India
Beta (relevered)	0.47	0.47	0.47	Beta has been considered based on the beta of companies operating in the similar kind of business in India
Base Cost of Equity	10.36%	10.36%	10.36%	Base Ke = Rf + ERP * \square
Company Specific Risk Premium (CSRP)	0.00%	0.00%	1.00%	Based on SPV specific risk(s)
Adjusted Cost of Equity (Ke)	10.36%	10.36%	11.36%	Adjusted Ke = Rf + ERP * \square + CSRP
Pre-tax Cost of Debt (Kd)	8.35%	8.35%	8.50%	As represented by the Investment Manager
Tax rate of SPV	25.17%	25.17%	25.17%	Tax Rate Applicable to SPV is considered
Post-tax Cost of Debt	6.25%	6.25%	6.36%	Post-tax Kd = Pre-tax Kd * (1-Tax rate)
Debt / (Debt + Equity)	70%	70%	70%	Debt : Equity ratio computed as [D/(D+E)] is considered as 70%
WACC	7.48%	7.48%	7.86%	WACC = [Ke * (1 - D/(D+E))] + [Kd * (1-t) * D/(D+E)]

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Appendix 3.1 – GSHPL: Summary of approval and licences

Sr. No. Approvals		Date of Issue	Validity	Issuing Authority
1	Permission of Environment Ministry for cutting of trees	09-Aug-18		Ministry of Environment, Forest and Climate Change
2	Grant of consent to establish to M/s HG Infra Engineering Ltd.	11-Jun-19	10-Jun-22	Haryana State Pollution Control Board
3	Grant of consent to operate to M/s HG Infra Engineering Ltd.	22-Apr-20	31-Dec-22	Haryana State Pollution Control Board
4	Inspection Certificate for Static Weight Bridge at various Toll Plazas (Legal Metrology)		02-Aug-23	
5	Inspection Certificate for WIM installed at various Toll Plazas		02-Aug-23	
6	Employees Provident fund Code Number			
7	Labour licenses (issued by local Labour Commissioner)	15-May-23	05-May-24	

Source: Investment Manager

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Appendix 3.2 – RAHPL: Summary of approval and licences

Sr. No.	Approvals	Date of Issue	Validity	Issuing Authority
1	Grant of consent to operate to M/s HG Infra Engineering Ltd.	22-Nov-19	31-Dec-22	Haryana State Pollution Control Board
2	Construction of proposed Narnaul Bypass as an Economic Corridor & Ateli Mandi to Narnaul section of NH-11 from 43.445 to 56.900 (designed length 14km) as a Feeder Route in the state of Haryana.	07-Aug-19		National Highways Authority of India
3	Upgradation of four lane of Rewari-Ateli Mandi section of NH-11 from 11+780 to km 43+445 Package-III as feeder route in the State of Haryana	20-Jan-20		National Highways Authority of India
4	Application for consent to operate under section 21 of Air (Prevention and Control of Pollution) Act, 1981.	31-Jan-20		Rajasthan State Pollution Control Board
5	Application for the grant of permit under Rule 31 of the Haryana Minor Mineral Concession for excavation of Ordinary clay or Earth.	28-Jan-21	08-Mar-21	Mining Officer, Mining & Geology Department
6	Regarding lifting of ordinary soil	01-Sep-22		Mining Officer, Mining & Geology Department
7	Permission of Environment Ministry for cutting of trees			
8	Inspection Certificate for Static Weight Bridge at various Toll Plazas (Legal Metrology)		29-May-24	
9	Inspection Certificate for WIM installed at various Toll Plazas		29-May-24	
10	Permission for setting up of Plant, installation of crushers, camp, stockyard, etc.			
11	Commissioning approval of the electrical installation for availing temporary power supply for Construction purpose			
12	Employees Provident fund Code Number			
13	Labour licenses (issued by local Labour Commissioner)	18-Aug-21	24-Aug-23	

Source: Investment Manager

Appendix 3.3 – RBPL: Summary of approval and licences

Sr. No.	Approvals	Date of Issue	Validity	Issuing Authority
1	CRS Sanction for the construction and launching of Limited Height Subway between stations Rewari Ateli Mandi - Karnawas in Rewari Alwar.	26-Apr-21		Commissioner of Railway Safety, Government of India
2	Construction of proposed Rewari Bypass (designed length 14.4km) as a Feeder Route in the state of Haryana.	15-Jan-21		National Highways Authority of India
3	Grant of consent to operate to M/s HG Infra Engineering Ltd.	12-Dec-22	31-Dec-24	Haryana State Pollution Control Board
4	Application for consent to operate under section 21 of Air (Prevention and Control of Pollution) Act, 1981.	31-Jan-20		Rajasthan State Pollution Control Board
5	Application for the grant of permit under Rule 31 of the Haryana Minor Mineral Concession for excavation of Ordinary clay or Earth.	25-Jan-23	31-Mar-23	Mining Officer, Mining & Geology Department
6	Application for the grant of permit under Rule 31 of the Haryana Minor Mineral Concession for excavation of Ordinary clay or Earth.	28-Jan-21	15-Mar-21	Mining Officer, Mining & Geology Department
7	Construction of proposed Rewari Bypass:- Regarding NOC for town Planning department.	26-Sep-20		National Highways Authority of India
8	Grant of temporary change of land use permission for setting up of RMC plant, WWW Plant and Weigh Bridge in the revenue estate of Village Kharsanki.	25-Jun-22		Directorate of Town & Country Planning, Haryana
9	Permission of Environment Ministry for cutting of trees	07-Feb-20		Ministry of Environment, Forest and Climate Change
10	Regarding lifting of ordinary soil	28-Sep-23	27-Oct-23	
11	Commissioning approval of the electrical installation for availing temporary power supply for Construction purpose			
12	Labour licenses (issued by local Labour Commissioner)	13-Mar-21	12-Mar-24	

Source: Investment Manager

<< End of Report >>