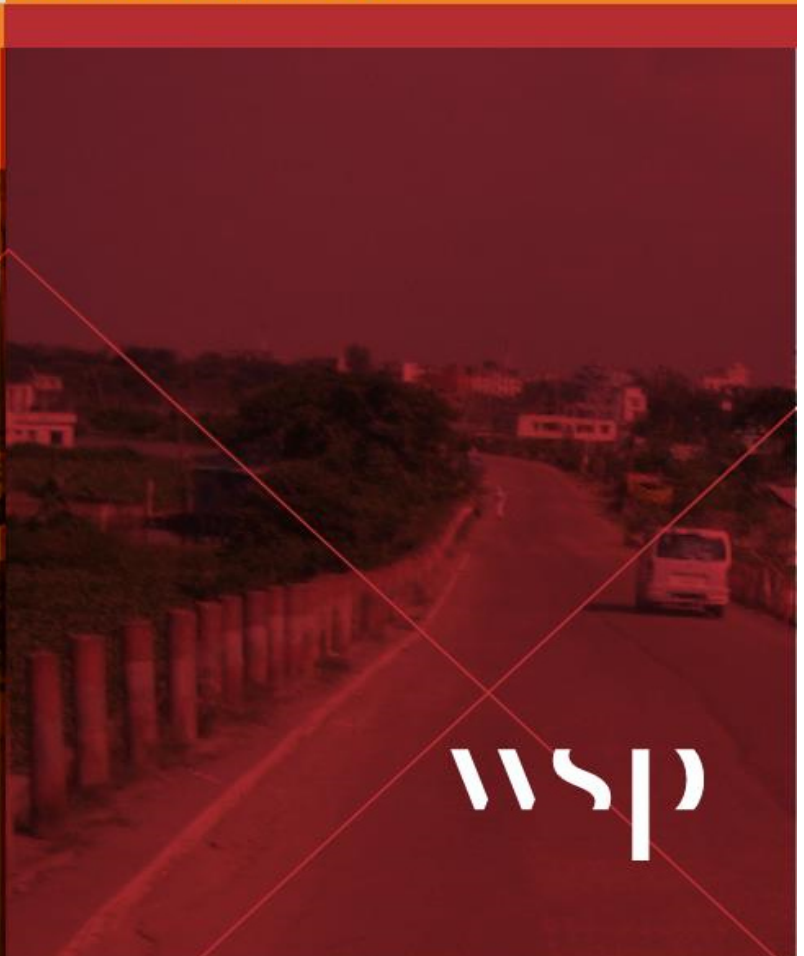




ADB TA 8909  
FEASIBILITY STUDY FOR RAMPURA-AMULIA-DEMRA  
ROAD PPP PROJECT

# VOLUME 6 DRAFT FINAL PPP STRUCTURING & PROJECT DELIVERY OPTIONS: PART 2 FINANCIAL FEASIBILITY REPORT

SEPTEMBER 2017 | 16M-02385-01



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**ADB TA 8909: Feasibility Study for Rampura-Amulia-Demra Road PPP  
Project, Dhaka, Bangladesh**

**PPP STRUCTURING & PROJECT DELIVERY  
OPTIONS: PART 2 FINANCIAL FEASIBILITY  
REPORT**

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## EXECUTIVE SUMMARY

As part of the Feasibility Study for the Rampura-Amulia-Demra (RAD) Public Private Partnership (PPP) road project, this report presents an analysis of the financial viability of the project. Given the results of the analysis presented in other volumes of this Feasibility Study, this report focuses on the financial viability of the RAD project as a Design-Build-Finance-Operate-Maintain (DBFOM) PPP project.

Five potential PPP structures have been reviewed in this financial analysis, and revolve around three key structuring issues: traffic risk, advantages of providing upfront payments and currency risk. Each structure addresses these key structuring issues – to a certain point – and takes into account the restrictions and priorities of the Government of Bangladesh. Each structure has also been reviewed based on the following key parameters: attractiveness to equity investors and bankability and amount of debt financing.

The five structures analyzed include four Availability Payment (AP) Models, and one Demand-Risk Model:

1. AP Model with VGF and CRMM
2. AP Model (sculpted) with VGF and CRMM
3. AP Model (non-sculpted) with CRMM
4. Demand-Risk Model with VGF, MRG and CRMM
5. AP Model with VGF (no CRMM)

Based on the analysis conducted, structure 3 (AP Model (non-sculpted) with CRMM) presents as the most efficient model for implementation of the project, followed by structure 2, then structure 1. Further, it was determined that structures 4 and 5 are not viable options to implement the project.

Structure 2 (AP Model (sculpted) with CRMM) would be the most efficient mechanism for the government to support the project (with the highest government NPV). This structure allows the concessionaire to optimize its capital structure and, hence, requires lower APs from the government. Nevertheless, the government would need to have the capacity to pay higher APs during the first years of operations than in structures 1 and 3.

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## ACRONYMS

ADB	Asian Development Bank
AP	Availability Payment
BDT	Bangladesh Taka
BIFFL	Bangladesh Infrastructure Finance Fund Limited
CAPEX	Capital Expenditure
CNG	Compressed Natural Gas Vehicles
CPI	Consumer Price Index
CRMM	Currency Risk Mitigation Mechanism
D:E	Debt-to-Equity
DBFOM	Design, Build, Finance, Operate and Maintain
DSCR	Debt Service Coverage Ratio
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortization
GoB	Government of the People's Republic of Bangladesh
IDCOL	Infrastructure Development Company Limited
IRR	Internal Rate of Return
LIBOR	London Interbank Offered Rate
LIF	Local Infrastructure Fund
MMHF	Mayor Mohammed Hanif Flyover
MRG	Minimum Revenue Guarantee
NPV	Net Present Value
PPP	Public Private Partnership
ROW	Right of Way
USD	US Dollar
VAT	Value-Added Tax
VGf	Viability Gap Funding

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# 1. INTRODUCTION

## 1.1. Background

In order to improve connectivity between Dhaka and surrounding districts and reduce urban congestion, the Government of the People's Republic of Bangladesh (GoB) is developing a number of key transportation corridors in and around Dhaka. One of the projects currently being considered for feasibility as Public Private Partnership (PPP) is the Hatirjheel – Rampura – Banasree Ideal School and College – Shekher Jayga – Amulia – Demra Highway (including the connecting point of Chittagong Road and the Tarabo Link Road), henceforth the Rampura-Amulia-Demra (RAD) Road. It is anticipated that this project be executed as a PPP, transferring the Design, Build, Finance, Operations and Maintenance (DBFOM) responsibilities to a private partner.

The GoB considers that RAD will provide a safe and efficient connection for road users travelling between the south-eastern part of Dhaka, with national highways (N1 and N2), and the mid-northern areas of Gulshan, Banani and Baridhara in Dhaka. There are three stated objectives to the Rampura-Demra PPP Project, which are:

- to create an alternate and congestion-free gateway to Dhaka;
- to provide better connectivity between Dhaka and Narayanganj, Chittagong, Sylhet and other eastern and south eastern districts of Bangladesh; and
- to improve the quality of life of this corridor's road users.

## 1.2. Project Description

RAD is being considered for development as a 13.5km, 4-lane access-controlled toll expressway with a toll-free service road, which will serve local traffic, including CNGs (compressed natural gas vehicles), motorbikes and non-motorized vehicle traffic. The RAD project is anticipated to align predominantly in accordance with the existing road Right of Way (ROW). As such, three design concepts were developed for consideration and further analysis (illustrated in Figure 1 below).

- Concept 1: Fully elevated concept design for the entire alignment. This is illustrated by the purple line in **Figure 1**.
- Concept 2: Combined concept design, with approximately 9.5 km of elevated road and 4km at-grade road (fully at-grade from chainages 3+460 to 7+300).
- Concept 3: Combined (9.5 km elevated and 4km at-grade) w/ Staff Quarter Realignment, as illustrated by the red line re-alignment in the middle circle of **Figure 1**.

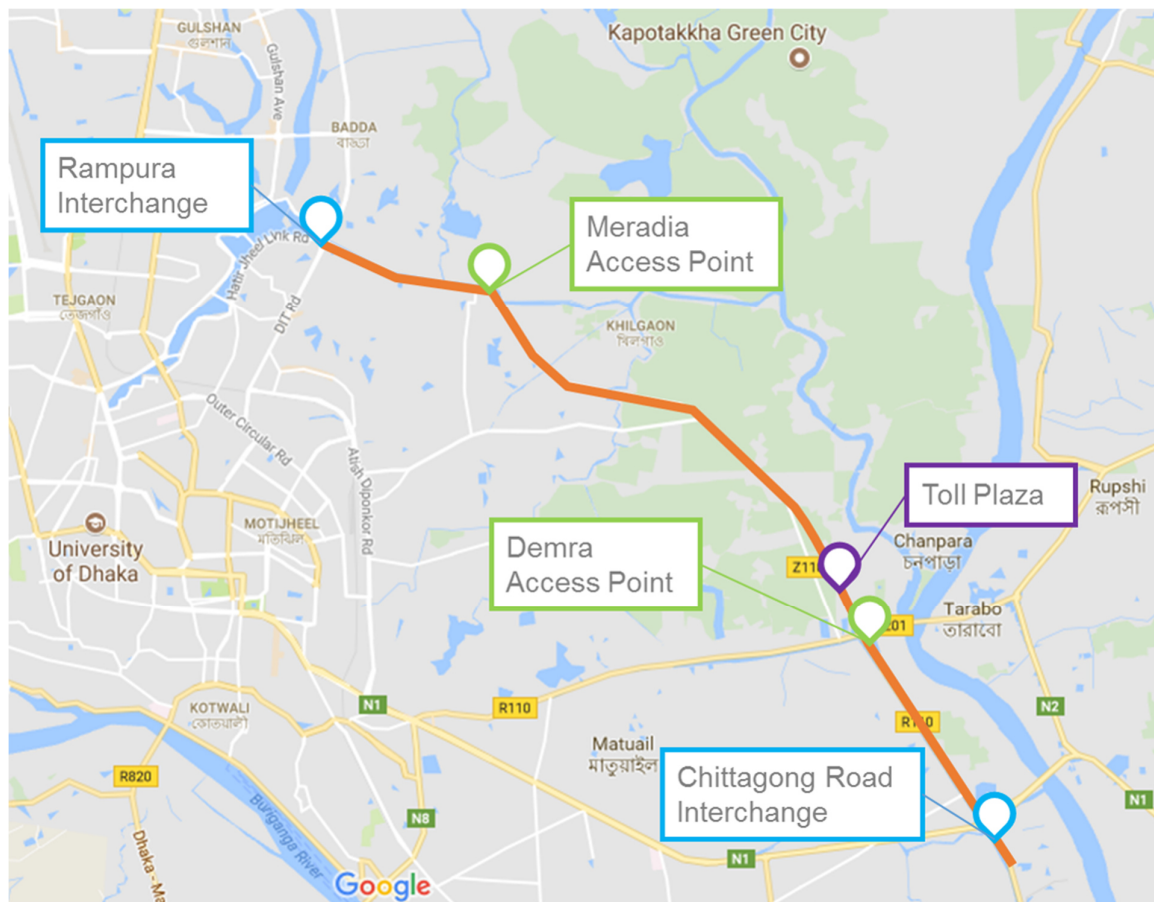


Figure 1: Project Alignment

Based on the analysis presented in the various other volumes of this report, the preferred project alternative is concept 3, with the combined elevated and at-grade road and straightened alignment at Staff Quarter. The financial analysis is therefore based on concept three and the results of this are presented herein.

### 1.3.Objectives

The overarching objective of this report is to analyze the viability of the RAD project in financial terms. Specifically, the analysis involves:

- determining project costs, including hard and soft construction costs, operating and maintenance costs and capital maintenance costs that will be incurred over the concession period;
- developing revenue forecasts, based on traffic projections presented in Volume 3, Traffic Demand Study;
- developing a financial model to determine the viability of the project on the basis of various PPP models, including availability payments (annuity) and demand risk models, with or without additional government support (e.g. viability gap funding, minimum revenue guarantee) and/or other methods to enhance the attractiveness of the project to potential bidders;
- sensitivity analysis on various inputs, including traffic volumes and tariff levels
- development of recommendations for the optimum structuring for the delivery of this project; and
- listing out all assumptions made in the analysis presented herein, including inflation rate, discount rate, depreciation, and forecast demand.

### 1.4. Methodology

The financial model developed for the purposes of this analysis is based on a number of key inputs, including capital, operating and capital maintenance costs, user revenue (tolls) and government annuity payments (availability payments), and other forms of government support. The purpose the model is to assess the viability of various project models, on the basis of a number of key financial indicators, including Net Present Value (NPV), Internal Rate of Return (IRR) and other leverage ratios such as Debt Service Coverage Ratio (DSCR) or Leverage Ratio.

- **NPV** is the sum present value of all future cash inflows and cash outflows. Where the NPV is positive, the value of the cash inflows (revenue) is greater than the cash outflows (negative). It is a useful tool to evaluate project profitability, taking into account the time value of money (in other words: a dollar earned in the present has a greater value than a dollar earned in the future). The RAD model uses the NPV to determine the cost of the project for the Government. Importantly, while a higher NPV implies greater value to the government for doing the project, a negative NPV does not, by itself, suggest that the project should not be done. If the government has decided that the project should be done (e.g. strong economic IRR) and has value for money to be done as a PPP, a negative NPV indicates the net cost of the project to implement the project which may still be less than the cost if the government had to implement the project on its own.
- **IRR** identifies the discount rate at which the NPV of a project reaches zero. The IRR can be used to compare investments, or a minimum IRR can be set to determine

whether a project is considered a good investment. The RAD model calculates the IRR on both the project and the equity investment (in BDT and USD).

- **DSCR** can be defined as the relation between the cashflow of a period and the current debt obligations, including principal and interest payments on a loan, sinking funds and lease payments (in that same period). The DSCR is expressed as the net operating income as a multiple of debt obligations. Where the DSCR is greater than 1, the project is considered to have sufficient revenue to cover current debt payments (i.e. positive cash flow); where it is less than 1, the project does not have sufficient revenue to cover debt obligations (i.e. negative cash flow). In the scenario in which the DSCR falls below 1, the project company would need to cover its debts through an injection of additional equity. This is an important indicator for lenders, who will require a minimum DSCR to provide assurance that the project company is able to repay its debts. The RAD model calculates the DSCR for each cash flow period and checks for the lowest DSCR, to show that the structure developed has a minimum buffer to ensure debt obligations are covered in each period.
- **Leverage/Gearing Ratios** are a set of financial ratios that measure the level of debt incurred by the project company in relation to other accounts. One of these ratios, the debt-to-equity (D:E) ratio compares liabilities to shareholders' equity. This ratio illustrates the relative financial commitment of lenders vs. shareholders; in other words, it illustrates how much debt is being used to finance activities in relation to the value held as shareholders' equity (**'skin in the game'**). Lenders will tend to require a minimum D:E ratio to minimize their risk. The D:E ratio was determined for each one of the RAD structuring scenarios, in accordance with the provision of public funds, source of financing (i.e. local or USD lenders) and the other financial indicators mentioned above.

Using these key metrics, the model helps determine the appropriate financial structure and risk allocation for the RAD project and the level of payment necessary to make this project bankable to the private partner and what the concomitant government contribution would be required.

## 2. KEY INPUTS & ASSUMPTIONS

In order to conduct the financial analysis, a number of assumptions were made. This section lists all key assumptions made to determine the costs and revenues associated with the project, as well as key assumptions made for the purposes of modeling, including, for instance, discount rates and inflation.

PROJECT DETAILS		NOTES
Project Name	Rampura Amulia Demra PPP Project	
Project Type	Expressway	
Road Length	13.5 km	
Concept Selected for Analysis	Concept 3: Elevated (9.4km) At-grade (4.1km)	Refer to Volume 2 for details
Procurement Type	PPP	Refer to Volume 5 for details
Procurement Structure	DBFOM	Refer to Volume 5 for details
Concession Length	25 years	Total incl. construction & operations
Design/Construction Start	Mid-2019	
Design/Construction Period	4 years	
Operations Start	Mid-2023	
Operations Period	21 years	
Concession End	Mid-2044	

Table 1: Project Details

### 2.1. Project Costs

#### 2.1.1 Capital Costs

Table 2 outlines the key capital costs to the concessionaire associated with the project. Including both hard and soft costs, the total cost for Concept 3 is under BDT 27 Billion, or c. USD 338M. These costs are expressed in 2017 currency, and are developed on the basis of RHD's rate schedule published in August 2015. For a breakdown of the cost estimate and further details on costing assumptions, please refer to Volume 2 of the Feasibility Study. It is assumed that 5% of capital costs will be expended in year 1 of construction, followed by 35%, 30% and 30% in the following years. These costs represent only the costs to the concessionaire. Escalation and exchange risk on these costs will be discussed in section 2.3.1.

