ARTICLES, PAPERS AND PUBLICATIONS OF
ACTUARIAL INTEREST

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BRITISH BOND RATINGS

In December 1974 a study group of the Institute of Actuaries and the Society of Investment Analysts
issued an exposure draft for a bond rating system. After discussion the system finally put forward in
March 1978 graded separately the company and the issue on objective criteria: unlike the American
systems, the gradings are not combined into a single assessment.
The Company grading examines the company’s ability to service its debt by combining

(i) equity capitalization (divided by the Financial Times–Actuaries 500-share index);
(ii) capital gearing (the ratio of total borrowing to shareholders funds, plus borrowing and
delayed taxation less goodwill);
(iii) income gearing (the ratio of gross interest to profit before taxation and interest charges).

The Issue grading is viewed in the light of the likelihood of the capital being repaid in the event of
default, i.e. its security, the borrowing limits and the capital priority percentage.
Full details are given in a report available from the Society of Investment Analysts, and ratings are
published by the Extel British Bond Rating Service.

COMMITTEE OF INQUIRY INTO THE [IRISH] INSURANCE INDUSTRY: FINAL REPORT
[Stationery Office, Dublin: Prl. 5330, 1976]

The Committee proposed the registration of agents and brokers, compulsory employer’s liability
insurance, and improvements in the allocation of expenses and in accounting principles. Details of
reinsurance business are to be given; the ‘gentlemen’s agreement’ to invest in Irish assets representing
two-thirds of the Irish liabilities is to be extended to Irish companies and pension schemes. Equity-
and property-linked assurance premiums are to attract tax relief. Assurance companies are to be
treated like other companies, although they need not reveal the difference between market and book
values of their assets. Companies are to produce data to enable the supervisory authority to
determine whether the reserve held for outstanding claims and unexpired risks is adequate.

STANDING COMMITTEE OF STATISTICS USERS: CONFERENCE ON FINANCIAL STATISTICS 1977

The report of proceedings (prepared by the Bank of England) contains the opening address and the
discussion papers listed below, summarizes the presentation of the papers and records the discussion
in full.

BAIN, A. D. The flow of funds accounts.
JOHNSON, C. Financial Statistics—too much, too little, or just right?
ATKINSON, R. H. Survey of money and banking statistics.
GRAYSON, A. N. Banking statistics: a view from contributors.
PEPPER, G. T. and THOMAS, R. L. Banking statistics and monetary control.

In order to detect the underlying trends of monetary aggregates, the distortions of sterling M₃
(round-tripping, soft arbitraging and the ‘corset’) are described, with a plea for a smoother M₂
excluding interest-bearing and certificated deposits.

ERRITT, M. J. Industrial and commercial companies’ financial statistics.
Articles, Papers and Publications of Actuarial Interest


Evans, C. M. Financial statistics on manufacturing industry—suggestions for improvement.

Reid, D. J. National and sector balance sheets.


The American Mathematical Monthly

Volume 84, No. 8 (1977)

Frauenthal, J. C. and Goldman, N. Demographic Dating of the Nukuara Society.

Nukeroro is an isolated atoll in the South Pacific, settled by drift voyagers. Lack of migration created a static population ruled by successive oldest inhabitants, the hundredth of whom died in 1871. Model lifetables based on the mortality at that time was used to derive the mean length of reign to suggest an original date of settlement around 1400 AD: this was confirmed by radiocarbon dating of occupation debris.

Population and Development Review

3.3


Consider the evidence and assumptions made in regional estimates, drawing attention to the parallels in population trends of China and Europe over the last 200 years. The upward trend in the eighteenth century was not confined to Western Europe, but seems to have occurred in countries where the industrial revolution came much later.

Journal of Biosocial Science

10, 2 (1978)


Much of the fluctuation is shown to be due to differential motility of X- and Y- bearing spermatozoa, together with differential foetal mortality.

Iliffe, L. Estimated fertility rates of Asian and West Indian immigrant women in Britain, 1969–74.

