

**XYZ INTERNATIONAL  
MARKETING PVT LTD**

**EMPLOYEES GRATUITY SCHEME  
MEASUREMENT REPORT**

Disclosure as per AS 15 - Revised - Defined Benefit Plans

**FOR THE PERIOD ENDING  
31/DEC/16**

*SRINIVASAN NAGASUBRAMANIAN B.Sc., A.F.I.I., F.I.A.I., Dip. Manag.*

Mem.No: 00144(1985)

**March 6, 2017**



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## **2. PREAMBLE**

### **XYZ INTERNATIONAL MARKETING PVT LTD**

(hereinafter called the "Company") has requested us to report on the financial position of the employees Projected Benefits Plan relating to Gratuity Scheme (Called "the Plan") Liabilities and ascertain the accounting expenses of it in accordance with AS 15 (REVISED, 2005) for

the fiscal year/ period ending on *31-Dec-2016*

keeping in view the provisions of

- a) The Rules of the Scheme, salient features of which are given later
- b) AS15R issued by ICAI, Guidance Note issued by the Accounting Standard (ASB) of ICAI and as per Accounting Standards specified under Sec 133 of the Companies Act 2013 read with Rule 7 of the Companies (Accounts) Rules 2014
- c) Relevant Guidance Notes issued by the Institute of Actuaries of India which are currently in vogue

1.1 The results set out in this Report are based on our understanding of AS15( R) 2005 and its application to the Plan. They have been evaluated for the specific requirements of AS 15 (R)2005) and should not be put to any other use or purpose. In particular this Report does not constitute a formal funding valuation of actuarial liabilities of the of the Scheme and does not present any recommendation of contributions or funding levels.

1.3 This Report is delivered solely for the Company's own use and for the definite and specific purposes indicated above. Except where we expressly agree in black and white, it should not be divulged or delivered to any third party, other than as indicated below. In the absence of such consent and an express assumption of responsibility, no responsibility whatsoever is accepted by me for any consequences arising from any third party relying on this Report or any of his advice relating to its contents. The Company may give a copy of this Report available to its Auditors, in connection with the audit of its financial statements but I make no representation as to the suitability of this Report for any purpose other than that for which it was originally provided and accept no responsibility or liability to the company's Auditors in this regard. The Company should draw the provisions of this paragraph to attention of its auditors when passing the report to them.

### **3.EXECUTIVE SUMMARY**

**THE TABLE BELOW SHOWS A SUMMARY  
OF THE KEY RESULTS FOR THE PERIOD ENDING  
DECEMBER 31, 2016**

DEFINED BENEFITS COST:	P&L CHARGE FOR PERIOD ENDING	31-Dec-2016
1.CURRENT SERVICE COST		2,517,394
2.NET PERIODIC BENEFIT COST RECOGNISED IN P & L		2,791,638
	31-Dec-2015	31-Dec-2016
4.PRESENT VALUE OF DEFINED BENEFITS OBLIGATIONS(DBO)		
	3,570,880	4,006,604
5.FAIR VALUE OF THE PLAN ASSETS (FVA)		
	0	0
6.NET ASSETS/LIABILITIES RECOGNISED IN BALANCE SHEET		
	(3,570,880)	(4,006,604)

Current Service Cost represents the cost associated with the current fiscal year benefit accruals. Total Employer expense is the expense under AS 15 (REVISED, 2005) inclusive of Current Service Cost and net interest.

#### 2.2 Table 1 - Net Periodic Cost

Expense for the period ending	31-Dec-2016
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#### 2.3 Table 2 - Analysis of Actuarial gain/loss

31-Dec-2016
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#### 2.4 Table 3 - The Net Asset/ (Liability)

Recognized in the Balance Sheet as at	31-Dec-2016
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#### 2.5 Table 4 - the Reconciliation of PV of Obligation & FV of Plan Assets - Period Ending

31-Dec-2016
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#### 2.6 Table 5 - The reconciliation of Net Asset/ Liability Recognized in the Balance Sheet over

31-Dec-2016
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## **4. SOURCES OF INFORMATION**

4.1 In preparing this Report I have used and relied on the financial data as well as membership information supplied to me on the valuation date by the Company

4.2 In preparing this Report I have relied on the completeness and accuracy of the Data and Information supplied to me and corroborated orally and in writing by or on behalf of the Company and its advisers. I have not completed any detailed validation checks on the information provided. I have, however, carried out broad statistical checks for consistency

4.3 In particular I would like to mention that the details of Information on Assets, Plan provisions, amendments, Contributions and Benefits Payments, membership data and movements thereon from start of the period of investigations to the end of the period have been taken as provided by the company

4.4 The discount rate as on the valuation date is based on the market yields of Government bonds, of a term that matches the term of the liability and applicable to the period over which the obligation is to be settled

4.5 The fair value of the Assets on the valuation date has been taken to be as provided by the Company for self-invested funds and as provided by the insurers for managed funds.

4.6 A summary of the employee profile is given in **Appendix A**

## **5.FULL PLAN INFORMATION:**

This valuation reflects the provisions of the plan as at valuation date. Following is a summary of the major plan provisions used to determine the plan's financial position; It should not be used to determine individual plan benefits.

