



# M/S. K.A. Pandit

*Consultants and Actuaries*

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**Topic to be covered:**

**Volatility in the Interest Rate -  
March 2018**

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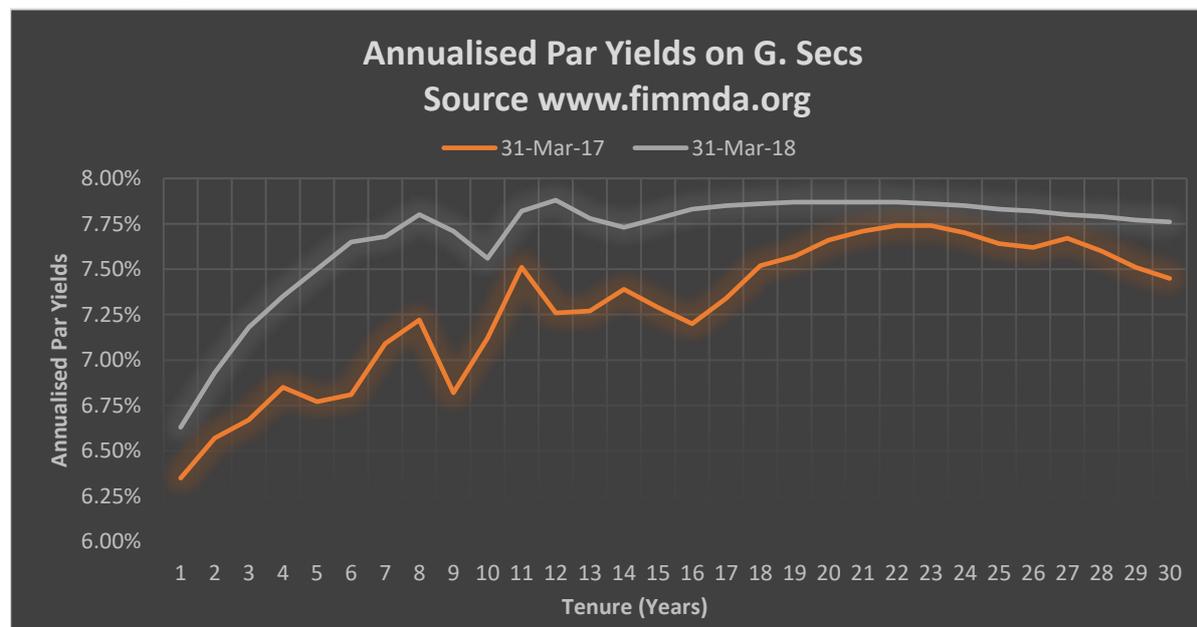
## Background

- 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 7.12% as on 31<sup>st</sup> March 2017 and is 7.56% as on 31<sup>st</sup> March 2018, resulting in an increase in the yield of 0.44%.
- CPI Index:
 

Mar 2017 - Feb 2017	0.36%	Mar 2017 - Mar 2016	2.61 %
Oct 2017 - Sept 2017	0.70 %	Oct 2017 - Oct 2016	3.24 %
Jan 2018 – Dec 2017	0.70%	Jan 2018 - Jan 2017	5.11%
- The yearly CPI has increased from 2.61% in March 2017 to 3.24% in October 2017. In January 2018 it has further increased to 12 months high to level of 5.11%.
- 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 increased it will result into decrease in liability and Actuarial Gain due to change in financial assumptions.

## Changes

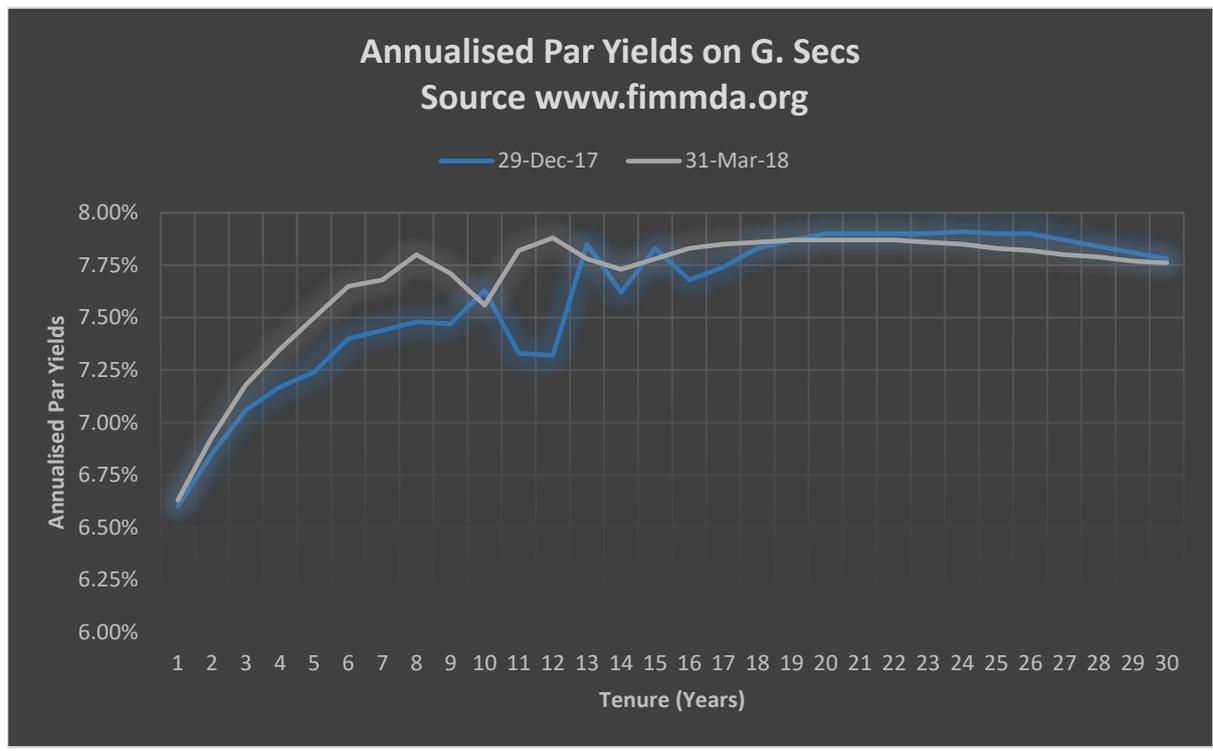
Below is comparison of G - Sec rates at March 2017 and March 2018.