Rates were based on the 1971 country of birth tabulations and the published statistics of registered births. The total fertility rate of both groups declined faster than that of the indigenous population. The higher total fertility of Asian than West Indian women is attributed in part to differential timing of migration.

Demographic Statistics 1960–76

(Statistical Office of the European Communities, Luxembourg £4.80)

Contains tables of population by sex and year of age with numbers and rates of birth, death, marriage and divorce. Population change is given, with natural increase and net migration numbers. Gross and net reproduction rates, birth order, age at first marriage and fertility rates by age group are included, with expectations of life at certain ages and population projections. The tables relate to each of the EEC countries: combined tables for the whole Community are given where appropriate.

Comparative Social Security Tables for Member States of the European Communities

(International Relations Division, Department of Health and Social Security)

This book details the coverage, source of funds, qualifying conditions, and rate of benefit for the benefits: maternity, sickness, invalidity, retirement, survivors (e.g. widows), employment injuries and diseases, unemployment and family allowances for each of the EEC countries.

Mortality Statistics 1975

(OPCS Series DH., No. 2)

The general volume contains tables for England and Wales of the population and deaths in 1975 by age, sex and marital status. Long time series (since 1841) are given of death rates by sex and age, standardized mortality ratios, deaths by month and by birthplace, by cause (all causes and certain groups), live and still birth rates. A life table for 1973–75 mortality is given, with expectations of life at
articles, papers and publications of actuarial interest

ages 0, 1, 15, 45 and 65 and the number of years of life lost because of certain causes of death. Another
four volumes cover in more detail mortality in childhood and deaths by area and by cause (a separate
volume covers accidental and violent deaths).

occupational mortality 1970–72
(opcs series ds, no. 1)

This new 'decennial supplement' includes more interpretative comment than hitherto, and text and
tables are combined. It commences with a survey of influences upon mortality and social classification,
continuing with an explanation of the methods of determining and measuring exposure to risk,
within the limitations imposed by errors of description. Differences in mortality by social class and
occupation are considered in general and also by specific groups of causes of death. The mortality of
wives and children according to the husband's occupation and social class are again studied, and the
volume ends with a study of trends in mortality over time and region, with specimen life tables.

the basic tables—deaths by sex, age and cause, by marital condition and standard region in
england and wales according to socio-economic group and occupation—are available separately on
microfiche.

population trends
10, winter 1977

gardner, m. and donnan, s. life expectancy: variations among regional health authorities.

abridged life tables for 1974–75 by regions again demonstrate the mortality gradient in england
from north to south.

hellier, j. perinatal mortality 1950 and 1973. still births and deaths in the first week of life nearly
halved between these dates: the improvement was mainly due to better maternal health and
medical care; about one-quarter is attributed to smaller family size, younger maternal ages and
changes in proportions by social class.

leete, r. changing marital composition. much of the recent increase in numbers married reflects
changes in the population structure: the numbers divorced trebled between 1961 and 1976, and
numbers remarried increased by 50%.

11, spring 1978

previews the demographic review 1977 which will discuss the age and sex structure of the population
of great britain. total population has been falling slowly since 1974 (deaths have exceeded births
since mid 1975). large increases in the elderly are expected (in particular those over 85 will rise by 60%
by the end of the century). population at the working ages will continue to rise slowly for a few years
but will then level off and decline. mortality among middle-aged and elderly men in britain is heavier
than in other european countries. the fall in the mean age at first marriage has ceased: births have
fallen by 30% in the last decade and are now below replacement levels for some cohorts. half a million
people (net) left britain by migration in the last 10 years: the southward trend of internal migration
has continued, with cities everywhere losing population.

hunt, a. the elderly: age differences in the quality of life.

a survey has shown that many disadvantages are strongly age-related, some examples not being
obvious (e.g. housing and amenities no less than health and mobility).

chilvers, c. regional mortality 1969–73. regional studies of infant mortality and selected causes of
death. association of proportion of current smokers with bronchitis incidence.