Bill No	Description	Concept 1	Concept 2	Concept 3
1	General & Site Facilities	115,397,765	114,933,765	114,933,765
2	Earthwork	363,580,558	344,263,896	409,504,460
3	Pavement Work	1,861,391,274	1,645,378,244	2,356,651,723
4	Foundation Work	4,248,463,403	4,088,990,846	3,961,626,036
5	Structures (incl. interchanges)	9,265,899,300	7,740,363,212	7,295,574,554
6	Incidentals	192,806,130	53,512,669	55,201,679
7	Dayworks	2,500,000	2,500,000	2,500,000
A	Subtotal Construction (Pre-Contingency & Soft Costs)	16,050,038,430	13,989,942,633	14,195,992,217
B	Specified Provisional Sums (included in 1-7)	30,475,000	30,475,000	30,475,001
C	Physical Contingency (on A-B)	2,910,143,565	1,395,946,763	1,416,551,722
D	Subtotal of Bills (A+C)	17,491,336,388	15,385,889,396	15,612,543,939
E	Price Contingency (on D-B)	3,492,172,278	2,303,312,159	2,337,310,341
F	Subtotal Hard Costs	20,983,508,666	17,689,201,555	17,949,854,280
G	Consultancy Service (on F)	2,098,350,867	707,568,062	717,994,171
H	Traffic Management / Construction Control (on F)	629,505,260	1,415,136,124	1,435,988,342
I	Business Administrative Cost (on F)	-	88,446,008	78,062,720
J	Allowance for Development Uncertainty & Risk	-	-	228,218,820
K	Subtotal Soft Costs	2,727,856,127	2,211,150,194	2,460,264,053
L	Independent Engineer (Developer Portion, 50%)	300,000,000	300,000,000	300,000,000
M	Legal Procurement and Bid Costs	230,000,000	230,000,000	230,000,000
N	Subtotal Developer Costs	530,000,000	530,000,000	530,000,000
<b>Total Costs (BDT)</b>		<b>25,710,210,400</b>	<b>20,430,351,749</b>	<b>20,940,118,333</b>
<b>Total Costs (USD)</b>		<b>321,377,630</b>	<b>255,379,397</b>	<b>261,751,479</b>

Table 2: Capital Costs, RAD

## 2.1.2 Government Contributions

Prior the opening of RAD, the government will have a number of upfront costs; these include its portion of the independent engineer and land acquisition costs. These costs do not affect the viability of the project from a concessionaire standpoint, but are borne by the government. Land acquisition and resettlement compensation costs, for instance, represent a risk that is best managed by the government; the acquisition of land, in turn, must occur prior to financial close to provide the concessionaire with the comfort that this will not cause any issues or delays to the development of the expressway. These government contributions are outlined in Table 3 and Table 4, below. It is anticipated that the land acquisition and resettlement costs are between BDT 3,164,709,451 and 7,610,567,909 for Concept 2 and BDT 4,354,243,697 and BDT 8,498,833,160 for Concept 3. The key difference between Concept 2 and Concept 3 is the cost of land acquisition associated with the straightening out of the alignment at Staff Quarter. This adjustment results in a lower overall cost to construct, and a higher cost for land

acquisition as it is outside the existing ROW. The detailed analysis of the cost of utility relocation was carried out at the final stage of the study. For the purposes of this analysis, utility relocation costs have been assumed to be the same across concept 2 and 3.

GOVERNMENT CONTRIBUTIONS		Low	High
Independent Engineer (Government Portion, 50%)		300,000,000	300,000,000
RAP Implementation		12,000,000	60,000,000
Project Implementation Unit		644,572,652	644,572,652
Utility Relocation		75,000,000	75,000,000
Land Acquisition & Resettlement Compensation		3,164,704,451	7,610,567,909
<b>Total Costs (BDT)</b>		<b>3,464,704,451</b>	<b>7,910,567,909</b>
<b>Total Costs (USD)</b>		<b>43,308,805</b>	<b>98,882,100</b>

Table 3: Government Contributions (Concept 2)

GOVERNMENT CONTRIBUTIONS		Low	High
Independent Engineer (Government Portion, 50%)		300,000,000	300,000,000
RAP Implementation		12,000,000	60,000,000
Project Implementation Unit		644,572,652	644,572,652
Utility Relocation		75,000,000	75,000,000
Land Acquisition & Resettlement Compensation		4,354,243,697	8,498,833,160
<b>Total Costs (BDT)</b>		<b>4,654,243,697</b>	<b>8,798,833,160</b>
<b>Total Costs (USD)</b>		<b>58,178,046</b>	<b>109,985,415</b>

Table 4: Government Contributions (Concept 3)

There are additional costs to the government in various forms (e.g. viability gap funding, availability payments, etc.), however, these are contingent on the specific PPP structure selected, and will be assessed in the latter sections of this report.

### 2.1.3 Operating & Capital Maintenance Costs

It is estimated that the total annual operating costs under Concept 3 will total just over BDT 350M or nearly USD 4.5M per year. The Operating costs are assumed to be constant over the course of the concession (plus indexation). In terms of capital maintenance costs, the cost is estimated to total over BDT 500M or nearly USD 6.5M every five years. For the purposes of modeling, the capital maintenance values have been flat-lined across all periods. Indexation and foreign exchange impacts on these costs will be discussed in section 2.3.1.

Operating Costs	Concept 1	Concept 2	Concept 3
Maintenance of Toll Road	9,667,000	15,412,000	15,412,000
Service Area	7,200,000	7,200,000	7,200,000
Maintenance of Equipment and Devices	28,573,000	28,648,000	28,648,000
Administrative Costs	175,266,000	175,266,000	175,266,000
Utility	51,000,000	51,000,000	51,000,000
Transport	22,500,000	22,500,000	22,500,000
Consultant	27,500,000	27,500,000	27,500,000
Fee	21,200,000	21,200,000	21,200,000
Miscellaneous (Unknown)	6,666,000	6,666,000	6,666,000
<b>Total Cost (BDT)</b>	<b>349,572,000</b>	<b>355,392,000</b>	<b>355,392,000</b>
<b>Total Cost (USD)</b>	<b>4,369,650</b>	<b>4,442,400</b>	<b>4,442,400</b>

Table 5: Operating Costs, RAD



Capital Maintenance Costs	Concept 1	Concept 2	Concept 3
Maintenance of Toll Road	-	4,000,000	4,000,000
Scarify, Mix & Recompact Existing Pavement & Shoulder	-	4,000,000	4,000,000
Bituminous Tack Coat	-	134,820,000	134,820,000
Dense Bituminous Surfacing-Base Course	322,816,000	322,816,000	322,816,000
Dense Bituminous Surfacing-Wearing Course	-	-	-
Repair of Potholes on Existing Pavement	-	4,000,000	4,000,000
Subtotal	322,816,000	465,636,000	465,636,000
Contingency	32,282,000	46,563,600	46,563,600
<b>Total Cost (BDT)</b>	<b>355,098,000</b>	<b>512,199,600</b>	<b>512,199,600</b>
<b>Total Cost (USD)</b>	<b>4,438,725</b>	<b>6,402,495</b>	<b>6,402,495</b>

Table 6: Capital Maintenance Costs, RAD

## 2.2 Project Revenue

### 2.2.1 Tolling

For the purposes of this analysis, the toll rates shown in Table 7, below were used as the base toll rates for RAD. The base toll rates are consistent with those charged on the existing Mayor Mohammad Hanif Flyover (MMHF).

TOLL CATEGORIES	TOLL RATE (2018)
Large Truck with at least 3 axles (trailer)	416.00
Large Truck	313.00
Medium Truck with at least 2 axles	209.00
Large Bus (>31 seat capacity incl. driver)	313.00
Small Truck (3 ton capacity)	157.00
Minibus, Coaster (<31 pax capacity)	209.00
Microbus	103.00
Sedan Car	73.00
Pick Up, Jeep, Wrecker, Converted Jeep, Crane	13.00
Motor Cycle	0.00
CNG, Auto Rickshaw, Tempo, EDR	0.00
Rickshaw, Bicycle, Cart, NMT	0.00

Table 7: Toll Rates

The financial analysis utilizes various toll rate escalation methodologies, including that currently followed in other access-controlled highways in Dhaka. The base case used throughout this analysis indexes toll rates every 18 months (3 periods) to 100% of the Consumer Price Index (CPI) – this index is illustrated in Figure 2, below. Other approaches are outlined in the tolling sensitivity analysis, presented in section 5.3.

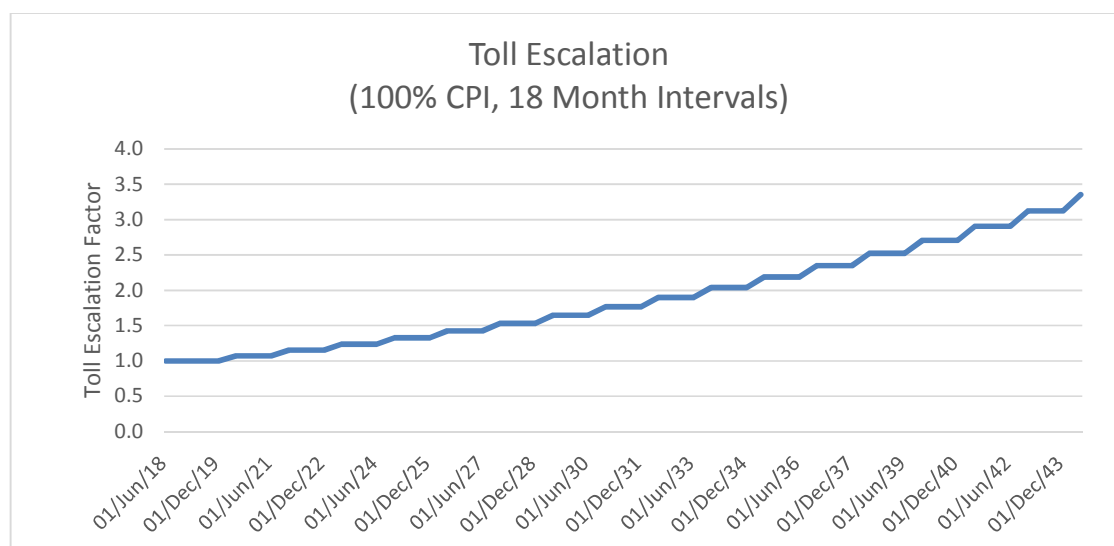


Figure 2: Toll Escalation (100% CPI, 18 Month Intervals)

## 2.2.2 Traffic Forecast

Traffic demand forecasts were determined on the basis of the toll rates presented above in Table 7, using a toll escalation rate equal to 100% of the Consumer Price Index (CPI). A separate sensitivity analysis on toll escalation was also conducted, and is presented in Section 5.3 of this report. Details on the basis of the traffic forecasts can be found in Volume 3: Traffic Demand Study.

TRAFFIC FORECAST	FY 2020	FY 2025	FY 2030	FY 2035	FY 2040	FY 2045	FY 2050
Large Truck with at least 3 axles (trailer)	677	2,545	3,494	4,619	5,646	6,447	7,250
Large Truck	1,015	3,818	5,241	6,928	8,468	9,670	10,875
Medium Truck with at least 2 axles	1,299	4,883	6,703	8,861	10,832	12,369	13,910
Large Bus (>31 seat capacity incl driver)	157	592	813	1,074	1,313	1,499	1,686
Small Truck (3 ton capacity)	944	3,552	4,875	6,445	7,878	8,996	10,116
Minibus, Coaster (<31 pax capacity)	1,102	4,144	5,688	7,519	9,191	10,495	11,802
Microbus	881	3,315	4,550	6,015	7,352	8,396	9,442
Sedan Car	1,472	5,535	7,597	10,043	12,276	14,018	15,764
Pick Up, Jeep, Recker, Converted Jeep, Crane	323	1,213	1,666	2,202	2,692	3,073	3,456
<b>Total</b>	<b>7,870</b>	<b>29,597</b>	<b>40,625</b>	<b>53,705</b>	<b>65,647</b>	<b>74,963</b>	<b>84,300</b>

Table 8: Traffic Forecast (100% CPI)

## 2.3 Key Modeling Assumptions

The following table outlines the key modeling assumptions utilized in the financial analysis, including the modeling timeframe and periods, discount rate used, inflation rates, exchange rate, depreciation and taxes. The financial analysis is performed on the life of the concession, which is assumed to be 25 years, including a construction period of 4 years; as such it is assumed that the value of the asset (to the concessionaire) reaches zero at the end of the concession in mid-

2044. The model is calculated on a semi-annual basis, that is, calculations are made (e.g. compounded) every 6 months (or 1 period).

KEY MODELING ASSUMPTIONS		NOTES
Concession Length	25 years	
Design/Construction Start	Mid-2019	
Design/Construction Period	4 years	
Operations Start	Mid-2023	
Operations Period	21 years	
Revenue Service Period	2023-2044	equal to Operations Period
Modeling Start	Mid-2017	(e.g. for calculation of inflation, currency depreciation)
Modeling Periods	Semi-annual	
General Inflation (CPI)	4.8% annually	Projected Inflation for Bangladesh, 2020 <sup>1</sup>
CAPEX Inflation (CPI + 1%)	5.8% annually	CPI + 1%
Depreciation	2.4%/period	Asset value at end of Concession is assumed=0
Corporate Tax	15%	Following a 10-year moratorium (exemption)
Value Added Tax (VAT)	15%	Exempt on Soft Costs (e.g. Engineering Services, Maintenance)

Table 9: Key Modeling Assumptions

### 2.3.1 Macroeconomic and Tax Assumptions

- Inflation:** As outlined earlier, tolls are escalated on the basis of CPI (4.8%, see General Inflation, Table 9). Operating Costs and Capital Maintenance Costs are also indexed to CPI. Capital Costs and Capital Maintenance Costs are indexed to CPI + 1% (see CAPEX Inflation, Table 9), to account for the escalating costs of construction materials (input/commodity costs, which are expected by most industry experts to rebound in the near future) and indeed, labour. Escalation is calculated on each period (6 months).
- Currency Risk & Forecast:** For the purposes of this analysis, it has been assumed that approximately 40% of the construction costs will occur in foreign currency (USD, specifically). As such, the cost estimate is subject to risks in the depreciation of the BDT vis-à-vis the USD. In addition, this financial analysis assumes that a significant portion of the debt required for the project will be from international lenders and be denominated in USD.

Provision has been made to account for this risk by calculating the potential impact of this risk and including the currency loss in the overall analysis. A constant 0.5% depreciation in the value of BDT has been assumed in the base case across each modeling period (every 6 months) on the 40% portion subject to currency risk. Further, a sensitivity analysis on this amount has also been included in section 5.4 of this report to account for a more pessimistic scenario (using a currency forecast based on the purchase power parity model). As outlined in section 2.4, the model assumes that a significant portion of the debt required to finance the project will

<sup>1</sup> <http://www.tradingeconomics.com/bangladesh/inflation-cpi/forecast>

come from international lenders and will be denominated in USD. Future fluctuations in the exchange rate would also affect the ability of the concessionaire to repay debt and the model accounts for this risk.

- **Tax Rates:** Value-Added Tax (VAT) and Corporate Tax have been included in the financial analysis. VAT is applied to Hard Construction Costs and tolls, with VAT exemptions for Soft Construction Costs, Developer Contributions; the Independent Engineer (GOB portion); toll operations and maintenance costs; and capital maintenance costs. The costs are, in turn, treated as a form of government revenue. As outlined in Table 9, the tax rates utilized in this analysis are 15% for VAT and 15% for Corporate Tax, however, it is noteworthy that the project is exempt from Corporate Tax for the first 10 years.

## 2.4.Financing Assumptions

Table 10 outlines the key financing assumptions made in the base case of this financial analysis. For the purposes of modeling, and on the basis a market consultation exercise, it was assumed that there are three key sources of financing: a local infrastructure financing facility, for example Infrastructure Development Company Limited (IDCOL) or the Bangladesh Infrastructure Finance Fund Limited (BIFFL) in BDT; local commercial lenders in BDT; and USD lenders. The USD tranche is assumed to be the largest, as these lenders would be able to provide the longest tenors (amortization periods), of up to 15 years, not including the construction period (grace period) and the lowest cost of capital (interest rate). This is followed by the local infrastructure funds, at 11 years and the local commercial lenders at 8 years. Details on each of the three tranches are provided in Table 10. Indicative financing terms for modeling purposes are also based on a market sounding of the RAD project with local and international banks.

FINANCING ASSUMPTIONS		NOTES
<b><u>BDT Tranche - Local Infrastructure Funds (LIF)</u></b>		
BDT LIF First Repayment	31/12/2023	
BDT LIF Grace Period	8 periods (4 years)	
BDT Tranche LIF	9.0%	IDCOL, BIFFL – Market sounding
BDT Tranche LIF Period (not incl. Grace Period)	11 years	Amortization Period
<b><u>BDT Tranche - Local Commercial Lenders</u></b>		
Local Commercial Lenders BDT First Repayment	31/12/2023	
Local Commercial Lenders Grace Period	8 periods (4 years)	
Local Commercial Lenders BDT Tranche Borrowing	11.7%	Market sounding exercise
Local Commercial Lenders BDT Tranche Debt Period (not incl. Grace Period)	8 years	Amortization Period
<b><u>USD Tranche</u></b>		
USD First Repayment	31/12/2023	
USD Grace Period	8 periods (4 years)	
USD Tranche Commercial Borrowing	6.1%	LIBOR + 4.25% - Market sounding
USD Tranche Debt Period (excluding construction phase)	15 years	Amortization Period
LIBOR interest rate	1.81%	
Margin on LIBOR	4.25%	

Table 10: Financing Assumptions

### 3. PPP STRUCTURES

#### 3.1 Key Structuring Issues

The 5 potential PPP structures that have been reviewed in this financial analysis revolve around three key structuring issues: traffic risk, advantages of providing upfront payments and currency risk.

##### 3.1.1 Traffic Risk

One of the key objectives of this study is to determine the optimal commercial structuring approach in terms of revenue generation for the private partner and the necessary government support to ensure viability. To this end, the analysis in this study examines different mechanisms to allocate traffic risks: from models where the concessionaire collects revenue through users fee (demand-risk model) to an availability payment model, where the public partner makes payments to the private partner for services rendered.<sup>2</sup> The recommendation incorporated in this financial analysis is to allocate demand risk to the actor best able to handle it.

In the demand-risk model, the private partner is given rights to collect revenue through user fees or tolls for a determined period, which it then uses to fund operations, repay debt and generate returns on equity invested. The private partner thus carries the risk of lower or higher than-predicted user or traffic volumes and thus revenue volatility. Given the risky nature of this model, governments may make the project more attractive through a minimum revenue guarantee (MRG), in which the government ensures a minimum level of revenues over the concession period to the private partner, ultimately reducing the demand risk for the private partner. On the other side, this mechanism is considered to be beneficial to governments as it attracts private sector investment without increasing reported budgetary spending/debt. In other words, if structured appropriately, this mechanism balances the needs and interests of the private partner's profitability and the public sector's fiscal management.

This minimum level can be calculated on actual traffic income, number of vehicles, EBITDA, EBIT, profit or loss, operating or maintenance costs, etc.<sup>3</sup> When the revenue falls below the agreed upon level, the government pays the private partner this difference (and may be required to pay back in future periods, as in the case of the Dhaka By-Pass, another road PPP project in Dhaka, currently in procurement).

Contrastingly, in the availability model, the private partner is remunerated by the public partner for making a facility or service available for use. In other words, the availability model involves a long-term agreement in which the public partner makes fixed periodic payments to the private

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<sup>2</sup> IISD. (2012, February). Harnessing the Power of Public-Private Partnerships. IISD Report. Accessed March 13, 2016: [http://www.iisd.org/pdf/2012/harnessing\\_ppp.pdf](http://www.iisd.org/pdf/2012/harnessing_ppp.pdf)

<sup>3</sup> Real Options Consulting Ltd. (n.d.) Minimum Revenue Guarantee. Accessed May 25, 2017: <http://www.ppp-infrastructure.com/minimum-revenue-guarantee/>

partner for the delivery of a facility or service (e.g. DBFOM), but where the private partner does not take on the traffic volume and demand risks, or revenue collection.<sup>4</sup> Indeed, one of the key benefits of the availability model – from the private partner’s perspective – is that the revenue risks are retained by the public partner; risks related to the design, construction (e.g. construction cost overruns, schedule delays),<sup>5</sup> finance, operations and maintenance are transferred to the private partner.

