

**Actuarial Valuation of the
Judicial Pension Plan
As of January 1, 2008**

March 17, 2009



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The Public Service Pension Board has carried out, as required by the current Judicial Pensions Law, an actuarial valuation of the Judicial Pension Plan as of January 1, 2008 for funding purposes. The results of the valuation are provided in this report. The last actuarial valuation to be carried out was as of January 1, 2005 by the consulting firm Watson Wyatt Worldwide.

This Plan originally arose from the The Judges' Emoluments and Allowance Law, 1997. The Judges' Emoluments and Allowance Order, 2005 ("the 2005 Order") came into effect on October 28, 2005, following a comprehensive review of the provisions and procedural arrangements. The 2005 Order incorporated features of the Plan that were not explicitly stated or defined in the prior legislation. It also specified certain administrative procedures, and has been developed in a format that is similar to other Public Service plans in the Cayman Islands.

A key feature of the 2005 Order is that there is a Defined Benefit part and a Defined Contribution part. Only the three existing participating judges (Justices Smellie, Levers and Henderson) are eligible for benefits defined under the Defined Benefit part. Benefits for future participating judges will be provided through the Defined Contribution part. As of the current valuation date, there are currently no participants in the Defined Contribution part.

Throughout this report "the Plan" means the pension provisions as stated in the 2005 Order.

The purpose of this valuation is to quantify the liabilities of the Plan and determine the amounts required for funding, in accordance with the 2005 Order. A separate valuation is required to establish the amounts to be expensed and the amounts to be reflected in the Government's balance sheet under the provisions of International Accounting Standard No. 19.

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



1. Actuarial Position of the Fund as of January 1, 2008

	<u>January 1, 2005</u> <u>valuation</u>	<u>January 1, 2008</u> <u>valuation</u>
	(CIS)	
Value of Pension Fund Allocated Assets	890,688	1,901,085
Past Service Liability (With Projection of Pay)	835,363	1,880,028
<i>Actuarial Surplus</i>	<i>55,325</i>	<i>21,057</i>
<u>Funded Ratio (Assets/PSL)</u>	107%	101%

2. Future Contribution Requirement

Annual amount	200,091	235,054
Annual amount as a percentage of annual salary	<u>41%</u>	<u>40.34%</u>

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



1. Census Data

Information was provided for each individual covered by the Plan as of January 1, 2008. The valuation was based on data submitted with respect to 3 active participants receiving total annual pensionable emoluments of CI\$582,681.

Exhibit 2 shows a summary of the census data used.

2. Benefit Provisions

As of January 1, 2008, the legal document concerning the pension provisions is the 2005 Order. Exhibit 4 shows an outline of the principal provisions as they affect the actuarial valuation of the liabilities. Only the provisions that have the most important impact on the valuation are detailed in the outline. There are no substantial differences from the prior valuation.

3. Available Assets

The Plan assets are combined with the assets of the Public Service Pensions Plan and the Parliamentarians Pension Plan. The Board maintains a notional allocation of assets between these three plans and this was used for purposes of this valuation. The value allocated to the Judicial Pension Plan as of January 1, 2008 was \$1,901,085.

4. Actuarial Assumptions Used for Valuing the Plan

Exhibit 3 provides a summary of the actuarial assumptions used in this valuation.

4.1 Economic Assumptions

It is important to take a consistent view on all of the economic assumptions used in an actuarial valuation since they are inter-related. 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. A long-term rate of 2.5% 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, net of administrative and investment expenses. This valuation has been carried out using a 7% per year rate, based on long-term expectations and composition of the portfolio.

Salary Increases - An allowance of 1.5% over and above inflation for merit and promotion has been made. The rate of salary increases used in this valuation is therefore 4% per year.

Pension Increases - We have assumed in the future that pensions will increase at the rate of 2.5% 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 – The plan’s normal retirement age is 65. The plan provides unreduced benefits from age 60 after completing 8 years of pensionable service. The valuation assumes retirement will take place immediately upon completing age 65 and 8 years of pensionable service.

Turnover & Mortality - Due to the small number of members in this Plan, no assumption has been made for turnover or for mortality prior to retirement. Exhibit 3 details the post-retirement mortality used.

5. Actuarial Cost Method Used for Valuing the Benefits

The on-going contribution requirement of the Plan as of January 1, 2008 has been determined 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 annual cost, expressed as a percentage of pay, would remain unchanged from year to year. The annual costs have been determined for the plan as a whole, and not individually by participant.

For determining the past service liabilities under the plan, the projected unit credit actuarial cost method has been used. The past service liability measurement includes projection of pay to retirement. This method is commonly used for measuring the funded status of the plan and for recognizing past service liabilities.

