DFW Airport
Retiree Health Care Plan

ACTUARIAL VALUATION REPORT
AS OF JANUARY 1, 2020

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May 11, 2020

Board of Directors
DFW Airport
Dallas/Fort Worth International Airport Board
PO Drawer DFW
DFW Airport, TX 75261-9428

Dear Members of the Board:

Submitted in this report are the results of an Actuarial Valuation of the assets and benefits associated with the employer financed retiree healthcare benefits provided by DFW Airport. The date of the valuation was January 1, 2020. The actuarially determined contribution has been calculated for the fiscal year beginning October 1, 2020. We certify that the information contained in this report is accurate and fairly presents the actuarial position of the retiree healthcare plan as of January, 1 2020.

Results of this report should not be used for any other purpose without consultation with the undersigned. This report was prepared at the request of the Airport Board (the Board) and is intended for use by the Board and designated Airport staff and those designated or approved by the Board. This report may be provided to parties, other than those described above, only in its entirety and only with the permission of the Board.

Actuarial Valuation
The primary purposes of the valuation report are to determine the employer's contribution for the upcoming fiscal year and to describe the current financial condition of the Plan. Valuations are prepared annually, as of January 1 of each year, the first day of the plan year.

Governmental Accounting Standards Board
Due to the significant amount of disclosure information requested under GASB Statements No. 74 and No. 75, all GASB related material will be provided in a separate report.

Financial Objectives and Actuarially Determined Contribution
The employer contribution is established by the Board. The Board's current intention is to contribute the Plan's normal cost plus the amount necessary to amortize the unfunded actuarial accrued liability (UAAL) over a period of 30 years from January 1, 2007; this contribution amount is $1,171,791 for the fiscal year beginning October 1, 2020.

Progress Toward Realization of Financial Objectives
The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) increased from last year. The funded ratio at January 1, 2020, is 114.29%, while it was 104.79% as of January 1, 2019.

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Benefit Provisions

The actuarial valuation reflects the benefit and contribution provisions set forth in the Plan as of the valuation date. There are no ancillary benefits funded by a source independent of the Plan. There have been no changes in the benefit provisions since the prior valuation. Please see Section D of this report for more details regarding the benefit provisions.

Assumptions and Methods

The actuarial assumptions and methods are set by the Board of Directors, based upon the recommendation of the actuary. The Board adopted the current assumptions and methods in conjunction with the 2015 Experience Study effective with the prior year's valuation. The demographic assumptions that are in common with the pension valuation(s) have not changed since the prior year. However, the OPEB specific assumption regarding retiree participation was lowered to better reflect the plan's anticipated experience. We believe that the actuarial assumptions used in the measurements for funding purposes are reasonable and appropriate for that purpose, and that the assumptions are internally consistent, reasonable, and, where appropriate, based on the actual experience of the Plan. For a more detailed description of all of the actuarial assumptions, please see Section F of this report.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience frequently deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. The actuarial calculations are intended to provide information for rational decision making.

This report does not reflect the recent and still developing impact of the COVID-19 pandemic, which may significantly impact the demographic and economic experience occurring after this valuation date.

The signing actuaries are independent of the plan sponsor. To the best of our knowledge, this report is complete and accurate and was prepared in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Mr. Riazi is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

Lewis Ward

Lewis Ward
Consultant

Daniel Siblik, ASA, EA, FCA, MAAA
Consultant

Mehdi Riazi

Mehdi Riazi, FSA, EA, MAAA
Consultant

Actuarial Standards of Practice Disclosure Statements

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

The funded status alone is not appropriate for assessing the need for or the amount of future contributions and is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

This report should not be relied on for any purpose other than the purpose described above. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

The valuation was based upon information furnished by the Airport's administrative staff, concerning the Plan's benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the Airport's administrative staff.

The developed findings included in this report consider data and other information through January 1, 2020.

EXECUTIVE SUMMARY

Executive Summary

Actuarially determined contribution

The Actuarially Determined Contribution (ADC) for the fiscal years ending September 30, 2021 and 2020 are shown below:

Actuarially determined contribution	FYE2021	FYE2020
Fiscal Year Ending September 30	$1,171,791	$1,403,506

For additional details please see Section A of the report.