The availability model can be particularly attractive in the provision of infrastructure where the infrastructure in question is not revenue-generating (e.g. common user facilities and social accommodations such as schools, courthouses)<sup>6</sup>, or where there no proven revenue stream (e.g. new corridors) or conditions of high volatility. Other factors that may suggest consideration of the availability payment-based model include:

- performance/operational outcomes are easy to define and monitor;
- government wishes to retain direct rate setting authority;
- revenue and/or demand is difficult to predict and/or influence through operational changes; or
- service quality is more important or applicable goal than revenue maximization.<sup>7</sup>

Indeed, the availability payment model is ideal in scenarios in which user demand revenue is uncertain and the private sector cannot materially influence demand from users. In a toll road project, for example, revenue is based on traffic and the collection of user fees (tolls). However, traffic demand forecasts are developed on the basis of a large number of variables, and user numbers in urban settings, particularly, are affected by competing routes or modes of travel, or other transport services offered. One study suggests that in half of all road projects assessed, the delta between actual and forecasted traffic varies more than +/- 20%.<sup>8</sup> This results in higher revenue risk, and consequently, higher costs to finance the project, making the project more expensive. Where the private sector is expected to take on this revenue risk, the investors will require higher returns on investment. Where this risk cannot be managed effectively, the expected higher returns would result in additional costs to the government; in this case, it is more efficient for this risk to be managed by the government directly.

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<sup>4</sup> KPMG (2009). Availability Payment Mechanisms for Transit Projects. KPMG Advisory. Accessed March 15, 2016: [http://www.pwfinance.net/document/research\\_reports/10%20KPMG%20availability.%20pdf](http://www.pwfinance.net/document/research_reports/10%20KPMG%20availability.%20pdf)

<sup>5</sup> Dovey, R. (2014, October 3). Taxpayers vs. Private Investors: Shifting the Risk of Funding Public Projects. Next City. Accessed March 14, 2016: <https://nextcity.org/daily/entry/risk-public-private-partnership-p3s-funders-payments>

<sup>6</sup> Mayer Brown LLP, HSH Nordbank and Rebel Group. (2011). Availability Payment Public-Private Partnerships for Port Projects. Accessed March 14, 2016: <https://www.mayerbrown.com/files/Publication/f83f06cf-20b5-4152-974b-3d561728c0b9/Presentation/PublicationAttachment/735ab7d8-3c8f-4b0f-92e4-d298819cf896/11266.pdf>

<sup>7</sup> Dochia, Silviu and Parker, Michael. (2009). Introduction to Public-Private Partnerships with Availability Payments. *Public Works Financing Newsletter*. Accessed March 14, 2016: [http://www.pwfinance.net/document/research\\_reports/9%20intro%20availability.pdf](http://www.pwfinance.net/document/research_reports/9%20intro%20availability.pdf)

<sup>8</sup> Flyvbjerg, B., M. K. S. Holm, and S. L. Buhl. (2005). How (in)accurate are demand forecasts in public works projects? *Journal of the American Planning Association*. vol. 71, no. 2, Spring 2005.



In the availability model, while the negative demand risks for the concessionaire are transferred to the public partner, so too are the positive demand risks; that is, potential revenue earnings that are above the projected values are gleaned by the implementing public sector agency, not the private partner. Thus, the revenue-earning potential of the concessionaire is pre-determined and is made in accordance with the concession agreement made at the outset of the partnership. Consequently, the costs to the government are predictable, in contrast to the traditional procurement scenario, or demand-risk projects with MRGs. These payments may begin only once the facility is completed and operations have begun,<sup>9</sup> although it is also common for the government to provide capital funds during construction, e.g. VGF contributions.

Just as the positive demand risks are retained by the public partner in an availability model, so too is the control over the toll rates to be charged to users. Indeed, availability payments allow the government more flexibility in modifying toll rates during the course of the concession, whether to maximize government revenue, to encourage vehicles to use the facility, or even to implement a different tolling structure (e.g. congestion charging).

### **3.1.2 VGF and Profile of Government Payments**

The vast majority of public infrastructure does not generate sufficient revenue to be fully self-funded. In order to make PPP projects more attractive or viable, it is common for governments to provide some form of contribution to projects deemed important for economic and/or social development. This support can take various forms, from direct funding to indirect or contingent support, some form of in-kind contributions (transfer of assets/equipment or provision of land), or ‘broader financial mechanisms that can support the country’s PPP program or encourage the financial markets to lend into projects.’<sup>10</sup>

In Bangladesh, the government has made it possible for PPP projects to receive partial funding through the Viability Gap Funding mechanism. This is a grant/capital injection that is provided during the construction period, and according to recent legislation on other projects (i.e. the Dhaka By-Pass Road), this can be provided up to a total of 30% of capital costs of the project. This payment schedule is illustrated in Figure 3, below, for the RAD project.

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<sup>9</sup> Payment amounts generally change only in the eventuality that the terms of the contract (i.e. maintenance and/or operating specifications) are not met and the implementing agency holds back payment – again, in accordance with the stipulations set out in the project contract.

<sup>10</sup> World Bank Group. (n.d.). Government Support in Financing PPPs. Public-Private-Partnership in Infrastructure Resource Centre (PPPIRC) <https://ppp.worldbank.org/>. Accessed June 06, 2017: <https://ppp.worldbank.org/public-private-partnership/financing/government-support-subsidies>

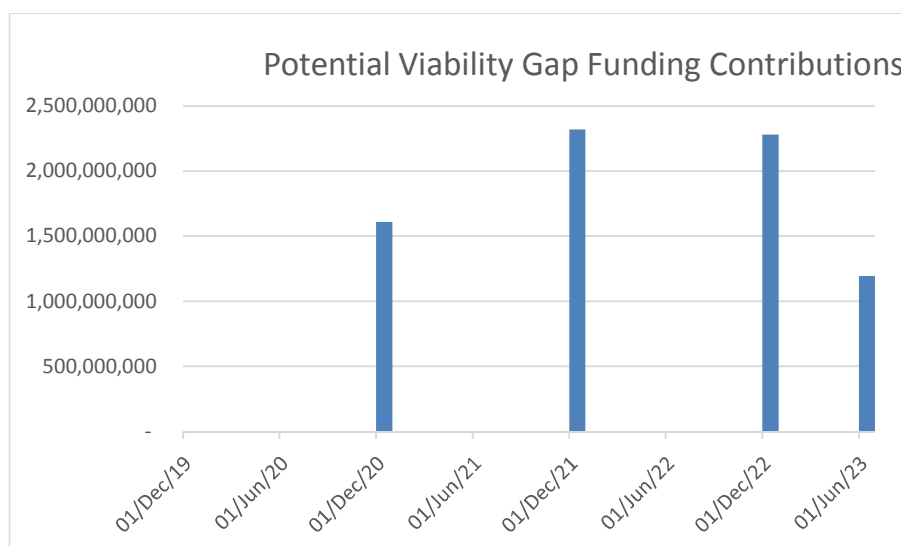


Figure 3: Viability Gap Funding Contributions per Period

Nevertheless, VGF funding carries two disadvantages:

- A long approval process which increases the cost of procuring the project, the cost of construction, delays the construction of important infrastructure projects and may potentially undermine the credibility of a tender process; and
- It reduces the amount of private sector capital mobilized for a specific project (assuming that the project could have been fully financed using private capital if VGF was not available).

### 3.1.3 Currency Risk

#### 3.1.3.1 Currency Risk Mitigation Mechanism

As described above, the risk of currency depreciation is inherent in this project, which has differing currency inflows and outflows. This risk is borne by the concessionaire, however, this can also be hedged by the government by providing a Currency Risk Mitigation Mechanism (CRMM). By providing a CRMM, the key benefit is lowering the cost of capital for the project and thus the amount of support needed by the government. This occurs in two ways:

- From a debt perspective, this allows the concessionaire to maximize the amount of financing in USD, which is cheaper and has longer terms than local BDT financing, resulting in lower availability payments or a lower guarantee on revenue (depending on the structure in question).
- From an equity perspective, the CRMM lowers the risk profile of the project for international equity investors and, hence, lowers their expected returns (equity IRR). Ultimately, these result in a lower overall project cost for the government.
- Two key parameters were considered in determining the appropriate CRMM to be used in the analysis:

- The percentage of APs or MRG (in BDT) indexed to the evolution of the USD
- The percentage of fluctuation allowable prior to activating the mechanism

In the case of the first consideration, risk mitigation is maximized by ensuring that the currency inflows match the cash outflows (debt, equity, dividends repayment). As such, it was assumed under the base case that 60% of the APs or MRG are indexed to USD (this generally reflects the portion of the USD debt tranche). In the case of the second consideration, by indexing APs and MRG to the evolution of the USD, frequent re-calculation and re-budgeting may be required. The establishment of a fluctuation band can reduced the need for constant recalculation and simplify the facility.

The CRMM included in this financial analysis assumes that currency risk is shared between the concessionaire and the government: the concessionaire would take all currency risk inside a +/- 5% fluctuation band and the government would take 60% of the currency risk outside of that fluctuation band.

### 3.1.3.2 Contingent Liability

If the BDT depreciates by an amount outside this fluctuation band (5%), the government is then faced with the responsibility of covering this amount. As such, the CRMM represents a contingent liability (a potential liability that may become an actual liability as a result of the occurrence of an uncertain future event(s)) that would need to be appropriately reflected in the government's accounts.

## 3.2 Selected PPP Structures

This Feasibility Study reviews 5 different PPP structures that could be used to structure the project and to, up to a certain point, address the key structuring issues described in section 3.1, depending on the restrictions and priorities of the Government of Bangladesh.

Table 11 outlines the various PPP structures ultimately considered in this analysis; these include four Availability Payment Models, and one Demand-Risk Model. These structures are the subject of this section.

PPP STRUCTURES	
1	AP Model with VGF and CRMM
2	AP Model (sculpted) with VGF and CRMM
3	AP Model (non-sculpted) with CRMM
4	Demand-Risk Model with VGF, MRG and CRMM
5	AP Model with VGF (no CRMM)

Table 11: RAD PPP Structure Options

Each PPP structure has been reviewed based on the following key parameters:

- **Attractiveness to Equity Investors:** Equity investors expect to receive returns on their equity investment that fairly and appropriately compensate for the level of risk that they are taking under each structure. Based on the market sounding exercise

conducted to prepare this report, it has been considered that a 15% equity IRR in USD would be appropriate for a structure with AP. If the structure was based on a demand-risk model, an 18%-20% equity IRR in USD would be required to compensate investors for the additional risks. A significant portion of equity investors contacted during the market sounding exercise expressed their unwillingness to participate in a tender process unless their equity returns were fully protected from fluctuations between the USD and the BDT so their exposure to fluctuations in the exchange rate has also been taken into account.

- **Bankability and Amount of Debt Financing:** This financial analysis does not perform a full credit analysis of the project and it is based on the premise that the amount of debt that the project would be able to borrow would be limited by two parameters: DSCR and leverage (see section 1.4 for a detailed description of these ratios). Based on the results of the market sounding exercise, lenders expressed their requirement to have a DSCR ratio above 1.2x and a maximum leverage ratio of 70% even though it could be increased to 80% if DSCR was very robust and their exposure to other risks (mostly currency, traffic and payment risk) was very limited or non-existent. Lenders would not be able to finance the project if the ability of the concessionaire to repay their loans could be compromised by the evolution of the currency or traffic.

### 3.2.1 AP Model with VGF and CRMM

The first structure considered is the AP Model with VGF and CRMM. In this structure, the concessionaire would be in charge of collecting and transferring toll revenues to RHD. It would be remunerated through a combination of availability payments which would be partially indexed to the evolution of the USD and a VGF that would cover 30% of the cost of construction of the road.

The key assumptions for analysis are as follows:

- Remuneration Method:
- Structure: Availability Payment (AP), indexed to CPI.
- Currency Risk Mitigation Mechanism: Availability payments paid in BDT but 60% of the value of the AP would be adjusted to cover any loss of value of the BDT outside of a 5% fluctuation band.
- Viability Gap Funding: 30% of the cost of construction.
- Toll Revenue: Allocated to Government.
- Financing Structure:
- Lenders would finance 44% of the total amount of capital required to build the road (% uses in Table 12, below).
- VGF would cover 27% of the total amount of capital required to build the road.

- Equity would cover the remaining 28% of the total amount of capital required to build the road.<sup>11</sup>

<b>Sources</b>	<b>BDT mln</b>	<b>% uses<sup>13</sup></b>	<b>% CAPEX</b>
Equity	8,409	28%	31%
VGF	8,060	27%	30%
Debt	13,164	44%	49%
<i>Local infrastructure funds</i>	<i>3,949</i>	<i>13%</i>	<i>15%</i>
<i>Local commercial lenders</i>	<i>658</i>	<i>2%</i>	<i>2%</i>
<i>US\$ lenders</i>	<i>8,557</i>	<i>29%</i>	<i>32%</i>
<b>Total</b>	<b>29,633</b>	<b>100%</b>	

Table 12: Sources of Capital (AP Model with VGF and CRMM)

The amount of debt used in this structure is constrained by the amount of cash inflows that the project receives during the first years of operations. The DSCR during the first period of operations is 1.2x so lenders cannot increase the amount of financing for the project even though the leverage ratio is 61% (see Figure 4, below) and lenders would normally be willing to finance up to 70% of the total project cost.

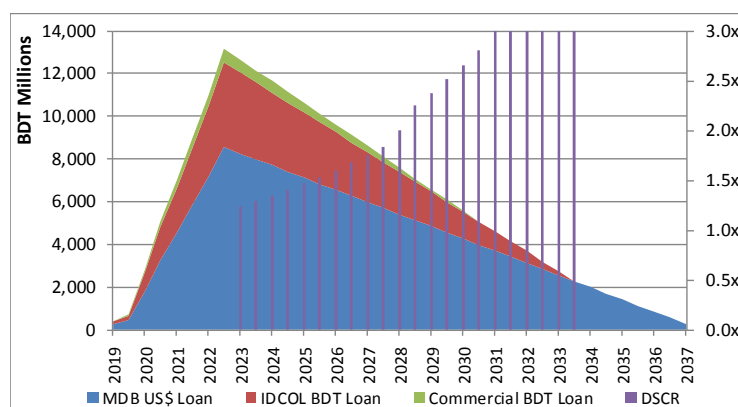


Figure 4: Leverage and DSCR (AP Model with VGF and CRMM)

The different type of lenders that would be expect to finance the project are the following<sup>12</sup>:

- BDT Tranche – Local Infrastructure Funds: 30% of total debt
- BDT Tranche – Local Commercial Lenders: 5% of total debt
- USD Tranche: 65% of total debt

The VGF is provided in accordance with the payment profile outlined earlier in section 3.1.2. As a grant, this lowers the overall needs of financing of the concessionaire during construction phase.

<sup>11</sup> Including cost of construction, interest during construction and others

<sup>12</sup> The same relative split has been assumed in all structures (specifically, structures 1, 3 and 4), unless otherwise stated.

As described earlier, providing CRMM allows for a higher amount of debt in USD, which is characterized by lower interest rates and longer terms than local debt.

### **3.2.2 AP Model (Sculpted) with VGF and CRMM**

The second structure considered is the sculpted AP Model with VGF and CRMM. In this structure, the concessionaire would be in charge of collecting and transferring toll revenues to RHD. It would be remunerated through a combination of availability payments which would be partially indexed to the evolution of the USD, and would be ‘sculpted’ during the initial years of operations, as well as a VGF that would cover 30% of the cost of construction of the road.

Sculpting refers to the manipulation or adjustment of APs from the government to ensure payments better match cash flows (e.g. debt repayment obligations) during the first years of operations of the road. Typically, APs are constant payments that can be tied to an index or various indices (or even a portion that is fixed) to account for inflation and/or other variables. As a result, the amount of debt financing can be increased and the leverage ratio can reach 74% (at a minimum DSCR of 1.25x), as shown in Figure 5, below.

The key assumptions for analysis are as follows:

- Remuneration Method:
- Structure: Availability Payment (AP), indexed to CPI, sculpted (i.e. 75% higher) for the first 7 years of operations.
- Currency Risk Mitigation Mechanism: Availability payments paid in BDT but 60% of the value of the AP would be adjusted to cover any loss of value of the BDT outside of a 5% fluctuation band.
- Viability Gap Funding: 30% of the cost of construction.
- Toll Revenue: Allocated to government.
- Financing Structure:
- Lenders would finance 54% of the total amount of capital required to build the road (% uses in Table 13, below).
- VGF would cover 27% of the total amount of capital required to build the road.
- Equity would cover the remaining 19% of the total amount of capital required to build the road.<sup>13</sup>

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<sup>13</sup> These values include the cost of construction, interest during construction and others.

Sources	BDT mln	% uses	% CAPEX
Equity	5,771	19%	21%
VGF	8,060	27%	30%
Debt	16,173	54%	60%
Local infrastructure funds	3,235	11%	12%
Local commercial lenders	0	0%	0%
US\$ lenders	12,939	43%	48%
<b>Total</b>	<b>30,004</b>	<b>100%</b>	

Table 13: Sources of Capital (AP Model (Sculpted) with VGF and CRMM)

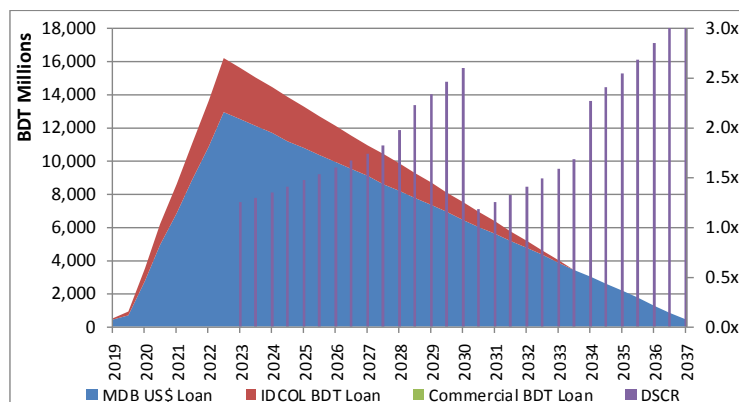


Figure 5: Leverage and DSCR (AP Model (Sculpted) with VGF and CRMM)

The different type of lenders that would be expect to finance the project are the following:

- BDT Tranche – Local Infrastructure Funds: 20% of total debt
- BDT Tranche – Local Commercial Lenders: 0% of total debt
- USD Tranche: 80% of total debt

The VGF is provided in accordance with the payment profile outlined earlier in section 3.1.2. As a grant, this lowers the overall cost to the concessionaire.

