

Handbook on Estimation of Contingent Liabilities from PPP

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**PPP Cell, Infrastructure Division
Department of Economic Affairs
Ministry of Finance
Government of India**

Introduction

The Department of Economic Affairs (DEA), Government of India defines Public Private Partnership (PPP) as *“an arrangement between a Government or statutory entity or Government owned entity on one side and a private sector entity on the other, for the provision of public assets and/or related services for public benefit, through investments being made by and/or management undertaken by the private sector entity for a specified time period, where there is a substantial risk sharing with the private sector and the private sector receives performance linked payments that conform (or are benchmarked) to specified, pre-determined and measurable performance standards”*. PPPs may be structured in different forms, like BOT, BOOT, etc. These partnerships could be annuity agreements with no user fees and with defined payment obligations to the concessionaire by the Government or could be non-annuity agreements.

PPPs, in whatever form they are structured, create explicit and implicit financial obligations to the Government which may result in fiscal risks to the financial system and therefore need to be measured and managed effectively. The fiscal commitments that PPPs may create are (i) explicit, as defined in the concession agreements and which arise due to contractual obligations which may be a direct or a contingent liability and (ii) implicit, those liabilities that arise on account of public expectations and morale obligations as the PPPs create public goods and services and which are not defined in the contracts. Implicit liabilities may also arise on account of Government agreeing for certain payment obligations even though there may not be a contractual necessity; contract readjustments/renegotiations in a long term PPP agreement, obligation to provide continuous services in case of early terminations of ongoing contracts, public expectation on Government to rescue troubled projects which may have no business justification to continue, etc.

The DEA desired developing a Framework for estimation and management of explicit contingent liabilities that may arise from PPPs and a web based Application Tool for use by Project Authorities, Government and PPP practitioners that will be useful in estimating the contingent liabilities from their respective PPP projects. The Framework and the Application Tool will serve the needs of the practitioners in the Roads and Bridges sector initially and later this will be upgraded and extended to cover all other relevant sectors.

This Handbook on estimation of contingent liabilities provides a brief objective and applicability of the Framework, explains the concepts and narrates the Framework and lists out the steps in estimating the contingent liabilities and their disclosure. A user manual appended to this handbook lists out steps to use the Application Tool with contextual help and screen shots.

Acknowledgments

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Abbreviations

Abbreviation	
AOED	Authority Event of Default
BOT	Build Operate Transfer
BOOT	Build Operate Own Transfer
CLMS	Contingent Liability Management System
COD	Commercial Operations Date
COED	Concessionaire Event of Default
CL	Contingent Liability
DEA	Department of Economic Affairs
GASAB	Government Accounting Standards Advisory Board
IGAS	Indian Government Accounting Standards
IGFRS	Indian Government Financial Reporting Standards
IPSAS	International Public Sector Accounting Standards
IPFM	Indirect Political Force Majeure
MCA	Model Concession Agreement
NPFM	Non Political Force Majeure
PFM	Political Force Majeure
PPP	Public Private Partnership

1. Objective and Applicability

1.1 Objective

The objective of the Handbook is to provide guidance to the project development and implementing authorities on the following:

- a) Understanding the concept of contingent liabilities in general and those that can arise from PPPs
- b) Measure and disclose the contingent liabilities arising from PPPs so that the project authorities and central/state government can better manage the fiscal costs arising from these long term agreements and strengthen fiscal discipline to ensure macro sustainability.
- c) Prepare the project authorities and central/state government to comply with the IFRS 5 as and when it becomes mandatory and also comply with internationally accepted standards for accounting and reporting of contingent liabilities.

1.2 Applicability

This handbook is currently made useful for Toll, Annuity and Hybrid Annuity PPP projects of the Roads and Bridges sector.

2. Concepts and Authoritative Pronouncements

2.1 Liability and Contingent liability

A “Liability” is a present obligation of an entity that arises from past events, the settlement of which results in outflow of economic resources. Liabilities can create immediate payment obligations, known as direct liabilities or can create future payment obligations upon the occurrence of some future event/s requiring an entity to settle, known as contingent liabilities. PPPs impose financial commitments on project authorities and/or the central/state Government which can be (i) direct liabilities, where the timing and size of the liability are known upfront and (ii) contingent liabilities, where the commitment can be contingent upon a future event. The distinction between direct liabilities and contingent liabilities is illustrated below.

Element of Liability	Direct Liability	Contingent Liability
Obligation and Need for Payment	Present and certain obligation resulting from a past event; obligations and payment needs are known upfront.	Possible obligation from a past event; obligations may be confirmed by occurrence/nonoccurrence of uncertain future events.
Quantum of amount	Known upfront with certainty; reliable estimates of the amount of the obligation can be made for accounting and budgeting.	Uncertain amounts; estimates may also not be possible with reasonable accuracy and reliability.
Timing	Known with certainty	Uncertain/unknown
Outflow of resources	Known with certainty.	Uncertain and depend on the occurrence/nonoccurrence of an event in future;
Recognition	Recognized only in accrual basis of accounting and not in cash basis. In cash basis of accounting liabilities are recognized only when they are paid.	Not recognized; only disclosure is recommended.

Translating the above conceptual framework to the PPP environment, PPPs can give rise to the following types of direct and contingent liabilities.

Direct Liabilities	Contingent Liabilities ¹
<ol style="list-style-type: none"> 1. Viability gap payments 2. Annuity payments 3. Any project related specific subsidies 	<ol style="list-style-type: none"> 1. Costs on account of Force Majeure events. 2. Termination payments for Force Majeure events. 3. Payments for Concessionaire/Authority event of default events, if such defaults lead to termination of agreements.