<p><b>VALUATION DATE</b></p> <p><b>SPONSORING EMPLOYER</b></p> <p><b>TYPE OF PLAN</b></p> <p><b>COVERING</b></p> <p><b>ELIGIBILITY</b></p> <p><b>VESTING CRITERIA</b></p> <p><b>ON RETIREMENT</b></p> <p><b>ON LEAVING SERVICE</b></p> <p><b>ON DEATH</b></p> <p><b>EMPLOYER CONTRIBUTION</b></p> <p><b>EMPLOYEE CONTRIBUTIONS</b></p> <p><b>APPLICABLE SALARY</b></p> <p><b>NORMAL RETIREMENT AGE</b></p> <p><b>BENEFIT BASIS</b></p> <p><b>BENEFIT PAYMENT TYPES</b></p> <p><b>NORMAL RETIREMENT BENEFIT</b></p> <p><b>EARLY RETIREMENT BENEFIT</b></p> <p><b>DEATH BENEFIT</b></p> <p><b>NOTE</b></p> <p><b>MAXIMUM LIMIT ON BENEFITS</b></p>	<p><b>31-DEC-2016</b></p> <p><b>XYZ INTERNATIONAL</b></p> <p><b>MARKETING PVT LTD</b></p> <p><b>DEFINED BENEFITS</b></p> <p><b>GRATUITY</b></p> <p><b>ALL REGULAR EMPLOYEES</b></p> <p><b>5 YEARS OF SERVICE</b></p> <p><b>EQUAL TO OR MORE THAN 5 YEARS OF SERVICE</b></p> <p><b>VESTING CONDITION NOT APPLICABLE</b></p> <p><b>100%</b></p> <p><b>NIL</b></p> <p><b>LAST DRAWN BASIC + D.A (EXCLUDING ALL OTHER ALLOWANCES AND PERQUISITES))</b></p> <p><b>58</b></p> <p><b>ACCRUED BENEFITS</b></p> <p><b>LUMP SUM PAYMENT</b></p> <p><b>15/26XSALARYXPQS</b></p> <p><b>SAME AS ABOVE</b></p> <p><b>SAME AS ABOVE</b></p> <p><b>PQS IS COMPLETED YEARS OF SERVICE ROUNDED TO NEAREST INTEGER, SUBJECT TO A MINIMUM OF 5 YEARS OF QUALIFYING SERVICE</b></p> <p><b>Rs. 1,000,000</b></p>
<p><b>SPECIAL CONDITIONS</b></p>	<p>Salary paid in a month is treated as for 26 days as per Supreme Court judgment</p>

## 6. SIGNIFICANT EVENTS DURING THE YEAR

	FROM 31-DEC-15 TO 31/DEC/16
<b>VALUATION PERIOD</b>	<b>STATUS</b>
<b>NAME OF EVENT</b>	
<b>PLAN PROVISIONS</b>	THERE IS NO PLAN INTRODUCTION OR CHANGES IN PROVISIONS DURING THIS PERIOD
<b>BUSINESS COMBINATION</b>	THERE IS NO BUSINESS COMBINATION DURING THIS PERIOD
<b>DIVESTURE</b>	THERE IS NO DIVESTURE DURING THE PERIOD
<b>ACQUISITIONS</b>	THERE IS NO ACQUISITION DURING THE PERIOD
<b>TRANSFER</b>	THERE IS NO TRANSFER DURING THE PERIOD
<b>CURTAILMENT</b>	THERE IS NO PLAN CURTAILMENT DURING THE PERIOD
<b>PLAN SETTLEMENT</b>	THERE IS NO PLAN SETTLEMENT DURING THE PERIOD
<b>PLAN COMBINATION</b>	THERE IS NO PLAN COMBINATION DURING THE PERIOD
<b>PLAN DIVISION</b>	THERE IS NO PLAN DIVISION DURING THE PERIOD
<b>SPECIAL TERMINATION</b>	THERE IS NO SPECIAL TERMINATION DURING THE PERIOD
<b>LIABILITY FUNDING</b>	UNFUNDED GRATUITY PLAN
<b>FUNDING METHODOLOGY</b>	NOT APPLICABLE
<b>BENEFITS PAYMENTS</b>	PAY AS YOU GO METHOD USED FOR GRATUITY SETTLEMENT
<b>SALARIES</b>	THERE IS SIGNIFICANT INCREASE IN AVERAGE SALARY DURING THE PERIOD
<b>PERCENTAGE INCREASE/DECREASE IN SALARIES</b>	THE AVERAGE SALARY INCREASED BY - 15.45% - DURING THE PERIOD
<b>EMPLOYEE COUNT</b>	THERE IS DECREASE IN EMPLOYEE COUNT DURING THE PERIOD
<b>PERCENTAGE IN EMPLOYEE COUNT</b>	THE EMPLOYEE COUNT DECREASED BY - 38.24% - DURING THE PERIOD
<b>EVENTS POST VALUATION DATE</b>	WE HAVE NOT BEEN NOTIFIED BY THE COMPANY NOR ARE WE AWARE OF ANY EVENTS SUBSEQUENT TO THE VALUATION DATE WHICH IN OUR OPINION WOULD HAVE MATERIAL IMPACT ON THE RESULTS OF THE VALUATION.

## **7. CERTIFICATION**

7.1 The assumptions and methodology used in compiling this Report are consistent with our understanding of AS 15 (REVISED, 2005).

Our calculations follow the company's accounting policy of immediate recognition of gains and losses in the year in which they occur in the Profit or Loss Account

7.2 The actuarial assumptions adopted for the valuation have been discussed and agreed with the Company. Based on the information provided to us we believe that the actuarial assumptions are reasonable for the purposes described in the report.

7.3 The results are particularly sensitive to some assumptions, such as the discount rate, level of salary inflation, level of assumed price inflation and mortality. A decrease in the discount rate assumed or an increase in salary inflation will lead to an increase in reported cost

7.4 The key assumptions used in the valuations are set out in **Appendix B**. The approach used for setting the assumptions is similar to prior year

7.5 The report was prepared in accordance with generally accepted actuarial principles and procedures.

7.6 The distribution of assets categories is set out in **Appendix C**.

7.7 The amounts for current & previous 4 periods (as per para 120(n)) used in the calculations are set out in **Appendix D**.

