MERCER

Public Service Pensions Plan

Report on the Actuarial Valuation for Funding Purposes as at January 1, 2020

September 2020

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Note to reader regarding actuarial valuations:

This valuation report may not be relied upon for any purpose other than those explicitly noted in the Introduction, nor may it be relied upon by any party other than the parties noted in the Introduction. Mercer is not responsible for the consequences of any other use. A valuation report is a snapshot of a plan's estimated financial condition at a particular point in time; it does not predict a pension plan's future financial condition or its ability to pay benefits in the future. If maintained indefinitely, a plan's total cost will depend on a number of factors, including the amount of benefits the plan pays, the number of people paid benefits, the amount of plan expenses, and the amount earned on any assets invested to pay the benefits. These amounts and other variables are uncertain and unknowable at the valuation date. The content of the report may not be modified, incorporated into or used in other material, sold or otherwise provided, in whole or in part, to any other person or entity, without Mercer's permission. All parts of this report, including any documents incorporated by reference, are integral to understanding and explaining its contents; no part may be taken out of context, used, or relied upon without reference to the report as a whole.

To prepare the results in this report, actuarial assumptions are used to model a single scenario from a range of possibilities for each valuation basis. The results based on that single scenario are included in this report. However, the future is uncertain and the Plan's actual experience will differ from those assumptions; these differences may be significant or material. Different assumptions or scenarios within the range of possibilities may also be reasonable, and results based on those assumptions would be different. Furthermore, actuarial assumptions may be changed from one valuation to the next because of changes in regulatory and professional requirements, developments in case law, plan experience, changes in expectations about the future, and other factors.

We note that the results presented herein rely on many assumptions, all of which are subject to uncertainty, with a broad range of possible outcomes, and the results are sensitive to all the assumptions used in the valuation.

Should the Plan be wound up, the going concern funded status becomes irrelevant. This report does not include an estimate of the financial position of the plan assuming it was wound up on the valuation date. The financial position of the plan on a wind-up basis could differ very significantly from the going concern funded status disclosed in this report. Emerging experience will affect the wind-up financial position of the Plan assuming it is wound up in the future. In fact, even if the Plan were wound up on the valuation date, the financial position would continue to fluctuate until the benefits are fully settled.

Decisions about benefit changes, granting new benefits, investment policy, funding policy, benefit security, and/or benefit-related issues should not be made solely on the basis of this valuation, but only after careful consideration of alternative economic, financial, demographic, and societal factors, including financial scenarios that assume future sustained investment losses.

Funding calculations reflect our understanding of the requirements of Public Service Pensions Law, (2020 Revision), and related regulations that are effective as of the valuation date. Mercer is not a law firm, and the analysis presented in this report is not intended to be a legal opinion. You should consider securing the advice of legal counsel with respect to any legal matters related to this report.

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Summary of Results

(CI 000’s)	01.01.2020	01.01.2017
Ultimate discount rate	***6.25%***	***7.25%***
Financial Status		
Market value of DB assets	$439,872	$277,646
Market value of DC assets	$396,816	$272,918
Market value of total plan assets	$836,688	$550,564
DB Liabilities	$636,144	$464,350
DC Account Balances	$396,816	$272,918
Total DB and DC Liabilities	$1,032,960	$737,268
DB Funding deficiency (past service liability)	($196,272)	($186,704)
Funded Ratio (DB Only)	69%	60%
Funded Ratio (DB and DC together)	81%	75%
Funding Requirements in the Year Following the Valuation		
Employees’ required DB contributions	$2,761	$2,649
Estimated employer’s DB normal cost	$5,272	$3,783
Expense allowance	$1,200	$900
Employer normal cost inclusive of expense allowance	$6,472	$4,683
Funding of deficiency over 20 years	$17,116	$17,463
Total employer DB contribution	$23,588	$22,146
Total DB contributions (employee + employer)	$26,349	$24,795
Employer DB contribution (% of DB pay)	52.3%	50.4%
Employee contribution (% of DB pay)	6.0%	6.0%
Total DC (employee + employer)	$34,412	$25,633
Employer DC contribution (% of DC pay)	6.4%	6.4%
Employee DC cost (% of DC pay)	6.0%	6.0%

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Executive Summary

At the request of the Public Service Pensions Board we have conducted an actuarial valuation of the Public Service Pensions Plan (the "Plan"), as at January 1, 2020, in accordance with the Public Service Pensions Law (2020 Revision) of the Cayman Islands. We are pleased to present the results of the valuation.

The purposes of the valuation are to:

- To determine the funded status of the Plan as at January 1, 2020 on a going-concern basis.
- To measure the ability of the fund to meet its liabilities for the following 40 years based on current contribution rates, in accordance with Section 12 of the Public Service Pensions Law (2020 Revision), hereinafter referred to as the 2020 Law.
- If not so capable, determine the contribution rates that would be required to reinstate the capability.

Our valuation was based on:

- The plan provisions described in Appendix E;
- The membership data summarized in Appendix D;
- Asset information described in Appendix B;
- The methods and assumptions described in Appendix C.

As with any valuation that makes long-term assumptions about future demographic and economic conditions, there is considerable uncertainty. The actual financial position of the Plan will differ, perhaps considerably, from the projections shown in this report as actual experience emerges differently from our assumptions. See page i of this report for further details and for limitations on the use of this report.

The key results of our valuation are as follows:

- The Plan is in a deficit position as of January 1, 2020. Based on an ultimate discount rate of 6.25%[1], the Plan has a deficit of $196 million at January 1, 2020 and the funded ratio of the DB Part of the Plan is 69%. The funded ratio of the DB Part of the Plan has increased by 9% since the previous valuation mainly due to gains from the contributions made by the participating employers and higher than expected asset returns, partially offset by the increase in liabilities resulting from the decrease in the valuation discount rate.

- The Board has previously established an objective of funding the deficit over a 20 year period, and decided to fund the Plan on the basis of the valuation results prepared based on an ultimate discount rate of 6.25%. On this basis, the employee and employer funding requirements of the Plan are as follows:

	Funding Requirements
Defined Contribution (DC) Part of the Plan	
Employee contributions (% of pay)	6.0%
Employer required contributions (% of DC payroll)	6.4%
Defined Benefit (DB) Part of the Plan	
Employee contributions (% of pay)	6.0%
Employer normal cost inclusive of expense allowance of $1,200,000) (% of DB payroll)	14.3%
Employer annual contributions to fund past service deficit	$17,116,000

[1] The discount rate has been phased in from the 7.25% discount rate used for the previous valuation over a 3 year period.

The estimated employer funding requirements for the three years following the valuation date are as below. This assumes pensionable earnings increase by 2.5% over the same period.

($000)	2020	2021	2022
Employer DB Contribution			
Normal cost	$6,472	$6,634	$6,800
Amount to fund past service liability	$17,116	$17,116	$17,116
Total employer DB contributions	$23,588	$23,750	$23,916
Employer DC contributions	$17,761	$18,205	$18,660
Total employer contributions (DB + DC)	$41,349	$41,955	$42,576

A breakdown of the funding requirements by participating employer is provided in Appendix A.

Some other critical conclusions from our valuation:

- If the participating employers fund on the above basis, and if actual fund returns are exactly the same as the valuation discount rate (7.25% in 2020, 6.75% in 2021 and 6.25% thereafter), the requirements of Section 12 of the Public Service Pensions Law will be met. If actual returns are lower than the discount rate, contributions will need to increase further.
- It is critical for the Plan to continue to be funded adequately (ideally in accordance with the recommendation contained in this report). A failure to adequately fund the Plan will result in a decline in the Fund asset base, which will in turn diminish the ability of investment returns to contribute towards the funding of the promised benefits.

See Section 6 and 7 for further details.

The remainder of this report provides further details on the results of the valuation.

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Introduction

To the Public Service Pensions Board (the "Board")

At the request of the Board, we have conducted an actuarial valuation of the Public Service Pensions Plan (the "Plan"), as at January 1, 2020, in accordance with the Public Service Pensions Law (2020 Revision) of the Cayman Islands. We are pleased to present the results of the valuation.

Purpose

The purposes of this valuation are:

- To determine the funded status of the Plan as at January 1, 2020 on a going-concern basis.
- To measure ability of the fund to meet its liabilities for the following 40 years based on current contribution rates, in accordance with Section 12 of the Public Service Pensions Law (2020 Revision), hereinafter referred to as the 2020 Law.
- If not so capable, determine the contribution rates that would be required to reinstate the capability.

The information contained in this report was prepared for the internal use of the Board and the participating employers of the Plan for determining the funding requirements of the Plan. This report is not intended or suitable for any other purpose.

All amounts shown in this report are in Cayman Dollars.

Terms of Engagement

In accordance with our terms of engagement with the Board, our actuarial valuation of the Plan is based on the following material terms:

- It has been prepared in accordance with the Public Service Pensions Law (2020 Revision)
- It has been prepared assuming that the Plan will continue indefinitely
- It has been prepared using best estimate assumptions proposed by Mercer and approved by the Board, adjusted as follows based on instructions from the Board:
  – we have not reflected a margins for adverse deviations; and

 – we reflected an additional allowance in our discount rate for active management investment outperformance of 0.5% per annum, to give some weight to with the historic returns earned by the Plan over the past 10 years

 Results have been presented using a discount rate of 7.25% in 2020, 6.75% in 2021 and an ultimate rate of 6.25% per year thereafter (which reflects the allowance for future active management outperformance).

- The employer funding requirements have been determined by reflecting the Board's previous decision to amortize past service actuarial deficiencies that arise over 20 years.