As described earlier, providing CRMM allows for a higher amount of debt in USD, which is characterized by lower interest rates and longer terms than local debt.

Sculpting AP is appropriate in projects where the amount of debt is limited by the capacity of the project to repay it during the first years of operations (DSCR ratio). By sculpting APs, the project could decrease the amount of expensive financing (equity) for the project and increase the amount of cheaper USD debt and this would lower the cost of the project to all parties involved (see Figure 6).



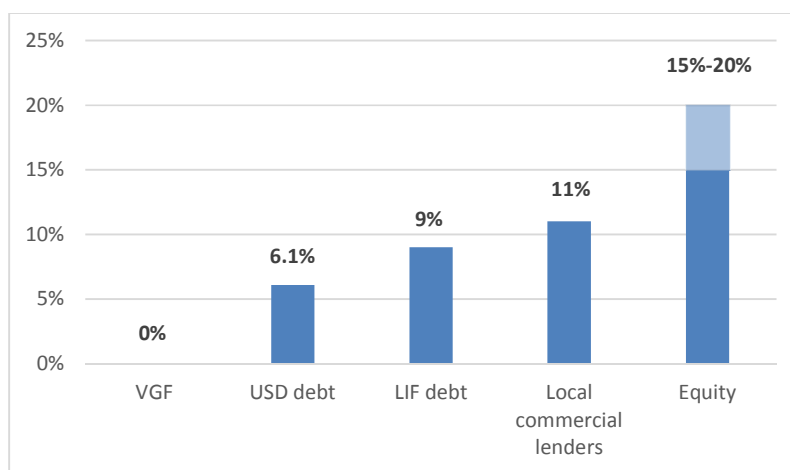


Figure 6: Estimated Annual Cost of Financing per Instrument

### 3.2.3 AP Model (non-sculpted) with CRMM

The third structure considered is the non-sculpted AP Model with CRMM. In this structure, the concessionaire would be in charge of collecting and transferring toll revenues to RHD. It would then be remunerated through availability payments which would be partially indexed to the evolution of the USD. It is assumed that there is no VGF provided by the government in this scenario.

The key assumptions for analysis are as follows:

- Remuneration Method:
- Structure: Availability Payment (AP), indexed to CPI.
- Currency Risk Mitigation Mechanism: Availability payments paid in BDT but 60% of the value of the AP would be adjusted to cover any loss of value of the BDT outside of a 5% fluctuation band.
- Viability Gap Funding: None.
- Toll Revenue: Allocated to government.
- Financing Structure:
- Lenders would finance 60% of the total amount of capital required to build the road (% uses in Table 14, below).
- VGF would cover 0% of the total amount of capital required to build the road.
- Equity would cover the remaining 40% of the total amount of capital required to build the road.<sup>14</sup>

<sup>14</sup> Including cost of construction, interest during construction and others

<b>Sources</b>	<b>BDT mln</b>	<b>% uses</b>	<b>% CAPEX</b>
Equity	12,225	40%	46%
VGF	0	0%	0%
Debt	18,537	60%	69%
<i>Local infrastructure funds</i>	<i>5,561</i>	<i>18%</i>	<i>21%</i>
<i>Local commercial lenders</i>	<i>927</i>	<i>3%</i>	<i>3%</i>
<i>US\$ lenders</i>	<i>12,049</i>	<i>39%</i>	<i>45%</i>
<b>Total</b>	<b>30,763</b>	<b>100%</b>	

Table 14: Sources of Capital (AP Model (Non-Sculpted) with CRMM)

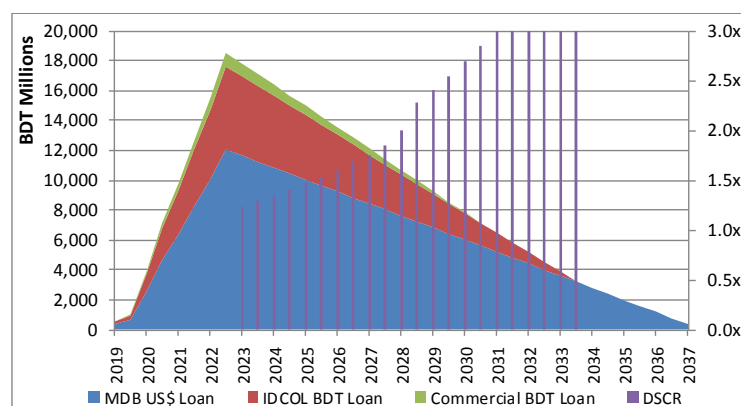


Figure 7: Leverage and DSCR (AP Model (Non-Sculpted) with CRMM)

The different type of lenders that would be expect to finance the project are the following:

- BDT Tranche – Local Infrastructure Funds: 30% of total debt
- BDT Tranche – Local Commercial Lenders: 5% of total debt
- USD Tranche: 65% of total debt<sup>15</sup>

The amount of equity financing in this structure is higher than in the previous two scenarios because of (i) lack of VGF, and (ii) the limited capacity of the concessionaire to repay debt during the first years of operations (ie availability payments not sculpted).

### 3.2.4 Demand-Risk Model with VGF, MRG and CRMM

The fourth structure considered is based on a demand risk model with VGF, MRG and a CRMM. In this structure, the concessionaire would be in charge of collecting; toll revenues would be retained by the concessionaire and would not be transferred to RHD. RHD, in turn, would not be required to make periodical payments during operations phase unless traffic revenues fell

<sup>15</sup> These are the same financing assumptions as structure 1, described earlier, and structure 4.

below a certain threshold. It is assumed that a VGF would be provided by the government in this scenario.

The key assumptions for analysis are as follows:

- Remuneration Method:
- Structure: Toll revenues with a minimum revenue guarantee indexed to inflation (CPI). The minimum revenue guarantee has been calculated to cover debt repayment (minimum DSCR c. 1.0x) and to guarantee a minimum equity return that is around 10%.
- Currency Risk Mitigation Mechanism: MRG paid in BDT but 60% of the value of the MRG would be adjusted to cover any loss of value of the BDT outside of a 5% fluctuation band.
- Viability Gap Funding: None.
- Toll Revenue: Allocated to government.
- Financing Structure:
- Lenders would finance 42% of the total amount of capital required to build the road (% uses in Table 14, below). DSCR would need to be higher than in scenarios where the concessionaire is remunerated through AP to provide sufficient buffer.
- VGF would cover 27% of the total amount of capital required to build the road.
- Equity would cover the remaining 31% of the total amount of capital required to build the road.<sup>16</sup>

<b>Sources</b>	<b>BDT mln</b>	<b>% uses</b>	<b>% CAPEX</b>
Equity	9,152	31%	34%
VGF	8,060	27%	30%
Debt	12,224	42%	46%
<i>Local infrastructure funds</i>	3,667	12%	14%
<i>Local commercial lenders</i>	611	2%	2%
<i>US\$ lenders</i>	7,946	27%	30%
<b>Total</b>	<b>29,436</b>	<b>100%</b>	

Table 15: Sources of Capital (Demand-Risk Model with VGF, MRG and CRMM)

<sup>16</sup> Including cost of construction, interest during construction and others

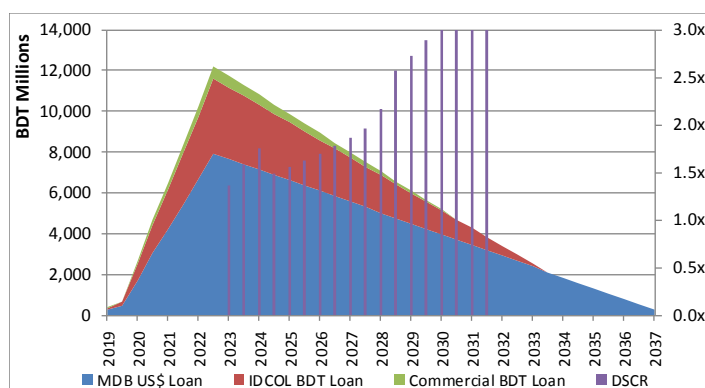


Figure 8: Leverage and DSCR (Demand-Risk Model with VGF, MRG and CRMM)

The different type of lenders that would be expect to finance the project are the following:

- BDT Tranche – Local Infrastructure Funds: 30% of total debt
- BDT Tranche – Local Commercial Lenders: 5% of total debt
- USD Tranche: 65% of total debt<sup>17</sup>

Equity investors would require a higher equity IRR of 18% in this scenario to compensate for the added risk that they are taking (traffic risk) and lenders would be likely to require a higher DSCR to cover any potential variations in revenues from lower traffic.

### 3.2.5 AP Model with VGF (no CRMM)

The last structure considered is the AP Model with VGF and without CRMM. In this structure, the concessionaire would be in charge of collecting and transferring toll revenues to RHD. It would be remunerated through a combination of availability payments, which would not be indexed to the evolution of the USD, and a VGF that would cover 30% of the cost of construction of the road.

The key assumptions for analysis are as follows:

- Remuneration Method:
- Structure: Availability Payment (AP), indexed to CPI.
- Currency Risk Mitigation Mechanism: Not provided
- Viability Gap Funding: 30% of the cost of construction.
- Toll Revenue: Allocated to government.
- Financing Structure: The ability of the concessionaire to raise USD debt financing would be severely limited. We have assumed that only 40% of the total debt required for the project would come from international lenders:

<sup>17</sup> These are the same financing assumptions as structures 1 and 3, described earlier.

- Lenders would finance 40% of the total amount of capital required to build the road (% uses in Table 16, below).
- VGF would cover 27% of the total amount of capital required to build the road.
- Equity would cover the remaining 33% of the total amount of capital required to build the road.<sup>18</sup>

<b>Sources</b>	<b>BDT mln</b>	<b>% uses</b>	<b>% CAPEX</b>
Equity	9,790	33%	36%
VGF	8,060	27%	30%
Debt	12,036	40%	45%
<i>Local infrastructure funds</i>	<i>3,611</i>	<i>12%</i>	<i>13%</i>
<i>Local commercial lenders</i>	<i>3,611</i>	<i>12%</i>	<i>13%</i>
<i>US\$ lenders</i>	<i>4,814</i>	<i>16%</i>	<i>18%</i>
<b>Total</b>	<b>29,886</b>	<b>100%</b>	

Table 16: Sources of Capital (AP Model with VGF (no CRMM))

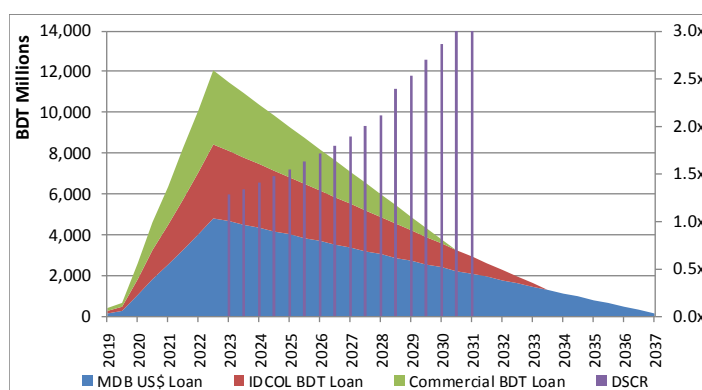


Figure 9: Leverage and DSCR (AP Model with VGF (no CRMM))

The different type of lenders that would be expected to finance the project are the following:

- BDT Tranche – Local Infrastructure Funds: 30% of total debt
- BDT Tranche – Local Commercial Lenders: 30% of total debt to cover for the shortage of USD funding and limited capacity of LIFs to finance the project.
- USD Tranche: 40% of total debt

<sup>18</sup> Including cost of construction, interest during construction and others.

## 4. RESULTS AND RECOMMENDED STRUCTURE

### 4.1.1 AP Model with VGF and CRMM

#### a) Project Returns for the Concessionaire

This structure would offer adequate returns to remunerate the concessionaire for the capital provided and for the risks allocated to them.

- Equity IRR (BDT): 16.1%
- Equity IRR (USD): 15.0%

The break-even point in this structure for equity investors occurs in 2030 and equity IRR grows steadily and progressively from that point forward, minimizing the incentives to the concessionaire to cause an early termination of the project.

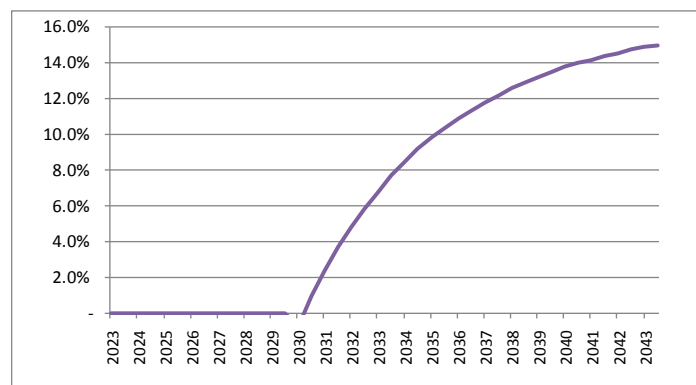


Figure 10: Equity IRR Build-up

#### b) Bankability

This structure would not allow the concessionaire to fully benefit from debt financing. The project does not generate enough cash flow during the first years of operations to have a leverage ratio above 61%. As a result, the capital structure of the project becomes highly inefficient and the concessionaire would require higher availability payments from the government to meet its hurdle equity IRR. If the leverage ratio could be increased to about 70%, the NPV of the project would improve from BDT 7.4 billion to BDT 8.5 billion.

#### c) Currency Risk

Indexing 60% of availability payments to the evolution of the USD offers an appropriate level of protection to both to lenders and equity investors. The repayment of both principal and interest payments would be protected from fluctuations between the BDT and the USD as shown in figure 11 below.

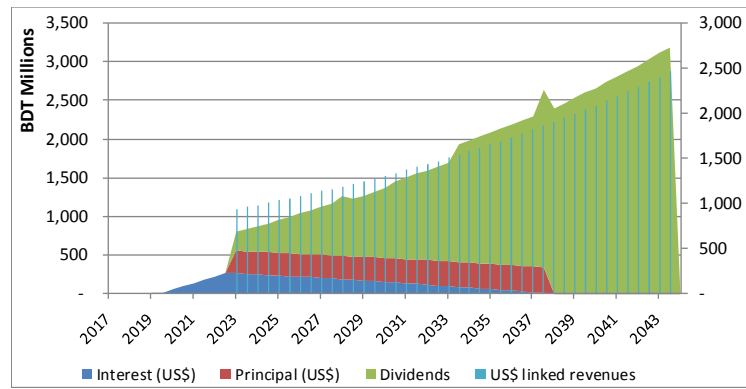


Figure 11: Currency Risk

The investment of sponsors would also be mostly covered or protected from fluctuations in the exchange rate even though the concessionaire would have a short position in the BDT until 2030 (with the exception of 2028) and a long position from 2031 until the end of the concession period as evidenced in figure 12.

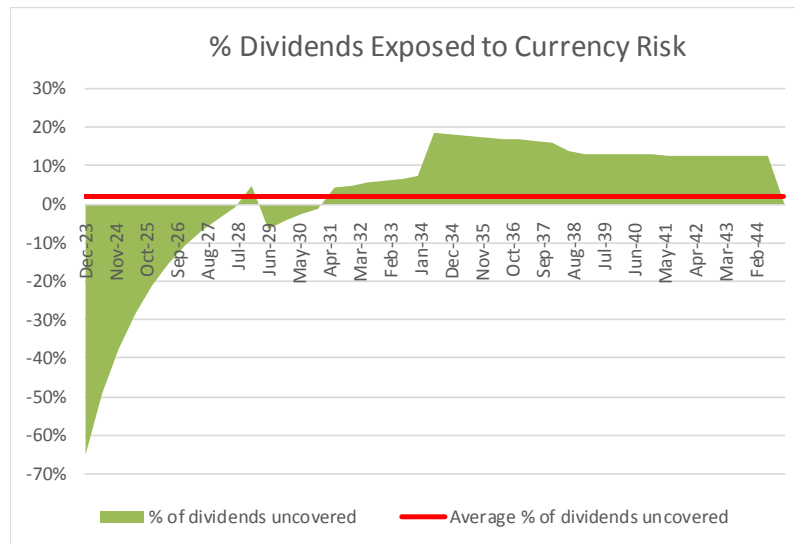


Figure 12: Currency Risk - Dividends

#### d) Government Cost and Government Payments

The total amount of financial support from the government amounts to BDT 127 billion as shown in table 17 below. VGF would amount to BDT 8.1 billion and total APs would be worth BDT 119 billion.



Total VGF	(BDT mln)	8,059.7
Total Av PMTs	(BDT mln)	119,224
Total MRG	(BDT mln)	0
Total Government payments	(BDT mln)	127,284
NPV* Government	(BDT mln)	8,125
Equity IRR (BDT)	%	16.1%
Equity IRR (USD)	%	15.0%

Table 17: Government Financial Contribution

Nevertheless, toll revenues would exceed the amount of APs and VGF and, as a result, the NPV of the project to the government would be positive by BTD 7.4 billion.

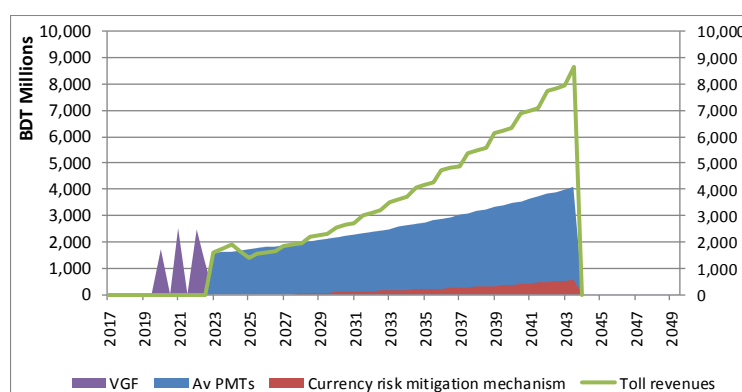


Figure 13: Government Payments and Toll Revenues

#### 4.1.2 AP Model (Sculpted) with VGF and CRMM

##### a) Project Returns for the Concessionaire

Availability payments could be sized to offer adequate returns to remunerate the concessionaire for the capital provided and for the risks allocated to them.