Liabilities and Assets

The present value of all benefits expected to be paid to current plan members as of January 1, 2020 is $38,496,057. The actuarial accrued liability, which is the portion of the $38,496,057 attributable to service accrued by plan members as of January 1, 2020, is $25,109,985. As of January 1, 2020, the market value of plan assets was $30,648,508. On a market value basis, the trust earned a dollar-weighted return of 19.5% in calendar year 2019, following a -2.8% in calendar year 2018. The actuarial value of assets as of January 1, 2020 was $28,698,451.

The funded status of the plan, which is the ratio of plan actuarial value of assets to actuarial accrued liability, as of January 1, 2020 was 114.79%, up from 104.79% as of January 1, 2019.

Other Comments

DFW Airport is currently pre-funding their retiree medical plan and the Airport's use of a closed amortization schedule and significant actuarial gains has resulted in the plan becoming fully funded with this valuation. However, as you are aware retiree medical liabilities as well as the assets of the plan can have significant volatility. For that reason we will continue to use the closed amortization period for amortizing any unfunded liabilities or surpluses. There will be 17 years left in the amortization period as of FYE21. The accumulated assets have been invested using a long-term time horizon, similar to the Airport's pension plans. For this reason, a 6.75% discount rate was used to value the liabilities of the fund. Starting with the 2016 investment experience, asset gains/losses are being amortized over a 5-year period.

The accrued liability as of January 1, 2020 was less than expected mainly due to the estimated age-adjusted claims for 2020 (see page C-1) being lower than expected and less participation than assumed.

SECTION A

Valuation Results

DFW Airport
Development of the Actuarially determined contribution and Unfunded Actuarial Accrued Liability

Contributions for	Development of the Actuarially Determined Contribution	
	Fiscal Year	
	Beginning 2020	Beginning 2019
Employer Normal Cost	$1,452,102	$1,493,149
Amortization of UAAL	(280,311)	(89,643)
Actuarially Determined Contribution (ADC)	$1,171,791	$1,403,506
ADC Per Active Participant	$564	$703

	Determination of Unfunded Actuarial Accrued Liability	
	January 1, 2020	January 1, 2019
A. Present Value of Future Benefits		
i) Retirees and Beneficiaries	$6,274,034	$7,037,787
ii) Vested Terminated Members	$0	$0
iii) Active Members	32,222,023	31,054,511
Total Present Value of Future Benefits	$38,496,057	$38,092,298
B. Present Value of Future Normal Costs	$13,386,072	$13,075,026
C. Actuarial Accrued Liabilities (A.-B.)	$25,109,985	$25,017,272
D. Actuarial Value of Assets	$28,698,451	$26,216,578
E. Unfunded Actuarial Accrued Liability (C.-D.)	$(3,588,466)	$(1,199,306)
F. Funded Ratio (D./C.)	114.29%	104.79%

DFW Airport
10 year projection of claims and Employer Provided Benefits

Year	Total Claims	Retiree Contributions	Net Employer Benefits
2020	$2,421,000	-$785,000	$1,636,000
2021	2,829,000	-949,000	1,880,000
2022	3,247,000	-1,143,000	2,104,000
2023	3,519,000	-1,294,000	2,225,000
2024	3,671,000	-1,408,000	2,263,000
2025	3,854,000	-1,522,000	2,332,000
2026	4,170,000	-1,658,000	2,512,000
2027	4,444,000	-1,791,000	2,653,000
2028	4,535,000	-1,870,000	2,665,000
2029	4,583,000	-1,942,000	2,641,000

Note: The OPEB valuation does not include claims or premiums for retirees who are covered under the Medicare supplement.