Events since the Last Valuation at January 1, 2017

The new funding contribution requirements outlined in the January 1, 2017 valuation report were approved October 2019, with the effective date of payment retroactive to January 1, 2017, as outlined in the Public Service Pensions (Contribution Rates) Regulations, 2019. As a result, a true up required contribution for the period January 1, 2017 to December 31, 2019 was payable by the Central Government in respect of its participation in the Plan. The true-up amount payable was $4.53 million, of which cash of $4.17 million was remitted to the Plan on December 31, 2019, and $0.36 million was reallocated from the Parliamentary Pension Plan. The Central Government had over contributed to the Parliamentary Pension Plans based on the approved 2017 contribution requirements; hence the Administrator reallocated this excess to the Plan as requested by the government.

The aggregate true-up contribution remitted to the Plan by the Statutory Authorities for the same period was $0.71 million.

During the inter-valuation period, the Cayman Islands Development bank (CIDB) settled the amount it owed the Plan in respect of its former employees who participated in the DB component of the Plan. As such, it has no further DB obligation under the Plan. We have reflected this in this valuation.

The Public Service Pensions Law was revised in 2020, and replaces the prior Law and amendments. The revisions did not have an impact on the valuation results presented herein.

Pension Plan

This valuation reflects the provisions of the Plan as at January 1, 2020.

We are not aware of any pending definitive or virtually definitive amendments coming into effect during the period covered by this report. The Plan provisions are summarized in Appendix E.

Assumptions

We have used the same valuation assumptions and methods as were used for the previous valuation, except for the following:

	Current valuation	Previous valuation
Discount rate:	7.25% for the first year, 6.75% for the second year, 6.25% thereafter	8.00% for the first year, 7.625% for the second year, 7.25% thereafter
Administration expenses for the DB Part of the Plan:	$1,200,000, increasing by 2.0% per year	$900,000, increasing by 2.0% per year
Pensionable earnings increases:	2.5% for first 2 years; 3% thereafter	3.0%
Retirement rates:	Revised age-related table	Age-related table
Mortality improvement rates	Scale MP-2019	Scale MP-2016

A summary of the valuation methods and assumptions is provided in Appendix C.

Subsequent Events

After checking with representatives of the Board, to the best of our knowledge, there have been no events subsequent to the valuation date which, in our opinion, would have a material impact on the results of the valuation as at January 1, 2020. However, since the valuation date, there have been significant fluctuations in the financial markets, which may have led to a deterioration of the funded position of the Plan after the valuation date. Our valuation reflects the financial position of the Plan as of this valuation date and does not take into account any experience after the valuation date, except as noted herein.

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Valuation Results

Financial status

This valuation compares the relationship between the value of Plan assets and the present value of expected future benefit cash flows in respect of accrued service.

The results of the current valuation compared with those from the previous valuation, are summarized below:

($000)	01.01.2020	01.01.2017
Ultimate discount rate	***6.25%***	***7.25%***
Assets		
Market value of assets – DB	$439,872	$277,646
Market value of assets – DC	$396,816	$272,918
Total Market Value of Plan Assets	$836,688	$550,564
Funding target		
• DB Active members	$232,074	$176,830
• Pensioners and survivors	$349,523	$268,394
• DB Deferred pensioners	$25,633	$19,126
• Reserve - 3 year DC smoothing[2]	$28,914	$0
Total DB Liabilities	$636,144	$464,350
DC Account Balances	$396,816	$272,918
Total liability (DB + DC)	$1,032,960	$737,268
Funding surplus (deficiency)	($196,272)	($186,704)
Total Funding Ratio (DB + DC)	81%	75%
DB Funding Ratio	69%	60%

[2] DC account balances are smoothed over a 3 year period. Since actual investment returns immediately prior to the valuation date have been very strong, some of the investment returns have not yet been reflected in the DC account balances. This reserve represents the expected increase in DC account balances due to investment gains that have not yet been recognized.

The funding target is based on best-estimate assumptions and does not include a provision for adverse deviations. The notional split of the funded position by participating employer is shown in Appendix A.

Reconciliation of Financial Status ($000)

The reconciliation of the funded position of the Plan from the prior valuation as at January 1, 2017 to January 1, 2020 is shown below.

Funding surplus (deficiency) as at previous valuation		($186,704)
Interest on funding surplus (deficiency) at 8% for first year, 7.625% for second year and 7.25% for the third year		($46,045)
Employer contributions to fund the deficit		$67,469
Expected funding surplus (deficiency)		($165,280)
Net experience gains (losses)		
Net Investment returns greater than the previous valuation interest rate (net of DC account deferred gains)	$50,002	
Increases in pensionable earnings higher than 3% per year	($11,418)	
Indexation greater than 2% per year	($15,902)	
Mortality rates lower than previous assumption	($4,048)	
Retirement gains	$188	
Termination losses	($2,863)	
Total experience gains (losses)		$15,959
Impact of changes in assumptions		
Pensionable earnings increase assumption	$1,697	
Mortality assumption	$5,260	
Retirement scale assumption	$9,600	
Discount rate	($60,388)	
Total assumption changes impact		($43,831)
Net impact of other elements of gains and losses		($3,120)
Funding surplus (deficiency) as at Jan 1, 2020		($196,272)

Normal cost

The normal cost is an estimate of the present value of the additional expected future benefit cash flows in respect of pensionable service that will accrue after the valuation date, assuming the Plan will be maintained indefinitely.

The normal cost during the year following the valuation date, compared with the corresponding value determined in the previous valuation, is as follows:

(\$000)	01.01.2020	01.01.2017
Ultimate discount rate	***6.25%***	***7.25%***
Defined Contribution (DC) Part of the Plan		
Total employer and employee contributions	\$34,412	\$25,633
• Employee DC	(\$16,651)	(\$12,403)
• Employer DC	\$17,761	\$13,230
• Total DC cost % of DC pay	12.4%	12.4%
• Employer DC cost as % of DC pay	6.4%	6.4%

(\$000)	01.01.2020	01.01.2017
Ultimate discount rate	***6.25%***	***7.25%***
Defined Benefit (DB) Part of the Plan		
• Total normal cost	\$8,033	\$6,432
• Estimated members' required contributions	(\$2,761)	(\$2,649)
• Employer's normal cost	\$5,272	\$3,783
• Expense allowance	\$1,200	\$900
• Employer normal cost including expense allowance	\$6,472	\$4,683
Total DB Normal Cost (ER & EE)	\$9,233	\$7,332
• Total DB cost as % of DB pay	20.3%	16.7%
• Employer DB cost as a % of DB pay	14.3%	10.7%

The key factors that have caused a change in the employer’s normal cost for the DB Part of the Plan since the previous valuation are summarized in the following table:

Employer’s DB normal cost as at previous valuation	10.7%
Demographic changes	2.2%
Changes in assumptions	1.4%
Employer’s DB normal cost as at January 1, 2020	14.3%

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Contribution Requirements

The Board's objective is to fund the Plan over 20 years from the valuation date. In order to achieve this objective, and based on the assumptions and methods described in this report, contributions should be made as described in the table below. The contributions recommended in the previous valuation are shown for comparison:

	Jan 1, 2020	Jan 1, 2017
Ultimate discount rate	***6.25%***	***7.25%***
Defined Contribution (DC) Part of the Plan		
Employee contributions (% of pay)	6.0%	6.0%
Employer required contributions (% of DC payroll)	6.4%	6.4%
Defined Benefit (DB) Part of the Plan		
Employee contributions (% of pay)	6.0%	6.0%
Employer normal cost (% of DB pay)[3]	14.3%	10.7%
Employer contributions to fund past service deficit[4] ($000 per year)	$17,116	$17,463

[3] Include expense allowance of $1,200,000 per year for January 1, 2020 and $900,000 per year for January 1, 2017

[4] Amortization of the total Plan deficit over 20 years

An estimate of the contributions that would be required in the year following the valuation is shown in the table below:

($000)	Jan 1, 2020	Jan 1, 2017
Ultimate discount rate	***6.25%***	***7.25%***
Defined Contribution (DC) Part of the Plan		
Employee contributions	$16,651	$12,403
Employer required contributions	$17,761	$13,230
Total employer and employee contributions	$34,412	$25,633
Defined Benefit (DB) Part of the Plan		
Employee contributions	$2,761	$2,649
Employer normal cost including expense allowance	$6,472	$4,683
Employer contributions to amortization past service liability over 20 years	$17,116	$17,463
Employer required contributions	$23,588	$22,146
Total employee and employer contributions	$26,349	$24,795
Total Plan (DB + DC)		
Total employee contributions	$19,412	$15,052
Total employer required contributions (DB +DC)	$41,349	$35,376
Current Employer contribution (DB +DC)	*$40,573**	*$33,987*

*based on 2017 contribution requirements and 2020 earnings levels

The required annual contributions based on the January 1, 2020 valuation using an ultimate discount rate of 6.25% are approximately $0.8 million greater than the contributions expected to be made in 2020 based on the previous valuation report. Also, the January 1, 2020 valuation requires that contributions be maintained at these levels for 20 years (until 2040).

The breakdown of the contribution requirements by sponsoring employer is shown in Appendix A. For each participating employer, the cost as a percentage of salary will be different than the overall cost due mainly to a substantial portion of the past service cost being attributable to the Cayman Islands Government (CIG).

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Prescribed Legislative Funding

Section 12 (1) (a) Test

Section 12(1) (a) of the Public Service Pensions Law (2020 Revision) requires a determination as to whether the Fund is “capable of meeting its liabilities for at least forty years at the rate or rates of contributions then in force”. The Board and its external legal counsel have advised that their interpretation is that the Section 12 (1)(a) test is met if the Fund is capable paying benefits to DB members and DC members in the next 40 years without using assets in respect of DC members to pay DB benefits.

