



# M/S. K.A. Pandit

*Consultants and Actuaries*

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**Topic to be covered:**

**Volatility in the Interest Rate –  
December 2018**

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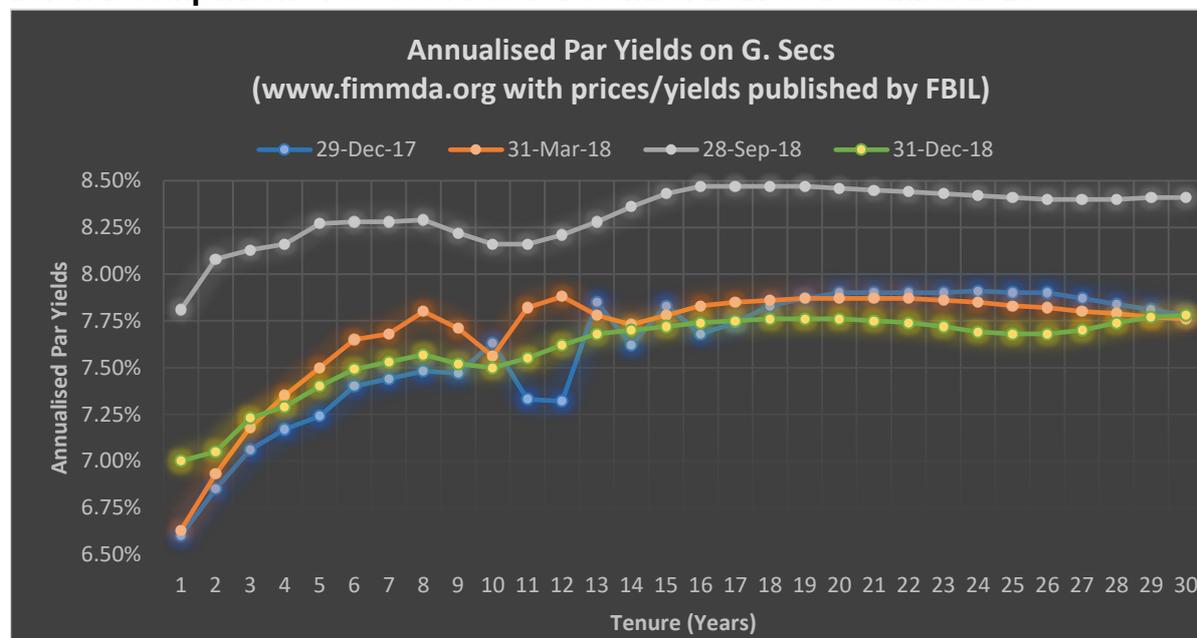
## Background

- Employee Benefit Obligations are to be valued based on G-Sec rate of estimated term (expected future service/ expected future life time) as prevalent at the end of the reporting period.
- 10 Years G.Sec. Yield was 7.56% as on 31<sup>st</sup> March 2018 and is 7.50% as on 31<sup>st</sup> Dec 2018, resulting in decrease in the yield marginally by 0.06%.
- CPI Index:
 

Apr 2018 - March 2018	0.35 %	Apr 2018 - Apr 2017	3.97 %
July 2018 - June 2018	3.44 %	July 2018 - July 2017	5.61 %
Oct 2018 - Sept 2018	0.33 %	Oct 2018 - Oct 2017	5.23 %
- The yearly CPI has increased from 3.97% in April 2018 to 5.23% in October 2018.
- Impact of change in assumption is recognised in Profit & Loss in case of AS 15, whereas in case of Ind AS 19 it is recognised through OCI.
- As Discount rate has decreased it will result into increase in liability and Actuarial Loss due to change in financial assumptions.

## Changes

Below is comparison of G - Sec rates at December 2017 to December 2018.



Annualised Par Yields on G. Secs as at 31-12-2018 ([www.fimmda.org](http://www.fimmda.org) with prices/yields published by FBIL)

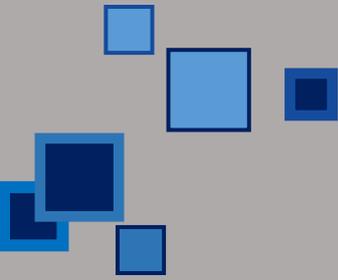
Year	1	2	3	4	5	6	7	8	9	10
Yield	7.00%	7.05%	7.23%	7.29%	7.40%	7.49%	7.53%	7.57%	7.52%	7.50%
Year	11	12	13	14	15	16	17	18	19	20
Yield	7.55%	7.62%	7.68%	7.70%	7.72%	7.74%	7.75%	7.76%	7.76%	7.76%
Year	21	22	23	24	25	26	27	28	29	30
Yield	7.75%	7.74%	7.72%	7.69%	7.68%	7.68%	7.70%	7.74%	7.77%	7.78%

### **Comments**

- Decrease in G- Sec yield will increase the Actuarial liability.
- In case Ind AS valuation is taken by company, Actuarial Loss in OCI due to the change in discount rate assumption can be estimated from Sensitivity of Obligation as disclosed at March 2018 under Ind AS 19.
- If a correlation in the assumptions are to be considered, one must take a re-look at the future salary escalation and if the Net gap remains same, there may not be much change in the liability. One must discuss this correlation with actuaries so as to have correlated assumptions.
- There is also a possibility of the fair value of the Plan Assets going up due to the decrease in the yield resulting in the lower provision requirements for funded plans which are linked to market movement.
- Over the last couple of years, G-Sec rate is very volatile and decreased to significantly low rate in past, this had resulted into Actuarial Loss on Obligation in previous periods particularly in 2016-17. In 2017-18 G-Sec started increasing resulted into Actuarial Gain due to Financial Assumption. In this period (March 2018 to December 2018), since discount rate has decreased, it will lead to *Actuarial loss on Obligation due to change in financial assumption*.
- In case of September 2018 to December 2018, G-Sec rate has decreased significantly and, on an average, decreased by 70-75 basis points as shown in above graph. So, for companies who are performing quarterly valuations, they may observe Actuarial Gain due to change in financial assumptions in period April 2018 to September 2018 but for this quarter, it will be Actuarial loss.
- In case of Ind AS this volatility is passed through OCI for Post-Employment Benefit plans so Profit and Loss account remain consistent.
- Discount rate is taken based on G-Sec rate of estimated term of obligation, as G-Sec rates vary a lot across various term of bonds. Estimated term of obligation is calculated by actuarial techniques applying probability of Attrition and death rate. So, it is suggested to review Attrition rate assumption based on actual experience of company.

### **Reference:**

Inflation: <http://www.inflation.eu/inflation-rates/india/current-cpi-inflation-india.aspx>  
G-Sec Yield: ([www.fimmda.org](http://www.fimmda.org) with prices/yields published by FBIL) (Per Annum yield)



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