DFW Airport
Actuarial Value of Assets

Development of Actuarial Value of Assets

			January 1, 2020
1.	Market value of assets at beginning of year	$	25,586,302
2.	External cashflow		
	a. Contributions	$	1,403,506
	b. Claims/premiums expenses		(1,135,285)
	c. Trustee fees (Note 7)		22,037
	d. Subtotal		290,258
3.	Assumed investment return rate for fiscal year		6.75%
4.	Assumed investment income for fiscal year (reflects timing of contributions)	$	1,704,101
5.	Expected Market Value at end of year (1+ 2 + 4)	$	27,580,661
6.	Market value of assets at end of year	$	30,648,508
7.	Difference (6 - 5)	$	3,067,847

8. Development of amounts to be recognized as of January 1, 2020

Fiscal Year End	Remaining Deferrals of Excess (Shortfall) of Investment Income	Offsetting of Gains/(Losses)	Net Deferrals Remaining	Years Remaining	Recognized for this valuation	Remaining after this valuation
	(1)	(2)	(3) = (1) + (2)	(4)	(5) = (3) / (4)	(6) = (3) - (5)
2015	$ 0	$ 0	$ 0	1	$ 0	$ 0
2016	0	0	0	2	0	0
2017	0	0	0	3	0	0
2018	(630,276)	630,276	0	4	0	0
2019	3,067,847	(630,276)	2,437,571	5	487,514	1,950,057
Total	$ 2,437,571	$ 0	$ 2,437,571		$ 487,514	$ 1,950,057

9.	Final actuarial value of plan net assets, end of year (Item 6 - Item 8, Column 6)	$	28,698,451
10.	Ratio of actuarial value to market value		93.6%

DFW Airport
History of Investment Return Rates – OPEB Trust

DFW Airport
History of Investment Return Rates

Plan Year Ending December 31,	Market	Actuarial
(1)	(2)	(3)
2009	10.6%	
2010	9.4%	
2011	3.7%	
2012	9.1%	
2013	16.1%	
2014	10.3%	
2015	1.0%	
2016	8.2%	7.0%
2017	14.8%	8.6%
2018	(2.8%)	6.3%
2019	19.5%	8.3%
Five-year Average Return	7.8%	
Ten-year Average Return	8.7%	

Comments

COMMENT A: One of the key assumptions used in any valuation of the liabilities and contribution requirements associated with post-employment benefits is the rate of return on Plan assets. Higher assumed investment returns will result in a lower ADC. Lower returns will increase the computed ADC. Based on information from the plan sponsor we have calculated the liability and the resulting ADC using an assumed 6.75% long term rate of investment.

COMMENT B: Both components of the ADC shown in this report (normal cost and amortization of the UAAL) have been calculated to increase at the same rate as the projected increase in active member payroll (3.75% per year), thereby producing level contributions as a percentage of payroll (if all assumptions are exactly met). The unfunded actuarial accrued liabilities were amortized as a level percent of active payroll over a period of 30 years from January 1, 2007. As of January 1, 2020, there are 17 years remaining. DFW Airport's use of a closed amortization schedule and significant actuarial gains has resulted in the plan becoming fully funded with this valuation. However, as you are aware retiree medical liabilities as well as the assets of the plan can have significant volatility. For that reason we will continue to use the closed amortization period for amortizing any unfunded liabilities or surpluses.

SECTION B

Sensitivity Analysis

Postemployment Health Insurance -- Sensitivity Tests

Actuarial valuations deal with the cost of benefits to be paid in the future. The payments considered will range from one month in the future to decades from the valuation date (for a young, newly hired employee who may retire many years from now and live many years after that). In order to establish a present day cost for these future benefit obligations, the actuary bases the valuation on a number of assumptions about future occurrences. The occurrences that must be considered include employee turnover, pay increases, disablement, retirements, deaths and investment income on anticipated plan assets.

When valuing health care benefits, a key factor is the future cost of the medical benefits being promised. This is projected using the current cost of the employer provided health care benefits and assumed future health care cost increases. The final cost of providing retiree health care benefits will depend upon how the charges for health care services actually increase in the future.

