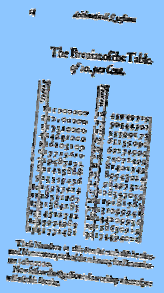
THE IMPACT OF THE TIME VALUE OF MONEY ON VALUATION PRACTICE



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1

The Concept of the Time Value of Money (TMV)

- Time is money
- The concept of the Time Value of Money has been recognized for five millennia
- First appeared as a charge on the borrowing of essentials and then money with the development of banking
- The charging of interest has been frowned upon by some cultures
- Now recognized in property valuation

2

The use of TMV in property

- The application of the Time Value of Money is now widely recognized in real estate valuation
- The application has evolved over time
- The application has lagged behind reality
- Need to be sure that TMV in its application truly reflects rental and other payment patterns in valuation practice

3

Approach to the Investment Method

- The Investment Method relies upon the capitalization of income flow
- The approach uses Annuity Tables
- Practice does not always fully apply theory
- Actual rental patterns are not always reflected in valuation practice
- These shortcomings need to be addressed
- Practice needs to truly reflect payment patterns

4

Development of Annuities

- At times, the Romans certainly applied discount and interest
  - Used in calculating life annuities
- Although condemning interest as usurious, the Church granted lands in return for annuities from the 8th century
- First large-scale development of annuities was in the Low Countries
- Common in much of Europe by the 16th century

5

The development of early property valuation tables in Britain

- The Reformation unleashed great change
  - Dilution of ecclesiastical power
  - Dissolution of the monasteries
  - Use of interest
- Influence of mathematicians

6

The role of the Mathematicians:

- Mathematicians played a central role from the outset
- 1566 – Jean Trenchant's *L'Arithmetique* deals with interest
- 1585 – Simon Stevin (Bruges)
- 1613 – Richard Witt
- 1614 – Napier's Logarithms
- Edmond Halley & Sir Isaac Newton
- Abraham de Moivre
- Life tables for London and Breslau

Comprehending the Value of Time

- William Rouse (1816) – Although he provided tables in arrear, he appreciated the importance of timing and frequency
- Rose's Tables (1975) recognized True Equivalent Yields
  - Allowed for quarterly in advance rental payments
- 2002 edition of Parry's tables provide for quarterly in advance.

Monthly rental payments:

- UK residential tenancies due monthly in advance in recent years, but often paid in arrears
- Also, more UK commercial tenants seeking monthly in advance
- Monthly in advance common elsewhere
- Advantageous to one party
- Disadvantageous to the other
- Favours the tenant
- Greater impact on higher yielding properties

Conclusions:

- Time Value of Money especially appreciated post-Rose
- In the UK the process evolved over 4 centuries
- To some extent, theory has now caught up with the 16th century mathematicians
- 4 centuries ago, logarithms facilitated compilation of tables
- Today, computers make the task easier

Finally……

- Real comparison for differing rental payment patterns can be made using effective yields (TEYs)
- Valuation practice should apply formulae to calculate TEYs
- Can use formulae for each case, but…..
- Where appropriate tables do not exist, practitioners should consider the use of computer technology

Thank you for listening

End