

**CAYMAN ISLANDS
PUBLIC SERVICE PENSIONS BOARD**

**Actuarial Valuation of
The Judicial Pension Plan
as of January 1, 2000**

August 11, 2000

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SECTION I - INTRODUCTION

Watson Wyatt Worldwide ("Watson Wyatt") has been requested by the Cayman Islands Public Service Pensions Board ("the Board") to carry out an actuarial valuation of the Judicial Pension Plan as of January 1, 2000. We are pleased to provide the results of the valuation in this report. This is the first such actuarial valuation being carried out.

This valuation was officially requested on May 1, 2000 in order to provide advice on the past service liability and current service cost of the judicial pensions arrangements. These arrangements are described in more detail in Exhibit 3. This valuation also provides the present value of benefits earned by Mr. Harre and Chief Justice Smellie.

For completeness, the results are presented for both total judicial service and service only after September 1997, the date members began contributing to the plan. Our understanding is that pre-contributory service will provide benefits at ½ of the rate of post-contributory service. However, if members with pre-contributory service refund prior gratuity payments, then the pre-contributory service will provide benefits at the same rate as post-contributory service. Accordingly, we have provided results both with and without the repayment of prior gratuities.

Over the past two years, there have been discussions with the Pensions Board regarding the possibility of using a defined contribution arrangement to provide pensions for the Judiciary. A defined contribution arrangement would be consistent with current provisions for Public Service pensions. The current Judicial Pension Plan calls for contributions of 10% of earnings from both the member and government. However, this level of contributions to a defined contribution plan would provide much lower benefits than the current Judicial Pension Plan. To maintain benefits a level similar to the current plan, it would be necessary to collect total contributions of 30% to 40% of earnings. As can be noted in the following report, this contribution level is consistent with the required total contributions for the current Judicial Pensions Plan.

Throughout this report "the Plan" means the pension provisions as stated in the May 1, 2000 memorandum from The Governor. We have used this memorandum, as well as Mr. Michael Bradley's report of September 1997("the Bradley Report") and a memorandum dated January 14, 1999 by The Hon. Chief Justice as the guide to determining the benefits to be valued under this Plan.

All monetary amounts in this report have been expressed in Cayman Islands Dollars.



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SECTION II - EXECUTIVE SUMMARY

1. Actuarial Position of the Plan as of January 1, 2000

The actuarial position of the Judicial Pension Plan is shown below:

Total available assets	CIS
• Total accumulated employee contributions with interest	85,848
• Total accumulated employer contributions with interest	85,848
• Total available assets	171,696

Available assets are equal to the accumulated contributions with interest.

Past service liabilities based on projected salary at retirement	
• Excluding pre-9/97 service	269,411
• Including pre-9/97 service (without repayment of gratuity)	617,432
• Including pre-9/97 service (with repayment of gratuity)	965,455

Past service liabilities reflect the present value of expected future retirements based on salary at retirement and service as of the valuation date.

Funding deficiency (past service liabilities – available assets)	
• Excluding pre-9/97 service	97,715
• Including pre-9/97 service (without repayment of gratuity)	445,736
• Including pre-9/97 service (with repayment of gratuity)	793,759

The funding deficiency is the shortfall between the available asset and the past service liabilities.

Gratuity repayment	
• Total gratuities for repayment	68,775
• Value of benefits received if gratuity is repaid	348,023

In order to receive full benefits under the Plan for Judicial service prior to September 1997, members must repay gratuities received while in Judicial service.

Total annual cost	
• Annual amount	173,821
• Annual amount as a percentage of annual salary	40.9%

The annual cost is the total annual contribution necessary to accumulate sufficient funds at retirement age to cover the value of expected benefits for Messrs. Smellie, Graham and Sanderson. The cost is expected to remain constant in future as a percentage of salary. The actual amount will increase as salaries increase.