Typically PPPs are implemented in several modes and only some forms of the PPPs create Contingent Liabilities while others do not, as shown below.

Mode/Form	Asset Ownership	O&M	Capital Investment	Commercial Risk	Potential to create Contingent Liability
Service Contract	Government	Public and Private	Government	Government	No
Management Contract	Government	Private	Government	Government	No
Lease	Government	Private	Government	Shared	No
Concessions	Government	Private	Private	Private	Yes
BOT/BOOT/DBOT/DBFOT	Private/ Government	Private	Private	Private	Yes

2.2 Indian and International Accounting Standards

Government accounting in India follows cash basis of accounting using Indian Government Accounting Standards (IGAS) formulated by Government Accounting Standards Advisory Board (GASAB) and notified by Government of India. Government of India has been planning a transition to the accrual basis of accounting and as part of the proposed transition the GASAB has issued a few accounting standards under the title Indian Government Financial Reporting Standards (IGFRS) which are recommendatory in nature and are currently being used for pilot studies as these have not been notified by Government of India. One of these IGFRS is the IGFRS 5 which deals with Contingent Liabilities (other than guarantees) and Contingent Assets: disclosure requirements. IFGRS 5 is only a disclosure standard² and the contingent liabilities

¹ A contingency is a condition or situation, the ultimate outcome of which, gain or loss, will be known or determined only on the occurrence, or non-occurrence, of one or more uncertain future events. (ICAI)

² Accounting Standards can be (i) Standards which recommend/prescribe recognition, measurement and disclosure requirement and (ii) Standards which prescribe/recommend only disclosures.

may be disclosed as recommended by IFRS 5 while their recognition and measurement may be done using any fiscally prudent approach.

As per IFRS 5, a Contingent liability is:

- i. A possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity; or
- ii. A present obligation that arises from past events but is not recognized because:
 - a. it is not probable that an outflow of resources embodying economic benefits or service potential will be required to settle the obligation; or
 - b. the amount of the obligation cannot be measured with sufficient reliability

International Public Sector Accounting Standards (IPSAS) are the internationally recognized accounting standards for government/public sector accounting. IPSAS 19 deals with Provisions and Contingent Liabilities and Contingent Assets. It defines contingent liability as:

A contingent liability is:

- i. a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity; or
- ii. a present obligation that arises from past events but is not recognized because:
 - a. It is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or
 - b. The amount of the obligation cannot be measured with sufficient reliability.

Indian and International Accounting Standards converge on the same principle, that contingent liabilities are unknown/ uncertain obligations that get converted into direct liabilities on occurrence or non-occurrence of future event/s not within the control of the government. In the accounting domain, contingent liabilities remain “off balance sheet” and are confined only to disclosures in the financial statements.

3. Recognition and Measurement

3.1 When to recognize Contingent Liabilities in the Financial Statements

The term recognition means formally recording the monetary effects of a transaction into the books of accounts and financial statements. **Contingent liabilities are never recorded in the books of accounts and financial statements and they remain off balance sheet.** Contingent liabilities are only disclosed in the financial statements irrespective of the basis of accounting i.e. cash or accrual. For the purpose of such disclosure, they are estimated based on probability of occurrence of an event that may give rise to contingent liabilities. The following tables illustrates the requirement for contingent liabilities under Indian and International Standards.

Method of Accounting	Relevant Standard	Accounting Treatment	Disclosure
Cash Accounting	-	Only when contingency is materialized and cash payments need to be made.	Encouraged
Accrual Accounting	IGFRS / IPSAS 19	Liability should be recognized as a provision if: <ul style="list-style-type: none"> • The chances of occurrence of the obligation/s are more than 50%. • The amount of obligation can be measured with sufficient reliability Liabilities that do not satisfy the above requirements do not get recognized	Required for the remaining contingent liabilities unless the probability of occurrence of a risk event and an associated payment to the Concessionaire is remote.

3.2 Contractual Risks and Payouts for Contingent Liabilities

The Concession Agreements for PPPs specify the types of risks/events that may trigger contingent liabilities. These agreements also lists the force majeure conditions and concessionaire and authority event of defaults that may lead to termination of the Concession Agreements and consequential termination payments that may become due from the project authorities/government to the concessionaire. This serves as the overarching framework for the

Application Tool developed for estimation of contingent liabilities as included in this handbook. The risks that need to be considered for estimation of Contingent Liabilities are:

- a. Event Risk – this is the likelihood of occurrence of an event defined in the Concession Agreement that may trigger an early termination of the Agreement or give rise to additional costs/payments for the Government/Authority.
- b. Termination Risk - this is the likelihood of an early termination of contract due to materialization of a contingent event.
- c. Payout Risk – this is the risk that an early termination may result in a payout as defined in the Agreement or result in additional payouts/costs due to materialization of a contingent event.

These risks are cascading. While probability of occurrence of some of those risks may vary from project to project due to project location, status of completion and other project specific factors, for many other risks probability of occurrence may remain the same. There are certain risks like change in law, change in scope etc. whose probability of occurrence may be high but such occurrence does not necessarily result in termination of projects (expressed as Termination Risk) and therefore do not trigger Termination Payouts (Payout Risks). Therefore, the following assumptions are made in developing a default risk register for the Application Tool for the purpose of contingent liability estimations.

