

APPENDIX 2

THE 50 PRIVATE SECTOR COMPANIES PARTICIPATING IN THE

PAY INVESTIGATION UNIT SURVEY

Amoy Canning Corporation (H.K.) Ltd.
British-American Tobacco Co. (H.K.) Ltd.
Caltex Oil Hong Kong Ltd.
Cathay Pacific Airways Ltd.
Chartered Bank
Chiap Hua Clocks and Watches Ltd.
China Motor Bus Co., Ltd.
Esso Hong Kong Ltd.
Fook Lee Construction Co., Ltd.
Gammon (Hong Kong) Ltd.
Golden Peak Maritime Agencies Ltd.
Haking W. Enterprises
Hong Kong Aircraft Engineering Co., Ltd.
Hong Kong and Kowloon Wharf and Godown Co., Ltd.
Hongkong Land Company Ltd.
Hong Kong Oxygen and Acetylene Co., Ltd.
Hongkong and Shanghai Banking Corporation
Hong Kong Soya Bean Products Co., Ltd.
Hong Kong Tramways Ltd.
Hong Kong United Dockyards Ltd.
Hong Kong and Yaumati Ferry Co., Ltd.
Hsin Chong Construction Co., Ltd.
Hutchison-Boag Ltd.
IBM World Trade Corporation
Jardine, Matheson and Co., Ltd.
Jebsen and Co., Ltd.
John Swire and Sons (H.K.) Ltd.
Kowloon Motor Bus Co., Ltd.

Appendix 2 (Continued)

Lap Heng Co., Ltd.
Li and Fung Ltd.
Lo and Lo Solicitors & Notaries Public
Manhattan Garments Ltd.
Mei Foo Investments Ltd.
Mobil Oil Hong Kong Ltd.
National Lacquer & Paint Products Co., Ltd.
Nedlloyd Lines
Otis Elevator Co. (H.K.) Ltd.
Palmer and Turner (H.K.) Architects & Consulting Engineers
Paul Y. Construction Co., Ltd.
Ryoden Electric Engineering Co., Ltd.
San Miguel Brewery Ltd.
Shell Company of Hong Kong Ltd.
Sing Tao Newspapers Ltd.
Sonca Industries Ltd.
South China Morning Post Ltd.
South Sea Textile Manufacturing Co., Ltd.
Swire Bottlers Ltd.
Toppan Printing Co. (H.K.) Ltd.
Wing On Co., Ltd.
Winner Company (H.K.) Ltd.

APPENDIX 3

ACTUARIAL ASSUMPTIONS

A3.1 Introduction

This Appendix contains the bases on which we have valued the following benefit programmes:-

- (1) Retirement schemes which can be divided into:
 - Pension Schemes (including widows' and dependants' pension schemes)
 - Gratuity Schemes
 - Provident Fund Schemes.
- (2) Life Assurance Schemes which provide benefits on death of an employee whilst in service.
- (3) Medical Insurance Schemes.

A3.2 Retirement Schemes

The assumptions are as follows:-

- (1) Interest rate will be 2% p.a. less than the rate at which salaries increase. The effect of this is that pension and gratuity schemes under which the benefits are expressed in terms of pay at or near to retirement are more valuable than schemes under which the benefit is an accumulation of contributions with interest (i.e. a provident fund scheme).
- (2) Government pension increases will be 4% p.a. less than salary increase rate. Discretionary increases in pensions in the surveyed employers are ignored. In any event pension schemes as opposed to provident funds or gratuity schemes are not widespread in the surveyed employers (see table in A3.7).

- (3) For those schemes under which benefits are based on the salary averaged over a period prior to retirement the salary increases during such a period have been assumed to be 12% p.a.
- (4) Age specific assumptions are made for remaining in service and survival as follows:-

Age	Percentage of employees who	
	(a) will remain in service to age 60	(b) will survive to age 60
20	34%	85%
30	59%	86%
40	84%	87%

- (5) Capital values of pensions at retirement ages (55 and 60) per unit of annual pension are as follows:-

Age	Pensions Subject to Cost of Living Increases*	Pensions not Subject to Cost of Living Increases
55	15.44	7.99
60	13.06	7.28

* The cost of living increase in the above table is equivalent to 8% p.a. increase in pensions.

The effect of this assumption is that a pension scheme which provides 1/60th of final salary per year of service as an annual income at age 60 is equivalent to a scheme which provides a lump sum of:-

- (a) 1.5 months' pay per year of service, if the pension is not subject to cost of living increases or
- (b) 2.6 months' pay per year of service, if the pension is subject to cost of living increases.