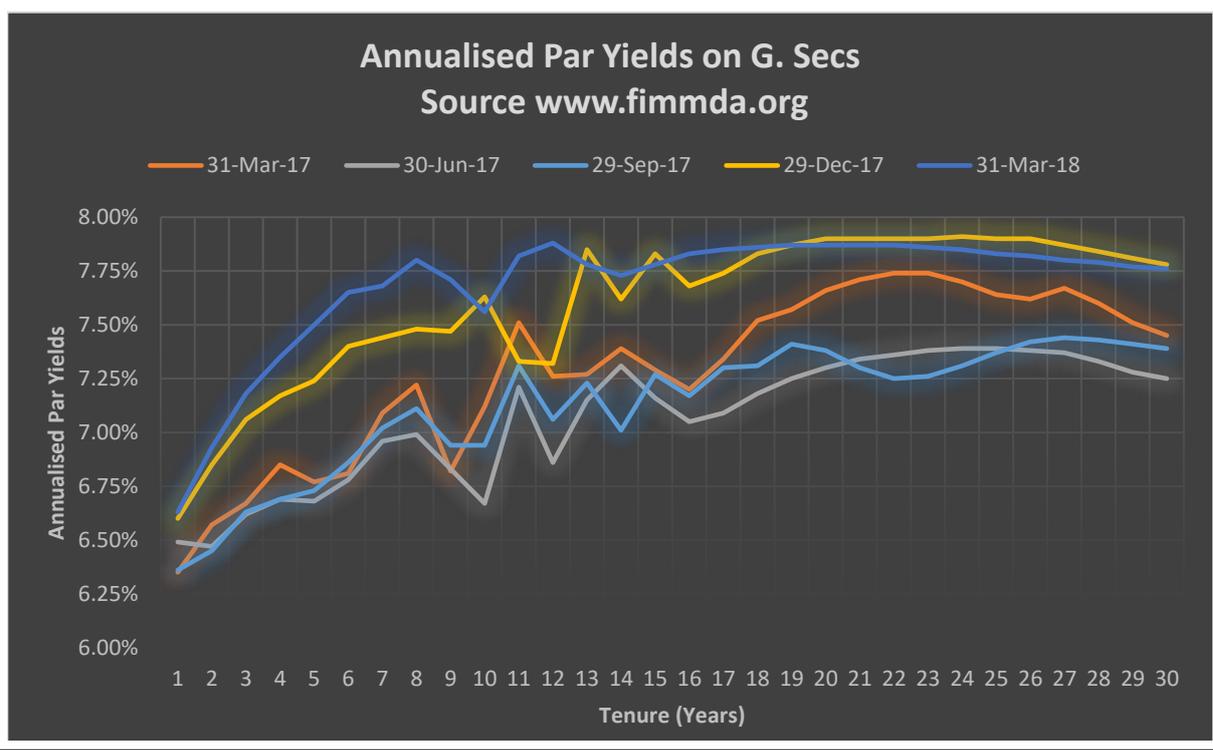
Annualised Par Yields on G. Secs as at 31-03-2018 (Source [www.fimmda.org](http://www.fimmda.org))

Year	1	2	3	4	5	6	7	8	9	10
Yield	6.63%	6.93%	7.18%	7.35%	7.50%	7.65%	7.68%	7.80%	7.71%	7.56%
Year	11	12	13	14	15	16	17	18	19	20
Yield	7.82%	7.88%	7.78%	7.73%	7.78%	7.83%	7.85%	7.86%	7.87%	7.87%
Year	21	22	23	24	25	26	27	28	29	30
Yield	7.87%	7.87%	7.86%	7.85%	7.83%	7.82%	7.80%	7.79%	7.77%	7.76%

Below is comparison of G - Sec rates for various tenures at December 2017 and March 2018.



Below is comparison of G - Sec rates during 2017-18

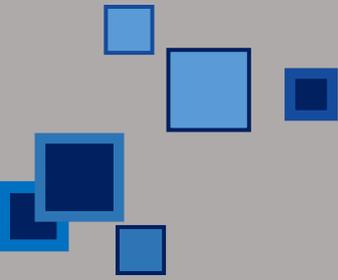


### **Comments**

- Increase in G- Sec yield will decrease the Actuarial liability.
- In case Ind AS valuation is taken by company, Income in OCI due to the change in discount rate assumption can be estimated from Sensitivity of Obligation as disclosed at March 2017/ December 2017 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 down due to the increase in the yield resulting in the higher 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. In this period, since discount rate has increased significantly it will lead to *Actuarial Gain on Obligation due to change in financial assumption*.
- In case of Ind AS this volatility is passed through OCI for Post-Employment Benefit plans so Profit and Loss account remain consistent.
- In current year as Gratuity ceiling has increased from 10 lakhs to 20 lakhs that till result into past service cost expense in Profit and Loss account for AS 15 (for vested benefits) as well as Ind AS 19.
- 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 past 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) (Per Annum yield)



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