In order to demonstrate how the liabilities and contribution requirements of these benefits can vary depending upon future health care cost increases, we have performed additional valuations based upon alternative health care cost increase assumptions. The schedules on page B-2 compare (i) the computed cost of the retiree health care benefits using the valuation (Intermediate) assumptions to (ii) results of alternate valuations. The pessimistic and optimistic scenarios provide the impact on the valuation results of a 1% increase or decrease to the trend assumption.

DFW Airport
Sensitivity Analysis

The selection of future health care cost increases is one of the key assumptions in determining plan liabilities. If the health care cost trend rates upon which the calculation of the ADC was based were changed by 1% in each future year (Pessimistic is +1% and Optimistic is -1%), the annual contribution for the combined groups (illustrated using the entry age normal funding method) would change as follows.

Contributions for	Development of the Actuarially Determined Contribution		
	Fiscal Year Beginning 2019		
	Pessimistic	Intermediate	Optimistic
Employer Normal Cost	$1,671,882	$1,452,102	$1,273,640
Amortization of UAAL*	(110,233)	(280,311)	(427,017)
Actuarially determined contribution (ADC)	$1,561,649	$1,171,791	$846,623
ADC Per Active Participant	$751	$564	$407

* Unfunded Actuarial Accrued Liabilities (UAAL) were amortized over 17 years.
All three scenarios above are based on a funded 6.75% discount rate

	Determination of Unfunded Actuarial Accrued Liability		
	Pessimistic	Intermediate	Optimistic
A. Present Value of Future Benefits			
i) Retirees and Beneficiaries	$6,430,462	$6,274,034	$6,125,969
ii) Vested Terminated Members	$0	$0	$0
iii) Active Members	36,740,074	32,222,023	28,502,580
Total Present Value of Future Benefits	$43,170,536	$38,496,057	$34,628,549
B. Present Value of Future Normal Costs	$15,883,261	$13,386,072	$11,396,659
C. Actuarial Accrued Liabilities (A.-B.)	$27,287,275	$25,109,985	$23,231,890
D. Actuarial Value of Assets	$28,698,451	$28,698,451	$28,698,451
E. Unfunded Actuarial Accrued Liability (C.-D.)	($1,411,176)	($3,588,466)	($5,466,561)
F. Funded Ratio (D./C.)	105.17%	114.29%	123.53%

SECTION C

Underlying Retiree Claims Cost Development

Underlying Retiree Claims Cost Development

The initial per capita costs were developed for retirees using claims experience for calendar years 2016 through 2018 in conjunction with census data for the active and retired members of the health care program. These claims were projected on an incurred claim basis, adjusted for plan design changes, large claims, and loaded for administrative expenses. The costs developed are used for both current and future retirees for all plans combined. An inherent assumption in this methodology is that the projected future retirees will have a similar distribution by plan type to the current retirees. Vision costs and the Airport's health care account contributions are included in the claims estimates shown below. Dental costs are not included in the age-rated claims shown below.

Age graded and sex distinct premiums are utilized by this valuation. These costs are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process "distributes" the average premium over all age/sex combinations and assigns a unique premium for each combination. The age/sex specific costs more accurately reflect the health care utilization and cost at that age.

The Airport currently offers three medical plans for retirees who are not Medicare eligible. The three Plans are the BCBSTX EPO (Exclusive Provider Organization), the BCBSTX HCA (Health Care Account) and the BCBSTX PPO (Preferred Provider Organization). A single premium was developed based on the current participant weighting in the plans.

Plan	Weighting
EPO	64%
HCA	34%
PPO	2%

The monthly one-person premium including medical and prescription drug benefits at select ages are shown below:

For those not eligible for Medicare		
Age	Male	Female
40	$577.97	$939.17
50	936.89	1,154.16
60	1,592.28	1,567.85
64	1,936.26	1,827.31

Underlying Retiree Claims Cost Development (Continued)

The Airport provides coverage for Medicare eligible retirees through a separate plan that does not offer prescription drug benefits. The post-65 premiums were not adjusted for age and are shown on page D-4.

Mr. Riazi is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to certify the per capita retiree health care rates shown above.