- a) The project “cycle” has been divided into three phases :
 - i. Appointed Date Pending - all projects for which the Appointed Date has not been officially declared/notified fall into this category.
 - ii. Under Construction – projects which are under construction and for which CoD has not been declared/notified fall into this category.
 - iii. Operational – projects for which CoD has been declared/ notified fall into this category.
- b) Probability of occurrence of a risk and its expected financial impact are the basis for developing the default risk register for the framework. Probability of occurrence of a risk event may vary (increase/decrease) with the project phase as above; however within a given “phase” all projects may have similar risk profiles except for the risks associated with the natural disasters.
- c) The termination risk profile for all projects may be similar irrespective of their location and status of completion.

3.3 Approach to Estimation of Contingent Liabilities for PPPs

Estimating accurately the contingent liabilities (like the guarantees, termination payouts etc.,) is difficult as these depend upon uncertain future events whose probability of occurrence depend upon the materialization of the embedded risks and estimating the probability of occurrence of those risks is not always easy. There are various techniques to estimate the contingent liabilities that range from simple excel worksheets to complex probability analysis, parametric modelling and option pricing techniques. These statistical models are extremely data intensive. Not too

many countries use the probability based models and several countries prefer more simplistic scenario based judgmental models to assess their contingent liabilities from PPPs.

In the Indian context, statistical modelling for estimation of contingent liabilities may be difficult due to data constraints and in the absence of historical data, models cannot be robust enough to produce desired results. Therefore an alternative approach is desired. A basic approach for estimation of contingent liabilities is to assume maximum exposure under the assumption of 100% likelihood of all risks associated with the events that may give rise to contingent liabilities. This, however, may be regarded as extremely conservative and inefficient. Therefore, a combination of scenario analysis and assignment of probabilities based on past experience and stakeholder consultations is considered more appropriate and simplistic. Accordingly, for the purposes of constructing a default risk register embedded in to the Application Tool, probabilities were assigned based on (i) past experience with the PPP projects and (ii) stakeholder consultations on the various risks associated with PPPs, the likelihood of their occurrence and their potential impact on the projects. Under this approach, the contingent liabilities will be calculated as the product of probability and the contracted termination payments for a given risk category if the associated risk score for that category crosses a given threshold score. The Application Tool generates this number. This is explained in the following steps.

3.4 Steps in Estimation of Contingent Liabilities

1. Assign Probabilities for each risk event based on the following guidance

S No	Range of Probability	Assign Probability score as	Explanation for Assigned Probability
1	0.00 - 0.25	1	The likelihood of occurrence of an event is to be classified as "REMOTE"
2	0.26 - 0.50	2	The likelihood of occurrence of an event is to be classified as "UNLIKELY"
3	0.51 - 0.75	3	The likelihood of occurrence of an event is to be classified as "POSSIBLE"
4	0.76 - 1.00	4	The likelihood of occurrence of an event is to be classified as "LIKELY"

The Application Tool provides default values for each risk event that may potentially impact a project. The User may use these default values as they are or may edit the same basing on the risk perception for each project for which contingent liabilities need to be estimated.

2. Assign Impact score for risk events as per the following guidance

S No	Likely Impact of a Risk Event	Guidance for defining financial impact	Impact Score to be assigned
1	If the risk event is expected to cause High Financial Impact	> 20% project cost	4
2	If the risk event is expected to cause Moderate Financial Impact	>10% and less than 20% of project cost	3
3	If the risk event is expected to cause Minor Financial Impact	>5% and less than 10% of project cost	2
4	If the risk event is expected to cause Insignificant Financial Impact	<5% of project cost	1

The Application Tool provides default impact values for each risk event that may potentially impact a project. The User may use these default values as they are or may edit the same basing on the risk and impact perception for each project for which contingent liabilities need to be estimated.

3. Construct a Risk Register

Construct a Risk Register to assign risk scores for each risk event that can potentially impact the project and result in contingent liabilities. Risk scores are assigned as product of probability of an event occurrence and its likely financial impact as illustrated in the following table.

		Probability * Risk Impact			
Risk Impact	High	4	8	12	16
	Moderate	3	6	9	12
	Minor	2	4	6	8
	Insignificant	1	2	3	4
		Remote	Unlikely	Possible	Likely
	Probability				

The Application Tool has a detailed default risk register (refer Annexure 2). The Users of the Tool can pull the default risk register, add/edit the probabilities as they deem fit for their

projects; this will create a new risk register for their portfolio of projects. The Tool is configured to take the edited values into consideration to determine the contingent liabilities.

4. Determine the threshold level of risk scores

Determine the threshold level of risk scores that can trigger a contingent liability. The Application Tool has a default level which can only be changed by the Administrator of the User.

Risk Score	Explanation for the Risk Score	Budgeting	Disclosure
9 to 16	Occurrence of risk events with this score is considered “possible” or “likely” and such occurrence can have a moderate to high financial impact. Therefore will trigger contingent liabilities.	Liabilities for these events should be budgeted.	These liabilities should be disclosed.
6 to 8	a. Occurrence of risk events with this score is considered “possible” or “likely” but their financial impact is “minor” Or b. Occurrence of risk event/s is considered “unlikely”; but if it occurs, it may have moderate to high financial impact.	Liabilities for these events need not be budgeted.	These liabilities should be disclosed.
1 to 4	Occurrence of risks is considered “remote” or “unlikely” with insignificant to minor financial impact. These events will not trigger any contingent liabilities	These may be fully ignored for the purpose of disclosure and budgeting	

5. Match the Termination Payments as per CA with the default list provided in the Application Tool.

The quantum of potential contingent liabilities is based on the quantum and basis of termination payments stated in the Concession Agreements. The basis and quantum of Termination payments as per Model CA has been listed and provided in the Application Tool (default list). The User will have to view the default list to ensure the basis and amounts stated therein match with the Concession Agreements of projects for which the contingent liabilities need to be estimated. The default list provided in the Application Tool (refer

Annexure 3) lists out basis and quantum of termination payments separately for Toll Projects and Annuity Projects.