7.8 The Items pertaining to Revised Schedule III of Companies Act 2013 is in Table 3.A

7.9 Based on membership data and plan information provided to me as on the valuation date I have made full actuarial valuation as at the end of the date.

7.10 The full results of my calculations are set out in Tables 1 to 5.

7.11 I would be pleased to discuss this Report with you

Yours faithfully,



**Srinivasan Nagasubramanian,**  
**Fellow of the Institute of Actuaries of India.**

Mem No: 00144 (1985).

**March 6, 2017**

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**AMOUNT TO BE RECOGNISED IN PROFIT & LOSS ACCOUNT  
NET PERIODIC BENEFIT COST RECOGNISED**

AS 15 Para 120 ( g ) (i) to (viii)

**TABLE 1**

**XYZ INTERNATIONAL  
MARKETING PVT LTD**

EMPLOYEES GRATUITY SCHEME

Actual Measurements as per AS 15 (REVISED, 2005)

Disclosure of employer expense for the period ending

31-Dec-2016

Local currency -

Rupees

**Expense Recognised In Income Statement**

The following table summarises the components of net benefit expenses recognised in the P&L Account

<b>A Components of Employer expense</b>			
	<b>Service Cost</b>	<b>31-Dec-2015</b>	<b>31-Dec-2016</b>
1	Current service Cost	2,596,320	2,517,394
2	Past service cost - Plan Amendment	0	0
3	Curtailement Cost/(Credit)	0	0
4	Settlement Cost/(Credit)	0	0
5	<b>Total Service Cost</b>	<b>2,596,320</b>	<b>2,517,394</b>
	<b>Net Interest Cost</b>		
6	Interest Cost	51,096	274,244
7	Expected Return on Asset	0	0
8	Interest (income)on reimbursement rights	0	0
9	Interest expense on effect of (asset ceiling)	0	0
10	<b>Total Net Interest</b>	<b>51,096</b>	<b>274,244</b>
11	Immediate Recognition of (Gain)/Losses	285,566	-2,355,914
12	Cost of Termination Benefits	0	0
13	Administrative Expenses and Taxes	0	0
14	<b>Defined Benefits cost included in P&amp;L</b>	<b>2,932,982</b>	<b>435,724</b>
	<b>Discount rate</b>		
	<b>6.57%</b>		

ANALYSIS OF ACTUARIAL (GAIN)/LOSS

AS PER DISCLOSURE ITEM 120 ( n ) (ii)

**TABLE 2**

**XYZ INTERNATIONAL  
MARKETING PVT LTD**

**EMPLOYEES GRATUITY SCHEME**

Actuaial Measurements as per AS 15 (REVISED, 2005)

Net Asset/(Liability) Recognised in Balance Sheet on-

31-Dec-2016

Local currency -

Rupees

The following Table gives the Funded Status and the amount recognised in the Balance Sheet for the Plan

A	Net Asset/(Liability) Recognised in Balance Sheet –	31-Dec-2015	31-Dec-2016
1	Actuarial (Gain) / Losses due to Demographic Assumption changes in DBO	0	15,173
2	Actuarial (Gain) / Losses due to Financial Assumption changes in DBO	793,445	314,782
3	Actuarial (Gain)/ Losses due to Experience Adjustments on DBO	-507,879	-2,685,869
4	Return on Plan Assets (Greater) / Less than Discount rate	0	0
6			
5	Return on reimbursement rights (excluding interest income)	0	0
6	Changes in asset ceiling /onerous liability (excluding interest Income)	0	0
7	<b>Total actuarial (gain)/loss</b>	285,566	-2,355,914
	<b>Discount rate</b>		
	<b>6.57%</b>		

AMOUNTS TO BE RECOGNISED IN BALANCE SHEET  
DETAILS OF PROVISION FOR GRATUITY

As 15 Para 120 ( f ) ( i ) to ( iv )

**TABLE 3**

**XYZ INTERNATIONAL  
MARKETING PVT LTD**

**EMPLOYEES GRATUITY SCHEME**

Actuarial measurements for AS15 (Revised, 2005) purposes

Net Asset/(Liability) Recognised in Balance Sheet on-

31/Dec/16

Local currency -

Rupees

The following Table gives the Funded Status and the amount recognised in the Balance Sheet for the Plan

<b>A Net Asset/(Liability) Recognised in Balance Sheet –</b>		31/Dec/15	31/Dec/16
1	Present value of Funded Obligation	0	0
2	Fair Value of Plan Assets	0	0
3	Present value of Unfunded obligation (120 d)	3,570,880	4,006,604
5	<b>Funded status [Surplus/(Deficit)]</b>	<b>-3,570,880</b>	<b>-4,006,604</b>
6	Unrecognised Past Service Costs	0	0
7	Amount not Recognised as an Asset (limit in Para 59(b))	0	0
8	Net Liability	-3,570,880	-4,006,604
9	Recognised in balance sheet	-3,570,880	-4,006,604
<b>Assumption on</b>		<b>31/Dec/16</b>	
<b>Discount rate as per Para 78 of AS15(R 2005)</b>			
<b>6.57%</b>			