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SECTION II (Continued)

1. Actuarial Position of the Plan as of January 1, 2000 (cont'd)

Results by individual are shown below:

Chief Justice Smellie	CIS
Past service liabilities	
• Excluding pre-9/97 service	108,608
• Including pre-9/97 service (without repayment of gratuity)	199,760
• Including pre-9/97 service (with repayment of gratuity)	290,913
Available assets	77,859
Pre-9/97 gratuity for repayment	26,002
Total Annual Cost	61,920
(as a % of annual pay)	38.7%

Justice Graham	CIS
Past service liabilities	119,148
Available assets	69,140
Total Annual Cost	63,343
(as a % of annual pay)	47.8%

Justice Sanderson	CIS
Past service liabilities	0
Available assets	0
Total Annual Cost	48,558
(as a % of annual pay)	36.6%

Mr. Harre	CIS
Value of back payments to date of retirement	
• Excluding pre-9/97 service	13,019
• Including pre-9/97 service (without repayment of gratuity)	93,303
• Including pre-9/97 service (with repayment of gratuity)	173,587
Lump sum value of future benefits	
• Excluding pre-9/97 service	28,636
• Including pre-9/97 service (without repayment of gratuity)	205,221
• Including pre-9/97 service (with repayment of gratuity)	381,807
Available assets	24,698
Pre-9/97 gratuity for repayment	42,773



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SECTION III - DETAILED RESULTS AND COMMENTS

1. Census Data

Information was provided by the Board for each individual covered by the Plan as of January 1, 2000. Information included date of birth, spouse's date of birth, judicial service prior to September 1997, judicial service after September 1997, current and average salary. Additional data was provided summarizing gratuities paid during Judicial service.

Justice Murphy has not been included in this valuation. Our understanding is that he has retired and received a refund of his member contributions.

2. Benefit Provisions

Exhibit 3 of this report describes the provisions of the Plan in more detail. The Plan began accepting member and Government contributions in September 1997. Required contributions currently equal 10% of salary from both the member and the government. Benefits earned for each month of contributory service is a monthly pension equal $1/300^{\text{th}}$ of final average salary. For service prior to September 1997, it is expected that benefits will equal only $1/600^{\text{th}}$ of final average salary for each month of pre-contributory service. However, if members repay all gratuities received during Judicial service prior to September 1997, the benefits payable will be the full $1/300^{\text{th}}$ of final average salary.

Several aspects of benefit design have yet to be finalized, the most important of which are as follows:

- a. Benefits on death while in service.
- b. Benefits on disablement while in service.
- c. Benefits of death after retirement. For the valuation, we have assumed that the benefit will be a spouse's pension equal to 50% of the pensioner's benefit.
- d. Pension increases. It has been assumed that the rules of The Public Service Pensions Law (1999) will be followed.
- e. Interest Credit on contributions. The Bradley Report calls for interest "at the base lending rate on the date of retirement". We feel that the interest credits should reflect the entire period during which contributions were made rather than the interest rate at one particular point in time. Furthermore, the interest credits should reflect the actual fund performance during that period, rather than some bank lending rate. We suggest that The Public Service Pensions Law (1999) be followed with respect to crediting interest.

We suggest that the Plan follows The Public Service Pensions Law (1999) as much as possible in these design areas.

3. Available Assets

Information was provided by the Board for each individual covered by the Plan as of January 1, 2000. Amounts include accumulated contributions since September 1997 along with credited interest through December 31, 1999. Total available assets as of December 31, 1999 equals CI\$171,697.



4. Actuarial Assumptions Used for Valuing the Plan

4.1 Economic Assumptions

Economic assumptions for the valuation of the Judicial Pension Plan are the same assumptions used for the January 1, 1999 valuation of the Public Service Pensions Plan. The following are the most important of the economic assumptions:

Inflation - It is usual to commence with an assumption on the underlying long-term rate of inflation, as inflation impacts such things as future salary increases, future asset earnings, and future pension increases. Based on discussions with the Board, a long-term rate of 3% per year has been used for purposes of this valuation.

Interest Rate - The valuation interest rate is used to discount future benefit payments and represents the expected long-term rate of return of the Fund's invested assets. This valuation has been carried out using an 8% per year rate, based on the current balanced portfolio of equities and fixed-interest securities in the Public Service Pension Fund.