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

6.1 The Actuarial Position of the Fund as of January 1, 2008

Exhibit 1 sets out the results of the actuarial valuation on the basis outlined in Sections 4 and 5 above, as well as the results from the previous valuation for comparison purposes.

Past Service Liability (With Projection of Pay) - This is shown in Item C of Exhibit 1. The total past service liability as of January 1, 2008 for the three participants is CI\$1,880,028. This

compares with CI\$835,363 as of the last valuation. The increase in liability is principally due to the additional service accrual since the last valuation.

As of January 1, 2008, the Plan assets exceed the Past Service Liability by CI\$21,057, as shown in Item D of Exhibit 1. There is therefore a small surplus in the Plan as of the valuation date.

6.2 Assessment of Future Contribution Requirements

Total Annual Cost - The annual contribution requirement, as a percentage of pensionable salaries, is 40.34%, as shown in Item H of Exhibit 1. The annual cost for the 2008 plan year is CI\$235,054 as shown in Item I of Exhibit 1.

7. Conclusions and Recommendations

1. The Plan's past service benefits are adequately funded. The surplus has decreases slightly from the previous valuation, mainly due to pay increases in excess of those anticipated.
2. As shown by the determination of the Annual Cost, total required contributions are 40.34% of annual pensionable salary (10% for the member and 30.34% for the Government).

I am 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. Professional standards require me to state that I am compensated as an employee of the Public Service Pensions Board.

Respectfully Submitted



Subramanian Sundaresan, FIA, CCA, MAAA, ASA, EA
Actuary
Public Service Pensions Board

March 17, 2009

Actuarial Valuation Results

Amounts in C1\$

	<u>January 1, 2005</u>	<u>January 1, 2008</u>
A. Summary of Valuation Data		
1. Number of participants currently receiving benefits	0	0
2. Number of participants with deferred vested benefits	0	0
3. Number of active participants	3	3
4. Total annual Pensionable Salaries	488,027	582,681
B. Value of Allocated Assets	890,688	1,901,085
C. Past Service Liability (With Projection of Pay)		
1. Justice Smellie	613,860	1,011,772
2. Justice Levers	110,788	386,746
3. Justice Henderson	110,715	481,510
4. Total	835,363	1,880,028
D. Surplus/(Deficiency) (Item B less Item C4)	55,325	21,057
E. Past and Future Service Liability (With Projection of Pay)		
1. Justice Smellie	1,321,314	1,646,274
2. Justice Levers	506,458	651,362
3. Justice Henderson	473,612	686,598
4. Total	2,301,384	2,984,234
F. Amount Required to be Funded in the Future (Item E4 less Item B)	1,410,696	1,083,149
G. Present Value of Future Pensionable Salaries	3,472,589	2,685,040
H. Annual Cost as a Percentage of Pensionable Salary (Item F divided by Item G)	<u>41%</u>	<u>40.34%</u>
<u>I. Annual Cost for Year</u>	<u>200,091</u>	<u>235,054</u>

Summary of Valuation Census Data

	<u>January 1 2005</u>	<u>January 1 2008</u>
<u>Active Participants</u>		
Number of Active Participants	3	3
Average Age	57.00	60.00
Average Pensionable Service	4.83	7.83
Total Annual Pensionable Earnings	488,027	582,681

Participants with Deferred Vested Benefits

Number of Participants	None	None
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Participants Currently Receiving Benefits

There is one prior participant currently receiving pensions but this is being financed separately on a pay-as-you-go basis.



Actuarial Assumptions Employed

A. Economic Assumptions

- | | |
|-------------------------------|--|
| 1. Underlying Inflation Rate: | Long-term inflation rate of 2.50% per year. |
| 2. Interest: | 7.00% per year, net of administrative and investment expenses. |
| 3. Salary Increases: | 4.00% per year, consisting of an allowance of 2.50% for inflation and 1.50% for merit and promotion. |
| 4. Pension Increases: | 2.50% per year, the same as the rate of inflation. |
| 5. Commutation of Pensions: | It has been assumed that all participants will exercise their right to commute part of their pension for a lump sum payment. |

B. Demographic Assumptions:

- | | |
|-------------------------------|---|
| 1. Post-Retirement Mortality: | It is not anticipated that the mortality rates will be significantly different to that of employees of U.S. corporations. Standard U.S. mortality rates have been used for the valuation. The rates used are based on the UP-1994 Table and sample rates are shown below: |
|-------------------------------|---|