- 5.1. **Toll Projects** based on the updated version of MCA of May 2016. A sample analysis of the concession agreements signed prior to 2006 and after 2006, indicate that the basis and quantum of termination payments in the event of occurrence of force majeure and default risks are almost similar in all concession agreements and hence the Application Tool can be used for all types of BOT projects with necessary user inputs as required by the Tool.
- 5.2. **Annuity Projects** based on an Annuity Concession Agreements signed during the period 2012.
- 5.3. **Hybrid Annuity Projects** based on the MCA of 2016 (version 2 of 2016).

6. Determine the Debt and Equity

The next step is determining the “Debt Due” and “Adjusted Equity” which provide the basis for determining the potential termination payments under concession agreements and hence also provide the basis for estimation of contingent liabilities. Article 48 in case of Model CA 2016 for BOT-Toll and Article 42 of Model CA 2016 (version 08.02.2016) in case of Hybrid Annuity contain necessary definitions for “Debt Due” and “Adjusted Equity”. These amounts may vary depending on the operational year of the project (for example, a project into 15th year of operation may have higher equity and less debt where as a project in its first year of operation will have higher debt and lower equity). Contingent liabilities should be estimated based on the actual debt due and/or adjusted equity as at the end of the year for which contingent liabilities are required to be estimated. Users of the Tool are required to input the actual loans, interest and other components of the debt and the equity along with the Total Project Cost as per Concession Agreement, Total Project Cost at Financial Close, and Total Project cost – actual and the grants (if any) received from government. The Tool will calculate the “Debt Due” and “Adjusted Equity” which will be used for estimating the contingent liability. The formulae embedded in the tool for this purpose are given below.

6.1. For BOT and Annuity Projects

The following formulae are based on Article 48 (Definitions) of the Model CA 2016 for BOT and Articles 34.9.1, 34.9.2, 34.9.3, 37.3.1 and 37.3.2 (Termination Payments). Similar definitions and payment obligations have been defined in the Annuity Agreements of 2012 which is the basis for the Application Tool.

Project Debt Outstanding = (Least of {(i) Total Project Cost as per CA,(ii) Total Project Cost at Finance Close, (iii) Total Actual Project cost} – Construction Grant – Equity as per CA.)

Debt Due = Lower of (i) Project Debt Outstanding and (ii) Actual loan outstanding with interest as per user inputs

Adjusted Equity (in case of termination on or before COD) = $(\text{Equity} * (1 + ((0.5 * \text{Change in WPI Value w.r.t Appointed Date}) / 100)))$

Adjusted Equity (in case of termination between COD and 4th anniversary thereof) = $\text{Adjusted Equity} = (\text{Base Equity on COD} * (1 + ((\% \text{ change in WPI w.r.t. given reference date and COD date}) / 100)))$

Adjusted Equity (in case of termination after 4th anniversary) = $\text{Adjusted Equity} = (((\text{Base Equity on COD} * (1 - (((\text{Equity Adjustment Factor}) / 100) * \text{No. of months after 4}^{\text{th}} \text{ Anniversary})))) * (100 + ((\% \text{ change in WPI w.r.t. given reference date and COD date}) / 100)))$

6.2. For Hybrid Annuity Projects:

The following formulae are based on Article 42 (Definitions) and Articles 28.9.1, 28.9.2, 28.9.3, 31.3.1, 31.3.2 and 31.3.3 (Termination Payments) of the Model CA 2016 (Version 08.02.2016) for Hybrid Annuity.