DETAILS OF CURRENT AND NON CURRENT PROVISION FOR GRATUITY

As PER Schedule 3 of Companies Act 2013

**TABLE 3 A**

**XYZ INTERNATIONAL**

**MARKETING PVT LTD**

**EMPLOYEES GRATUITY SCHEME**

Actuarial measurements for AS15 (Revised, 2005) purposes

Net Asset/(Liability) Recognised in Balance Sheet on-

31/Dec/16

Local currency -

Rupees

The following Table gives Current and Noncurrent for the PVO and the Funded Status

<b>A Net Asset/(Liability) Recognised in Balance Sheet –</b>		<b>Current</b>	<b>Non_Current</b>
1	Present value of Benefit Obligation	8,711	3,997,893
2	<b>Funded status [Surplus/(Deficit)]</b>	8,711	3,997,893
	For funded schemes as per ICAI circular page no 18 (See commentary)		

**CHANGES IN PRESENT VALUE OF DEFINED BENEFIT  
OBLIGATION AND RECONCILIATION THEREOF**

AS 15 Para 120( c ) (i) to (x)

**TABLE 4**

**XYZ INTERNATIONAL**

**MARKETING PVT LTD**

**EMPLOYEES GRATUITY SCHEME**

Actuaial Measurements as per AS 15 (REVISED, 2005)

<b>A Disclosure Item 120( C )- Local Currency Rupees</b>		31-Dec-2016	
Change in Obligation over the period ending on		31-Dec-2015	31-Dec-2016
1	Present Value of Defined Benefits	637,898	3,570,880
	Obligation At Beginning(Opening)		
2	Current Service Cost	2,596,320	2,517,394
3	Interest Cost	51,096	274,244
4	Plan Amendments	0	0
5	Prior Service Costs	0	0
6	Curtailments	0	0
7	Settlements	0	0
8	Actuarial (Gains)/Loss	285,566	-2,355,914
9	Benefits Paid	0	-0
10	Acquisitions/Divestures /Transfers	0	0
11	Present Value Of Defined Benefits	3,570,880	4,006,604
	Obligation At the end (Closing)	-	
<b>B RECONCILIATION OF OPENING &amp; CLOSING VALUES OF PLAN ASSETS</b>			
<b>AS15 Para 120( e ) (i) to ( viii)</b>			
1	Fair Value of Plan Assets at the beginning(Opening)	0	0
2	Expected Return on Assets	0	0
3	Employer Contribution	0	0
4	Plan Participants Contributions	0	0
6	Settlements By Fund Manager	0	0
7	Benefits Payouts	0	-0
8	Actuarial gain/(Loss)	0	0
9	Fair Value of assets at the End	0	0
10	Actual Return on Plan Assets	0	0

**RECONCILIATION OF BALANCESHEET ITEMS**

<b>TABLE 5</b>			
<b>XYZ INTERNATIONAL</b>			
<b>MARKETING PVT LTD</b>			
<b>EMPLOYEES GRATUITY SCHEME</b>			
<b>Actuarial measurements for AS15 (Revised, 2005) purposes</b>			
<b>Reconciliation of Net Asset/(Liability) Recognised in Balance Sheet</b>			
<b>For the period ending on</b>			<b>31-Dec-2016</b>
<b>Rupees</b>			
<b>A Net Asset/(Liability) Recognised in Balance Sheet –</b>			
		<b>31-Dec-2015</b>	<b>31-Dec-2016</b>
<b>1</b>	Net Asset/(Liability) Recognised at the beginning of the period	<b>-637,898</b>	<b>-3,570,880</b>
<b>2</b>	Employer expense	<b>-2,932,982</b>	<b>-435,724</b>
<b>3</b>	Employer Contribution	<b>0</b>	<b>0</b>
<b>4</b>	Acquisitions/Divestures	<b>0</b>	<b>0</b>
	Effect of the Limit in Para 59(b)		<b>0</b>
<b>5</b>	Net Asset/(Liability) Recognised at the end of the period	<b>-3,570,880</b>	<b>-4,006,604</b>
	<b>THE COMPANY EXPECTS TO CONTRIBUTE TO GRTUITY IN THE NEXT PERIOD (AS15 PARA 120(o))</b>		<b>3,833,173</b>

## **SUMMARY OF EMPLOYEE PROFILE**

### A.1 Active Members:

<b>TABLE A</b>			
<b>XYZ INTERNATIONAL MARKETING PVT LTD</b>			
<b>EMPLOYEES GRATUITY SCHEME</b>			
<b>ACTIVE MEMBERS</b>			
<b>A</b>	<b>AS AT</b>	<b>31-Dec-15</b>	<b>31-Dec-16</b>
1	<b>Number of Employees</b>	306	189
2	<b>Total Monthly salaries</b>	8,884,868	6,335,629
3	<b>Average Monthly Salaries</b>	29,036	33,522
4	<b>Average past service</b>	0.64	1.20
5	<b>Discontinuance Gratuity</b>	4,698,526	5,774,866
6	<b>Term of Liability</b>	4.42	4.45
7	<b>Average Age</b>	33.04	33.08

## **APPENDIX B**

### **KEY ASSUMPTIONS**

One of the principal assumptions is the discount rate, which should be based upon the market yields available on Government bonds at the accounting date with a term that matches that of the liabilities.

The financial and demographic assumptions employed for the calculations as at the end of previous period and current period are as follows

<b>Assumption</b>	<b>31-Dec-15</b>	<b>31-Dec-16</b>
<b>Discount rate</b>	7.68%	6.57%
<b>Expected return on assets</b>	0.00%	0.00%
<b>Salary Escalation</b>	12.00%	12.00%
<b>Attrition Rate</b>	20.10%	20.00%
<b>Mortality</b>	Indian Assured Lives Mortality(2006-08) (Ultimate)	

a sample pick from this table as below

Age	Mortality
20	0.000848
30	0.001056
35	0.001282

Disability:

Provided under demographic assumptions

Notes

- 1.All the assumptions have been set following discussions with the company in this regard
- 2.We understand that the assumption of future salary increases (which has been set in consultation with the company), take account of inflation, seniority, promotion and other relevant factors, such as supply and demand in the employment market

Contd...



