

Cambridge University Press

978-1-316-60387-1 - Compound Interest and Annuities-Certain

D. W. A. Donald

Index

[More information](#)

## INDEX

[NOTE: *Page references in Roman type relate to the main text, those in italics to the illustrative examples at the end of each chapter*]

## Annuities:

- Amount of, 47, 58–61, 68
- Amounts of, at nominal rates of interest, 50
- Analysis of, elementary, 73–5
- Analysis of, general, 76–8
- Analysis of, at two rates of interest, 83–8, 92–4
- Consolidation of, 95–6, 157–9
- Definitions of, 41–3
- Determination of yield on, 244–8
- Fractional terms, 51
- Present values of, 44–7, 58–61, 67, 69, 70
- Present values of, at nominal rates of interest, 48–9
- Relationships between types of, 43–4
- Schedules of Principal and Interest, 79–82, 83–5
- Values of, allowing for income tax, 212–16, 219
- Values of, at varying rates of interest, 241–3
- Varying, 52–6, 88–9

## Calculating Machines, 80, 271–3

## Capital Redemption Assurances:

- Alterations in terms of, 114, 116
- Application to replace invested capital, 111–14, 146
- Effect of income tax, on, 210, 220
- General description of, 99
- Net premiums (annual), 99–100
- Net premiums (payable more frequently than yearly), 105–7
- Office Premiums, 109
- Paid-up policies, 102, 104, 107
- Policy Values, 100–2, 104, 106–7
- Stationary Fund, example of, 119
- Commercial Discount, 18, 22
- Construction of tables of compound interest functions, 273–7

## Conversion tables, 107–8

## Cumulative Sinking Funds:

- Definitions, 169
- Determination of term of loans repayable by, 171, 175, 201, 216
- Example of working of, 174
- Income tax on loans repayable by, 216, 227–34
- Interest and sinking fund operating at different intervals, 177–82, 189–93
- Options to purchase in market, 184
- Valuation of securities redeemable by (simplest conditions), 175–6, 187–9
- Valuation of securities redeemable by ( $g$ ,  $\pi$  or  $C$  varying), 176, 193–200
- Valuation of securities redeemable by, allowing for income tax, 216–17, 227–34

Debentures, *see* Stock Exchange Securities

## Discount:

- Effective and nominal rates of, 14–15
- Relation to interest, 16–18

## Equated time, 37–9, 69

## Equation of value, 30–3

## Force of interest:

- General, 6, 8, 236
- Relations to effective and nominal rates of interest, 9–11
- Varying as exponential function, 239
- Varying as linear function, 237
- Varying on Stoodley's hypothesis, 239–41

Cambridge University Press

978-1-316-60387-1 - Compound Interest and Annuities-Certain

D. W. A. Donald

Index

[More information](#)

## 300

## INDEX

## Income Tax

Effect of, on capital redemption assurances, 210, 217, 219, 220, 224-5

Effect of, on loans repayable by annuities, 212-15, 224-7

Effect of, on loans repayable by cumulative sinking funds, 216-17, 227-34

Effect of, on valuation of Stock Exchange securities, 211, 219, 221, 222, 223, 224

Net rates of interest, 207-8

## Interest:

Determination of rate of, *see* Yields

Earned on Life Office Fund, 264-6

Effective rate of, 7-11, 13

General, 1-2

Nominal rate of, 7-11, 13

Relation to discount, 16-18

Tables, 19, 268-71

Leasehold Assurances, *see* Capital Redemption Assurances

Makeham's Formula, 133, 138, 150-2, 162-6, 180-1, 211, 214, 222-4

Ordinary Stocks and Shares, *see* Stock Exchange Securities

Perpetuities, 50

Preference Stocks and Shares, *see* Stock Exchange Securities

Running Yields, 254-6

Sinking Fund Policies, *see* Capital Redemption Assurances

Sinking Funds (non-cumulative), 82-3, 98

## Stock Exchange Securities:

Alterations in terms of, 157, 160, 229

Definitions of types of, 127-31

Optional redemption dates, 135-7

Repayable by instalments, 137-9; *see also* 'Makeham's Formula'

Valuation of, irredeemable, 131

Valuation of, redeemable, 132-5

Valuation of, at other than dividend date, 135, 223

Writing up or down book values of, 152-5, 161

Stoodley, C. L., 239-41

## Yields:

Elementary methods of determination of, 139, 143, 146-8, 222

Gross and net yields, 253

More complicated methods of determination of, 243-53