The ability to satisfy the Section 12(1)(a) test depends primarily on the level of contributions made to the Plan and the level of investment returns expected to be earned by the pension fund. We have performed an analysis to determine if the test is met under the following three scenarios for future employer contribution levels to the Plan:

1. Scenario 1: 2020 Valuation Funding (6.25%) - Funding in accordance with the Jan 1, 2020 valuation recommendation, whereby the deficit is funded over a 20 year period starting from the valuation date

2. Scenario 2: 2017 Valuation Funding (7.25%) - Continuation of funding based on the latest approved funding requirements (Jan 1, 2017 valuation), until the Plan is fully funded (The current CIG approval of funding the deficit revealed in that valuation expires on Dec 31, 2036)

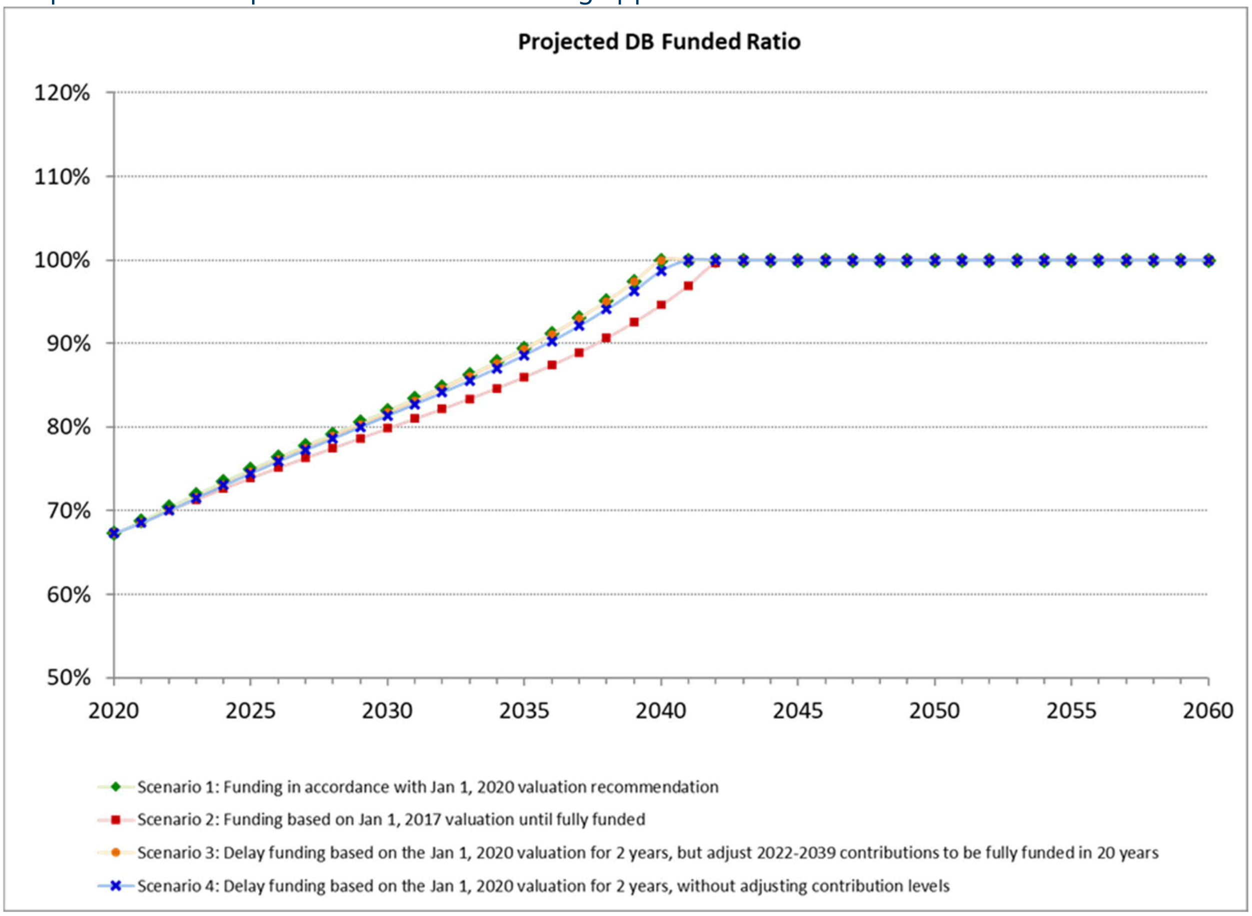
3. Scenario 3: Same as Scenario 1, except the start of the new valuation funding level is delayed until 2022, and adjust contribution levels for the years 2022 through 2039 so that the Plan is still projected to be fully funded by Jan 1, 2040 (20 years from Jan 1, 2020)

4. Scenario 4: Same as Scenario 1, except the new valuation funding level is delayed until 2022, without adjusting future year contributions. Deficit contributions would continue until the Plan achieves a fully funded status

Under all scenarios, employee contributions are assumed to remain at the current 6% of pay level.

The projected funded position of the DB Part of the Plan under each of the above funding scenarios and assuming future ultimate investment returns of 6.25% per year are shown below. Scenarios in which the funded ratio of the DB Part of the Plan remains above 0% at least until 2060 (40 years after the valuation date) are considered to have met the Section 12(1)(a) test.

Graph 1: Shows impact of alternative funding approaches



Each of the funding scenarios would pass the Section 12(1) (a) Testprovided that funding continues until the Plan is fully funded.

Projections assume future investment returns and other experience is exactly in accordance with Jan 1, 2020 valuation assumptions. Actual experience will differ, potentially significantly, which will produce outcomes which may differ significantly from these projections.

Recommended DB Contributions based on 20 years funding

Based on the above analysis, the Board has decided to recommend that the employers fund the Plan based on the recommendations of this valuation report, based on an ultimate discount rate of 6.25% and on the basis of amortizing the past service liability over a 20 year period. Based on the Board's decision, the method for determining the amount of employee and employer contributions are as follows:

($000)	Funding Requirements
Defined Contribution (DC) Part of the Plan	
Employee contributions (% of pay)	6.0%
Employer required contributions (% of DC payroll)	6.4%
Defined Benefit (DB) Part of the Plan	
Employee contributions (% of pay)	6.0%
Employer normal cost (% of DB pay)[5]	14.3%
Employer contributions to amortization past service deficit ($ per year)	$17,116

The estimated required employer contributions to fund the DB Plan for the three years following the valuation date are outlined below.

Employer DB Contribution ($000)	Jan 1, 2020 to Dec 31, 2020	Jan 1, 2021 to Dec 31, 2021	Jan 1, 2022 to Dec 31, 2022
Normal cost (inclusive of expense allowance)	$6,472	$6,634	$6,800
Amount to fund past service liability	$17,116	$17,116	$17,116
Total Employer contributions	$23,588	$23,750	$23,916

The normal cost in 2021 and 2022 assumes that pensionable earnings would increase by 2.5% per annum.

Employee contributions of 6% of pay are in additional to the amounts shown above. For the year starting January 1, 2020, the total estimated employee contributions to the DB Part of the Plan is $2,761,000.

[5] Includes expense allowance of $1,200,000 per year

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Sustainability of Pension Plan

To have a sustainable pension system, contributions and investment income must be able to fund benefit payments and expenses. Historically, contribution levels to the Plan have been low relative to the cost of benefits that have been promised. This has placed pressure on the Fund assets to generate sufficient investment returns to make up the difference.

DB Plan Financing

It is critical that future funding to the Plan remain at least at the current funding levels outlined in the *Public Service Pensions (Contribution Rates) Regulations, 2019* and ideally at the levels recommended in this report. In the past, contribution levels have been much lower than the cost of the benefits promised, which has placed pressure on the assets to generate sufficient investment returns to make up the difference. While historical investment returns earned on the Fund have been excellent, in this current economic environment it will become increasingly difficult for investment returns alone to make up the difference.

In order to ensure the long term sustainability of the Plan, the employers will need to fund the Plan in accordance with the current and future funding recommendations of the actuary and the Board. If the existing contribution level is not maintained or the recommended contributions in this report are not implemented, the Plan deficit is expected to grow significantly. We note that in the past, benefit outflows were projected to exceed contributions inflows over the next few years, if adequate contribution levels are not maintained, and even more significant contributions would likely be required in the future in order to provide the promised benefits.