**MAJOR CATEGORIES OF PLAN ASSET  
AS A PERCENTAGE OF THE FAIR VALUE**

As15 Para 120(h)

**APPENDIX C  
XYZ INTERNATIONAL  
MARKETING PVT LTD**

**EMPLOYEES GRATUITY SCHEME**

**ASSETS DISTRIBUTION**

<b>A</b>		<b>AS AT</b>	<b>31-Dec-15</b>	<b>31-Dec-16</b>
<b>PERCENTAGES</b>				
1	Govt Securities(Central&State)		0.00%	0.00%
2	Highquality Corporate Bonds		0.00%	0.00%
3	Equity shares of Listed Cos		0.00%	0.00%
4	Property		0.00%	0.00%
5	Special deposits		0.00%	0.00%
6	Others(PSU)		0.00%	0.00%
7	Assets Under Insurance Schemes		0.00%	0.00%
8	<b>Total</b>		-	0

**AMOUNTS FOR CURRENT & PREVIOUS FOUR PERIODS**

AS PER PARA 120(N)				
APPENDIX D				
XYZ INTERNATIONAL				
MARKETING PVT LTD				
EMPLOYEES GRATUITY SCHEME				
31/Dec/13		31/Dec/14	31/Dec/15	31/Dec/16
1	Defined benefits Obligation			
	0	637,898	3,570,880	4,006,604
2	Plan assets			
	0	0	0	0
3	Surplus /Deficits			
	0	-637,898	-3,570,880	-4,006,604
4	Experience Adjustments on Plan Liabilities			
	0	0	-507,879	-2,685,869
5	Experience Adjustments on Plan Assets			
	0	0	0	0
<p>Para 142A as inserted in Notified AS15 by Companies (AccountingStandards) Amendment Rules 2009 states that an enterprise may disclose the amounts required by paragraph 120(n) as the amounts are determined for each accounting period prospectively from the date the enterprise first adopts this standard.</p>				

## **APPENDIX E**

### **ACTUARIAL ASSUMPTIONS:**

I have used actuarial assumptions selected by the Company. Any Changes in actuarial assumptions, methods or plan provisions since the prior valuations are described in this report. The assumptions used in compiling this report are consistent with the requirements of AS 15 R(2005). The company was advised on assumptions as per the requirements under AS 15 R(2005).

### **DEMOGRAPHIC ASSUMPTIONS:**

**THE FOLLOWING DEMOGRAPHIC ASSUMPTIONS WERE USED IN VALUING THE LIABILITIES AND BENEFITS UNDER THE PLAN.**

<b>MORTALITY:</b>	<b>INDIAN ASSURED LIVES MORTALITY (2006-08 ULTIMATE</b>	
<b>DISABILITY:</b>	<b>5% OF MORTALITY RATE RATES</b>	
<b>WITHDRAWAL:</b>	<b>20.00%</b>	
<b>RETIREMENT AGE:</b>	<b>58</b>	<b>58</b>

### **TABLE OF SAMPLE RATES**

<b>Mortality</b>		<b>Age</b>	<b>Disability</b>	
<b>Male</b>	<b>Female</b>		<b>Male</b>	<b>Female</b>
0.0848%	0.0848%	20	0.0042%	0.0042%
0.0984%	0.0984%	25	0.0049%	0.0049%
0.1056%	0.1056%	30	0.0053%	0.0053%
0.1282%	0.1282%	35	0.0064%	0.0064%
0.1803%	0.1803%	40	0.0090%	0.0090%
0.2874%	0.2874%	45	0.0144%	0.0144%
0.4946%	0.4946%	50	0.0247%	0.0247%
0.7888%	0.7888%	55	0.0394%	0.0394%
1.1534%	1.1534%	60	0.0577%	0.0577%

**SAMPLE RATES CONTD...**

<b>Mortality</b>			<b>Disability</b>		
<b>Male</b>	<b>Female</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Age</b>
1.7009%	1.7009%	65	0.0850%	0.0850%	
2.5855%	2.5855%	70	0.1293%	0.1293%	
3.9637%	3.9637%	75	0.1982%	0.1982%	
6.0558%	6.0558%	80	0.3028%	0.3028%	
9.1982%	9.1982%	85	0.4599%	0.4599%	
13.8895%	13.8895%	90	0.6945%	0.6945%	
20.8585%	20.8585%	95	1.0429%	1.0429%	
31.1628%	31.1628%	100	1.5581%	1.5581%	
			<b>Age</b>		
<b>Withdrawal</b>			<b>Retirement</b>		
20%	20%	20	0%	0%	
20%	20%	25	0%	0%	
20%	20%	30	0%	0%	
20%	20%	35	0%	0%	
20%	20%	40	0%	0%	
20%	20%	45	0%	0%	
20%	20%	50	0%	0%	
20%	20%	55	0%	0%	
0%	0%	60	100%	100%	
0%	0%	65	100%	100%	
0%	0%	70	100%	100%	
0%	0%	75	100%	100%	
0%	0%	80	100%	100%	
0%	0%	85	100%	100%	
0%	0%	90	100%	100%	
0%	0%	95	100%	100%	
0%	0%	100	100%	100%	

## **APPENDIX F: THE METHODOLOGY**

### **D.1 Defined Benefits Schemes:**

These are schemes under which benefits are related to the remuneration at or near retirement, and /or years of service. The extent of an employer's obligation under such schemes is usually uncertain and requires estimation. In estimating the obligation, assumptions are made regarding future conditions and events, which are largely outside the employer's control.