SECTION D

Summary of Benefits

DFW Airport Retiree Health Care Plan
Summary of Benefits

Plan Participants

Regular full-time employees of DFW Airport are eligible to participate in the retiree health care plan. Eligible spouses receive the same pre-65 and post-65 benefits offered to the retiree.

Normal Retirement Benefits

General Employees – 5 years of service and age 62
DPS Commissioned and Fire-certified Employees – 5 years of service and age 62

Early Retirement Benefits

General Employees - 5 years of service and age 55

DPS Commission and Fire Certified Employees - (who contribute to the plan)

- 5 years of service and age 55
- at age 50, if age plus years of service equal 80, or
- with 25 years of service as a commissioned officer

Deferred Retirement Benefits

Not eligible for retiree health benefits.

Duty Death in Service Retirement Benefits

General employees – dependents of employees who die while actively employed are not eligible for retiree health benefits.

DPS commissioned and fire-certified employees – dependents of employees who die while actively employed are eligible for post-employment health benefits at the active employee premium rate.

Non-Duty Death in Service Retirement Benefits

Not eligible for retiree health benefits.

Death After Retirement

Surviving spouses of retirees are offered COBRA coverage.

Duty and Non-Duty Disabled Retirement Benefits

For employees disabled before January 1, 2006, post-employment benefits are provided at the active employee rates. For employees disabled after January 1, 2006, post-employment benefits are available through COBRA at 102% of the monthly premium.

DFW Airport Retiree Health Care Plan
Summary of Benefits (continued)

Health Care Benefit Eligibility Conditions

Retirees are eligible to enroll in available Airport medical plans if upon separation from the Airport they:

- are currently enrolled in one of the Airport's medical plans,
- are eligible for retirement under one of the Airport's pension plans, and
- begin drawing a pension immediately upon retirement. Failure to immediately draw pension benefits will result in loss of eligibility for medical coverage.

Health Care Benefit Provided by Plan

The same medical coverage offered to active employees is available to retirees under age 65 and their eligible dependents. It includes medical coverage, prescription coverage and vision coverage. Retirees and their spouse age 65 and older are eligible for medical coverage through a Medicare Supplement Plan. Dental coverage is only available through COBRA for 18 months.

Medical plans offered under age 65:

BCBS PPO
BCBS EPO
BCBS HCA

Eligible dependents include the retiree's:

- legal spouse,
- dependent children, unmarried and under age 25 who are dependent on the retiree for at least 50% of their support and claimed on the retiree's income tax return,
- unmarried grandchildren under age 25 who are dependent on the retiree for at least 50% of their support, reside in the retiree's household, and claimed on the retiree's income tax return,
- unmarried children at any age if mentally or physically incapable of self-support.

Retirees pay the total amount charged to the Airport, less the retiree's subsidy, if applicable.

Retiree Medical Subsidy - Implemented January 1, 2003, the medical subsidy is designed to assist Airport retirees in purchasing medical coverage available through the Airport. This subsidy is only available until the age of 65 or when Medicare becomes available and cannot be applied to the Medicare Supplement Plan.

Employees are eligible for medical subsidy who:

- retire after January 1, 2003
- have a minimum of 10 years of service
- begin drawing a pension immediately upon retirement, and
- are currently enrolled in an Airport medical plan.

The Airport provides a credit of $20 per month per completed year of service up to a maximum of $400 per month. These credits have no cash value and can only be used toward purchasing medical coverage from the Airport.

DFW Airport Retiree Health Care Plan
Summary of Benefits (continued)

Retirees will not pay less than active employees for medical coverage. Therefore, even if the $400 per month credit would cover the entire cost of medical coverage, the retiree will pay the same monthly rate as an active employee. There is a small group (mostly former executives) who pay active employee premiums or no premiums for their retiree medical coverage.

Non-Medicare and Medicare–Eligible Provisions

Non-Medicare – same benefit as active employees (medical, prescription and vision coverage, no dental)

Medicare Supplement Plan

For retirees and/or their spouses age 65 or older, DFW Airport offers a PPO Medicare Supplement Plan. The retiree and/or spouse must transfer to the Medicare Supplement Plan by the first of the month following their 65th birthday if they choose to remain on the DFW Plan.