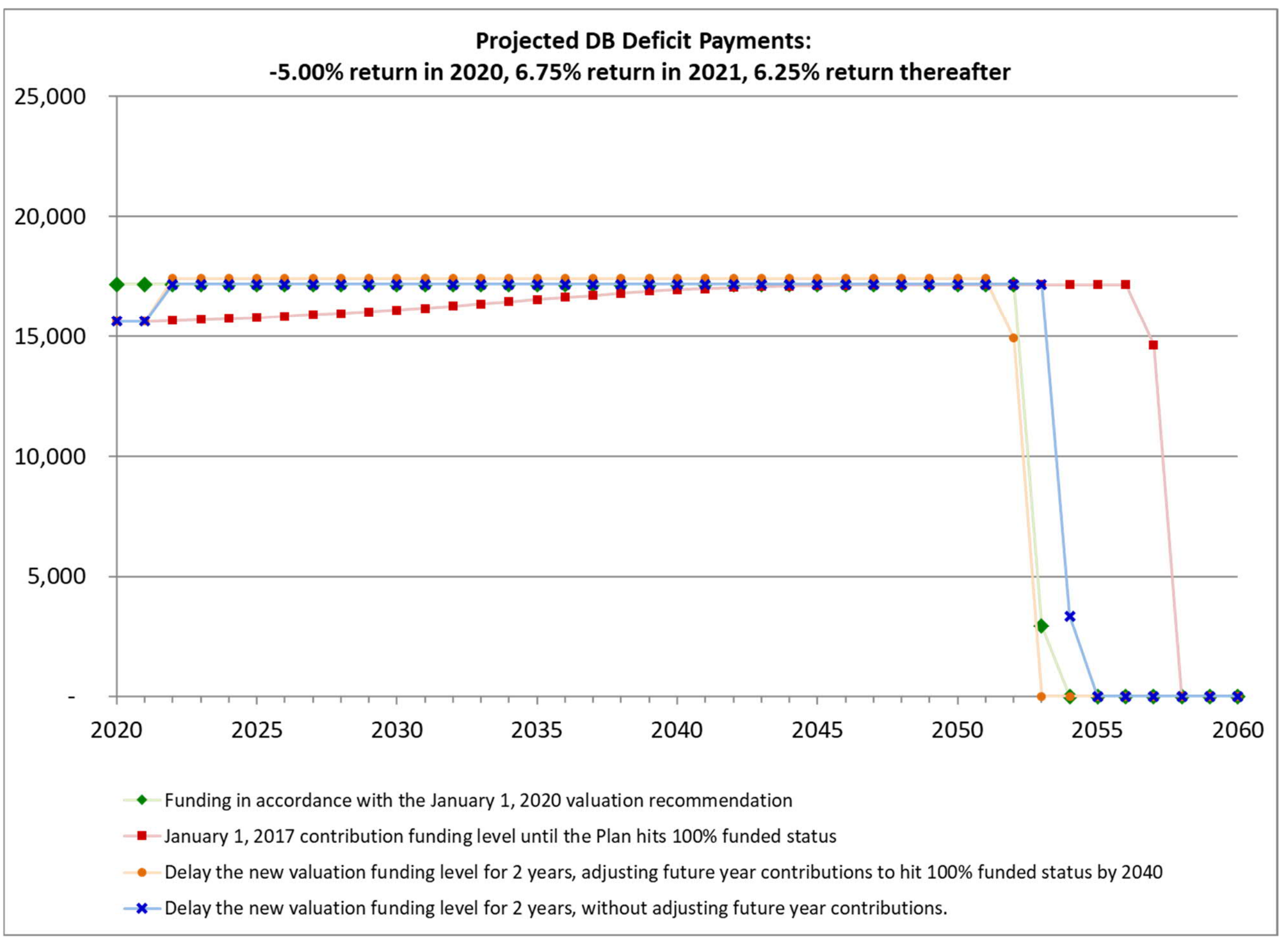
Projection Analysis

Analysis of the sustainability of the Plan involves long term projection of the funded status of the Plan and its cash flow requirements. In the following analysis we show the sensitivity of the Plan to short term market shock and uncertainty, such as the market impact of the 2020 COVID 19 pandemic, as well as the results if long term investment returns are 1% lower than the valuation discount rate.

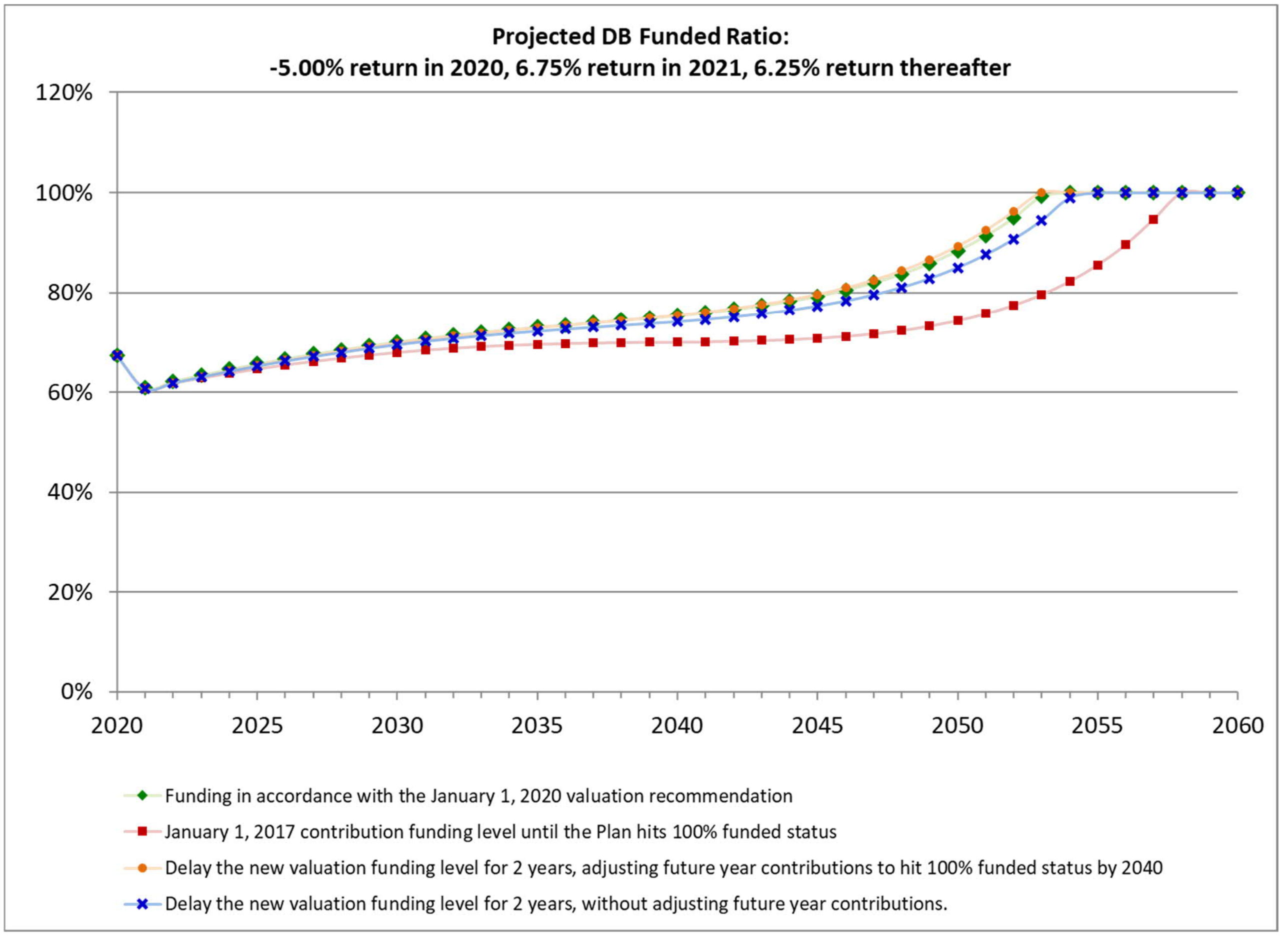
Graphs 2A and 2B shows the impact of -5% market shock in 2020 on the projected deficit payments over the next 40 years for the DB Part of the Plan, as well as the projected funded status over the same period under various funding level scenarios. Graph 3 shows a projection of the funded status assuming a 0% return in 2020 (and no subsequent recovery) under various funding level scenarios. Graph 4 shows the compounded impact of market shock and 1% lower investment return versus the valuation long term expected return.

Unless otherwise noted, the projections assume investment returns and other experience is exactly in accordance with Jan 1, 2020 valuation assumptions. Actual experience will differ, potentially significantly, which will produce outcomes that may differ significantly from these projections.

Graph 2A: Projected DB Deficit Payments - Market Shock with 2020 Return of -5%, and no recovery



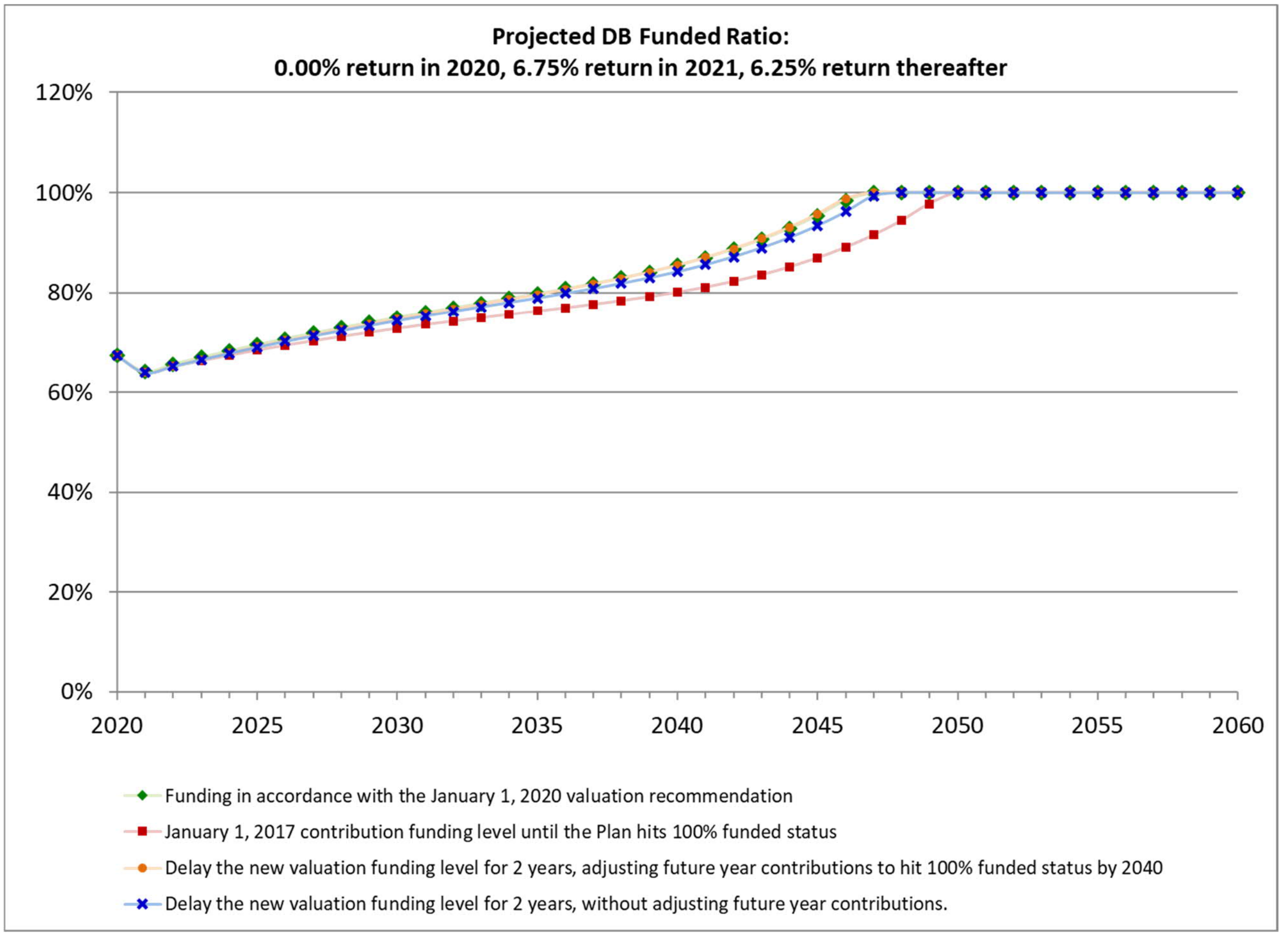
Graph 2B: Projected DB Funded Status - Market Shock with 2020 Return of -5%, and no recovery