### **D.2 Allocation Problems:**

The retirement benefits under defined benefit schemes are earned over a long period and various factors frequently enter into the computation of these benefits. As a result, allocation problems arise in determining how the cost of retirement benefits should be recognized in the financial statements of the employer. The cost of retirement benefits to an employer relates to service put in by employees who are entitled to receive such benefits. Consequently the cost of retirement benefits needs to be accounted for in the period during which these services are rendered. Expensing the Defined Benefit retirement benefit costs at the time of employees exit does not appropriately achieve the objective of allocating these costs uniformly over the working lifetime of the employees.

### **D.3 Actuarial Value of Accrued Obligation:**

This is done having regard to the following:

1) The Accrued Service as on the date of valuation 2) Salaries projected to the date of separation, based on appropriate assumptions as to the average rate of future annual salary increases. 3) The probabilities of death or resignation before retirement. 4) The likely future return on investments of funds.

### **D.4 Projected Unit Credit Method (Summary of Actuarial Cost Method)**

We have used the Projected Unit Credit (PUC) actuarial method to assess the Scheme's liabilities, as required by AS 15 (revised 2005), including those related to death-in-service and incapacity benefits. Under the PUC method a "projected accrued benefit" is calculated at the beginning of the year and again at the end of the year for each benefit that will accrue for all active members of the Plan. The "projected accrued benefit" is based on the Scheme's accrual formula and upon service as of the beginning or end of the year, but using a member's final compensation, projected to the age at which the employee is assumed to leave active service. The Scheme Liability is the actuarial present value of the "projected accrued benefits" as of the beginning of the year for active members.

### **D.5 The measurement:**

The liability is determined actuarially, by calculating the expected future cash outflows in respect of each individual employee by the application of a multiple decrement table which takes in to account the exits by way of normal age-retirement, earlier death while in service and other premature withdrawals. Then the present value of these expected payments is arrived at, using an appropriate rate of discount and added up.

### **D.6 Recognition of Actuarial Gains and Losses.**

All actuarial gains and losses arising during the year are recognized in the statement of expenses of the year without resorting to any amortization and the disclosures in the report has been prepared accordingly..

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AS NEIL ARMSTRONG WAS THE FIRST TO REACH MOON, WE WILL REACH OUT TO YOU FIRST WITH OUR SOLUTIONS] Page 21

# **APPENDIX G: COMMENTARY**

## **1. DESCRIPTION OF PLAN CHARACTERISTICS AND ASSOCIATED RISKS:**

The Gratuity scheme is a final salary defined benefit plan, that provides for a lumpsum payment at the time of separation; based on scheme rules the benefits are calculated on the basis of last drawn salary and the period of service at the time of separation and paid as lumpsum.

The design entails the following risks that affect the liabilities and cash flows,

1. Interest rates risk : the defined benefit obligation calculated uses a discount rate based on government bonds. If bond yields fall, the defined benefit obligation will tend to increase.
2. Salary inflation risk: higher than expected increases in salary will increase the defined benefit obligation.
3. Demographic risks: this is the risk of volatility of results due to unexpected nature of decrements that include mortality attrition, disability and retirement. The effects of these decrement on the DBO depends upon the combination salary increase, discount rate, and vesting criteria and therefore not very straight forward. It is important not to overstate withdrawal rate because the cost of retirement benefit of a short caring employees will be less compared to long service employees.

## **2. DESCRIPTION OF FUNDING ARRANGEMENTS AND POLICIES**

Regulatory frame work:

While the payment of gratuity is statutory and provided by the Payment of Gratuity Act 1972 and subsequent amendments, there are no statutory minimum funding requirement for gratuity plans in India. However the companies can setup a separate irrevocable trust and start funding for the gratuity liability and avail of tax exemption under the income tax act. By this security of gratuity benefits to the employees is ensured. The trustees of the Trust so created also becomes responsible for the governance of the plan.

## **3. ON ASSUMPTIONS:**

To prepare this report, actuarial assumptions as agreed by the Company, are used to select a single scenario from the range of possibilities. The results of that single scenario are included in this report. However, the future is uncertain and the plan's actual experience will differ from those assumptions; these differences may be significant or material. In addition, different assumptions or scenarios may also be within the reasonable range and results based on those assumptions would be different. Actuarial assumptions may also be changed from one valuation to the next because of mandated requirements, plan experience, changes in expectations about the future and other factors.

- 1 The effects of Morbidity and Withdrawals (Attrition) have been factored by constructing a multiple decrement table on assumption of Mortality Table

### **Basis of Valuation:**

All costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures.

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### Valuation Formula:

Consider an employee at 31 Mar 16 to be aged  $x$  Years  
with Past Service upto 31 Mar 16 -  $PSERV(x:31/03/16)$   
with Salary at 31 Mar 16 -  $SAL(x:31/03/16)$

Accordingly Gratuity payable to this employee would be computed as

$GRAT(x) = GF \times SAL(x:31/03/16) \times PSERV(x:31/03/16)$ , where "GF" is a gratuity factor based on scale of benefits.

Accordingly if he leaves 't' years from now, then Gratuity arising out of his service up to now would be increased due to salary escalation during these 't' years. Accordingly gratuity payable would be

$GRAT(x+t) = GF \times SAL(x:31/03/16) \times (1+j)^t \times PSERV(x:31/03/16)$

when  $j$  is the rate of increase of salary per year

This gratuity will be payable if he dies in service in year  $t$ .