Once the retiree or spouse reaches age 65 and transfers to the Medicare Supplement Plan, any remaining covered dependents must transfer to one of the PPO plans. If the retiree becomes eligible for Medicare mid-year and does not wish to transition to the supplement plan, the retiree may drop their medical coverage. However, the retiree and his/her dependent(s) will retain current coverage until the end of the month in which the retiree declined coverage.

Eligibility

A retiree or spouse is eligible for the Medicare Supplement Plan provided the participant:

- is age 65 and currently enrolled in DFW Airport medical plan,
- has applied for the Medicare Supplement Plan two months prior to turning age 65, and
- transitions to Medicare Supplement Plan the first of the month following their 65th birthday.

Plan Benefits & Options

The PPO Medicare Supplement Plan has the same plan features as the PPO Plan. However, Medicare is the primary coverage and the Medicare Supplement Plan is secondary. This means that claims are filed with Medicare first and if there are any remaining costs, the claim is filed with the Medicare Supplement Plan. The current Plan offers medical only and no drug coverage. Drug coverage can be purchased through Medicare Part D or from a private insurance company.

Effective January 1, 2010, Medicare eligible retirees are not eligible for drug coverage.

DFW Airport Retiree Health Care Plan
Summary of Benefits (continued)

Vision Coverage

Vision coverage is included in each medical plan option.

Dental Coverage

Dental coverage is only available through COBRA for 18 months

Life Insurance Coverage – Not provided

Plan Premiums Effective January 1, 2020

Coverage	EPO	HCA	PPO	Medicare Supplement
Retiree Only	$868.79	$700.55	$1,247.94	$298.00
Retiree and Child(ren)	1,824.49	1,471.16	2,545.79	
Retiree and Spouse	2,180.68	1,744.38	3,069.93	596.00
Family	3,127.67	2,521.98	4,380.26	

Retiree premiums (pre-65 only) are offset by the service based subsidy. Retirees participating in the HCA plan receive an annual $500 ($1,000 if dependents are covered) fund contribution from the Airport.

The current retiree distribution among the health plans is shown in following table:

PLAN	WEIGHTING
EPO	64%
HCA	34%
PPO	2%

SECTION E

Summary of Participant Data

DFW Airport
Total Active Members as of January 1, 2020
By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Under 20								
20-24	49							49
25-29	146	11						157
30-34	126	58	11					195
35-39	121	59	55	13	1			249
40-44	80	52	51	35	13			231
45-49	98	44	45	52	33	3		275
50-54	77	40	56	46	33	16	10	278
55-59	66	42	54	51	39	22	41	315
60-64	51	32	35	30	33	17	47	245
65 & Over	19	14	12	10	13	6	10	84
Totals	**833**	**352**	**319**	**237**	**165**	**64**	**108**	**2,078**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age:	47.0	years
Service:	10.4	years

DFW Airport
Total Retired Members as of January 1, 2020
By Attained Age

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	4	1	5
55-59	17	4	21
60-64	51	26	77
65 & Over	32	7	39
Totals	**104**	**38**	**142**

The number counts above only include those retirees who have elected to receive retiree health care coverage through the DFW Airport Retiree Health Care Plan.

SECTION F

Actuarial Cost Method and Actuarial Assumptions

Valuation Methods for
DFW Airport
as of January 1, 2020

Actuarial Cost Method. Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

(i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;

(ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains (losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded actuarial accrued liabilities (UAAL) (full funding credit if assets exceed liabilities) were amortized by level (principal & interest combined) percent-of-payroll contributions. The UAAL was determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date. The UAAL amortization payment (one component of the contribution requirement), is the level percent-of-payroll required to fully amortize the UAAL over a remaining 17-year period.

Actuarial Value of Plan Assets. The actuarial value of assets is equal to the market value of assets less a five-year phase in of the Excess (Shortfall) between expected investment return and actual income. The expected investment return each year is calculated based on the market value of assets with the difference from actual income smoothed in over five years in 20% increments. If the current year's difference is opposite sign of the prior years' deferred Excesses/(Shortfalls), then the prior years' bases (starting with the oldest) are reduced dollar for dollar along with the current year's base. Any remaining bases are then recognized over five years (20% per year) from their initial creation.

