THE RISK FREE RATE AND THE MRP

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The Risk Free Rate:

- Spot Rate versus Historical Average: The NPV = 0 principle implies that the spot rate should be used. Historical averaging (even if coupled with a LT MRP estimate of 6%) is undesirable because
  - It overestimates the cost of equity for businesses with Be less than 1 *and*
  - It wrongly assumes that the QCA's MRP estimate is LT *and*
  - It raises questions about which historical period to use *and*
  - It sacrifices an observable, relevant, and significant parameter

- The Appropriate Term for Rf: The NPV = 0 principle implies that the Rf term should match the regulatory cycle. Contrary views:
  - The proposition rests upon unrealistic assumptions (eg: sale at end of cycle)
  - Alternative terms are suggested without consideration of the NPV Principle
  - Matching Rf to the reg cycle is not necessary to satisfy the NPV Principle
  - The proposition assumes that the expectations hypothesis holds
  - Implies that there is a free lunch from reducing the regulatory cycle

MRP: Theory

- I recommend a variety of methods to estimate the MRP (historical and forward-looking)

- Is use of a variety of estimation methods consistent with the NPV = 0 principle?
  - The NPV = 0 principle requires use of the ‘spot’ rate
  - Unlike Rf, the MRP is not observable
  - The best estimation method should then be used
  - This involves minimising the MSE
  - This is achieved using many methods, and some may even be biased

- Is the use of a variety of estimation methods consistent with the use of the CAPM?
  - The CAPM requires use of the ‘spot’ rate
  - As above, this is consistent with using many methods
  - One-period model applied to a multi-period situation

MRP: Empirical

- My recommended methods include the following
  - Historical averaging of excess returns (6.2%)
  - Historical averaging modified for the 20th century inflation shock (5%)
  - DGM – Cornell (7.0 – 9.5%)
  - Surveys – Fernandez and Independent Valuation Reports (6.1%)
  - Median = 6.15%

- Also, estimate the real E(Rm) from historical data, convert to nominal using current expected inflation, and then deduct the current Rf (7.5%):
  - Assumes that the real E(Rm) is constant rather than the MRP
  - Median = 6.2%

- Evidence from foreign markets should also be considered: Bias v variance
  - Median = 5.9%

- All three medians round to 6% if rounding to nearest 1%

Other Arguments

- The DRP has risen since 2007 and therefore so too should the MRP. This is plausible, but an estimate is required. Some methods reveal an increase (DGM and real Rm) but the others don't, and the median is therefore unchanged since 2007.

- The Independent Valuation Reports use Rf values in excess of the prevailing ten-year spot rates. But the time frame is longer.

- Surveys of one-year ahead inflation forecasts show no bias, contrary to Siegel. But Siegel rests upon longer term forecast errors.

- DGM estimates must embody an expected growth rate in DPS converging on the GDP growth rate less an allowance for new share issues and new coys.