4.1 Economic Assumptions (cont'd)

Salary Increases - As with the valuation of the Public Service pensions, we have made an allowance of 2% over and above inflation for merit and promotion. The rate of salary increases used in this valuation is therefore 5%.

Pension Increases - We have assumed that pensions will increase in the future at the rate of 3% per year, the same as the rate of inflation.

4.2 Demographic Assumptions

The most important of the demographic assumptions are as follows:

Retirement Age - Age 65 has been selected as the assumed retirement age.

Turnover - Due to the small number of members in this Plan, no assumption has been made for turnover

5. Actuarial Cost Method Used for Valuing the Benefits

We have determined the on-going contribution requirements of the Plan as of January 1, 2000 using an aggregate actuarial cost method in conjunction with assumptions outlined in the preceding section. Under this method, the present value of all projected benefits (for past and future service) is first reduced by the available assets. The resulting amount is spread over the working lifetime of each participant, as a fixed percentage of that participant's salary, in order to determine the annual cost. If actual future experience follows the actuarial assumptions used, the



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SECTION III (Continued)

annual cost, expressed as a percentage of pay would remain unchanged from year to year. The annual costs have been determined individually to show the cost attributable to each participant separately.

For determining the past service liabilities under the plan we have used the projected unit credit actuarial cost method. This method is commonly used for measuring the funded status of the plan and for recognizing past service liabilities. For this valuation, we have determined the past service liabilities under three scenarios. Each scenario allows for the impact of future pay increases at the assumed rate of pay increase.

- 1) excluding all Judicial service prior to September 1997, the date contributions were first collected for the Plan,
- 2) including all Judicial service prior to September 1997, but assuming that prior gratuity payments are not repaid (benefits earned for this service at ½ of the rate for contributory service),
- 3) including all Judicial service prior to September 1997, but assuming that prior gratuity payments are repaid (benefits earned for this service at the same rate as for contributory service).

A surplus/(deficiency) arises when the available assets of the Fund are more/(less) than this projected past service liability under the projected unit credit actuarial cost method.



6. Valuation Results

Past Service Liability – The past service liability has been determined under three scenarios. Each of these scenarios includes the future projection of pay to retirement. Under the first scenario, which excludes service prior to September 1997, the past service liability is CI\$269,411. Under the second scenario, which includes service prior to September 1997 but assumes that past gratuity payments are not repaid, the past service liability is CI\$617,432. Under the third scenario, which includes service prior to September 1997 and assumes that past gratuity payments are repaid, the past service liability is CI\$965,455.

Total Annual Cost - The total annual cost of the benefits provided has been determined for each individual member of the Plan. However, in total, the annual cost is CI\$173,821 (or 40.9% of pay).

Exhibits 1A through 1B show the data and results for each participant.

7. Conclusions and Recommendations

The available assets for the Plan are far less than the amount necessary to fund the benefits provided. As shown by the determination of the Annual Cost, total required contributions are over 40% of annual salary as compared to the current total contributions of 20% of annual salary (10% for both the member and the government).

* * * * *



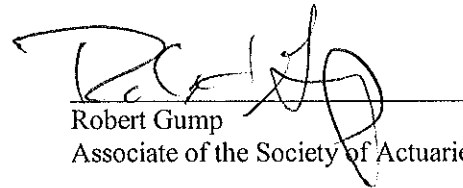
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We are at the disposal of the Board to discuss this report and to answer any questions that may arise, or to provide any further information that may be required.

Respectfully Submitted
WATSON WYATT WORLDWIDE



Subramanian Sundaresan
Fellow of the Institute of Actuaries



Robert Gump
Associate of the Society of Actuaries

August 11, 2000



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Exhibit 1A

Data

1. Name	Chief Justice Anthony Smellie	
2. Date of Birth		10/25/1952
3. Spouse Date of Birth		11/07/1961
4. Current Annual Pensionable Salary	CIS	160,000
5. Pre 9/1997 service	Mths:	47

Age and Service

1. Current age		47.1667
2. Spouse's age at retirement		56
3. Future service (months)		214
4. Past service excluding pre-9/1997 service (months)		28
5. Total service excluding pre-9/1997 service (months)		242
6. Total service including pre-9/1997 service		290

