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## Application Portfolio Assignment – Part 5

**Keep up the good work!** Discussions with many of you indicate that you been struggling with the process of applying decision analysis to real world problems. This indicates that we are making progress on the important issue of really learning how to use the techniques. I am proud of how much you have been able to do.

### Part 5 – Lattice Analysis of Evolution of a major uncertainty

Develop a lattice depicting the development of a major uncertainty that applies to your case. This should cover 5 periods beyond the current best estimate at time zero. To do this, you will need to define:

- The trend that you expect over time, of the form:  
Modal forecast = (forecast at time zero)  $e^{rt}$   
where  $r$  is the rate of growth per period (it may be zero, or even negative)
- The volatility around this mean

The object of this exercise is to make sure that you understand the process of developing a lattice projection.

### VARG Curve and Multiple Criteria

If you have not already drawn a VARG curve and set up a table of multiple criteria for your case, (as part of AP4) – Do so for this exercise!

### Software aids:

On the web, under “...Course Material / Spreadsheets” you will find several Excel files that can be useful:

- “binomial lattice.xls” allows you to try out various  $(u, d, p)$  combinations to see what you can get
- “best fit to data.xls” gives you a way to obtain the  $(v$  and  $\sigma)$  and thus the  $(u, d, p)$  that best fit time series of data
- “binomial fitting to assumed values.xls” provides a way to get  $(u, d, p)$  to some minimal technology (or other) projection.