The asset smoothing began with the 2016 investment experience.

Actuarial Assumptions for DFW Airport as of January 1, 2020

The rate of inflation is assumed to be 2.75% per year.

The rate of investment return is 6.75% per year, compounded annually, composed of the assumed general inflation assumption (2.75%) and a real rate of return assumption, which is net of investment expenses.

The assumed real return assumption, of 4.00%, is the rate of return in excess of price inflation. The real return assumption is assumed to be after netting investment expenses. Combining general inflation and real return, we have a combined 6.75% nominal rate (2.75% + 4.00%).

Administrative expenses of $22,037 were added to the Normal Cost.

Actuarial Assumptions for
DFW Airport
as of January 1, 2020 (Continued)

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which future contributions will be based.

% Increase in Salary at Sample Ages		
	Male and Female	
Years of Service	General Employees	Public Safety
1	6.25%	13.25%
2	5.75%	11.75%
3	5.25%	8.50%
4	5.25%	7.50%
5	5.25%	7.50%
6	5.00%	7.50%
7	4.75%	6.75%
8	4.75%	4.25%
9	4.50%	4.25%
10	4.50%	4.25%
11	4.50%	4.25%
12	4.50%	4.25%
13-16	4.25%	4.25%
17 & Over	3.75%	3.75%

The number of active members is assumed to remain constant in the future.

The payroll growth rate for financing Unfunded Actuarial Accrued Liabilities was assumed to be 3.75% per year

Actuarial Assumptions for DFW Airport as of January 1, 2020 (Continued)

The rates of post retirement mortality for healthy retirees:

RP-2014 Combined Healthy mortality table for males and females with Blue Collar Adjustments were used. Generational mortality improvements are in accordance with Scale BB from the table's base year of 2014.

The rates of post retirement mortality for disabled retirees:

RP-2014 Combined Healthy mortality table for males and females with Blue Collar Adjustments, with 3 years set forward. Generational mortality improvements are in accordance with Scale BB from the table's base year of 2014, with a minimum 3% rate of mortality at all ages.

The rates of mortality for active members:

RP-2014 Employee Mortality tables. Generational mortality improvements are in accordance with Scale BB from the table's base year of 2014. For Public Safety employees, 25% of active deaths are assumed to result in duty death. Death benefits are applicable only to those who die in the line of duty.

Actuarial Assumptions for
DFW Airport
as of January 1, 2020 (Continued)

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

Retirement Ages	General Employees	
	Male	Female
55	4%	5%
56	4	5
57	4	5
58	5	5
59	5	5
60	6	10
61	7	10
62	20	25
63-64	15	25
65-66	15	30
67-69	15	25
70-74	25	25
75	100	100

Public Safety	
Retirement Ages	Rates of Retirement
<55	8.0%
55-61	10.0
62-69	50.0
70	100.0

Actuarial Assumptions for DFW Airport as of January 1, 2020 (Continued)

Rates of separation from active membership were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

General Employees first 10 years of service	
Years of Service	**% of Active Members Separating Within Next Year**
1	20.0%
2	16.0
3	12.0
4	9.0
5	8.0
6	7.0
7	6.0
8-10	5.0

General Employees after first 10 years of service		
Age	**Male**	**Female**
25	6.10%	6.10%
30	5.90	5.90
35	4.90	4.90
40	3.90	3.90
45	2.90	2.90
50	1.74	1.74
55	1.68	1.68
60	1.38	1.38

Public Safety		
Years of Service	**% of Active Members Separating Within Next Year**	
	Male	**Female**
1	8.00%	8.00%
2	7.50	7.50
3-8	2.75	2.75
9-24	0.75	0.75
25+	0.00	0.00

Actuarial Assumptions for
DFW Airport
as of January 1, 2020 (Continued)

Rates of disability among active members.