Projections at Age 65

1. Pay	CIS	381,941
2. 3-yr average pay	CIS	364,042
3. Projected pensions - past service		
a. Excl pre-9/97 service	CIS	33,977.25
b. Incl pre-9/97 service	CIS	62,493.88
4. Projected pensions - total service		
a. Excl pre-9/97 service	CIS	291,233.60
b. Incl pre-9/97 service	CIS	291,233.60

Past Service Liability

1. Excl pre-9/97 service	CIS	108,608
2. Incl pre-9/97 service	CIS	199,760

Share of Assets

CIS 77,858.65

Present Value of Future Service Benefits

1. Excl pre-9/97 service	CIS	822,314
2. Incl pre-9/97 service	CIS	731,162

Annual Cost as % of Pay

1. Excl pre-9/97 service		38.70%
2. Incl pre-9/97 service		38.70%

Year 2000 Annual Cost

1. Excl pre-9/97 service	CIS	61,920
2. Incl pre-9/97 service	CIS	61,920



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Exhibit 1B

Data

1. Name	Justice Henry Graham
2. Date of Birth	06/05/1940
3. Spouse Date of Birth	07/09/1943
4. Current Annual Pensionable Salary	CI\$ 132,600
5. Pre 9/1997 service	Mths: 0

Age and Service

1. Current age	59.5000
2. Spouse's age at retirement	62
3. Future service (months)	66
4. Past service excluding pre-9/1997 service (months)	27
5. Total service excluding pre-9/1997 service (months)	93
6. Total service including pre-9/1997 service	93

Projections at Age 65

1. Pay	CI\$ 173,414
2. 3-yr average pay	CI\$ 165,287
3. Projected pensions - past service	
a. Excl pre-9/97 service	CI\$ 14,875.83
b. Incl pre-9/97 service	CI\$ 14,875.83
4. Projected pensions - total service	
a. Excl pre-9/97 service	CI\$ 51,238.97
b. Incl pre-9/97 service	CI\$ 51,238.97

Past Service Liability

1. Excl pre-9/97 service	CI\$ 119,148
2. Incl pre-9/97 service	CI\$ 119,148

Share of Assets

CI\$ 69,140.22

Present Value of Future Service Benefits

1. Excl pre-9/97 service	CI\$ 291,251
2. Incl pre-9/97 service	CI\$ 291,251

Annual cost as % of Pay

1. Excl pre-9/97 service	47.77%
2. Incl pre-9/97 service	47.77%

Year 2000 Annual Cost

1. Excl pre-9/97 service	CI\$ 63,343
2. Incl pre-9/97 service	CI\$ 63,343



Principal Benefit Provisions (Continued)

6. Retirement Benefits (cont'd):
- c. Pension Increases - Pensions in payment may be increased, once a year and will follow the rules of the The Public Service Pensions Law (1999) which calls for these pensions increases to match annual cost-of-living increases up to 5% and on a sliding scale thereafter.
7. Benefits on Death After Retirement or While Eligible to Retire: Not yet specified, but for purposes of this actuarial valuation, it has been assumed that the benefit will be a spouse's pension equal to 50% of the pensioner's benefit, payable until remarriage. This follows the Public Service Pensions Law (1999).
8. Benefits on Disablement Not yet specified.
9. Benefits on Death in Service: Not yet specified.
10. Early Retirement Prior to Normal Retirement Age After Completing Eight Years of Pensionable Service: Participant has the following three options:
(i) Wait until attainment of Normal Retirement Age and then collect a pension.
(ii) An immediate reduced pension (reductions have not yet been specified).
(iii) A lump sum payment of Participant and matching Government contributions with interest.
11. Resignation prior to Completing Eight Years of Pensionable Service: A lump sum payment of Participant and matching Government contributions with interest.
12. Participant Contributions: 10% of Pensionable Salary
13. Government Contributions: Determined by the Government. However, resignation benefits will be credited with Government contributions of 10% of Pensionable Salary for each year of Pensionable Service.
14. Interest Credit on Contributions. The same rate of interest credit as applied under the Public Service Pensions.