- Equity IRR (BDT): 16.2%
- Equity IRR (USD): 15.0%

As a result of sculpting APs, the break-even point for equity investors would be reached earlier than in structure 1 (in 2028) and equity IRR would grow steadily and progressively from that point forward, minimizing the incentives to the concessionaire to cause an early termination of the project.

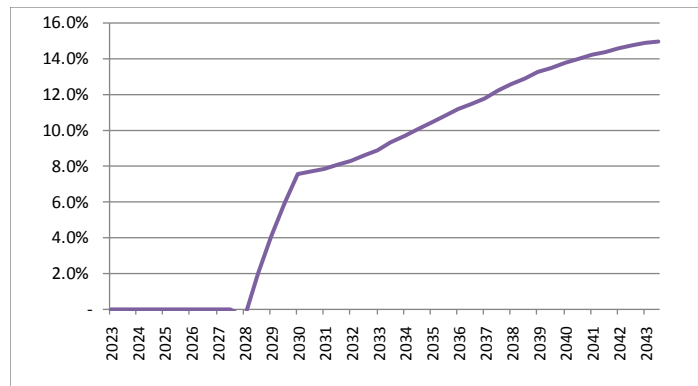


Figure 14: Equity IRR Build-up

## b) Bankability

This structure would allow the concessionaire to fully benefit from debt financing and optimize its capital structure. Sculpting availability payments allows the project to generate enough cash flow during the first years of operations to have a leverage ratio of 74% and, as a result, the concessionaire requires lower total availability payments from the Government to meet its hurdle equity IRR than in structure 1.

## c) Currency Risk

Indexing 60% of availability payments to the evolution of the USD offers an appropriate level of protection to both to lenders and equity investors. As shown in figure 13 below, sculpted availability payments offers a good match between cash outflows and cash inflows in USD even with a 74% leverage ratio.

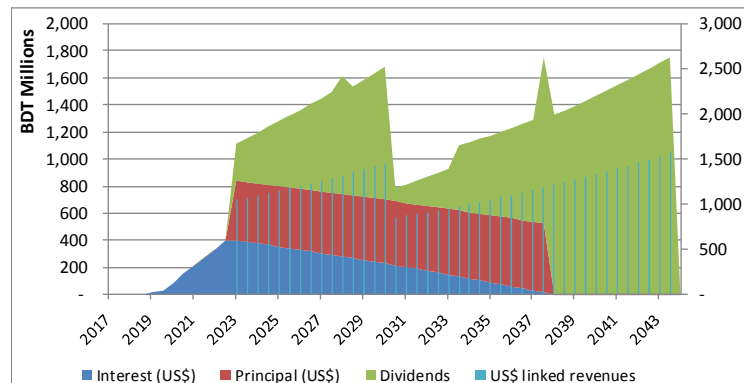


Figure 15: Currency Risk

The investment of sponsors would be well covered or protected from fluctuations in the exchange rate even though the concessionaire would have a short position in the BDT between 2030 and 2034 as shown in figure 16.

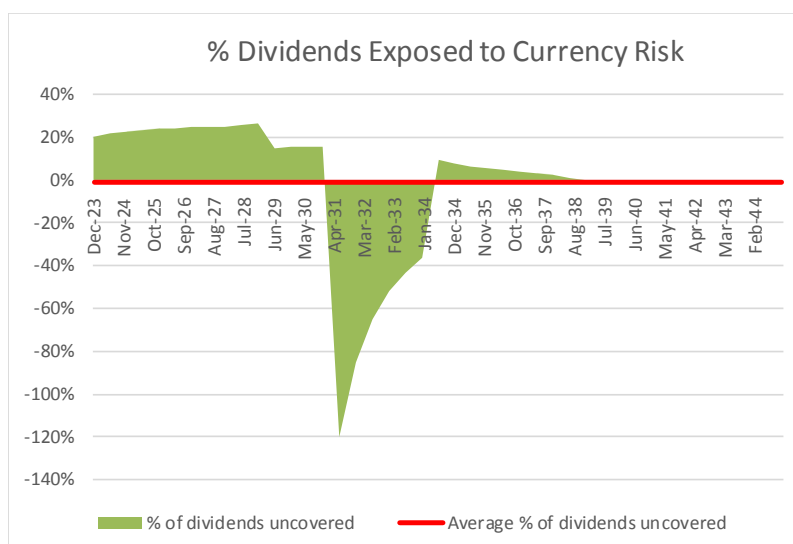


Figure 16: Currency Risk - Dividends

## d) Government Cost and Government Payments

The total amount of financial support from the government would be reduced from BDT 127 billion in structure 1 to BDT 97 billion as shown in table 18 below. The amount of VGF would remain unchanged (BDT 8.1 billion) but total APs would be reduced to BDT 89 billion from BDT 119 billion.

Toll revenues would exceed the amount of APs and VGF and, as a result, the NPV of the project to the government would be positive by BDT 12.7 billion.

Total VGF	(BDT mln)	8,059.7
Total Av PMTs	(BDT mln)	89,367
Total MRG	(BDT mln)	0
Total Government payments	(BDT mln)	97,426
NPV* Government	(BDT mln)	13,811
Equity IRR (BDT)	%	16.2%
Equity IRR (USD)	%	15.0%

\*Assuming a 7.8% discount rate

Table 18: Government Financial Contribution

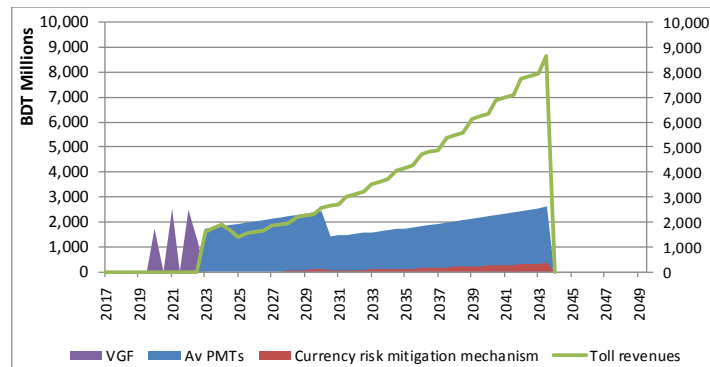


Figure 17: Government Payments and Toll Revenues

#### 4.1.3 AP Model (Non-Sculpted) with CRMM

##### a) Project Returns for the Concessionaire

Availability payments could be sized to offer adequate returns to remunerate the concessionaire for the capital provided and for the risks allocated to them.

- Equity IRR (BDT): 16.2%
- Equity IRR (USD): 15.0%

Without a VGF and sculpting APs, the break-even point for equity investors would be reached slightly after 2030, a couple years later than in the previous structure (2). Equity IRR would grow steadily and progressively from that point forward, minimizing the incentives to the concessionaire to cause an early termination of the project.

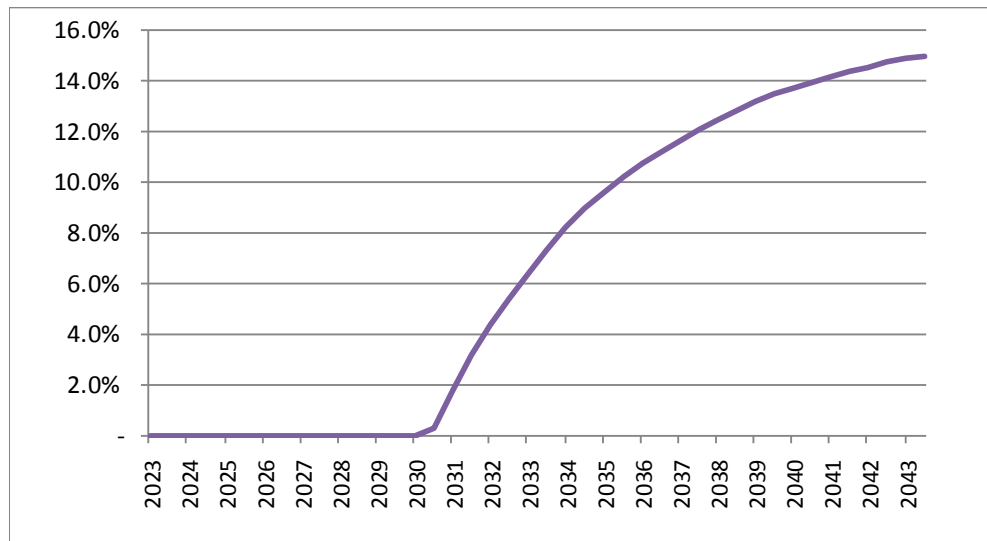


Figure 18: Equity IRR Build-up

##### b) Bankability

This structure would not allow the concessionaire to fully benefit from debt financing and it would be more inefficient than structures 1 and 2. The project does not generate enough cash

flow during the first years of operations to have a leverage ratio above 60%. As a result, the capital structure of the project becomes highly inefficient and the concessionaire required higher availability payments from the Government to meet its hurdle equity IRR.

### c) Currency Risk

Indexing 60% of availability payments to the evolution of the USD offers an appropriate level of protection to both to lenders and equity investors.

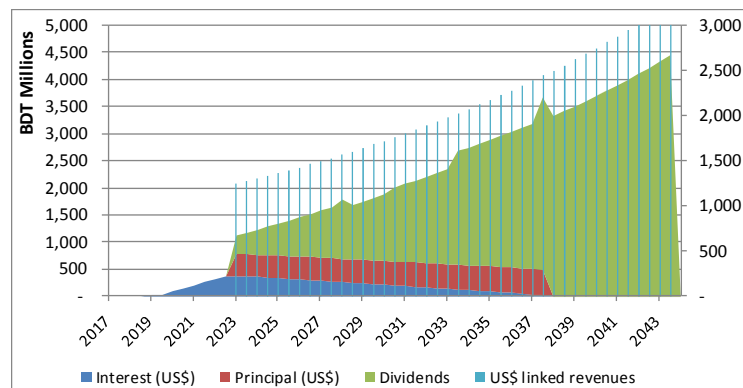


Figure 19: Currency Risk

The equity investment of sponsors would also be mostly covered or protected from fluctuations in the exchange rate even though the concessionaire would have a short position in the BDT between 2030 and 2034 as shown in figure 20.

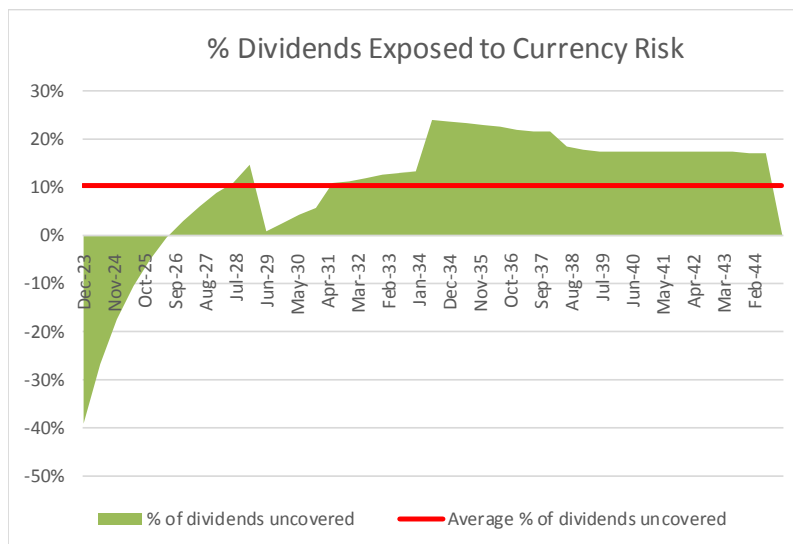


Figure 20: Currency Risk - Dividends

### d) Government Cost and Government Payments

The total amount of financial support from the government would be significantly higher than in structures 1 and 2 as shown in table 19. The amount of VGF is 0 but APs would increase to BDT 156 billion.

Total VGF	(BDT mln)	0.0
Total Av PMTs	(BDT mln)	156,743
Total MRG	(BDT mln)	0
Total Government payments	(BDT mln)	156,743
NPV* Government	(BDT mln)	3,343
Equity IRR (BDT)	%	16.2%
Equity IRR (USD)	%	15.0%

\*Assuming a 7.8% discount rate

Table 19: Government Financial Contribution

Toll revenues would exceed APs and VGF combined and, as a result, the NPV of the project to the government would be positive BDT 3.3 billion.

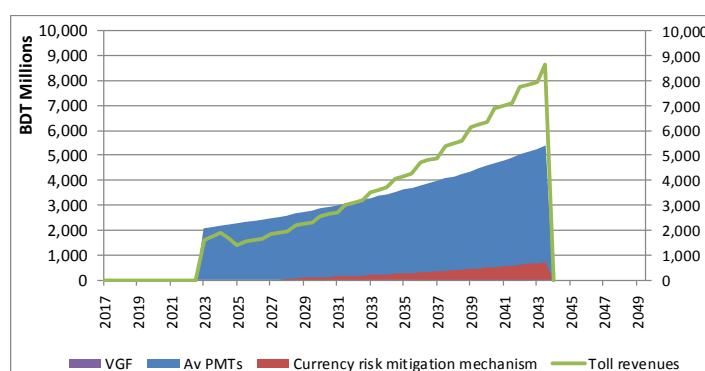


Figure 21: Government Payments and Toll Revenues

#### 4.1.4 Demand-Risk Model with VGF, MRG and CRMM

##### a) Project Returns for the Concessionaire

On the basis of the current traffic forecasts, toll revenues offer a substantial return to the concessionaire for the capital provided and for the risks allocated to them.

- Equity IRR (BDT): 19.2%
- Equity IRR (USD): 18.0%

Based on feedback from investors, we consider that an equity IRR in USD between 18% and 20% would be required to compensate investors for the additional risks that a demand-risk model involves. A significant portion of equity investors contacted during the market sounding exercise expressed their unwillingness to participate in the tender process unless they were fully protected from traffic risk because traffic would be difficult to manage in an urban road like RAD with several free alternatives.

In this structure option, the break-even point for equity investors would be reached in 2029 and equity IRR would grow steadily and progressively from that point forward, minimizing the incentives to the concessionaire to cause an early termination of the project.

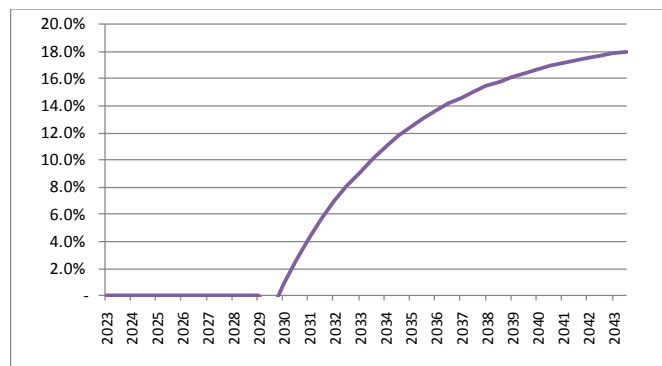


Figure 22: Equity IRR Build-up

The MRG has been sized to guarantee an equity IRR in USD above 10%-15%, regardless of traffic levels.

#### b) Bankability

This structure would not allow the concessionaire to fully benefit from debt financing and it would be less efficient than structure 2. The project does not generate enough cash flow during the first years of operations to have a leverage ratio above 57%. As a result, the capital structure of the project becomes highly inefficient and the concessionaire requires higher availability payments from the government to meet its hurdle equity IRR.

The MRG has been sized to guarantee a DSCR of 1.2x-1.3x regardless of traffic levels. This assumption is in line with lenders requirement that that the MRG covers their target DSCR.

#### c) Currency Risk

Indexing 60% of MRG to the evolution of the USD offers an appropriate level of protection to lenders but would leave equity investors exposed to currency fluctuations as shown in figure 23 below.

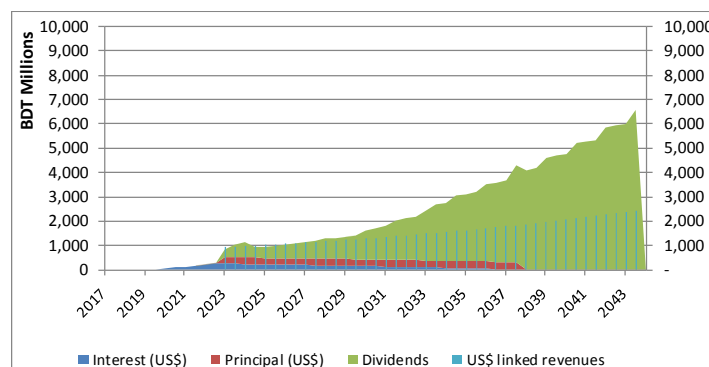


Figure 23: Currency Risk

#### d) Government Cost and Government Payments

The total amount of financial support from the government would be limited to BDT 8.1 billion to be provided in the form of VGF and a small MRG contribution. Nevertheless, the

government would not collect toll revenues (worth BDT 169 billion) and, as a result, the NPV of the government would be negative BDT 2.0 billion.

Total VGF	(BDT mln)	8,059.7
Total Av PMTs	(BDT mln)	0
Total MRG	(BDT mln)	<u>858</u>
Total Government payments	(BDT mln)	8,917
NPV* Government	(BDT mln)	(2,010)
Equity IRR (BDT)	%	19.2%
Equity IRR (USD)	%	18.0%

\*Assuming a 7.8% discount rate

Table 20: Government Financial Contribution

#### 4.1.5 AP Model with VGF (no CRMM)

##### a) Project Returns for the Concessionaire

Availability payments could be sized to offer adequate returns to remunerate the concessionaire for the capital provided and for the risks allocated to them.

- Equity IRR (BDT): 16.2%
- Equity IRR (USD): 15.0%

It is likely that investors would require an equity IRR in USD above 15% to compensate them for currency risk if they were to accept participating in a tender for a project that follows this structure.

The break-even point for equity investors would be reached in 2030 and equity IRR would grow steadily and progressively from that point forward, minimizing the incentives to the concessionaire to cause an early termination of the project.