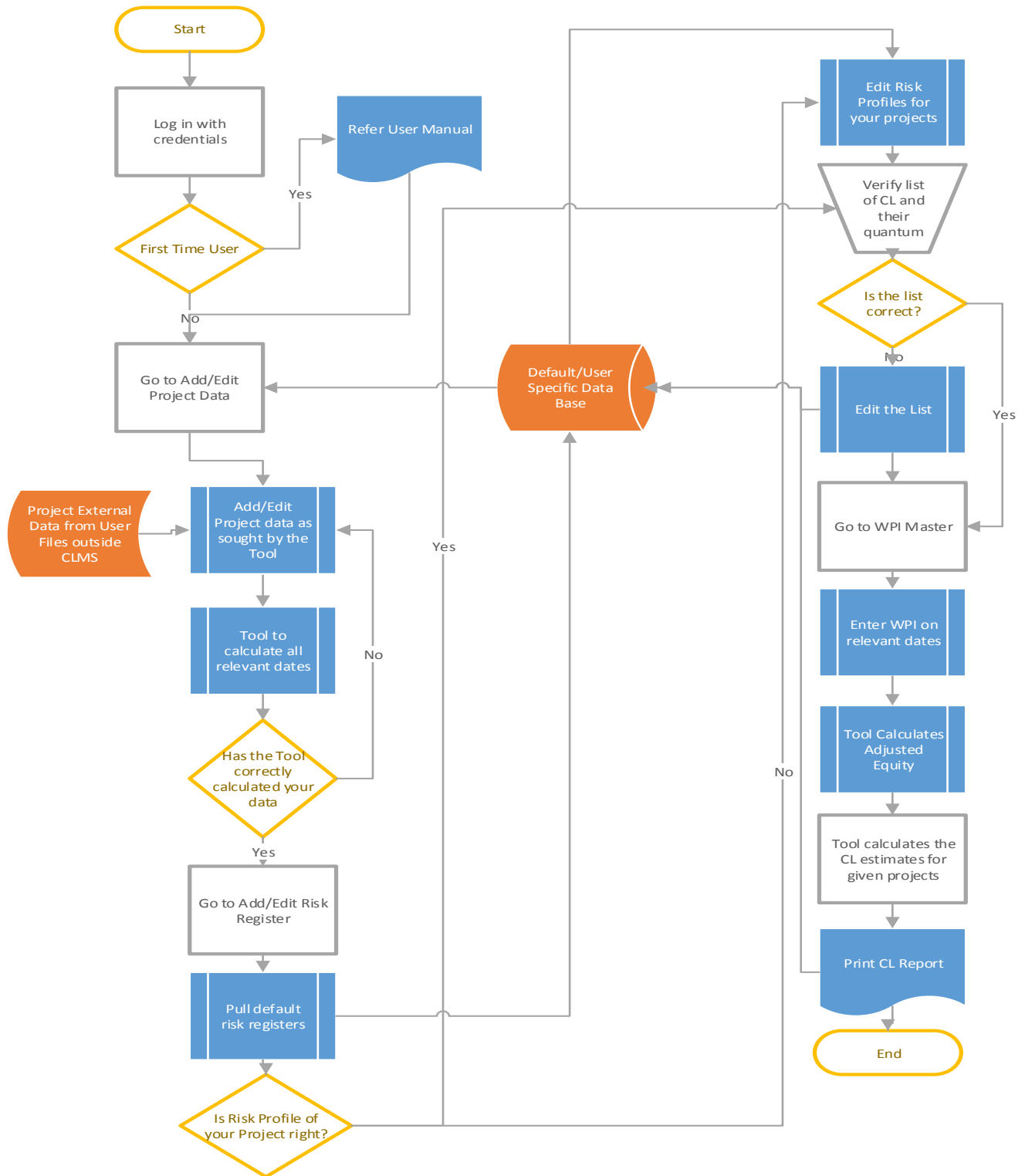
Debt Due = Lower of (i) actual debt due (as per user input) or (ii) $\{(60\% * \text{Bid Project Cost} - \text{Equity as per CA.}) \text{ not exceeding } 85\% \text{ of TPC or } 50\% \text{ of BPC whichever is lower}\}$

Adjusted Equity = $(\text{Equity} * (1 + ((0.5 * \text{Change in WPI Value w.r.t Appointed Date}) / 100)))$

7. Estimate contingent Liabilities on a Reference Date.

Contingent liabilities may be estimated on any date the User may determine (“Reference Date”). Each project may face multiple risks emanating from different sources and depending on the stage of its location and completion. Contingent liabilities will have to be estimated for all such multiple risk categories such as COED, AOED, NPFM, IPFM and PFM as the project faces. In order to automate this process of estimation of contingent liabilities, an Application Tool as fully described in Annexure 1, has been developed and tested. This Tool estimates the contingent liability for projects if and only if the expected probability of occurrence of risks the projects face is greater than 0.50. It estimates the contingent liability for all risk categories with risk score of greater than 6 (equivalent to a

probability of >0.50) and the User can either take the maximum or the average of those liabilities as the potential contingent liability for that project. The work flow in estimating the Contingent Liabilities is illustrated in the following flow chart.



4. Reporting of Contingent Liabilities

The IFRS 5, which is recommendatory in nature, requires the disclosures of contingent liabilities in the following manner:

- a) A brief description of the nature of the contingent liability,
- b) Amount of financial effect or an estimate of its financial effect,
- c) An indication of the uncertainties relating to the amount or timing of any outflow, and
- d) The possibility of any reimbursement.

The 13th Finance Commission while delving on the Annuity Projects in its report, recommended that these may be spelt out and appropriately disclosed in the budget documents of the Government. As a corollary to this, the Report of the Task Force on the Ceilings for Annuity Commitments, proposed an Annual compilation of annuity commitments of various ministries/departments to be undertaken to be transparently depicted in the budget documents. Any viability gap funding/preferential financing by government should also be disclosed appropriately. Similarly, any project funding/off balance sheet financing by government owned entities that have a potential to create a contingent liability to the governments must also be disclosed.

International practices on reporting of contingent liabilities suggest similar disclosures in the annual financial statements. Many countries such as UK, South Africa, New Zealand, Chile, Brazil, Columbia etc. have all institutionalized the disclosure practices.

It is therefore recommended that all contingent liabilities should be reported in the financial statements of the Authority/State Owned Enterprises and the Government in its budget documents. The suggested format for such reporting are:

1. All annuity commitments of the sponsoring ministries/departments/state owned enterprises requiring budget support, should be compiled annually and disclosed in the budget documents. The suggested format for such disclosure is:

Sector	Project Name	Annuity Period T	Annuity Period T+1	Annuity Period T+2	Annuity Period T+3	NPV of all Annuities

2. PPPs may be subject to multiple risks with varying fiscal exposures. Therefore, contingent liabilities that create largest exposure for PPPs may be disclosed sector wise along with expected insurance payouts in case of occurrence of adverse events. The suggested format for such disclosure is:

Project Name	Project Cost	Largest liability creating event/risk	Brief description of contingency	Average contingent liability for all risk events	Estimated payout for the largest liability event if that event occurs on March 31	Insurance if any– Sum Assured.