Probable Gratuity on death =  $GRAT(x+t) \times$  Probability of dying during age  $x+t$

Present value of gratuity payable on death during age  $x+t$  will be arrived by discounting at rate  $i$  for  $t$  years.

Accordingly

$VGRAT(x+t) = GRAT(x+t) \times$  probability of dying during age  $x+t / (1+i)^t$   
 $= GRAT(x+t) \times$  death factor at age  $x+t / (1+i)^t$

where  $i$  is the discounting rate,

Where Death

factor = Number people dying during age  $x+t$  to  $X+t+1$  / number at age  $X+t$ .

Gratuity payable on withdrawal and retirement is similarly worked out.

Accordingly present value of Gratuity payable at age  $x$  if one separates during age  $x+t$  is

$VGRAT(x+t) = GRAT(x+t) \times \{ \text{Death Factor} + \text{withdrawal Factor} + \text{Retirement Factor} \} / (1+i)^t$

Aggregate of  $VGRAT(x+t)$  for ages from  $x$  till Retirement Age is therefore, present value of Gratuity payable to that individual - this is expressed as  $V(x)$ .

Aggregate of  $V(x)$  for all individual constitutes the Gratuity liability of the Company.

### Accounting Principles:

The benefit expense for the year is made up of:

- the cost of the additional benefits that members accrue during the year based on projected salaries at retirement or earlier termination (current service cost);
- plus interest on the defined benefit obligation (interest cost);
- less the expected return on the assets held by the plan (expected return on plan assets);

- plus or minus the amount required to recognise actuarial losses or gains in accordance with the Company's accounting policy.

The amount recognized as a net gratuity/pension liability / (asset) in the company balance sheet is:

- the deficit (surplus) in the plan at the balance sheet date
- The amount falling due in the next one year

#### **4. CURRENT & NON – CURRENT LIABILITIES:**

Regarding funded post-employment benefit obligations, amount due for payment to the fund created for this purpose within twelve months is treated as “current” liability. This is as per Institute of Chartered Accountants circular date December 2011. Guidance Note on the revised schedule 3 of the companies Act, 2013. Page 18, Sec 7.3.C reproduced below

“Regarding funded post-employment benefit obligations, amount due for payment to the fund created for this purpose within twelve months is treated as “current” liability. Regarding the unfunded post-employment benefit obligations, a company will have settlement obligation at the balance sheet date or within twelve months for employees such as those who have already resigned or are expected to resign (which is factored for actuarial valuation) or are due for retirement within the next twelve months from the balance sheet date. Thus, the amount of obligation attributable to these employees is a “current” liability. The remaining amount attributable to other employees, who are likely to continue in the services for more than a year, is classified as “non-current” liability. Normally the actuary should determine the amount of current & non - current liability. Normally the actuary should determine the amount of current & non- current liability for unfunded post-employment benefit obligation based on the definition of current and Non- current assets and liabilities in the Revised schedule 3.

.....This is shown in our table 3A under Funded status, row No2. Regarding the unfunded postemployment benefit obligations, a company will have settlement obligation at the Balance Sheet date or within twelve months for employees such as those who have already resigned or are expected to resign (which is factored for actuarial valuation) or are due for retirement within the next twelve months from the Balance Sheet date. Thus, the amount of obligation attributable to these employees is a current Liability. This is shown under Line 1 of Table 3A

#### **5. DISCONTINUANCE GRATUITY**

This refers to the payment of Gratuity Liability on the valuation Date in case the company discontinues its commercial operations. It is the sum total of gratuity payable to each and every employee including those with less than 5 years of service.

**6. TERM OF FUTURE LIABILITY** is a weighted average term , the liabilities falling due in each year being the weights..

The discount rate is based on the term of the future liability. Term of the future liability is equal to term used in the bond rate table, for determining the discount rate.



## **7.DETERMINATION OF CONTRIBUTION RATES :**

This can be done by the companies by spreading the balance Actuarial liability as on the valuation Date (i.e. Total Benefit Obligation taking into account the total service of the employees from date of joining to retirement less the current asset for the Plan) over the balance expected service of the employees as a group.

The annual contribution rate to meet future service liability is calculated using the Expression below:

- (1) Actuarial Value of Total Service Liability Less Assets Value: TBO-A
- (2) Actuarial Value of One Percent of future salaries over the balance Expected service time. 1% C
- (3) Uniform Future Annual Contribution Rate (%) = (1)/(2) = (TBO-A)/1% C

## **8.Understanding Actuarial Gains and Losses.**

Possible reasons for Actuarial Gains or Losses on Plan Liabilities

1. If the actual attrition, retirement or mortality experience turns out to be higher or lower than expected based on the assumptions made at the start of the accounting period, it would lead to an Actuarial Gain or Loss on Plan Liabilities.
2. If the salary increases are higher or lower than expected based on the assumption made at the start of the accounting period, it would lead to an Actuarial Gain or Loss on Plan Liabilities.
3. If the actuarial assumptions of salary increase, attrition rate and discount rate change from one valuation year to another, it may lead to Actuarial Gain or Loss on Plan Liabilities.
4. Any significant changes in the demographic profile may also lead to Actuarial Gain or Loss on Plan Liabilities such as a large growth of the employee count from new joiners.
5. If the actual leave avilment from the current year entitlement is different than the Availment Pattern assumed at the start of the accounting period, it may leave to Actuarial Gain or Loss on Plan Liabilities.

**Possible reasons for experience Gains or Losses on Plan Assets;**

1. Return on plan assets greater /(lesser) than discount rate. For example, if the discount rate was 8% and the fund actually earned 7%, it would result in an actuarial loss on assets.