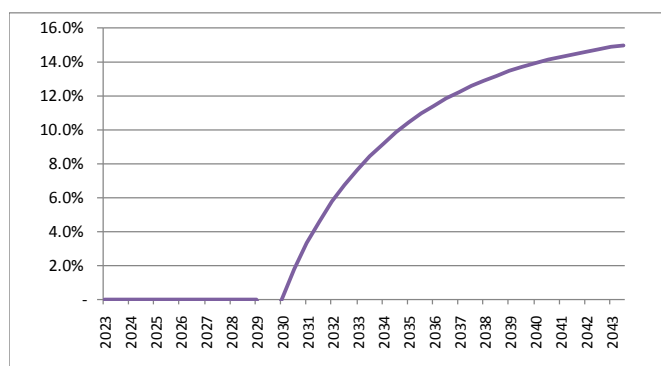


Figure 24: Equity IRR Build-up



## e) Bankability

This structure would not allow the concessionaire to benefit from lower cost USD debt financing and it would be more inefficient than the other structures. In addition, the project would still not generate enough cash flow during the first years of operations to have a leverage ratio above 55% since USD lenders would probably require a DSCR at least between 1.25x and 1.30x to cover any potential fluctuations in the exchange rate. As a result, the capital structure of the project becomes highly inefficient and the concessionaire required higher availability payments from the government to meet its hurdle equity IRR.

## f) Currency Risk

This structure would offer no currency risk protection to lenders nor equity investors.

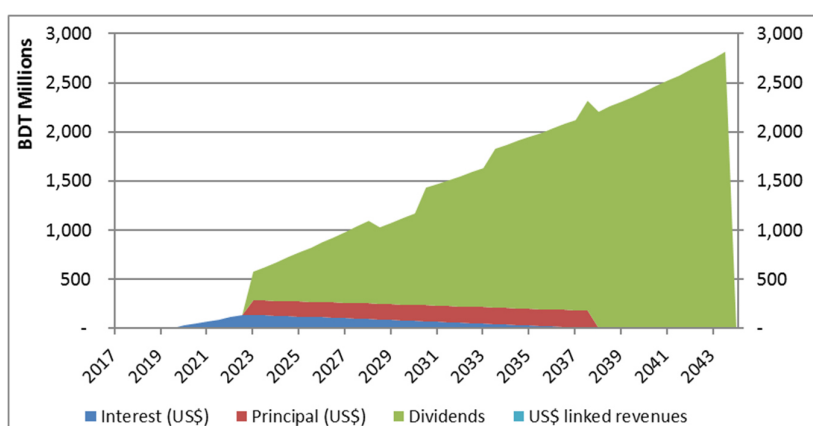


Figure 25: Currency Risk

## g) Government Cost and Government Payments

The total amount of financial support from the government would be significantly higher than in structures 1, 2 and 3 as shown in table 14 below. The amount of VGF would remain unchanged (BDT 8.1 billion) but APs would stay at BDT 122 billion.

Total VGF	(BDT mln)	8,059.7
Total Av PMTs	(BDT mln)	121,823
Total MRG	(BDT mln)	0
Total Government payments	(BDT mln)	129,883
NPV* Government	(BDT mln)	6,744
Equity IRR (BDT)	%	16.2%
Equity IRR (USD)	%	15.0%

\*Assuming a 7.8% discount rate

Table 21: Government Financial Contribution

Toll revenues would exceed APs and VGF combined and, as a result, the NPV of the project to the government would be positive BTD 6.2 billion.

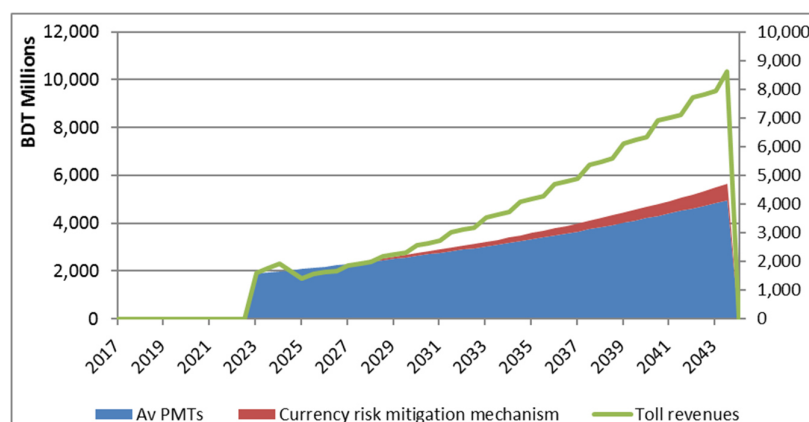


Figure 26: Government Payments and Toll Revenues

#### 4.1.6 Summary of Results and Recommended Structure

	Scenario 1: AP Model with VGF and CRMM	Scenario 2: AP Model (Sculpted) with VGF and CRMM	Scenario 3: AP Model (Non-Sculpted) with CRMM	Scenario 4: Demand-Risk Model with VGF, MRG and CRMM	Scenario 5: AP Model with VGF (no CRMM)
<b>Attractiveness to equity investors</b>					
Equity IRR	15%	15%	15%	18%	15%
Currency risk for equity investors	No	No	No	Yes	Yes
<b>Attractiveness to lenders</b>					
Leverage	61%	74%	60%	57%	55%
Min. DSCR	1.24x	1.25x	1.23x	1.30x	1.28x
Traffic risk for lenders	No	No	No	No	Yes
Currency risk for lenders	No	No	No	No	Yes
<b>Attractiveness to Government</b>					
Government NPV	BDT 8.1 bln	BDT 13.8 bln	BDT 3.3 bln	BDT -2.0 bln	BDT 6.7 bln

The 5 key take-aways from this financial analysis are the following:

- Structure 4 - Demand-Risk Model with VGF, MRG and CRMM would inefficiently allocate traffic risk to the private sector. The private sector has no mechanisms to control traffic risk in an urban setting where different free alternative routes exist or new alternatives may be created by different public entities. As a result, several sponsors would refuse to participate in project that is structured transferring demand risk to the private sector and those who agree to participate would require a higher equity IRR that

would make the project much more expensive for the government. For these reasons, **we consider that structure 4 is not a viable option to implement the project.**

- b) Structure 5: AP Model with VGF (no CRMM) would inefficiently allocate all currency risk to the private sector. This sits in contrast to structures 1 to 4, where a mechanism is proposed to share currency risk between the private sector and the government. The private sector does not have the capacity to manage the evolution of the BDT, whereas the Government of Bangladesh sets its monetary and fiscal policy, directly affecting the evolution of the exchange rate. As a result, most reputable international sponsors would refuse to participate in a project structure that transfers full currency risk to the private sector. For these reasons, **we consider that structure 5 is not a viable option to implement the project.**
- c) Structures 1, 2 and 3 (AP Model with VGF and CRMM, AP Model (sculpted) with VGF and CRMM; and AP Model (non-sculpted) with CRMM, respectively) would be viable options to implement the project.
- d) Structure 3 (AP Model (non-sculpted) with CRMM) is the recommended to implement the RAD project. In this scenario, the concessionaire does not benefit fully from debt financing, requiring higher equity contributions and thus higher APs from the government (compared to structures 1 and 2). Notwithstanding, toll revenues do still exceed APs and VGF combined, resulting in a positive NPV to the government. The main advantage of this option is that it does not require VGF from the government and, hence, it maximizes private sector investment and it helps streamline the procurement process for the project. For these reasons, **we would recommend structure 3 above all other structures if the government does not have the capacity to pay higher APs during the first years of operations of the project as required for Structure 2.**
- e) Structure 2 (AP Model (sculpted) with CRMM) would be the most efficient mechanism for the government to support the project (in terms of government NPV). This structure allows the concessionaire to optimize its capital structure and, hence, requires lower APs from the government. Government NPV using this structure is the highest. Nevertheless, the government would need to have the capacity to pay higher APs during the first years of operations than in structure 1 (AP Model with VGF and CRMM). For these reasons, **we would recommend structure 2 above all other structures if the government has the capacity to pay higher APs during the first years of operations of the project.**
- f) Structure 1 (Model with VGF and CRMM) would be the third most efficient option to implement the project. It is a viable option but it requires the government to provide VGF and it is not as efficient as structure 2.

## 5. SENSITIVITY ANALYSIS

This sensitivity analysis reviews the impact of variation in key quantitative assumptions and computations that are not under control of the Government of Bangladesh. This analysis is performed by systematically changing these key assumptions to assess their effect on the final outcome of the analysis. As mentioned earlier, while a higher NPV implies greater value to the government for doing the project, a negative NPV does not, by itself, suggest that the project should not be done. If the government has decided that the project should be done (e.g. strong economic IRR) and has value for money to be done as a PPP, a negative NPV indicates the net cost of the project to implement the project which may still be less than the cost if the government had to implement the project on its own.

This analysis will be based on structure 3 (AP Model (Non-Sculpted) with CRMM) but similar results (on relative basis) could be expected for other structures.

### 5.1. Capital Costs: Cost overruns

Delays and cost overrun are inherent part of most projects despite experience and knowledge in project management of the different parties involved. An unexpected increase in cost of construction that significantly reduces the returns for the private sector may potentially create the financial incentives for the private sector to abandon the project

	Increase in cost of construction							
	-10%	-5%	0%	5%	10%	15%	20%	25%
Equity IRR (USD)	17.0%	16.0%	15.0%	14.1%	13.3%	12.5%	11.8%	11.2%

Figure 27: Equity IRR - Cost Overruns

### 5.2 Traffic

Traffic risk and traffic revenues are retained by the Government of Bangladesh. Variations between estimated traffic and actual traffic would have a material financial impact for the Government of Bangladesh as shown in Figure 30

	Increase in traffic							
	-25%	-20%	-15%	-10%	-5%	0%	5%	10%
Government NPV (BDT million)	-9,143	-6,646	-4,148	-1,651	846	3,343	5,841	8,338

Figure 28: Government NPV - Traffic

### 5.3 Toll rates

One of the main advantages of using an AP structure is that the government retains a higher level of flexibility to set tolls during the concession period. The Government may decide to set toll rates at a level that does not optimize toll revenues for social, political, economic or other reasons.

In other toll road projects, the Government of Bangladesh has decided to increase toll rates at 60% of CPI. This analysis shows the financial impact to the government of using a similar tolling strategy in RAD as opposed to the 100% CPI increase assumed in our base case.

TRAFFIC FORECAST (60% CPI)	FY 2020	FY 2025	FY 2030	FY 2035	FY 2040	FY 2045	FY 2050
Large Truck with at least 3 axles (trailer)	677	2,693	3,686	4,707	5,751	6,552	7,250
Large Truck	1,015	4,040	5,528	7,061	8,627	9,829	10,875
Medium Truck with at least 2 axles	1,299	5,168	7,071	9,032	11,034	12,571	13,910
Large Bus (>31 seat capacity incl driver)	157	626	857	1,095	1,337	1,524	1,686
Small Truck (3 ton capacity)	944	3,758	5,143	6,568	8,025	9,143	10,116
Minibus, Coaster (<31 pax capacity)	1,102	4,385	6,000	7,663	9,362	10,667	11,802
Microbus	881	3,508	4,800	6,131	7,490	8,533	9,442
Sedan Car	1,472	5,857	8,014	10,236	12,505	14,248	15,764
Pick Up, Jeep, Recker, Converted Jeep, Crane	323	1,284	1,757	2,244	2,742	3,124	3,456
<b>Total</b>	<b>7,870</b>	<b>31,319</b>	<b>42,856</b>	<b>54,737</b>	<b>66,873</b>	<b>76,190</b>	<b>84,300</b>

Table 22: Traffic Forecast (60% CPI)

This adjusted traffic estimate assuming that tolls grow at 60% of CPI shows that demand is very inelastic and, hence, the reduction in toll revenues derived from lower toll rates will not be compensated by an increase in the number of users RAD.

As a result, and as shown in Figure 29, toll revenues and government NPV decrease very significantly if tolls are indexed to 60% of inflation instead of 100%.

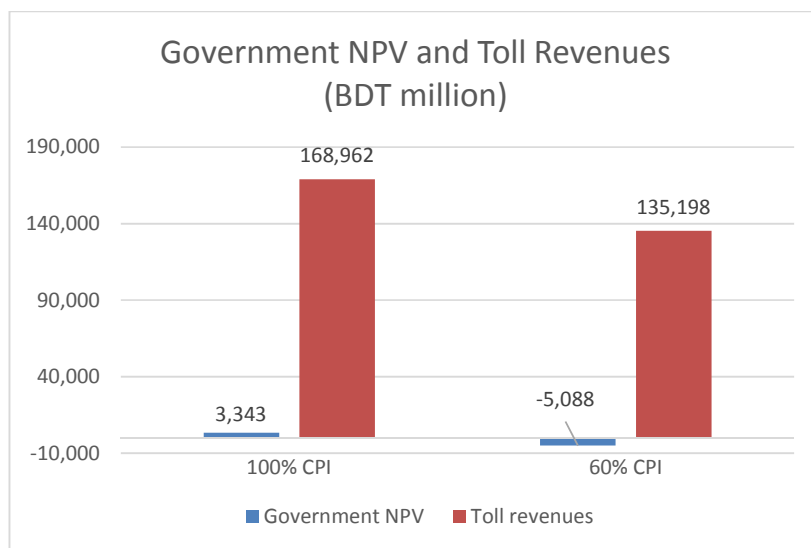


Figure 29: Government NPV and Toll Revenues – Toll Rates

# APPENDIX A

## DETAILED CONCESSIONAIRE CASH FLOWS

## PPP Structure 1: AP Model with VGF and CRMM – Detailed Concessionaire Cash Flow

<b>Concessionaire cash flows</b>															
<i>(BDT million)</i>	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
VGF	-	1,746	2,528	2,485	1,301	-	-	-	-	-	-	-	-	-	-
Availability Payments	-	-	-	-	1,569	3,251	3,407	3,570	3,742	3,982	4,255	4,487	4,731	4,989	5,261
Total Payments from GoB	-	1,746	2,528	2,485	2,870	3,251	3,407	3,570	3,742	3,982	4,255	4,487	4,731	4,989	5,261
Total Toll Operations \$ Road Maintenance	-	-	-	-	(272)	(563)	(590)	(619)	(649)	(681)	(714)	(748)	(785)	(823)	(863)
Total Capital Maintenance (periodized)	-	-	-	-	(85)	(178)	(189)	(201)	(214)	(228)	(242)	(257)	(274)	(291)	(310)
EBITDA	-	1,746	2,528	2,485	2,785	3,073	3,218	3,369	3,528	3,755	4,013	4,230	4,458	4,698	4,952
Corporate Tax	-	-	-	-	-	-	-	-	-	-	(216)	(254)	(293)	(333)	(374)
Contribution to Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash Flow from Operations	-	1,746	2,528	2,485	2,785	3,073	3,218	3,369	3,528	3,755	3,997	3,976	4,165	4,365	4,577
Cost of construction	(848)	(4,972)	(8,426)	(8,284)	(4,336)	-	-	-	-	-	-	-	-	-	-
VAT on cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash flow from Investment Activities	(848)	(4,972)	(8,426)	(8,284)	(4,336)	-	-	-	-	-	-	-	-	-	-
<b>Project Cash Flow</b>	<b>(848)</b>	<b>(3,226)</b>	<b>(5,898)</b>	<b>(5,799)</b>	<b>(1,551)</b>	<b>3,073</b>	<b>3,218</b>	<b>3,369</b>	<b>3,528</b>	<b>3,755</b>	<b>3,997</b>	<b>3,976</b>	<b>4,165</b>	<b>4,365</b>	<b>4,577</b>
Losses from fluctuations in the exchange rate	-	(0)	(1)	(4)	(14)	(28)	(38)	(47)	(55)	(63)	(70)	(77)	(83)	(88)	(92)
Debt Drawdown	415	2,436	4,129	4,059	2,125	-	-	-	-	-	-	-	-	-	-
Debt repayment	-	-	-	-	(506)	(1,012)	(1,012)	(1,012)	(1,012)	(1,012)	(1,012)	(1,012)	(971)	(929)	(929)
Total Interest	(15)	(129)	(434)	(723)	(951)	(894)	(817)	(741)	(664)	(587)	(511)	(434)	(358)	(289)	(222)
Equity investments	447	1,261	2,950	2,202	1,309	-	-	-	-	-	-	-	-	-	-
Dividends or equity repayment	-	-	-	-	-	(615)	(799)	(989)	(1,186)	(1,450)	(1,529)	(1,743)	(2,046)	(2,270)	(2,504)
Cash flow from Financing Activities	848	3,568	6,643	5,534	1,963	(2,548)	(2,666)	(2,788)	(2,917)	(3,112)	(3,122)	(3,266)	(3,457)	(3,576)	(3,748)
<b>Cash Flow to equity investors</b>	<b>(447)</b>	<b>(1,261)</b>	<b>(2,950)</b>	<b>(2,202)</b>	<b>(1,309)</b>	<b>615</b>	<b>799</b>	<b>989</b>	<b>1,186</b>	<b>1,450</b>	<b>1,529</b>	<b>1,743</b>	<b>2,046</b>	<b>2,270</b>	<b>2,504</b>

<i>(BDT million)</i>	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048
VGF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Availability Payments	5,548	5,851	6,171	6,508	6,863	7,238	7,634	8,052	8,493	8,958	4,661	-	-	-	-
Total Payments from GoB	5,548	5,851	6,171	6,508	6,863	7,238	7,634	8,052	8,493	8,958	4,661	-	-	-	-
Total Toll Operations \$ Road Maintenance	(905)	(949)	(995)	(1,043)	(1,094)	(1,147)	(1,202)	(1,261)	(1,322)	(1,386)	(718)	-	-	-	-
Total Capital Maintenance (periodized)	(329)	(350)	(373)	(396)	(421)	(448)	(477)	(507)	(539)	(574)	(300)	-	-	-	-
EBITDA	4,314	4,552	4,803	5,068	5,348	5,643	5,955	6,284	6,631	6,998	3,643	-	-	-	-
Corporate Tax	(418)	(459)	(502)	(546)	(601)	(655)	(701)	(751)	(803)	(858)	(450)	-	-	-	-
Contribution to Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash Flow from Operations	3,897	4,093	4,302	4,522	4,747	4,989	5,254	5,533	5,829	6,140	3,192	-	-	-	-
Cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAT on cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash flow from Investment Activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Project Cash Flow</b>	<b>3,897</b>	<b>4,093</b>	<b>4,302</b>	<b>4,522</b>	<b>4,747</b>	<b>4,989</b>	<b>5,254</b>	<b>5,533</b>	<b>5,829</b>	<b>6,140</b>	<b>3,192</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Losses from fluctuations in the exchange rate	(96)	(99)	(102)	(103)	(52)	-	-	-	-	-	-	-	-	-	-
Debt Drawdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt repayment	(750)	(570)	(570)	(570)	(285)	-	-	-	-	-	-	-	-	-	-
Total Interest	(155)	(112)	(78)	(43)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Equity investments	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Dividends or equity repayment	(3,101)	(3,328)	(3,569)	(3,822)	(4,695)	(4,989)	(5,254)	(5,533)	(5,829)	(6,140)	(3,192)	-	-	-	-
Cash flow from Financing Activities	(4,102)	(4,110)	(4,319)	(4,539)	(5,041)	(4,989)	(5,254)	(5,533)	(5,829)	(6,140)	(3,192)	-	-	-	-
<b>Cash Flow to equity investors</b>	<b>3,101</b>	<b>3,328</b>	<b>3,569</b>	<b>3,822</b>	<b>4,695</b>	<b>4,989</b>	<b>5,254</b>	<b>5,533</b>	<b>5,829</b>	<b>6,140</b>	<b>3,192</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>