If 2020 returns are -5%, and there is no future recovery of these losses, the Plan would achieve full funding roughly 12 to 17 years later than 2040 (the targeted 20 year funding date), depending on the level of funding.

As such, if there is no recovery of 2020 losses, and CIG wishes to continue funding the deficit over 20 years, then contributions would need to increase in subsequent valuations.

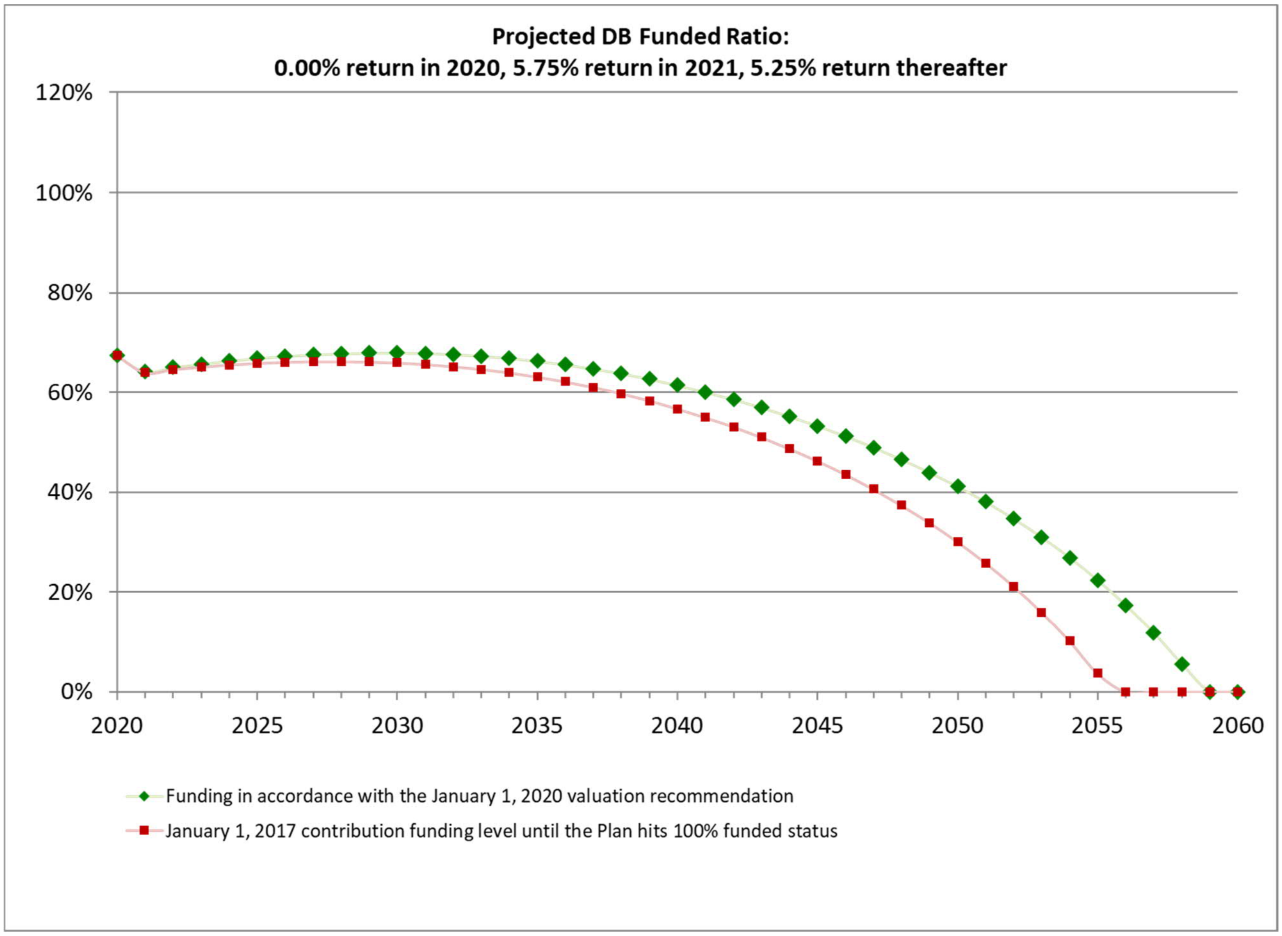
Graph 3: Projected DB Funded Status: Market Shock - 2020 Return of 0%, and no recovery



If 2020 returns are 0%, and there is no future recovery of these losses, the Plan would achieve full funding roughly 5 to 6 years later than PSPB's targeted 20 years deficit funding, depending on the funding scenario.

If there is no recovery of 2020 losses, contributions would need to increase in subsequent valuations beyond the levels if the CIG wishes to fund deficits over a 20 year period.

Graph 4: 2020 Return of 0%, plus investment returns are 1% lower than the valuation discount rate



As shown above, if future investment returns are 5.25% per year instead of 6.25%, the invested assets would eventually deplete to zero, even if existing contribution levels are maintained. The funded status will remain fairly constant for roughly the first 15 years, and then decline rapidly thereafter. This illustrates the critical importance of achieving investment returns at least equal to the valuation discount rate.

Of course, if actual returns are lower than the valuation discount rate for a prolonged period, this will result in larger deficits in future valuations. We would expect that funding would increase in order to preserve the funded position of the Plan.

Projections assume future investment returns are 1% lower than valuation assumption and other experience is exactly in accordance with the January 1, 2020 valuation assumptions. Actual experience will differ, potentially significantly, which will produce outcomes which may differ significantly from these projections.

8
Actuarial Opinion

In our opinion, for the purposes of the valuations,

- The membership data on which the valuation is based are sufficient and suitable for the intended purpose.
- The assumptions are reasonable and appropriate.
- The methods employed in the valuation are appropriate.

This report has been prepared in accordance with our Terms of Engagement and the Caribbean Actuarial Association Standards of Practice – APS3.

Except as noted herein, this report has been prepared, and our opinions given, in accordance with accepted actuarial practice.

Angelita Graham Fellow of the Society of Actuaries Fellow of the Canadian Institute of Actuaries	Manuel Monteiro Fellow of the Society of Actuaries Fellow of the Canadian Institute of Actuaries
September 21, 2020 Date	September 21, 2020 Date

Appendix A
Valuation Results as at January 1, 2020 by Sponsoring Employer

Actuarial Position of the Defined Benefit Part

Ultimate discount rate	6.25%		
DB Part of the Plan	**CIG**	**Statutory Authorities**	**Total**
Summary of Membership Data			
• Number of actives	562	145	707
• Number of pensioners	2,155	0	2,155
• Number of deferred	332	102	434
Market Value of Assets ($000)	395,944	43,928	439,872
Accrued Liability ($000)			
• Active members	195,691	36,383	232,074
• Pensioners and survivors	349,523	0	349,523
• Deferred pensioners	18,340	7,293	25,633
• Reserve - 3 year DC smoothing	28,914	0	28,914
Total Liabilities	592,468	43,676	636,144
Funding surplus (deficit) - ($000)	(196,524)	252	(196,272)
DB Funded Ratio	67%	101%	69%

Actuarial Position of the DB Plan as at January 1, 2020 Results Split by Participating Employer ($000)

At retirement from a Statutory Authority, the obligation and an actuarial equivalent amount of assets is transferred to CIG. Those authorities with negative assets shown above still owe an amount to the Plan in respect the retirees' liabilities that have been transferred to CIG.