<u>Age</u>	<u>Male</u>	<u>Female</u>
50	.002773	.001536
60	.008576	.004773
70	.025516	.014763
80	.066696	.042361
90	.164442	.125016

- | | |
|------------------------------|-------|
| 2. Pre-Retirement Mortality: | None. |
|------------------------------|-------|



Actuarial Assumptions Employed (Continued)

B. Demographic Assumptions (Cont'd.):

- | | |
|---|--|
| 3. Turnover: | None. |
| 4. Disability: | No disability incident rates have been used. |
| 5. Retirement Age: | Age 65 and 8 years of pensionable service. |
| 6. Family Assumptions: | |
| a. Percentage of Participants with Spouse at Retirement | 100% if currently married. |
| b. Age of Spouse | As provided in the data. |
| 7. New Entrants: | None. |



Principal Benefit Provisions

The following is a summary of the provisions under the Defined Benefit part of The Judges' Emoluments and Allowance Order, 2005. Not all of the features are identified here - only those that are the most important for assessing the liabilities and costs of the Plan.

- | | |
|--|--|
| 1. Eligibility: | Only the following are eligible participants:
Chief Justice Anthony Smellie
Justice Priya Levers
Justice Alexander Henderson |
| 2. Pensionable Service: | Service as a Judge of the Grand Court. |
| 3. Pensionable Earnings: | Annual base salary while serving as a Judge of the Grand Court. |
| 4. Final Pensionable Earnings: | Average of Pensionable Earnings over the final 36 months prior to retirement, resignation, death or disability. |
| 5. Participant Contributions: | 10% of Pensionable Earnings. |
| 6. Government Contributions: | To be determined by actuarial valuations. |
| 7. Normal Retirement Age: | Age 65. |
| 8. Eligibility for Retirement Pension: | After eight years of judicial service and attaining Normal Retirement Age or after completing 20 years' of judicial service. |
| 9. Retirement Benefits: | |
| a. Pension at retirement | An annual pension equal to 1/300 times the number of completed months of Pensionable Service times Final Pensionable Earnings. The pension cannot exceed 4/5ths of Final Pensionable Earnings. For months of service prior to September 1997, the pension factor will be 1/600 per month rather than 1/300 per month. However, if the member repays all gratuities received during judicial service, then the pension factor for service prior to September 1997 will be the original 1/300 per month. |
| b. Commutation | Up to ¼ of the retirement pension can be commuted for a lump sum. The pension to lump sum conversion will be determined by the Plan's actuarial factors. |



Principal Benefit Provisions (Continued)

9. Retirement Benefits (cont'd):

c. Pension Increases

Pensions in payment may be adjusted annually to match annual cost-of-living increases up to 5% and on a sliding scale thereafter.

d.. Early Retirement

Allowed from age 55 subject to completing eight or more years of judicial service. For retirements prior to age 60, the benefits will be reduced in accordance with the Plan actuarial tables.

10. Benefits on Death After Retirement or While Eligible to Retire:

A spouse's pension equal to 50% of the pensioner's benefit. An additional equivalent amount is divided equally among any children under the age of 18 (or 23 if in full-time education).

11. Benefits on Disablement

A pension based on accrued normal retirement pension is payable upon receipt of medical evidence of permanent disability and incapacity to perform duties.

An additional pension is payable to an officer who is permanently injured in discharge of duty equal to one-third of the participant's Final Pensionable Earnings.



Principal Benefit Provisions (Continued)

12. Benefits on Death in Service: A spouse's pension equal to 50% of the member's pension accrued as of the date of death, based on pay and service at the date of death. An additional equivalent amount is divided equally among any children under the age of 18 (or 23 if in full-time education).
- In addition, there will be paid an amount equal to the excess, if any, of the greater of:
- (a) a lump sum equal to 12 month' Pensionable Earnings
 - (b) the participant's contribution account balance
- over the actuarially equivalent present value of the pension benefits payable to the beneficiaries.
- An additional pension is paid to the beneficiaries of participants killed as a result of injuries received while in the actual discharge of duty.
13. Resignation Prior to Completing Eight Years of Pensionable Service: A lump sum payment (or a transfer to an approved plan) of Participant and matching Government contributions with interest.
14. Resignation After Completing Eight Years of Pensionable Service: A participant may elect to:
- (a) receive a lump sum payment (or a transfer to an approved plan) of Participant and matching Government contributions with interest, or
 - (b) have an entitlement to a deferred vested benefit payable upon reaching retirement eligibility, or
 - (c) transfer, to an approved plan, an amount equal to the greater of (a) above or the actuarial present value of (b) above.