## PPP Structure 2: AP Model (sculpted) with VGF and CRMM – Detailed Concessionaire Cash Flows

<b>Concessionaire cash flows</b>															
<i>(BDT million)</i>	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
VGF	-	1,746	2,528	2,485	1,301	-	-	-	-	-	-	-	-	-	-
Availability Payments	-	-	-	-	1,748	3,621	3,794	3,977	4,167	4,435	4,739	4,997	3,011	3,175	3,348
Total Payments from GoB	-	1,746	2,528	2,485	3,048	3,621	3,794	3,977	4,167	4,435	4,739	4,997	3,011	3,175	3,348
Total Toll Operations \$ Road Maintenance	-	-	-	-	(272)	(563)	(590)	(619)	(649)	(681)	(714)	(748)	(785)	(823)	(863)
Total Capital Maintenance (periodized)	-	-	-	-	(85)	(178)	(189)	(201)	(214)	(228)	(242)	(257)	(274)	(291)	(310)
EBITDA	-	1,746	2,528	2,485	2,963	3,442	3,605	3,775	3,953	4,208	4,497	4,740	2,737	2,884	3,039
Corporate Tax	-	-	-	-	-	-	-	-	-	-	(266)	(308)	(13)	(39)	(67)
Contribution to Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash Flow from Operations	-	1,746	2,528	2,485	2,963	3,442	3,605	3,775	3,953	4,208	4,231	4,432	2,725	2,845	2,971
Cost of construction	(848)	(4,972)	(8,426)	(8,284)	(4,336)	-	-	-	-	-	-	-	-	-	-
VAT on cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash flow from Investment Activities	(848)	(4,972)	(8,426)	(8,284)	(4,336)	-	-	-	-	-	-	-	-	-	-
<b>Project Cash Flow</b>	<b>(848)</b>	<b>(3,226)</b>	<b>(5,898)</b>	<b>(5,799)</b>	<b>(1,373)</b>	<b>3,442</b>	<b>3,605</b>	<b>3,775</b>	<b>3,953</b>	<b>4,208</b>	<b>4,231</b>	<b>4,432</b>	<b>2,725</b>	<b>2,845</b>	<b>2,971</b>
Losses from fluctuations in the exchange rate	-	(0)	(2)	(6)	(21)	(43)	(57)	(71)	(84)	(95)	(106)	(116)	(125)	(133)	(140)
Debt Drawdown	510	2,993	5,072	4,987	2,610	-	-	-	-	-	-	-	-	-	-
Debt repayment	-	-	-	-	(578)	(1,157)	(1,157)	(1,157)	(1,157)	(1,157)	(1,157)	(1,157)	(1,157)	(1,157)	(1,157)
Total Interest	(17)	(146)	(491)	(817)	(1,075)	(1,016)	(937)	(858)	(780)	(701)	(622)	(543)	(465)	(386)	(307)
Equity investments	354	708	2,044	1,350	1,035	-	-	-	-	-	-	-	-	-	-
Dividends or equity repayment	-	-	-	-	(704)	(903)	(1,110)	(1,324)	(1,613)	(1,671)	(1,907)	(2,331)	(3,861)	(5,441)	(7,148)
Cash flow from Financing Activities	848	3,555	6,624	5,514	1,971	(2,919)	(3,054)	(3,196)	(3,344)	(3,566)	(3,557)	(3,723)	(1,980)	(2,061)	(2,148)
<b>Cash Flow to equity investors</b>	<b>(354)</b>	<b>(708)</b>	<b>(2,044)</b>	<b>(1,350)</b>	<b>(1,035)</b>	<b>704</b>	<b>903</b>	<b>1,110</b>	<b>1,324</b>	<b>1,613</b>	<b>1,671</b>	<b>1,907</b>	<b>233</b>	<b>386</b>	<b>544</b>

<i>(BDT million)</i>	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048
VGF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Availability Payments	3,531	3,724	3,927	4,142	4,368	4,607	4,859	5,124	5,405	5,701	2,967	-	-	-	-
Total Payments from GoB	3,531	3,724	3,927	4,142	4,368	4,607	4,859	5,124	5,405	5,701	2,967	-	-	-	-
Total Toll Operations \$ Road Maintenance	(905)	(949)	(995)	(1,043)	(1,094)	(1,147)	(1,202)	(1,261)	(1,322)	(1,386)	(718)	-	-	-	-
Total Capital Maintenance (periodized)	(329)	(350)	(373)	(396)	(421)	(448)	(477)	(507)	(539)	(574)	(300)	-	-	-	-
EBITDA	2,297	2,425	2,560	2,702	2,853	3,012	3,179	3,356	3,543	3,741	1,948	-	-	-	-
Corporate Tax	(97)	(124)	(151)	(180)	(222)	(260)	(285)	(312)	(340)	(369)	(196)	-	-	-	-
Contribution to Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash Flow from Operations	2,201	2,301	2,408	2,522	2,631	2,752	2,894	3,045	3,204	3,372	1,752	-	-	-	-
Cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAT on cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash flow from Investment Activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Project Cash Flow</b>	<b>2,201</b>	<b>2,301</b>	<b>2,408</b>	<b>2,522</b>	<b>2,631</b>	<b>2,752</b>	<b>2,894</b>	<b>3,045</b>	<b>3,204</b>	<b>3,372</b>	<b>1,752</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Losses from fluctuations in the exchange rate	(146)	(150)	(154)	(156)	(79)	0	0	0	0	0	0	0	0	0	0
Debt Drawdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt repayment	(1,010)	(863)	(863)	(863)	(431)	-	-	-	-	-	-	-	-	-	-
Total Interest	(229)	(170)	(118)	(65)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Equity investments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends or equity repayment	(997)	(1,145)	(1,301)	(1,464)	(2,552)	(2,752)	(2,894)	(3,045)	(3,204)	(3,372)	(1,752)	-	-	-	-
Cash flow from Financing Activities	(2,380)	(2,327)	(2,435)	(2,548)	(3,075)	(2,752)	(2,894)	(3,045)	(3,204)	(3,372)	(1,752)	-	0	-	(0)
<b>Cash Flow to equity investors</b>	<b>997</b>	<b>1,145</b>	<b>1,301</b>	<b>1,464</b>	<b>2,552</b>	<b>2,752</b>	<b>2,894</b>	<b>3,045</b>	<b>3,204</b>	<b>3,372</b>	<b>1,752</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>



## PPP Structure 3: AP Model (non-sculpted) with CRMM – Detailed Concessionaire Cash Flows

<b>Concessionaire cash flows</b>															
<i>(BDT million)</i>	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
VGF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Availability Payments	-	-	-	-	2,063	4,274	4,479	4,694	4,919	5,236	5,595	5,899	6,220	6,559	6,917
Total Payments from GoB	-	-	-	-	2,063	4,274	4,479	4,694	4,919	5,236	5,595	5,899	6,220	6,559	6,917
Total Toll Operations \$ Road Maintenance	-	-	-	-	(272)	(563)	(590)	(619)	(649)	(681)	(714)	(748)	(785)	(823)	(863)
Total Capital Maintenance (periodized)	-	-	-	-	(85)	(178)	(189)	(201)	(214)	(228)	(242)	(257)	(274)	(291)	(310)
EBITDA	-	-	-	-	1,978	4,096	4,290	4,493	4,705	5,008	5,352	5,642	5,947	6,268	6,607
Corporate Tax	-	-	-	-	-	-	-	-	-	-	(381)	(434)	(489)	(545)	(603)
Contribution to Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash Flow from Operations	-	-	-	-	1,978	4,096	4,290	4,493	4,705	5,008	4,971	5,208	5,457	5,723	6,004
Cost of construction	(848)	(4,972)	(8,426)	(8,284)	(4,336)	-	-	-	-	-	-	-	-	-	-
VAT on cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash flow from Investment Activities	(848)	(4,972)	(8,426)	(8,284)	(4,336)	-	-	-	-	-	-	-	-	-	-
<b>Project Cash Flow</b>	<b>(848)</b>	<b>(4,972)</b>	<b>(8,426)</b>	<b>(8,284)</b>	<b>(2,358)</b>	<b>4,096</b>	<b>4,290</b>	<b>4,493</b>	<b>4,705</b>	<b>5,008</b>	<b>4,971</b>	<b>5,208</b>	<b>5,457</b>	<b>5,723</b>	<b>6,004</b>
Losses from fluctuations in the exchange rate	-	(0)	(2)	(6)	(19)	(40)	(53)	(66)	(78)	(89)	(99)	(108)	(116)	(124)	(130)
Debt Drawdown	585	3,430	5,814	5,716	2,992	-	-	-	-	-	-	-	-	-	-
Debt repayment	-	-	-	-	(712)	(1,425)	(1,425)	(1,425)	(1,425)	(1,425)	(1,425)	(1,425)	(1,367)	(1,309)	(1,309)
Total Interest	(21)	(182)	(611)	(1,018)	(1,339)	(1,258)	(1,151)	(1,043)	(935)	(827)	(720)	(612)	(504)	(406)	(312)
Equity investments	284	1,723	3,225	3,592	3,064	-	-	-	-	-	-	-	-	-	-
Dividends or equity repayment	-	-	-	-	-	(864)	(1,125)	(1,394)	(1,672)	(2,040)	(2,068)	(2,368)	(2,794)	(3,108)	(3,437)
Cash flow from Financing Activities	848	4,972	8,426	8,284	3,985	(3,587)	(3,753)	(3,928)	(4,110)	(4,381)	(4,311)	(4,513)	(4,781)	(4,947)	(5,188)
<b>Cash Flow to equity investors</b>	<b>(284)</b>	<b>(1,723)</b>	<b>(3,225)</b>	<b>(3,592)</b>	<b>(3,064)</b>	<b>864</b>	<b>1,125</b>	<b>1,394</b>	<b>1,672</b>	<b>2,040</b>	<b>2,068</b>	<b>2,368</b>	<b>2,794</b>	<b>3,108</b>	<b>3,437</b>

<i>(BDT million)</i>	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048
VGF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Availability Payments	7,294	7,692	8,112	8,556	9,023	9,516	10,037	10,586	11,165	11,777	6,128	-	-	-	-
Total Payments from GoB	7,294	7,692	8,112	8,556	9,023	9,516	10,037	10,586	11,165	11,777	6,128	-	-	-	-
Total Toll Operations \$ Road Maintenance	(905)	(949)	(995)	(1,043)	(1,094)	(1,147)	(1,202)	(1,261)	(1,322)	(1,386)	(718)	-	-	-	-
Total Capital Maintenance (periodized)	(329)	(350)	(373)	(396)	(421)	(448)	(477)	(507)	(539)	(574)	(300)	-	-	-	-
EBITDA	6,060	6,394	6,745	7,116	7,508	7,921	8,358	8,818	9,304	9,817	5,110	-	-	-	-
Corporate Tax	(664)	(722)	(782)	(845)	(921)	(996)	(1,062)	(1,131)	(1,204)	(1,281)	(670)	-	-	-	-
Contribution to Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash Flow from Operations	5,396	5,671	5,963	6,272	6,587	6,925	7,296	7,687	8,100	8,536	4,439	-	-	-	-
Cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAT on cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash flow from Investment Activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Project Cash Flow</b>	<b>5,396</b>	<b>5,671</b>	<b>5,963</b>	<b>6,272</b>	<b>6,587</b>	<b>6,925</b>	<b>7,296</b>	<b>7,687</b>	<b>8,100</b>	<b>8,536</b>	<b>4,439</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Losses from fluctuations in the exchange rate	(136)	(140)	(143)	(146)	(73)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Debt Drawdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt repayment	(1,056)	(803)	(803)	(803)	(402)	-	-	-	-	-	-	-	-	-	-
Total Interest	(218)	(158)	(109)	(61)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Equity investments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends or equity repayment	(4,275)	(4,594)	(4,932)	(5,286)	(6,513)	(6,925)	(7,296)	(7,687)	(8,100)	(8,536)	(4,439)	-	-	-	-
Cash flow from Financing Activities	(5,685)	(5,695)	(5,988)	(6,296)	(7,000)	(6,925)	(7,296)	(7,687)	(8,100)	(8,536)	(4,439)	-	-	(0)	0
<b>Cash Flow to equity investors</b>	<b>4,275</b>	<b>4,594</b>	<b>4,932</b>	<b>5,286</b>	<b>6,513</b>	<b>6,925</b>	<b>7,296</b>	<b>7,687</b>	<b>8,100</b>	<b>8,536</b>	<b>4,439</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>

## PPP Structure 4: Demand-Risk Model with VGF, MRG and CRMM – Detailed Concessionaire Cash Flows

<b>Concessionaire cash flows</b>															
<i>(BDT million)</i>	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
VGF	-	1,746	2,528	2,485	1,301	-	-	-	-	-	-	-	-	-	-
Availability Payments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Payments from GoB	-	1,746	2,528	2,485	1,301	-	-	-	-	-	-	-	-	-	-
Total Toll Operations \$ Road Maintenance	-	-	-	-	(272)	(563)	(590)	(619)	(649)	(681)	(714)	(748)	(785)	(823)	(863)
Total Capital Maintenance (periodized)	-	-	-	-	(85)	(178)	(189)	(201)	(214)	(228)	(242)	(257)	(274)	(291)	(310)
EBITDA	-	1,746	2,528	2,485	1,216	(178)	(189)	(201)	(214)	(228)	(242)	(257)	(274)	(291)	(310)
Corporate Tax	-	-	-	-	-	-	-	-	-	-	(250)	(318)	(393)	(506)	(595)
Contribution to Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash Flow from Operations	-	1,746	2,528	2,485	1,216	(178)	(189)	(201)	(214)	(228)	(493)	(575)	(667)	(797)	(905)
Cost of construction	(848)	(4,972)	(8,426)	(8,284)	(4,336)	-	-	-	-	-	-	-	-	-	-
VAT on cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash flow from Investment Activities	(848)	(4,972)	(8,426)	(8,284)	(4,336)	-	-	-	-	-	-	-	-	-	-
<b>Project Cash Flow</b>	<b>(848)</b>	<b>(3,226)</b>	<b>(5,898)</b>	<b>(5,799)</b>	<b>(3,120)</b>	<b>(178)</b>	<b>(189)</b>	<b>(201)</b>	<b>(214)</b>	<b>(228)</b>	<b>(493)</b>	<b>(575)</b>	<b>(667)</b>	<b>(797)</b>	<b>(905)</b>
Losses from fluctuations in the exchange rate	-	(0)	(1)	(4)	(13)	(26)	(35)	(44)	(51)	(59)	(65)	(71)	(77)	(82)	(86)
Debt Drawdown	386	2,262	3,834	3,769	1,973	-	-	-	-	-	-	-	-	-	-
Debt repayment	-	-	-	-	(470)	(939)	(939)	(939)	(939)	(939)	(939)	(939)	(901)	(863)	(863)
Total Interest	(14)	(120)	(403)	(671)	(883)	(830)	(759)	(688)	(617)	(546)	(474)	(403)	(332)	(268)	(206)
Equity investments	476	1,434	3,225	2,450	1,229	-	-	-	-	-	-	-	-	-	-
Dividends or equity repayment	-	-	-	-	-	(1,182)	(879)	(1,062)	(1,251)	(1,552)	(1,795)	(2,177)	(2,677)	(3,315)	(3,821)
Cash flow from Financing Activities	848	3,575	6,654	5,544	1,837	(2,978)	(2,612)	(2,733)	(2,859)	(3,096)	(3,274)	(3,591)	(3,987)	(4,528)	(4,976)
<b>Cash Flow to equity investors</b>	<b>(476)</b>	<b>(1,434)</b>	<b>(3,225)</b>	<b>(2,450)</b>	<b>(1,229)</b>	<b>1,182</b>	<b>879</b>	<b>1,062</b>	<b>1,251</b>	<b>1,552</b>	<b>1,795</b>	<b>2,177</b>	<b>2,677</b>	<b>3,315</b>	<b>3,821</b>

<i>(BDT million)</i>	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048
VGF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Availability Payments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Payments from GoB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Toll Operations \$ Road Maintenance	(905)	(949)	(995)	(1,043)	(1,094)	(1,147)	(1,202)	(1,261)	(1,322)	(1,386)	(718)	-	-	-	-
Total Capital Maintenance (periodized)	(329)	(350)	(373)	(396)	(421)	(448)	(477)	(507)	(539)	(574)	(300)	-	-	-	-
EBITDA	(1,234)	(1,299)	(1,367)	(1,439)	(1,515)	(1,595)	(1,679)	(1,768)	(1,862)	(1,960)	(1,019)	-	-	-	-
Corporate Tax	(687)	(825)	(925)	(1,026)	(1,199)	(1,322)	(1,441)	(1,628)	(1,752)	(1,878)	(1,045)	-	-	-	-
Contribution to Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash Flow from Operations	(1,921)	(2,124)	(2,292)	(2,465)	(2,714)	(2,917)	(3,120)	(3,396)	(3,613)	(3,838)	(2,064)	-	-	-	-
Cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAT on cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash flow from Investment Activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Project Cash Flow</b>	<b>(1,921)</b>	<b>(2,124)</b>	<b>(2,292)</b>	<b>(2,465)</b>	<b>(2,714)</b>	<b>(2,917)</b>	<b>(3,120)</b>	<b>(3,396)</b>	<b>(3,613)</b>	<b>(3,838)</b>	<b>(2,064)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Losses from fluctuations in the exchange rate	(89)	(92)	(95)	(96)	(48)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Debt Drawdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt repayment	(696)	(530)	(530)	(530)	(265)	-	-	-	-	-	-	-	-	-	-
Total Interest	(144)	(104)	(72)	(40)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Equity investments	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Dividends or equity repayment	(4,668)	(5,442)	(6,008)	(6,581)	(8,079)	(8,773)	(9,444)	(10,507)	(11,207)	(11,921)	(6,563)	-	-	-	-
Cash flow from Financing Activities	(5,597)	(6,169)	(6,705)	(7,247)	(8,401)	(8,773)	(9,444)	(10,507)	(11,207)	(11,921)	(6,563)	0	-	0	(0)
<b>Cash Flow to equity investors</b>	<b>4,668</b>	<b>5,442</b>	<b>6,008</b>	<b>6,581</b>	<b>8,079</b>	<b>8,773</b>	<b>9,444</b>	<b>10,507</b>	<b>11,207</b>	<b>11,921</b>	<b>6,563</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>