Annexure 1 - About Toolkit

Separately Annexed.

Annexure 2 - Risk Register

Framework for Estimation of Contingent Liabilities from PPP Projects				Legend	Project Stage	
Department of Economic Affairs, MoF, Government of India				Phase 1	Appointed Date Pending	
Risk Register to score Risks of various adverse events associated with PPP Projects				Phase 2	Under Construction	
				Phase 3	Operational	
Risks identified in the Model Concession Agreement for Roads & Bridges				Sector - Transportation - Roads & Bridges		
				AD Pending		
Risk Source	Risk Event/s	Risk Effect	Risk Code	Probability	Risk Impact	Risk Score
Authority/Government	Failure by Authority to fulfill condition precedents as set out in agreement	Non Termination - Damages	R1	2	2	4
Authority/Government	Delay in Right of Way - 80% of Land	Non Termination - Damages	R2	2	3	6
	Delay in Right of Way - 20% of Land	Non Termination - Damages	R3	2	3	6
Authority/Government	Change in Scope other than due to Force Majeure events	Non Termination - Damages/ Additional Cost	R4	3	2	6
Authority/Government	Change in Law other than due to Force Majeure events	Non Termination - Damages/ Additional Cost	R5	2	2	4
Concessionaire Event of Default	Financial Closure not occurred	Termination for CEoD	R6	3	1	3

Concessionaire Event of Default	Project milestones failed and no cure possible.	Termination for CEoD	R7	2	2	4
Concessionaire Event of Default	Material breach of agreement by Concessionaire.	Termination for CEoD	R8	2	2	4

Risks identified in the Model Concession Agreement for Roads & Bridges				AD Pending		
Risk Source	Risk Event/s	Risk Effect	Risk Code	Probability	Risk Impact	Risk Score
Concessionaire Event of Default	Concessionaire commits defaults that cannot be cured.	Termination for CEoD	R9	2	2	4
Concessionaire Event of Default	Concessionaire creates non-permissible encumbrances.	Termination for CEoD	R10	1	2	2
Concessionaire Event of Default	Shareholding falls and not cured.	Termination for CEoD	R11	1	2	2
Concessionaire Event of Default	Winding up of concessionaire	Termination for CEoD	R12	1	2	2
Concessionaire Event of Default	Loans recalled by senior lenders	Termination for CEoD	R13	1	2	2
Authority Event of Default	Breach by Authority.	Termination for AEoD	R14	2	2	4
Authority Event of Default	Cancellation of agreement by Authority	Termination for AEoD	R15	2	2	4
Authority Event of Default	Govt. creates circumstances having a material impact on the concessionaire.	Termination for AEoD	R16	2	2	4
Authority Event of Default	Delay in payments by	Termination for AEoD	R17	2	1	2

	more than 90 days.					
Non Political Force Majeure Events	Earthquake > 7	Termination for NPFM	R18	3	1	3
Non Political Force Majeure Events	Cyclone/Hurricane	Termination for NPFM	R19	2	1	2
Non Political Force Majeure Events	Landslides	Termination for NPFM	R20	2	1	2
Non Political Force Majeure Events	Fire	Termination for NPFM	R21	3	1	3
Non Political Force Majeure Events	Radioactive contamination	Termination for NPFM	R22	1	1	1

Risks identified in the Model Concession Agreement for Roads & Bridges				AD Pending		
Risk Source	Risk Event/s	Risk Effect	Risk Code	Probability	Risk Impact	Risk Score
Non Political Force Majeure Events	Strikes/Boycotts	Termination for NPFM	R23	2	1	2
Non Political Force Majeure Events	Court Judgements having a permanent affect	Termination for NPFM	R24	1	1	1
Indirect Political Force Majeure Events	Act of Wars/Invasion	Termination for IPFM	R25	1	1	1
Indirect Political Force Majeure Events	Terrorists/Military actions/Armed Conflict.	Termination for IPFM	R26	1	1	1
Indirect Political Force Majeure Events	Civil Commotion,	Termination for IPFM	R27	1	1	1
Indirect Political Force Majeure Events	Industry/State/All India Industrial Strikes	Termination for IPFM	R28	1	1	1
Indirect Political Force Majeure Events	Public Agitation preventing execution of agreement.	Termination for IPFM	R29	2	1	2

Political Force Majeure Events	Change in Law in certain cases.	Termination for PFM	R30	2	1	2
Political Force Majeure Events	Acquisition of project by Authority/Govt.	Termination for PFM	R31	2	1	2
Political Force Majeure Events	Revocation/Cancellation of any right etc. not due to Concessionaire fault.	Termination for PFM	R32	1	1	1

Risks identified in the Model Concession Agreement for Roads & Bridges				Sector - Transportation - Roads & Bridges		
				Under Construction		
Risk Source	Risk Event/s	Risk Effect	Risk Code	Probability 2	Risk Impact 2	Risk Score 2
Authority/Government	Failure by Authority to fulfill condition precedents as set out in agreement	Non Termination - Damages	R1	0	0	0
Authority/Government	Delay in Right of Way - 80% of Land	Non Termination - Damages	R2	0	0	0
	Delay in Right of Way - 20% of Land	Non Termination - Damages	R3	3	2	6
Authority/Government	Change in Scope other than due to Force Majeure events	Non Termination - Damages/ Additional Cost	R4	2	2	4
Authority/Government	Change in Law other than due to Force Majeure events	Non Termination - Damages/ Additional Cost	R5	2	2	4
Concessionaire Event of Default	Financial Closure not occurred	Termination for CEoD	R6	0	0	0