- (6) For schemes which provide a widow's pension on death after retirement the capital value per unit of contingent widow's pension at retirement ages (55 and 60) per unit of annual pension are as follows:-

<u>Age</u>	<u>Pensions Subject to Cost of Living Increases*</u>	<u>Pensions not Subject to Cost of Living Increases</u>
55	5.93	1.27
66	5.94	1.57

* The cost of living increase in the above table is equivalent to 8% p.a. increase in pension.

A3.3 Retirement Schemes - Comments on Assumptions

The following comments pertain to the assumptions described in A3.2.

- (1) The salary increase assumption covers the period to retirement, which for an employee aged 30 probably means a further 30 years. The pension increase assumption for the same employee relates to a period commencing 30 years ahead and ceasing on the death of himself or his surviving widow. The period may well be a further 25 years so that the relevant period for pension increases starts after 30 years' time and ceases 55 years hence. The interest assumption relates to the whole 55-year period in the case of the same employee.
- (2) It is idle to pretend that salary increases and interest assumptions can be predicted with any degree of accuracy for the very long period referred to above. The reasonableness of the assumptions is therefore judged against two criteria:
 - The effect on the relative values of different retirement schemes.
 - Their relationship to historical experience.
- (3) The effect of the assumed difference between the salary increase rate

and interest rate is illustrated by the relative value of a provident fund scheme (i.e. a scheme in which the benefit is the accumulation with interest of the contributions made by the employee and the employer on the employee's behalf) and a gratuity scheme (i.e. a scheme in which the benefit is expressed as a multiple of the product of pay at or near to retirement and years of service).

A typical Hong Kong provident fund scheme might have a joint (i.e. employee plus employer) contribution of 15% of pay. The effect of the assumptions is that this provident fund would be equivalent to a gratuity of 1½ months' pay, i.e. 10.4% of final annual pay, per year of service after 40 years' service, and 1½ months' pay, i.e. 12.5% of final annual pay, per year of service after 20 years' service. The lower percentages under the gratuity scheme are related to final salary, whereas the higher percentage under the provident fund scheme is related to year by year salary.

- (4) The extent to which past experience is a guide to the future is particularly limited with respect to economic factors. However, over the past eight years, salaries have on average increased by 15.4% p.a. and investment returns have averaged 13.1% p.a. These figures relate to statistics we have compiled as actuaries to a number of retirement schemes in Hong Kong. Hence the difference of 2% p.a. in the assumptions is slightly narrower than the 2.3% p.a. (15.4% less 13.1%) based on the above statistics.
- (5) The following are average annual increases in the Civil Service over the past ten years:

- Revisions to Master Pay Scale: 10.6% p.a.
- Revisions to Model Scale 1 : 11.4% p.a.
- Pension Increases : 8.7% p.a.

The actual salary increases in the Civil Service will have been at a higher level than shown above because of point-to-point scale increases and promotions. The addition in respect of these are likely to have been of the order of 2% p.a. if account is taken of the

significant numbers of Civil Servants who have reached the highest point of the pay scale for their particular grades. The assumption of 4% p.a. for the future difference between pay and pension increases is not inconsistent with the experience of the past ten years.

- (6) Demographic factors, i.e. factors other than salary increase rates and interest rates, tend to change much more slowly and between much narrower limits than economic factors. Experience therefore tends to be a more relevant guide in making assumptions as to the demographic factors. The demographic assumptions are essentially based on statistics compiled in relation to the Hong Kong population.

A3.4 Life Assurance Schemes

We have used life assurance premium rates to value the benefits as follows:-

<u>Age</u>	<u>Annual cost per HK\$1,000 sum assured under Employer's Scheme</u>	
	<u>Group Life Assurance</u>	<u>Accidental Death Insurance</u>
20	2.1	1.0
30	2.9	1.0
40	4.5	1.0

A3.5 Medical Schemes

Medical schemes offered by employers show a very wide variation of conditions and amounts of cover. These variations do not generally have a major influence on the costs of the schemes. We have classified each employer's medical scheme into three broad categories:

- Low level
- Medium level
- High level.

We have determined the cost of each of the three categories by reference

to the premium rates which would be charged by leading insurers. Separate categorization was made for clinical schemes (i.e. those which cover visits to or by doctors) and hospital expense schemes.

Also for each employer we have distinguished between schemes which cover the employee only, schemes which cover the employee and wife/husband, and schemes which cover the whole family.