## PPP Structure 5: AP Model with VGF (no CRMM) – Detailed Concessionaire Cash Flows

<b>Concessionaire cash flows</b>															
<i>(BDT million)</i>	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
VGF	-	1,746	2,528	2,485	1,301	-	-	-	-	-	-	-	-	-	-
Availability Payments	-	-	-	-	1,723	3,570	3,742	3,921	4,110	4,307	4,514	4,730	4,957	5,195	5,445
Total Payments from GoB	-	1,746	2,528	2,485	3,024	3,570	3,742	3,921	4,110	4,307	4,514	4,730	4,957	5,195	5,445
Total Toll Operations \$ Road Maintenance	-	-	-	-	(272)	(563)	(590)	(619)	(649)	(681)	(714)	(748)	(785)	(823)	(863)
Total Capital Maintenance (periodized)	-	-	-	-	(85)	(178)	(189)	(201)	(214)	(228)	(242)	(257)	(274)	(291)	(310)
EBITDA	-	1,746	2,528	2,485	2,939	3,392	3,552	3,720	3,895	4,079	4,271	4,473	4,683	4,904	5,135
Corporate Tax	-	-	-	-	-	-	-	-	-	-	(268)	(307)	(348)	(385)	(420)
Contribution to Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash Flow from Operations	-	1,746	2,528	2,485	2,939	3,392	3,552	3,720	3,895	4,079	4,004	4,165	4,335	4,519	4,715
Cost of construction	(848)	(4,972)	(8,426)	(8,284)	(4,336)	-	-	-	-	-	-	-	-	-	-
VAT on cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash flow from Investment Activities	(848)	(4,972)	(8,426)	(8,284)	(4,336)	-	-	-	-	-	-	-	-	-	-
<b>Project Cash Flow</b>	<b>(848)</b>	<b>(3,226)</b>	<b>(5,898)</b>	<b>(5,799)</b>	<b>(1,397)</b>	<b>3,392</b>	<b>3,552</b>	<b>3,720</b>	<b>3,895</b>	<b>4,079</b>	<b>4,004</b>	<b>4,165</b>	<b>4,335</b>	<b>4,519</b>	<b>4,715</b>
Losses from fluctuations in the exchange rate	-	(0)	(1)	(2)	(8)	(16)	(21)	(26)	(31)	(36)	(40)	(43)	(47)	(49)	(52)
Debt Drawdown	380	2,227	3,775	3,711	1,943	-	-	-	-	-	-	-	-	-	-
Debt repayment	-	-	-	-	(550)	(1,101)	(1,101)	(1,101)	(1,101)	(1,101)	(1,101)	(1,101)	(875)	(649)	(649)
Total Interest	(16)	(141)	(475)	(791)	(1,040)	(964)	(862)	(760)	(658)	(556)	(454)	(352)	(250)	(188)	(139)
Equity investments	484	1,473	3,331	2,603	1,583	-	-	-	-	-	-	-	-	-	-
Dividends or equity repayment	-	-	-	-	-	(800)	(1,029)	(1,265)	(1,508)	(1,757)	(1,747)	(1,972)	(2,642)	(2,834)	(3,036)
Cash flow from Financing Activities	848	3,558	6,630	5,521	1,928	(2,880)	(3,013)	(3,152)	(3,297)	(3,450)	(3,341)	(3,468)	(3,814)	(3,721)	(3,876)
<b>Cash Flow to equity investors</b>	<b>(484)</b>	<b>(1,473)</b>	<b>(3,331)</b>	<b>(2,603)</b>	<b>(1,583)</b>	<b>800</b>	<b>1,029</b>	<b>1,265</b>	<b>1,508</b>	<b>1,757</b>	<b>1,747</b>	<b>1,972</b>	<b>2,642</b>	<b>2,834</b>	<b>3,036</b>

<i>(BDT million)</i>	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048
VGF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Availability Payments	5,706	5,980	6,267	6,568	6,883	7,213	7,560	7,922	8,303	8,701	4,506	-	-	-	-
Total Payments from GoB	5,706	5,980	6,267	6,568	6,883	7,213	7,560	7,922	8,303	8,701	4,506	-	-	-	-
Total Toll Operations \$ Road Maintenance	(905)	(949)	(995)	(1,043)	(1,094)	(1,147)	(1,202)	(1,261)	(1,322)	(1,386)	(718)	-	-	-	-
Total Capital Maintenance (periodized)	(329)	(350)	(373)	(396)	(421)	(448)	(477)	(507)	(539)	(574)	(300)	-	-	-	-
EBITDA	4,472	4,681	4,900	5,129	5,368	5,618	5,880	6,154	6,441	6,741	3,487	-	-	-	-
Corporate Tax	(457)	(492)	(528)	(565)	(608)	(651)	(690)	(731)	(774)	(819)	(427)	-	-	-	-
Contribution to Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash Flow from Operations	4,015	4,189	4,372	4,564	4,760	4,967	5,190	5,423	5,667	5,922	3,060	-	-	-	-
Cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAT on cost of construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash flow from Investment Activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Project Cash Flow</b>	<b>4,015</b>	<b>4,189</b>	<b>4,372</b>	<b>4,564</b>	<b>4,760</b>	<b>4,967</b>	<b>5,190</b>	<b>5,423</b>	<b>5,667</b>	<b>5,922</b>	<b>3,060</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Losses from fluctuations in the exchange rate	(54)	(56)	(57)	(58)	(29)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Debt Drawdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt repayment	(485)	(321)	(321)	(321)	(160)	-	-	-	-	-	-	-	-	-	-
Total Interest	(90)	(63)	(44)	(24)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Equity investments	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Dividends or equity repayment	(3,567)	(3,758)	(3,960)	(4,170)	(4,730)	(4,967)	(5,190)	(5,423)	(5,667)	(5,922)	(3,060)	-	-	-	-
Cash flow from Financing Activities	(4,196)	(4,198)	(4,382)	(4,573)	(4,925)	(4,967)	(5,190)	(5,423)	(5,667)	(5,922)	(3,060)	(0)	-	-	0
<b>Cash Flow to equity investors</b>	<b>3,567</b>	<b>3,758</b>	<b>3,960</b>	<b>4,170</b>	<b>4,730</b>	<b>4,967</b>	<b>5,190</b>	<b>5,423</b>	<b>5,667</b>	<b>5,922</b>	<b>3,060</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>

# APPENDIX B

## DETAILED GOVERNMENT CASH FLOWS

## PPP Structure 1: AP Model with VGF and CRMM – Detailed Government Cash Flow

### Government cash flows

(BDT million)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
VGF	-	(1,746)	(2,528)	(2,485)	(1,301)	-	-	-	-	-	-	-	-	-	-
Availability Payments	-	-	-	-	(1,569)	(3,251)	(3,407)	(3,570)	(3,742)	(3,982)	(4,255)	(4,487)	(4,731)	(4,989)	(5,261)
MRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total government payments	-	(1,746)	(2,528)	(2,485)	(2,870)	(3,251)	(3,407)	(3,570)	(3,742)	(3,982)	(4,255)	(4,487)	(4,731)	(4,989)	(5,261)
Toll revenues	-	-	-	-	1,598	3,683	3,058	3,181	3,534	3,898	4,445	4,879	5,367	6,117	6,713
Net government payments	-	(1,746)	(2,528)	(2,485)	(1,272)	432	(349)	(389)	(208)	(84)	189	392	636	1,128	1,451
Other government revenues	5	11	12	12	293	649	560	584	643	703	791	863	943	1,063	1,160
Other government costs	(1,517)	(232)	(244)	(255)	(132)	-	-	-	-	-	-	-	-	-	-
Government cash flow	(1,511)	(1,967)	(2,760)	(2,729)	(1,112)	1,082	212	195	434	619	981	1,255	1,579	2,190	2,611
	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048
VGF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Availability Payments	(5,548)	(5,851)	(6,171)	(6,508)	(6,863)	(7,238)	(7,634)	(8,052)	(8,493)	(8,958)	(4,661)	-	-	-	-
MRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total government payments	(5,548)	(5,851)	(6,171)	(6,508)	(6,863)	(7,238)	(7,634)	(8,052)	(8,493)	(8,958)	(4,661)	-	-	-	-
Toll revenues	7,328	8,277	8,981	9,697	10,841	11,691	12,564	13,904	14,820	15,759	8,627	-	-	-	-
Net government payments	1,780	2,426	2,810	3,189	3,978	4,452	4,929	5,852	6,328	6,801	3,966	-	-	-	-
Other government revenues	1,260	1,411	1,525	1,642	1,824	1,962	2,104	2,316	2,466	2,619	1,427	-	-	-	-
Other government costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government cash flow	3,040	3,836	4,336	4,831	5,802	6,414	7,033	8,168	8,793	9,420	5,393	-	-	-	-

## PPP Structure 2: AP Model (sculpted) with VGF and CRMM – Detailed Government Cash Flows

<b>Government cash flows</b>															
<i>(BDT million)</i>															
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
VGF	-	(1,746)	(2,528)	(2,485)	(1,301)	-	-	-	-	-	-	-	-	-	-
Availability Payments	-	-	-	-	(1,748)	(3,621)	(3,794)	(3,977)	(4,167)	(4,435)	(4,739)	(4,997)	(3,011)	(3,175)	(3,348)
MRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total government payments	-	(1,746)	(2,528)	(2,485)	(3,048)	(3,621)	(3,794)	(3,977)	(4,167)	(4,435)	(4,739)	(4,997)	(3,011)	(3,175)	(3,348)
Toll revenues	-	-	-	-	1,598	3,683	3,058	3,181	3,534	3,898	4,445	4,879	5,367	6,117	6,713
Net government payments	-	(1,746)	(2,528)	(2,485)	(1,451)	63	(736)	(795)	(634)	(537)	(295)	(118)	2,356	2,942	3,364
Other government revenues	5	11	12	12	293	649	560	584	643	703	791	863	943	1,063	1,160
Other government costs	(1,517)	(232)	(244)	(255)	(132)	-	-	-	-	-	-	-	-	-	-
Government cash flow	(1,511)	(1,967)	(2,760)	(2,729)	(1,291)	712	(176)	(211)	9	166	497	745	3,299	4,005	4,524
	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048
VGF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Availability Payments	(3,531)	(3,724)	(3,927)	(4,142)	(4,368)	(4,607)	(4,859)	(5,124)	(5,405)	(5,701)	(2,967)	-	-	-	-
MRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total government payments	(3,531)	(3,724)	(3,927)	(4,142)	(4,368)	(4,607)	(4,859)	(5,124)	(5,405)	(5,701)	(2,967)	-	-	-	-
Toll revenues	7,328	8,277	8,981	9,697	10,841	11,691	12,564	13,904	14,820	15,759	8,627	-	-	-	-
Net government payments	3,797	4,553	5,054	5,555	6,474	7,084	7,705	8,779	9,415	10,058	5,661	-	-	-	-
Other government revenues	1,260	1,411	1,525	1,642	1,824	1,962	2,104	2,316	2,466	2,619	1,427	-	-	-	-
Other government costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government cash flow	5,057	5,964	6,579	7,197	8,297	9,046	9,808	11,095	11,881	12,677	7,088	-	-	-	-

### PPP Structure 3: AP Model (non-sculpted) with CRMM – Detailed Government Cash Flows

<b>Government cash flows</b>															
<i>(BDT million)</i>	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
VGF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Availability Payments	-	-	-	-	(2,063)	(4,274)	(4,479)	(4,694)	(4,919)	(5,236)	(5,595)	(5,899)	(6,220)	(6,559)	(6,917)
MRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total government payments	-	-	-	-	(2,063)	(4,274)	(4,479)	(4,694)	(4,919)	(5,236)	(5,595)	(5,899)	(6,220)	(6,559)	(6,917)
Toll revenues	-	-	-	-	1,598	3,683	3,058	3,181	3,534	3,898	4,445	4,879	5,367	6,117	6,713
Net government payments	-	-	-	-	(465)	(591)	(1,421)	(1,513)	(1,386)	(1,337)	(1,150)	(1,020)	(853)	(443)	(204)
Other government revenues	5	11	12	12	293	649	560	584	643	703	791	863	943	1,063	1,160
Other government costs	(1,517)	(232)	(244)	(255)	(132)	-	-	-	-	-	-	-	-	-	-
Government cash flow	(1,511)	(221)	(232)	(243)	(305)	59	(861)	(928)	(743)	(634)	(358)	(157)	90	620	956
	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048
VGF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Availability Payments	(7,294)	(7,692)	(8,112)	(8,556)	(9,023)	(9,516)	(10,037)	(10,586)	(11,165)	(11,777)	(6,128)	-	-	-	-
MRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total government payments	(7,294)	(7,692)	(8,112)	(8,556)	(9,023)	(9,516)	(10,037)	(10,586)	(11,165)	(11,777)	(6,128)	-	-	-	-
Toll revenues	7,328	8,277	8,981	9,697	10,841	11,691	12,564	13,904	14,820	15,759	8,627	-	-	-	-
Net government payments	34	584	868	1,141	1,818	2,174	2,527	3,318	3,655	3,982	2,499	-	-	-	-
Other government revenues	1,260	1,411	1,525	1,642	1,824	1,962	2,104	2,316	2,466	2,619	1,427	-	-	-	-
Other government costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government cash flow	1,294	1,995	2,394	2,783	3,642	4,136	4,630	5,634	6,121	6,601	3,926	-	-	-	-

**PPP Structure 4: Demand-Risk Model with VGF, MRG and CRMM – Detailed Government Cash Flows**

<b>Government cash flows</b>															
<i>(BDT million)</i>	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
VGF	-	(1,746)	(2,528)	(2,485)	(1,301)	-	-	-	-	-	-	-	-	-	-
Availability Payments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MRG	-	-	-	-	-	-	(298)	(336)	(153)	(70)	-	-	-	-	-
Total government payments	-	(1,746)	(2,528)	(2,485)	(1,301)	-	(298)	(336)	(153)	(70)	-	-	-	-	-
Toll revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net government payments	-	(1,746)	(2,528)	(2,485)	(1,301)	-	(298)	(336)	(153)	(70)	-	-	-	-	-
Other government revenues	5	11	12	12	293	649	560	584	643	703	791	863	943	1,063	1,160
Other government costs	(1,517)	(232)	(244)	(255)	(132)	-	-	-	-	-	-	-	-	-	-
Government cash flow	(1,511)	(1,967)	(2,760)	(2,729)	(1,141)	649	262	248	490	633	791	863	943	1,063	1,160

	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048
VGF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Availability Payments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total government payments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toll revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net government payments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other government revenues	1,260	1,411	1,525	1,642	1,824	1,962	2,104	2,316	2,466	2,619	1,427	-	-	-	-
Other government costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government cash flow	1,260	1,411	1,525	1,642	1,824	1,962	2,104	2,316	2,466	2,619	1,427	-	-	-	-



## PPP Structure 5: AP Model with VGF (no CRMM) – Detailed Government Cash Flows

<b>Government cash flows</b>															
<i>(BDT million)</i>															
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
VGF	-	(1,746)	(2,528)	(2,485)	(1,301)	-	-	-	-	-	-	-	-	-	-
Availability Payments	-	-	-	-	(1,723)	(3,570)	(3,742)	(3,921)	(4,110)	(4,307)	(4,514)	(4,730)	(4,957)	(5,195)	(5,445)
MRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total government payments	-	(1,746)	(2,528)	(2,485)	(3,024)	(3,570)	(3,742)	(3,921)	(4,110)	(4,307)	(4,514)	(4,730)	(4,957)	(5,195)	(5,445)
Toll revenues	-	-	-	-	1,598	3,683	3,058	3,181	3,534	3,898	4,445	4,879	5,367	6,117	6,713
Net government payments	-	(1,746)	(2,528)	(2,485)	(1,427)	113	(684)	(740)	(576)	(409)	(69)	149	410	922	1,268
Other government revenues	5	11	12	12	293	649	560	584	643	703	791	863	943	1,063	1,160
Other government costs	(1,517)	(232)	(244)	(255)	(132)	-	-	-	-	-	-	-	-	-	-
Government cash flow	(1,511)	(1,967)	(2,760)	(2,729)	(1,266)	762	(123)	(156)	67	295	722	1,012	1,353	1,985	2,428
	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048
VGF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Availability Payments	(5,706)	(5,980)	(6,267)	(6,568)	(6,883)	(7,213)	(7,560)	(7,922)	(8,303)	(8,701)	(4,506)	-	-	-	-
MRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total government payments	(5,706)	(5,980)	(6,267)	(6,568)	(6,883)	(7,213)	(7,560)	(7,922)	(8,303)	(8,701)	(4,506)	-	-	-	-
Toll revenues	7,328	8,277	8,981	9,697	10,841	11,691	12,564	13,904	14,820	15,759	8,627	-	-	-	-
Net government payments	1,622	2,297	2,714	3,129	3,958	4,477	5,004	5,981	6,518	7,057	4,121	-	-	-	-
Other government revenues	1,260	1,411	1,525	1,642	1,824	1,962	2,104	2,316	2,466	2,619	1,427	-	-	-	-
Other government costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government cash flow	2,882	3,708	4,239	4,771	5,782	6,439	7,107	8,297	8,984	9,677	5,548	-	-	-	-