Participating Employers	Allocated Funds	DC Deferred gains reserve	Total DB past service liability	Surplus/ (deficiency)	Funding level
Cayman Islands Airports Authority	4,117		8,074	(3,957)	51%
Civil Aviation Authority	4,212		3,436	776	123%
University College of Cayman Islands	(1,144)		42	(1,186)	N/A
CAYS Foundation	74		15	59	493%
CINICO	192		167	25	115%
Cayman Islands Development Bank	0		0	0	N/A
Health Services Authority	11,464		12,681	(1,217)	90%
National Housing Development Trust	112		0	112	N/A
Utility Regulation and Competition Office	364		245	119	149%
Cayman Islands Monetary Authority	11,826		6,930	4,896	171%
Public Service Pensions Board	1,785		1,268	517	141%
National Roads Authority	4,538		3,519	1,019	129%
Maritime Authority of Cayman Islands	3,343		3,053	290	109%
Cayman Turtle Conservation and Education Centre LTD.	1,678		1,719	(41)	98%
Water Authority	1,367		2,527	(1,160)	54%
CIG	395,944	28,914	563,554	(196,524)	67%
Total	439,872	28,914	607,230	(196,272)	69%

Contribution Requirements as at January 1, 2020 – Defined Benefit Part

Results by SPONSORING Employer – ultimate Discount rate of 6.25%

Participating Employers of the Plan	Total Annual Pensionable Pay $000	Actuarial Surplus/ (deficit) $000	Normal Cost $000	Normal Cost as % of Pay	Amortization Cost * $000	Amortization Cost as % of Pay*	Expenses $000	Total Cost * $000	Total Cost as % of Pay*
Cayman Islands Airports Authority	1,186	(3,957)	208	17.5%	345	29.1%	0	553	46.6%
Civil Aviation Authority	429	776	53	12.4%	N/A	N/A	0	53	12.4%
University College of Cayman Islands	0	(1,187)	0	N/A	103	N/A	0	103	N/A
CAYS Foundation	0	59	0	N/A	N/A	N/A	0	N/A	N/A
CINICO	63	25	11	17.5%	N/A	N/A	0	11	17.5%
Health Services Authority	3,714	(1,217)	660	17.8%	106	2.9%	0	766	20.6%
National Housing Development Trust	0	112	0	N/A	N/A	N/A	0	N/A	N/A
Utility Regulation and Competition Office	244	119	32	13.1%	N/A	N/A	0	32	13.1%
Cayman Islands Monetary Authority	1,441	4,896	252	17.5%	N/A	N/A	0	252	17.5%
Public Service Pensions Board	194	517	39	20.1%	N/A	N/A	0	39	20.1%
National Roads Authority	1,218	1,020	205	16.8%	N/A	N/A	0	205	16.8%
Maritime Authority of Cayman Islands	1,001	290	181	18.1%	N/A	N/A	0	181	18.1%
Cayman Turtle Conservation and Education Centre LTD.	317	(41)	61	19.2%	4	1.3%	0	65	20.5%
Water Authority	249	(1,160)	45	18.1%	101	40.6%	0	146	58.6%
CIG	35,059	(196,524)	6,286	17.9%	17,138	48.9%	1,200	24,624	70.2%
Plan*	**45,115**	**(196,272)**	**8,033**	**17.8%**	**N/A**	**N/A**	**1,200**	**N/A**	**N/A**

Note: Employee contribution requirement is currently 6% of the total cost shown above.

*The Amortization Cost of the Plan deficit of $196.3 million is $17,116,000 and the Total Cost for the Plan is $26,349,000. However, broken down by Participating Employers, employers for which a deemed surplus is disclosed are assumed to contribute the Normal Cost only. Hence, the summation of the Amortization and Total Cost columns across employers with a deemed deficit position is greater than the amount of the entire Plan as a whole.

Appendix B
Plan Assets

The assets of the Defined Benefit Part and the Defined Contribution Part of the Plan are commingled and held as a part of the Public Service Pension Fund (“the Fund”) and managed by the PSPB. The assets of two other pension plans, the Parliamentary Pensions Plan and the Judicial Pension Plan, are pooled together to constitute the Fund.

The assets are notionally allocated to each of the three participating pension plans through an internal accounting mechanism that tracks, for each accounting period, actual cash flows and allocates investment income and expenses in proportion to the opening value of assets allocated. Similar internal accounting is used for developing each participating employer’s share of the Fund.

The valuations are based on the asset information provided to us by PSPB. The Fund assets are held in trust by CIBC Mellon. We have relied on the data provided to us by PSPB without further audit. Customarily, this information would not be verified by a plan’s actuary. To the extent that the data provided changes, the results herein may also change.

Reconciliation of Market Value of invested Fund

The Fund transactions since the last valuation are summarized in the following table:

	2017	2018	2019
January 1	$567,916,294	$685,529,998	$663,728,784
PLUS			
Member contributions	$14,634,135	$16,183,268	17,513,784
Employer contributions	$40,238,799	$35,698,116	38,855,053
Investment earnings	$105,254,222	($28,480,531)	178,486,008
	$160,127,156	$23,400,853	$234,854,845
LESS			
Benefits paid	$34,015,799	$37,863,081	34,584,523
Administration and investment fees	$8,497,653	$7,338,986	$10,395,711
	$42,513,452	$45,202,067	$44,980,234
December 31	$685,529,998	$663,728,784	$853,603,395
Gross rate of return[6]	18.33%	-4.13%	26.66%
Rate of return net of expenses[7]	16.73%	-5.17%	24.92%

[6] Assuming mid-period cash flows.

[7] Assuming mid-period cash flows.

The market value of assets shown in the above table is adjusted to reflect in-transit amounts as follows:

	Current Valuation	Previous Valuation
Market value of invested assets	$853,603,395	$567,916,294
In-transit amounts		
• Members' contributions	$0	$0
• Employer's contributions	$4,881,813	$0
• Expenses	($0)	($0)
• Benefit payments	($0)	($0)
Market value of assets adjusted for in-transit amounts	$858,485,208	$567,916,294

The table below shows the reconciliation of the market value of invested assets allocated to the Plan. In determining the notional assets allocated to the Plan as at December 31, 2019, we started with the asset value disclosed in the prior valuation report as at January 1, 2017 and adjusted for the Plan's cash flows and allocated investment income based on the investment returns earned by the Fund over the three-year period, 2017 to 2019.

	2017	2018	2019
January 1	$550,595,825	$665,874,613	$645,996,447
PLUS			
Member contributions	$14,445,178	$15,863,709	$17,124,780
Employer contributions	$38,649,128	$34,076,160	$36,794,444
Investment earnings	$102,144,496	($27,691,340)	$173,793,673
	$155,238,802	$22,248,529	$227,712,897
LESS			
Benefits paid	$31,721,524	$34,998,131	$32,145,769
Administration and investment fees	$8,238,490	$7,128,564	$10,117,976
	$39,960,014	$42,126,695	$42,263,745
December 31	$665,874,613	$645,996,447	$831,445,599
Gross rate of return[8]	18.33%	-4.13%	26.66%
Rate of return net of expenses[9]	16.73%	-5.17%	24.92%

[8] Assuming mid-period cash flows.

[9] Assuming mid-period cash flows.

The market value of assets shown in the above table is adjusted to reflect in-transit amounts as follows:

	Current Valuation	Previous Valuation
Market value of invested assets	$831,445,599	$550,595,825
Funds reallocated from Parliamentarian Plan	$359,833	
In-transit amounts*		
• Members' contributions	$0	$0
• Employer's contributions	$4,881,813	$0
• Expenses	($0)	($0)
• Benefit payments	($0)	($0)
Market value of assets adjusted for in-transit amounts	$836,687,245	$550,595,825

* We understand that the amount was remitted on December 31, 2019, but credited to fund in January 2020

The portion of the fund allocated to the DC Part of the Plan as at January 1, 2020 is estimated to be $396.82 million based on the DC account balances as at January 1, 2020 provided to us by the PSPB.

The DB assets value of the Plan as at January 1, 2020 is $439.87 million after reflecting the total adjustment of $5.24 million contribution receivable.

Investment Policy

The plan administrator, PSPB, has adopted a statement of investment policy and procedures. This policy is intended to provide guidelines for the managers as to the level of risk that is consistent with the Plan's investment objectives. A significant component of this investment policy is the asset mix.

PSPB is solely responsible for selecting the plan's investment policies, asset allocations, and individual investments.

The investment policy was updated August 15, 2019. The target asset mix and the actual asset mix at the valuation date are provided for information purposes:

	Investment policy			Actual asset mix as at January 1, 2020
	Minimum	Target	Maximum	
Equities	55%	80%	85%	79%
Fixed Income	15%	20%	45%	20%
Cash and cash equivalents	0%	0%	5%	1%
		100%		100%

Appendix C

Methods and Assumptions – Going Concern

Valuation of Assets

For this valuation, we have used the market value of assets.

Going Concern Funding Target

Over time, the real cost to the employer of a pension plan is the excess of benefits and expenses over member contributions and investment earnings. The actuarial cost method allocates this cost to annual time periods.

For purposes of the going concern valuation, we have continued to use the projected unit credit actuarial cost method. Under this method, we determine the present value of benefit cash flows expected to be paid in respect of service accrued prior to the valuation date, based on projected final average earnings. This is referred to as the funding target.

The funding excess or funding shortfall, as the case may be, is the difference between the market or smoothed value of assets and the funding target. A funding excess on a market value basis indicates that the current market value of assets and expected investment earnings are expected to be sufficient to meet the cash flows in respect of benefits accrued to the valuation date as well as expected expenses – assuming the plan is maintained indefinitely. A funding shortfall on a market value basis indicates the opposite – that the current market value of the assets is not expected to be sufficient to meet the plan's cash flow requirements in respect of accrued benefits, absent additional contributions.