The premium rates used in the valuation are as follows:-

(a) Clinical Coverage

	<u>Low Level</u>	<u>Medium Level</u>	<u>High Level</u>
	HK\$	HK\$	HK\$
Maximum amount per visit	30	60	100
Annual Cost:			
- employee only	270	550	800
- employee plus spouse	600	1,210	1,760
- employee plus family	1,010	2,060	3,000

(b) Hospital Expense Coverage

Benefit package:

i) Room and Board per day (maximum 31 days per illness)	45	80	130
ii) Hospital Supplies and Services	900	1,600	2,600
iii) Surgical (maximum per illness)	2,500	3,500	6,000
iv) In Hospital Consultation per day (maximum 31 days per illness)	40	60	100

Annual Cost:

- employee only	130	190	290
- employee plus spouse	290	420	640
- employee plus family	490	710	1,100

A3.6 Life Assurance and Medical Schemes - Comments on Assumptions

- (1) In fixing the premium rates used in A3.4 or A3.5 the insurance company will take account of the incidence and amount of claims, i.e. the extent of utilization. The utilization factor for the purpose of our exercise is therefore automatically built into the premium rates.
- (2) The premium rates used are those quoted by insurance companies to us relating to the period under review. The actual premium rates paid by the surveyed employers to insurance companies could not be determined. In any event the actual premiums could be influenced by a number of factors, e.g. discount for large business volume, which are irrelevant to the value of the benefit to employees.
- (3) Under medical insurance the reimbursement by the insurance company will be less than the cost of provision of the services. We have assumed that the difference between actual cost of the medical service and the insurance payment is not a benefit to the individual. In most cases we understand that the employee himself is liable for the difference between the actual cost and the insurance payment. However, there are certain cases in which the employer would, on a discretionary basis, pay the difference in whole or part. It has not been possible to quantify the extent of this. Medical costs have risen very substantially during the period under review and are continuing to increase. The insurance companies are also increasing the amount of cover and as a consequence the premium rates. The premium rates quoted in this Appendix are now out of date but were typical of the period under review.
- (4) We recommend that the PIU, in taking account of medical benefits in future surveys, should obtain up to date information on premium rates.

A3.7 Types of Retirement Scheme

We were supplied with the details of the retirement schemes of the 47 employers which participated in our study. A number of these employers

have more than one scheme for different categories of employees or for different types of benefit.

No. of Schemes			
Pension Scheme	Gratuity Scheme	Provident Fund	Total
6	37	17	60

Notes: (i) Five surveyed employers had no scheme at all.

(ii) Pension schemes include those cases where the retirement benefit is expressed as a pension although it may be commuted in whole or in part for a lump sum benefit.

APPENDIX 4

ANALYSIS OF BENEFITS

AS A PERCENTAGE OF BASIC SALARY AND BONUSES AS AT 1.4.1981

Category (By reference to Analogue)	Housing	Retirement	Death	Medical	Additional Leave	Travel	Education	Misc.	Total
Model Scale 1: Surveyed Employers Civil Service	0.8 -	4.0 18.2	0.1 1.0	1.0 1.9	0.3 0.9	- -	0.1 0.7	- -	6.3 22.7
MPS - Lower: Surveyed Employers Civil Service	4.6 -	8.3 25.5	0.3 1.0	1.2 2.0	0.3 2.0	- -	0.1 0.6	0.6 -	15.4 31.1
MPS - Middle: Surveyed Employers Civil Service	4.0 -	8.8 25.2	0.3 1.0	1.4 2.0	0.5 3.7	0.1 -	- 0.2	0.4 -	15.5 32.1
MPS - Higher (Local): Surveyed Employers Civil Service	9.3 39.6	12.6 37.8	0.4 1.0	1.4 2.0	0.4 2.8	1.2 -	0.2 0.1	0.5 -	26.0 83.3
MPS - Higher (Expat.): Surveyed Employers Civil Service	99.1 85.4	15.9 37.8	0.5 1.0	1.5 2.0	2.1 8.7	22.8 23.7	3.0 2.0	1.3 -	146.2 160.6

NOTES

- (i) Housing benefits include rental subsidy, employer-provided accommodation and purchase assistance schemes.
- (ii) The value of retirement and death benefits is dependent on age. The age assumed is age 30 for Model Scale 1, MPS - Lower and MPS - Middle, and age 40 for MPS - Higher Local and Expatriate.
- (iii) Misc. benefits include, for example, club membership, utilities, meals.