Concessionaire Event of Default	Project milestones failed and no cure possible.	Termination for CCoD	R7	2	3	6
Concessionaire Event of Default	Material breach of agreement by Concessionaire.	Termination for CCoD	R8	2	3	6
Concessionaire Event of Default	Concessionaire commits defaults that cannot be cured.	Termination for CCoD	R9	2	3	6
Concessionaire Event of Default	Concessionaire creates non permissible encumbrances.	Termination for CCoD	R10	1	3	3

Risks identified in the Model Concession Agreement for Roads & Bridges				Under Construction		
Risk Source	Risk Event/s	Risk Effect	Risk Code	Probability 2	Risk Impact 2	Risk Score 2
Concessionaire Event of Default	Shareholding falls and not cured.	Termination for CCoD	R11	1	3	3
Concessionaire Event of Default	Winding up of concessionaire	Termination for CCoD	R12	1	3	3
Concessionaire Event of Default	Loans recalled by senior lenders	Termination for CCoD	R13	1	3	3
Authority Event of Default	Breach by Authority.	Termination for ACoD	R14	2	2	4
Authority Event of Default	Cancellation of agreement by Authority	Termination for ACoD	R15	2	2	4
Authority Event of Default	Govt. creates circumstances having a material impact on the concessionaire.	Termination for ACoD	R16	2	2	4

Authority Event of Default	Delay in payments by more than 90 days.	Termination for AEOd	R17	2	2	4
Non Political Force Majeure Events	Earthquake > 7	Termination for NPFM	R18	2	3	6
Non Political Force Majeure Events	Cyclone/Hurricane	Termination for NPFM	R19	2	3	6
Non Political Force Majeure Events	Landslides	Termination for NPFM	R20	2	3	6
Non Political Force Majeure Events	Fire	Termination for NPFM	R21	2	3	6
Non Political Force Majeure Events	Radioactive contamination	Termination for NPFM	R22	1	1	1
Non Political Force Majeure Events	Strikes/Boycotts	Termination for NPFM	R23	2	1	2
Non Political Force Majeure Events	Court Judgements having a permanent affect	Termination for NPFM	R24	1	1	1
Indirect Political Force Majeure Events	Act of Wars/Invasion	Termination for IPFM	R25	2	3	6

Risks identified in the Model Concession Agreement for Roads & Bridges				Under Construction		
Risk Source	Risk Event/s	Risk Effect	Risk Code	Probability 2	Risk Impact 2	Risk Score 2
Indirect Political Force Majeure Events	Terrorists/Military actions/Armed Conflict.	Termination for IPFM	R26	2	3	6
Indirect Political Force Majeure Events	Civil Commotion,	Termination for IPFM	R27	2	2	4
Indirect Political Force Majeure Events	Industry/State/All India Industrial Strikes	Termination for IPFM	R28	2	2	4
Indirect Political Force Majeure Events	Public Agitation preventing execution of agreement.	Termination for IPFM	R29	2	2	4

Political Force Majeure Events	Change in Law in certain cases.	Termination for PFM	R30	2	3	6
Political Force Majeure Events	Acquisition of project by Authority/Govt.	Termination for PFM	R31	2	3	6
Political Force Majeure Events	Revocation/Cancellation of any right etc. not due to Concessionaire fault.	Termination for PFM	R32	2	2	4

Risks identified in the Model Concession Agreement for Roads & Bridges				Sector - Transportation - Roads & Bridges		
				Operational		
Risk Source	Risk Event(s)	Risk Effect	Risk Code	Probability 3	Risk Impact 3	Risk Score 3
Authority/Government	Failure by Authority to fulfill condition precedents as set out in agreement	Non Termination - Damages	R1	0	0	0
Authority/Government	Delay in Right of Way - 80% of Land	Non Termination - Damages	R2	0	0	0
	Delay in Right of Way - 20% of Land	Non Termination - Damages	R3	0	0	0
Authority/Government	Change in Scope other than due to Force Majeure events	Non Termination - Damages/Additional Cost	R4	2	2	4
Authority/Government	Change in Law other than due to Force Majeure events	Non Termination - Damages/Additional Cost	R5	2	2	4
Concessionaire Event of Default	Financial Closure not occurred	Termination for CEoD	R6	0	0	0
Concessionaire Event of Default	Project milestones	Termination for CEoD	R7	0	0	0

	failed and no cure possible.					
Concessionaire Event of Default	Material breach of agreement by Concessionaire.	Termination for CEoD	R8	2	3	6
Concessionaire Event of Default	Concessionaire commits defaults that cannot be cured.	Termination for CEoD	R9	2	3	6
Concessionaire Event of Default	Concessionaire creates non permissible encumbrance	Termination for CEoD	R10	1	3	3

Risks identified in the Model Concession Agreement for Roads & Bridges				Operational		
Risk Source	Risk Event/s	Risk Effect	Risk Code	Probability 3	Risk Impact 3	Risk Score 3
Concessionaire Event of Default	Shareholding falls and not cured.	Termination for CEoD	R11	1	3	3
Concessionaire Event of Default	Winding up of concessionaire	Termination for CEoD	R12	2	3	6
Concessionaire Event of Default	Loans recalled by senior lenders	Termination for CEoD	R13	2	3	6
Authority Event of Default	Breach by Authority.	Termination for AEOd	R14	2	2	4
Authority Event of Default	Cancellation of agreement by Authority	Termination for AEOd	R15	2	2	4
Authority Event of Default	Govt creates circumstances having a material impact on the concessionaire.	Termination for AEOd	R16	2	2	4
Authority Event of Default	Delay in payments by more than 90 days.	Termination for AEOd	R17	2	2	4