## **APPENDIX HGLOSSARY**

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of pension/Gratuity plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortisation of the unfunded actuarial accrued liability.

**Actuarial Gain or Loss.** The actuarial loss is the excess of the plan’s unfunded actuarial accrued liability on the valuation date over the unfunded actuarial accrued liability that would have resulted had all of the actuarial assumptions been realised. If the actuarial loss is less than zero, it is called an actuarial gain. From one plan year to next, if the experience of the plan differs from that anticipated using the actuarial assumptions, an actuarial gain or loss occurs. For example, an actuarial gain would occur if the plan assets earned 12% for the year while the assumed rate of return used in the valuation was 8%. Other causes of actuarial gains or losses would include changes in actuarial assumptions and / or demographic changes in the population profile.

**Actuarial Present Value.** The current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The actuarial present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Adjustment for limit on net asset.** A reduction of the net asset that may be necessary in situations where the company is unable to recover a surplus of the plan either through reduced contributions in the future or through refunds from the plan.

**Balance Sheet Asset/(Liability)** The sponsor's balance sheet asset/(liability) entry, the Net recognized amount, is the sum of the cumulative excess of contributions to the plan over net Annual Expense and other plan-related charges to income due either to business combination or accelerated recognition. The difference between this account and the Funded Status is the un-recognized net loss/(gain) unvested prior service costs [and net transition obligation.]

**Current Service Cost.** (component of expense). The actuarial present value of benefits attributed by the gratuity/pension benefit formula to services rendered by employees during that period based on assumptions as to future compensation levels. The interest rate used in determining the present value is the discount rate.

**Curtailment.** An event that significantly reduces the expected years of future service of present employees or eliminates for a significant number of employees the accrual of defined benefits for some or all of their future services.

**Deficit or surplus.** The excess of the present value of the obligation over plan assets.

**Discount Rate.** Also referred to as the “settlement rate,” the discount rate represents the employer’s estimate (as of the valuation date) of the interest rate at which pension benefits could be effectively settled. Assumed discount rates are used in the measurement of the present value of the obligation.

**Expected Return on Assets.** The expected return on plan assets over the accounting period, based on an assumed rate of return

**Expected Long-Term Rate of Return on Plan Assets.** An assumption as to the rate of return on plan assets reflecting the average rate of earnings expected on the funds invested or to be invested to provide for the benefits included in the projected benefit obligation. This assumption is used to determine the expected return on assets for purposes of AS 15 (REVISED 2005) pension expense.

**Expense recognized in balance sheet.** The amount recognised in an employer's financial statements as the cost of a pension plan for a period, pursuant to AS 15 (REVISED 2005). Components of expense are current service cost, interest cost, expected return on plan assets along with settlement and curtailment charges (if any).

**Fair value of plan assets.** The assets out of which the obligations have to be settled, measured at their market value.

**Funded Status.** This is the excess/(shortfall) of the fair value of plan assets over the Plan Liability.

**Interest Cost**(component of net periodic Gratuity/Pension cost). The increase in the present value of obligation due to passage of time or The increase in the Plan liability over the accounting period due to interest (the time value of money)

**Net Periodic Benefit Cost.** This is the profit and loss charge for the accounting period, under AS 15 (REVISED 2005) and comprises the sum of the service and net interest costs, plus amortized actuarial gain /Loss.

**Other Comprehensive Income :**

Other comprehensive income comprises items of income and expense (including reclassification adjustments) that are not recognized in profit or loss as required or permitted by other AS 15 (REVISED 2005).

**Past Service Cost.** Plan amendments often include provisions that grant increased benefits based on services rendered in prior periods. These provisions give rise to past service costs.

**Plan Liability.** This quantity is the discounted present value of all benefits attributed by the plan's benefit formula to service rendered prior to the measurement date. It is measured using an assumption as to future pay levels.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Present value of the Obligation.** The actuarial present value as of a date of all benefits attributed by the pension benefit formula to employee service rendered before that date. The Present value of obligation is defined in AS 15 and is measured based on the discount rate and other assumptions used for accounting disclosure purposes. The present value of the obligation is measured using assumptions as to future compensation levels and increases in maximum benefit limitations (if applicable). The interest rate used in determining the present value is the discount rate.

**Remeasurements of the net defined benefit liability (asset) comprise:**

- (a) actuarial gains and losses;
- (b) the return on plan assets, excluding amounts included in net interest on the net defined benefit liability (asset); and
- (c) any change in the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability (asset).

**Service Cost.** It has the following components.

- A) This is the discounted present value of benefits attributed by the plan's benefit formula to services rendered by employees during the accounting period. It is measured using an assumption as to future pay levels.
- b) Past service cost: which is the change in the present value of the defined benefit obligation for employee service in prior periods, resulting from a plan amendment (the introduction or withdrawal of, or changes to, a defined benefit plan) or a curtailment (a significant reduction by the entity in the number of employees covered by a plan); and

**Settlement.** A transaction that is irrevocable relieves the employer (or the plan) of primary responsibility for a pension benefit obligation and eliminates significant risks related to the obligation and the assets used to effect the settlement. The purchase of non-participating annuities or the payment of significant lump-sum payments to plan participants might constitute a settlement.

**Termination Benefits.** Benefits provided to employees in connection with their termination of employment at a specific time or under certain prescribed circumstances

**Unrecognized Net Gain or Loss.** The cumulative net gain or loss that has not been recognised as a part of net periodic pension cost.

**Unrecognised Past Service Cost.** That portion of past service cost that has not yet been recognised as part of expense is unrecognised past service cost.

ENDS.