The actuarial cost method used for the purposes of this valuation produces a reasonable matching of contributions with accruing benefits. Because benefits are recognized as they accrue, the actuarial cost method provides an effective funding target for a plan that is maintained indefinitely.

Normal cost

The normal cost is the present value of projected benefits to be paid under the plan with respect to service expected to accrue during the period until the next valuation.

The employer's normal cost is the total normal cost reduced by the members' required contributions. The employer's normal cost has been expressed as a percentage of the members' pensionable earnings to provide an automatic adjustment in the event of fluctuations in membership and/or pensionable earnings.

Under the projected unit credit actuarial cost method, the normal cost for an individual member will increase each year as the member approaches retirement. However, the normal cost of the entire group, expressed as a percentage of the members' pensionable earnings, can be expected to remain stable as long as the average age of the group remains constant.

Actuarial Assumptions – Going Concern Basis

The present value of future benefit payment cash flows is based on economic and demographic assumptions. At each valuation, we determine whether, in our opinion, the actuarial assumptions are still appropriate for the purposes of the valuation, and we revise them, if necessary. Emerging experience will result in gains or losses that will be revealed and considered in future actuarial valuations.

The table below shows the various assumptions used in the current valuation in comparison with those used in the previous valuation.

Assumption	Current valuation	Previous valuation
Discount rate:	7.25% for the first year, 6.75% for the second year, 6.25% thereafter	8.00% for the first year, 7.625% for the second year, 7.25% thereafter
Explicit expenses in respect of the DB Part of the Plan:	$1,200,000, increasing by 2.0% per year	$900,000, increasing by 2.0% per year
Inflation:	2.0%	2.0%
Pensionable earnings increases:	2.5% for first 2 years; 3% thereafter	3.0%
Post-retirement pension increases:	2.0%	2.0%
Retirement rates:	Revised age-related table	Age-related table
Termination rates:	Age-related table	Age-related table
Election for 25% commutation of pension:	100% election	100% election
Mortality rates:	100% of the rates of the RP-2014 Mortality Table scaled back to 2006 using Scale MP-2016	100% of the rates of the RP-2014 Mortality Table scaled back to 2006 using Scale MP-2016
Mortality improvements:	Fully generational using Scale MP 2019	Fully generational using Scale MP 2016
Disability rates:	None	None

Assumption	Current valuation	Previous valuation
Eligible spouse at retirement:	80%	80%
Spousal age difference:	Male 3 years older	Male 3 years older
Dependent children:	Pre Ret: Male 65% Female 20% Post Ret: Male 5% Female 0%	Pre Ret: Male 65% Female 20% Post Ret: Male 5% Female 0%
DC Annuity Conversions:	Assumed to be cost neutral; liabilities recognized once members retires	Assumed to be cost neutral; liabilities recognized once members retires
Cost of DC death benefit	0.4% of DC payroll	0.4% of DC payroll

The assumptions are best-estimates and do not include a margin for adverse deviations.

Age Related Tables

Sample rates from the age related tables are summarized in the following table:

Age	Termination – Male	Termination – Female	Retirement*
20	7.50%	12.50%	0.00%
25	5.00%	12.50%	0.00%
30	3.50%	7.50%	0.00%
35	2.50%	4.50%	0.00%
40	1.50%	2.50%	0.00%
45	0.50%	0.50%	0.00%
50	0.00%	0.00%	0.00%
55 to 59	0.00%	0.00%	8.00%
60 to 64	0.00%	0.00%	15.00%
65	0.00%	0.00%	100.00%

*The retirement rates for ages 60-64 have been revised since the prior valuation. In the previous valuation, the rate of retirement at age 60 was 60% and retirement rates at ages 61-64 were 8%.

Pensionable Earnings

The benefits ultimately paid will depend on each member's final earnings. To calculate the pension benefits payable upon retirement, death, or termination of employment, we have taken monthly earnings and assumed that such pensionable earnings will increase at the assumed rate.

Sample Annual Commutation Factors

Age	Annual Rates
50	195.81
51	193.89
52	191.89
53	189.91
54	187.65
55 - 65	185.41

Rationale for Assumptions

A rationale for each of the assumptions used in the current valuation is provided below.

Discount Rate

We have discounted the expected benefit payment cash flows using the expected investment return on the market value of the fund. Other bases for discounting the expected benefit payment cash flows may be appropriate, particularly for purposes other than those specifically identified in this valuation report.

The discount rate is comprised of the following:

- Estimated returns for each major asset class consistent with market conditions on the valuation date and the target asset mix specified in the Plan's investment policy
- Additional returns assumed to be achievable due to active equity management, equal to the fees related to active equity management. Such fees were determined by the difference between the provision for total investment expenses and the hypothetical fees that would be incurred for passive management of all assets.
- Implicit provision for investment expenses determined as the average rate of investment expenses paid from the fund over the last 4 years

The discount rate was developed as follows:

Assumed investment return	5.85%
Investment expense	(0.70%)
Added value from manager selection	0.60%
Margin for adverse deviation	0.00%
Net discount rate (assuming added value from manager selection equal to incremental cost of active management over passive management)	5.75%
Additional allowance for added value from manager selection	0.50%
Net ultimate discount rate[10] (including added value from manager selection in excess of incremental cost of active management)	6.25%

Expenses

$1,200,000. Represents portion of expenses allocated to DB component.

[10] 7.25% for the first year, 6.75% for the second year, and 6.25% thereafter.

Inflation
Based on market expectation of long-term inflation implied by the yield captured in U.S. Treasury prices at the valuation date.
Pensionable Earnings
This is a long term view of salary increases, based on the underlying inflation assumption plus the Board's best estimate assumption of general salary growth, merit and promotional increases of 1%.
Post-Retirement Pension Increases
The assumption is based on the Plan formula and inflation assumption above.
Retirement Rates
The plan experience study conducted in 2017 based on 2011 to 2016 data, was updated in 2020. This was to take into account the observable experience in the last 3 years following the change in the normal retirement age from 60 to 65.
Termination Rates
The assumption is based on a table that is consistent with our experience with similar plans and employee groups. Recent experience has been consistent with the assumptions.
Mortality Rates
The assumption for the mortality rates is based on the U.S. 2014 Retirement Plans' Mortality Table scaled back to 2006, generationally projected using Scale MP-2019. Recent mortality studies shows that mortality continues to improve resulting in people living longer. New mortality tables have been issued by U.S. and Canada. The mortality table has been updated to reflect actual mortality improvement rates experienced in the U.S. over the last 20 years (Scale MP-2019).
Disability Rates
Use of a different assumption would not have a material impact on the valuation.
Eligible Spouse
The assumption is based on an industry standard for non-retired members (actual status used for retirees).
Spousal Age Difference
The assumption is based on an industry standard showing males are typically 3 years older than their spouse.

Appendix D
Membership Data

Analysis of Membership Data

The actuarial valuation is based on membership data as at January 1, 2020, provided by PSPB.

We have applied tests for internal consistency, as well as for consistency with the data used for the previous valuation. These tests were applied to membership reconciliation, basic information (date of birth, date of hire, date of membership, gender, etc.), pensionable earnings, credited service, contributions accumulated with interest, and pensions to retirees and other members entitled to a deferred pension. Contributions, lump sum payments, and pensions to retirees were compared with corresponding amounts reported in financial statements. PSPB was queried in order to resolve inconsistent data elements. The PSPB provided confirmation that the final data, incorporating query responses, was appropriate for the purpose of the valuations.

If the data supplied are not sufficient and reliable for its intended purpose, the results of our calculation may differ significantly from the results that would be obtained with such data. Although Mercer has reviewed the suitability of the data for its intended use, Mercer has not verified or audited any of the data or information provided.

Plan membership data are summarized below. For comparison, we have also summarized corresponding data from the previous valuation.

	01.01.2020	01.01.2017
Active Members - DB		
Number	707	803
Total annual payroll ($000)	$45,115	$43,911
Average years of pensionable service	26.55	23.93
Average age	50.38	48.01
Active Members – DC		
Number	6,196	4,944
Total annual payroll ($000)	$277,520	$206,720
Total account balance ($000)	$358,519	$243,183
Average age	43.72	43.53
Deferred Pensioners – DB		
Number	434	456
Total annual deferred pension ($000)	$2,753	$2,835
Average age	49.09	46.56
Deferred Pensioners – DC		
Number	1,564	1,546
Total account balance ($000)	$38,297	$29,387
Average age	44.09	41.28
Pensioners and Survivors		
Number	2,155	1,892
Total annual pension ($000)	$25,983	$21,343
Average age	66.00	65.10

The membership movement for all categories of membership since the previous actuarial valuation is as follows:

	Active DB	Active DC	Deferred DB	Deferred DC	Retirees	Beneficiaries	Total
Jan. 1, 2017	**803**	**4,944**	**456**	**1,546**	**1,685**	**207**	**9,641**
New Entrants		1,810					1,810
Rehires	4	49	(4)	(49)			0
Terminations							
• Cashed/Transferred	(3)	(271)	(2)	(88)			(364)
• Deferred Pension	(13)	(202)	13	202			0
Deaths	(3)	(21)	(2)	(2)	(70)	(13)	(111)
Benefit Expired						(18)	(18)
New Beneficiaries						86	86
Retirements	(84)	(147)	(22)	(13)	266		0
Retirements – DC Cash-out					(3)		(3)
Data Corrections	3	34	(5)	(32)	12	3	15
Jan. 1, 2020	**707**	**6,196**	**434**	**1,564**	**1,890**	**265**	**11,056**

The distribution of the active members of the DB Part of the Plan by age and pensionable service as at 01.01.2020 is summarized as follows:

Years of Pensionable Service								
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 +**	**Total**
35 to 39			2	6	23			31
40 to 44		1		7	83	21		112
45 to 49	1		1	10	108	59	32	211
50 to 54				3	46	42	91	182
55 to 59				1	36	20	71	128
60 to 64					15	6	22	43
Total	**1**	**1**	**3**	**27**	**311**	**148**	**216**	**707**

The distribution of the deferred members of the DB Part of the Plan by age as at the valuation date is summarized as follows:

Deferred Pensioners		
Age	**Number**	**Average Pension**
30 – 34		
35 – 39	36	$1,806
40 – 44	110	$4,338
45 – 49	112	$6,114
50 – 54	89	$9,575
55 – 59	52	$8,245
60 – 64	25	$8,867
65 and Over	10	$2,368
Total	**434**	**$6,344**

The distribution of the pensioners and survivors by age as at the valuation date is summarized as follows:

Pensioners and Survivors		
Age	**Number**	**Average Pension**
Under 20	25	$5,902
20 – 24	4	$2,795
25 – 29	3	$3,131
30 – 34	7	$2,243
35 – 39	10	$2,577
40 – 44	14	$6,035
45 – 49	53	$6,199
50 – 54	123	$10,790
55 – 59	245	$13,247
60 – 64	415	$12,902
65 – 69	587	$13,092
70 – 74	331	$10,758
75 – 79	174	$12,829
80 – 84	73	$13,312
85 – 89	58	$10,519
90 – 94	17	$12,900
95 and Over	16	$9,609
Total	**2,155**	**$12,057**

Active DB Participant Data by Participating Employers

Active Participants				
Participating Employers	**Count**	**Total Annual Payroll ($000)**	**Average Age**	**Average Service**
Cayman Islands Airports Authority	18	1,186	50.21	25.62
Civil Aviation Authority	4	429	48.69	28.40
University College of Cayman Islands				
CAYS Foundation				
CINICO	1	*	48.41	25.83
Electricity Regulatory Authority				
Health Services Authority	63	3,714	51.04	25.90
National Housing Development Trust				
Utility Regulation and Competition Office	3	244	41.07	20.55
Cayman Islands Monetary Authority	13	1,441	49.08	24.33
Public Service Pensions Board	1	*	55.41	34.42
National Roads Authority	23	1,218	49.03	27.67
Maritime Authority of Cayman Islands	9	1,001	50.43	29.35
Cayman Turtle Conservation and Education Centre LTD.	6	317	53.59	24.19
Water Authority	4	249	51.89	26.21
CIG	562	35,059	50.41	26.65
Total	**707**	**$45,115**	**50.38**	**26.55**

**Data not disclosed to preserve privacy*

Note: Of the 707 active members above, 166 (156 unique members) have service with multiple participating employers. See Transferred Participants on next page for breakdown of service with other employers.

Transferred Participants				
Participating Employers	**Count**	**Total Annual Payroll ($000)**	**Average Age**	**Average Service**
Cayman Islands Airports Authority	12	898	46.07	27.17
Civil Aviation Authority	1	61	42.42	21.50
University College of Cayman Islands				
CAYS Foundation				
CINICO				
Cayman Islands Development Bank	n/a	n/a	n/a	n/a
Health Services Authority	18	1,127	49.47	24.25
National Housing Development Trust				
Utility Regulation and Competition Office				
Cayman Islands Monetary Authority	3	297	46.00	20.94
Public Service Pensions Board	4	500	47.17	23.81
National Roads Authority				
Maritime Authority of Cayman Islands	1	*	48.52	26.08
Cayman Turtle Conservation and Education Centre LTD.	2	*	40.78	21.54
Water Authority	3	142	52.17	23.28
CIG	122	8,326	50.50	26.48
Total	**166**	**$11,619**	**49.76**	**25.97**

**Data not disclosed to preserve privacy*

Note: The above table consists of 156 unique members, but since several of these members have service periods with more than 2 employers they are counted more than once.

Active DC Participant Data by Participating Employers

Participating Employers	Count	Salary ($000)	Total Account Balance ($000)	Age
Cayman Islands Airports Authority	215	9,229	11,584	40.20
Civil Aviation Authority	9	648	951	39.12
CAYS Foundation	57	2,258	2,607	45.02
CINICO	2	120	235	58.40
Health Services Authority	853	51,130	60,462	48.07
Utility Regulation and Competition Office	33	2,939	1,312	50.62
Cayman Islands Monetary Authority	168	11,711	12,175	39.25
Public Service Pensions Board	29	1,915	3,153	44.85
National Roads Authority	95	3,194	5,726	44.20
Maritime Authority of Cayman Islands	7	474	846	44.93
Cayman Turtle Conservation and Education Centre LTD.	183	6,952	4,488	42.95
Cayman Islands Stock Exchange	4	*	37	39.45
National Housing Trust	10	459	213	48.29
Cayman Islands Development Bank	13	932	1,541	52.15
CIG	4,518	185,559	253,189	43.16
Total	**6,196**	**$277,520**	**$358,519**	**43.72**

**Data not disclosed to preserve privacy*

CIG Includes Pirate's Week, Office of the Commissioner of Police, Queen Elizabeth Botanical Park, and Tourism Attraction Board

Deferred DB participant data by participating employers

Participating Employers at Termination	Number	Annual Deferred Pension
Cayman Islands Airports Authority	16	179,532
Civil Aviation Authority	2	137,385
University College of Cayman Islands	4	13,579
CAYS Foundation	2	*
CINICO		
Cayman Islands Development Bank	n/a	n/a
Health Services Authority	25	193,877
National Housing Development Trust		
Utility Regulation and Competition Office		
Cayman Islands Monetary Authority	26	270,799
Public Service Pensions Board	3	36,553
National Roads Authority	7	85,330
Maritime Authority of Cayman Islands	2	*
Cayman Turtle Conservation and Education Centre LTD.	5	32,663
Water Authority	10	85,604
CIG	332	1,674,453
Total	**434**	**$2,753,251**

**Data not disclosed to preserve privacy*

Appendix E

Principal Provisions of the Defined Benefit Part of the Public Service Pension Plan

1.	Eligibility:	Public service employees are immediately eligible for participation in the Plan.
2.	Pensionable Service:	Continuous service from date of hire.
3.	Pensionable Earnings:	Pensionable Earnings include monthly basic salary, acting allowances, and duty allowances. The retirement pension computation is generally based on the monthly Pensionable Earnings at the time of retirement, unless there are transfers from one office to another, in which case the computation may be based on one-third of the aggregate pensionable earnings during the final three years.
4.	Employee Contributions:	Employee contributions are currently pitched at a rate of 6% of pensionable earnings.
5.	Eligibility for Retirement Pension:	Generally, on or after attaining age 50 and completing 10 years of service. There are special cases under which these conditions may be relaxed.

6.	Retirement benefits:	
	a. Pension at Retirement -	A monthly pension equal to 1/720 times the number of completed months of pensionable service times the final month's Pensionable Earnings. For officers first appointed to a pensionable office prior to July 10, 1980, the monthly pension is computed as 1/600 times the number of completed months of pensionable service times the final month's Pensionable Earnings. The pension cannot exceed two-thirds of the highest Pensionable Earnings received during the officer's service.
	b. Commutation -	Up to □of the retirement pension can be commuted for a lump sum. The pension to lump sum conversions will be determined by the plan's actuarial factors.
	c. Pension Increases -	Pensions in payment may be increased, once a year. The Pensions Law calls for these pension increases to match annual cost-of-living increases up to 5% and on a sliding scale thereafter.
	d. Early Retirement -	Early retirement reduction factors apply to retirement pensions prior to completion of age 50 and 10 years of service. For deferred vested participants, early retirement reduction factors apply for pension commencement prior to age 60. Police officers are allowed to retire with full benefits after completing 21 years of service.
7.	Benefits on Death After Retirement or While Eligible to Retire:	A spouse's pension equal to 50% of the pensioner's benefit, payable until remarriage. A dependent children's pension payable up to age 18 or age 23 (if full-time education) equal to 50% of the pension received by the participant, divided by the number of dependent children. These amounts are doubled if there is no spouse.

8.	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. In addition, a pension is payable to an officer who is permanently injured in discharge of duty and who is not entitled to compensation under any Workmen's Compensation Law. The amount of the pension depends on the extent of disablement.
9.	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 lump sum equal to 12 month' Pensionable Earnings 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.

10.	Termination Benefits:	An employee who terminates his employment can expect to receive a pension commencing at age 60, based on benefits accrued at the time of termination or alternatively to receive the participant contribution account balance. The pension has the same features of commutation, post-retirement death benefit, and post-retirement pension increases as for active employees eligible for retirement benefits.
11.	Other Benefits (Not Valued):	Supplementary pensions on abolition of office and re-organization.

Appendix F
Employer Certification

With respect to the Report on the Actuarial Valuation for Funding Purposes as at January 1, 2020 of the Public Service Pensions Plan, I hereby certify that, to the best of my knowledge and belief:

- The valuation reflects the terms of the Board's engagement with the actuary described in section 3 of this report.
- A copy of the official plan documents and of all amendments made up to January 1, 2020 was provided to the actuary and is reflected appropriately in the summary of plan provisions contained herein.
- The asset information summarized in Appendix B is reflective of the Plan's assets.
- The membership data provided to the actuary included a description of every person who is entitled to benefits under the terms of the Plan for service up to January 1, 2020 and are appropriate for purposes of the valuation.
- All events subsequent to January 1, 2020 that may have an impact on the Plan have been communicated to the actuary.

23/9/2020
Date

J Lindsey
Signed

JEWEL EVANS LINDSEY
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