Non Political Force Majeure Events	Earthquake > 7	Termination for NPFM	R18	2	3	6	
Non Political Force Majeure Events	Cyclone/Hurricane	Termination for NPFM	R19	2	3	6	
Non Political Force Majeure Events	Landslides	Termination for NPFM	R20	2	3	6	
Non Political Force Majeure Events	Fire	Termination for NPFM	R21	2	3	6	
Non Political Force Majeure Events	Radioactive contamination	Termination for NPFM	R22	1	1	1	
Non Political Force Majeure Events	Strikes/Boycotts	Termination for NPFM	R23	2	3	6	
Non Political Force Majeure Events	Court Judgements having a permanent affect	Termination for NPFM	R24	1	3	3	
Risks identified in the Model Concession Agreement for Roads & Bridges					Operational		
Risk Source	Risk Event/s	Risk Effect	Risk Code	Probability	Risk Impact	Risk Score	
Indirect Political Force Majeure Events	Act of Wars/Invasion	Termination for IPFM	R25	2	3	6	
Indirect Political Force Majeure Events	Terrorists/Military actions/Armed Conflict	Termination for IPFM	R26	2	3	6	
Indirect Political Force Majeure Events	Civil Commotion	Termination for IPFM	R27	2	2	4	
Indirect Political Force Majeure Events	Industry/State/All India Industrial Strikes	Termination for IPFM	R28	2	2	4	
Indirect Political Force Majeure Events	Public Agitation preventing execution of agreement.	Termination for IPFM	R29	2	3	6	
Political Force Majeure Events	Change in Law in certain cases.	Termination for PFM	R30	2	3	6	

Political Force Majeure Events	Acquisition of project by Authority/Govt.	Termination for PFM	R31	2	3	6
Political Force Majeure Events	Revocation/Cancellation of any right etc. not due to Concessionaire fault.	Termination for PFM	R32	2	3	6

Annexure 3 - List of Contingent Liabilities

A 3.1 – Basis and quantum of contingent liabilities for BOT & Annuity Projects

Road and Bridges Sector

Clause in Toll MCA	Source of Termination	Risk Covered	Prior to CoD		After CoD		Remarks
			Basis	Quantum	Basis	Quantum	
34.9.1	Non Political Event	As per Risk Register	Debt Due	90%	Debt Due	100%	Debt Due = Least of (TPC as per CA, TPC as per FC and Actual TPC)- Grant - Equity
34.9.2	Indirect Political Event		Debt Due and Adjusted Equity	100% plus 110%	Debt Due and Adjusted Equity	100% plus 110%	
34.9.3	Political Event		Debt Due and Adjusted Equity	100% plus 150%	Debt Due and Adjusted Equity	100% plus 150%	
37.1. and 37.3.3	Concessionaire Event of Default		0	0	Debt Due	90%	
37.2 and 37.3.2	Authority Event of Default		Debt Due and Adjusted Equity	100% plus 150%	Debt Due and Adjusted Equity	100% plus 150%	

A 3.2 – Basis and quantum of contingent liabilities for Hybrid Annuity Projects.

Hybrid Annuity Projects - Road & Bridges sub-sector

Clause In MCA	Source of Termination	Risks Covered	Prior to COD				After COD	
			Basis	Quantum - Lower of DD/BPC and Equity			Basis	Quantum
			Payment Mile Stone	% of Debt Due	% of BPC	% Adjusted Equity		
28.9.1	Non Political Event	As per Risk Register	PM1	90%	8.10%	0	Annuity Due for balance concession period	75%
			PM2	90%	16.20%	0		
			PM3	90%	24.30%	0		
			PM4	90%	30.38%	0		
			PM5	90%	36.45%	0		
28.9.2	Indirect Political Event		PM1	100%	9.00%	110%	Annuity Due for balance concession period	90%
			PM2	100%	18.00%	110%		
			PM3	100%	27.00%	110%		
			PM4	100%	33.75%	110%		
			PM5	100%	40.50%	110%		
28.9.3	Political Event		PM1	100%	9.00%	150%	Annuity Due for balance concession period	100%
			PM2	100%	18.00%	150%		
			PM3	100%	27.00%	150%		
			PM4	100%	33.75%	150%		
			PM5	100%	40.50%	150%		
31.3.3.	Authority Event Of Default		PM1	100%	9.00%	150%	Annuity Due for balance concession period	100%
			PM2	100%	18.00%	150%		
			PM3	100%	27.00%	150%		
			PM4	100%	33.75%	150%		
			PM5	100%	40.50%	150%		
31.3.2	Concessionaire Event Of Default		PM1	0%	0.00%	0%	Annuity Due for balance concession period	65%
			PM2	50%	9.00%	0%		
			PM3	60%	16.00%	0%		
			PM4	70%	24.00%	0%		
			PM5	80%	32.00%	0%		

Disclaimer

The information contained in this document is provided for general guidance of the Project Sponsors, Project Authorities, Government and PPP Practitioners who may have to estimate and manage the contingent liabilities arising from PPP projects. The document contains information sourced from publicly available information and from sources found to be reliable. Assumptions made in this report although believed to be reasonable, are subject to uncertainties that may cause actual events and the future results to be different from that expected or indicated by such statements. No representation or warranty is made as to the accuracy of the information and assumptions contained herein and no responsibility or liability is or will be accepted by the DEA or its representatives as to the accuracy or completeness of the information contained herein.

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