Ordinary Disability	
Sample Ages	% Becoming Disabled within Next Year
20	0.00%
25	0.00
30	0.01
35	0.03
40	0.05
45	0.08
50	0.12
55	0.16
60	0.22
65	0.28

Health cost increases are displayed in the following table:

	Health Care Trend Inflation Rates
Year	Medical and Drug
2020	7.30%
2021	7.20
2022	7.10
2023	7.00
2024	6.75
2025	6.50
2026	6.25
2027	6.00
2028	5.75
2029	5.50
2030	5.25
2031	5.00
2032	4.75
2033 & Later	4.50

The employer's service based subsidies are not anticipated to increase.

Miscellaneous and Technical Assumptions for DFW Airport as of January 1, 2020

Administrative Expenses	Administrative expenses are included in the per-capita premiums.
Claims Utilization	To model the impact of aging on the underlying health care costs, the valuation relied on the Society of Actuaries' 2013 Study "Health Care Costs – From Birth to Death". Chart 1 (2010 Aggregate Commercial Costs) was used to model the impact of aging for ages less than 65 and Table 4 (Development of Plan-Specific Medicare Age Curve) was used to model the impact of aging for ages 65 and over.
Decrement Timing	Decrements of all types are assumed to occur mid-year.
Decrement Operation	Disability does not operate during retirement eligibility.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Marriage Assumption	85% of DPS employees are assumed to be married for the purpose of determining the duty-death spousal benefit. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Medicare Coverage	Assumed to be available for all covered employees on attainment of age 65. Disabled retirees were assumed to be eligible for Medicare coverage at age 65.

Miscellaneous and Technical Assumptions for DFW Airport as of January 1, 2020 (Continued)

Election Percentage

It was assumed that retirees would choose to receive retiree health care benefits through the Employer based on the following schedule:

Service at Retirement	Participation
20+	80%
15-19	40%
10-14	30%
<10	20%

Of those assumed to elect coverage, 15% of members were assumed to elect two-person coverage.

It was assumed that the future retirees will have a similar distribution by plan type to the current retirees.

No explicit assumption is made for participation past the age of 65. However, no employer liability is valued for post-65 benefits other than those provided to former executives over the age of 65.

Demographic Assumptions

This report used the same demographic assumptions used to value the defined benefit retirement plan(s) under which most employees are covered. General employees hired after January 1, 2010 who participate in the defined contribution plan are assumed to behave in the same manner as the general employees who participate in the defined benefit plan.

Experience Studies

The date of the most recent experience study of the demographic assumptions used in the pension valuation was December 31, 2015. The OPEB specific assumptions are reviewed each valuation and updated as needed.

Miscellaneous and Technical Assumptions for DFW Airport as of January 1, 2020 (Continued)

Excise Tax and Health Care Reform	This report has not incorporated any additional liabilities associated with the excise tax on high-cost employer health plans effective January 1, 2022. Due to the caps on the employer's contribution, we believe any additional costs related to the excise tax will be passed onto retirees. The age-adjusted per capita claims shown on page C-1 include estimated PCORI fees.
Assumption/Method Changes	No assumption or method changes since prior valuation.

Appendix

Glossary

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Glossary (Concluded)

Actuarially determined contribution (ADC). The ADC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ADC is an amount that is actuarially determined in accordance with the requirements so that, if paid on an ongoing basis, it would be expected to provide sufficient resources to fund both the normal cost for each year and the amortized unfunded liability.

Governmental Accounting Standards Board (GASB). GASB is the private, nonpartisan, nonprofit organization that works to create and improve the rules U.S. state and local governments follow when accounting for their finances and reporting them to the public.

Medical Trend Rate (Health Care Inflation). The increase in the cost of providing health care benefits over time. Trend includes such elements as pure price inflation, changes in utilization, advances in medical technology, and cost shifting.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Other Post-Employment Employee Benefits (OPEB). OPEB are post-employment benefits other than pensions. OPEB generally takes the form of health insurance and dental, vision, prescription drugs or other health care benefits.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets. The value of current plan assets recognized for valuation purposes.