

City and County of San Francisco Employees' Retirement System

GASB 67/68 Report as of June 30, 2021

Produced by Cheiron

January 2022

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SECTION I – BOARD SUMMARY

The purpose of this report is to provide accounting and financial reporting information under the Governmental Accounting Standards Board Statements 67 and 68 (GASB 67 and 68) for the City and County of San Francisco Employees' Retirement System ("System") and for the participating employers, respectively. This information includes:

- Determination of the discount rate as of June 30, 2021,
- Projection of the Total Pension Liability from the valuation date to the measurement date,
- Note disclosures and required supplementary information under GASB 67 for the System,
- Determination of collective amounts under GASB 68, and
- Schedules for the financial reporting of participating employers under GASB 68.

Highlights

The measurement date for the City and County of San Francisco Employees' Retirement System ("System") is June 30, 2021. Measurements are based on the fair value of assets as of June 30, 2021 and the Total Pension Liability as of the valuation date, June 30, 2020, updated to June 30, 2021.

The beginning and end of year measurements are based on different economic and demographic assumptions as well as different Supplemental COLA assumptions. A detailed description of the Supplemental COLA assumptions can be found in Appendix B of this report.

The table below provides a summary of the key collective results during this measurement period.

Table I-1 Summary of Collective Results														
Measurement Date														
6/30/2021 6/30/2020														
Net Pension Liability	\$	(2,585,069)	\$	5,410,800										
Deferred Outflows		(412,293)		(594,128)										
Deferred Inflows		6,078,116		110,667										
Net Impact on Statement of Net Position	\$	3,080,754	\$	4,927,339										
Pension Expense (\$ Amount) Pension Expense (% of Payroll)	\$	(1,010,026) -27.87%	\$	989,317 27.74%										



SECTION I – BOARD SUMMARY

As of the end of the measurement year, the System and its participating employers in aggregate report a Net Pension Liability of \$(2,585,069,000), Deferred Inflows of \$6,078,116,000, and Deferred Outflows of \$412,293,000. Consequently, the net impact on the aggregate of participating employers' Statements of Net Position due to the System is \$3,080,754,000 at the end of the measurement year. Participating employers also report any contributions between the measurement date and their reporting date as deferred outflows of resources.

The Net Pension Liability (NPL) decreased by about \$8.0 billion since the prior measurement date, primarily due to investment gains. There were also economic and demographic assumption changes that further decreased the NPL and experience losses on the Total Pension Liability that slightly offset the investment gains and assumption changes. The investment gains are recognized over five years, and the liability experience losses and assumption changes are recognized over the average remaining service life, which is also five years. Unrecognized amounts are reported as deferred inflows and deferred outflows.

For the measurement year ending June 30, 2021, the collective annual pension expense is **income** of \$1,010,026,000 or 27.87% of covered payroll. This amount is not related to participating employers' contributions to the System (\$836,559,000), but instead represents the change in the net impact on participating employers' Statements of Net Position plus employer contributions (\$3,080,754,000 - \$4,927,339,000 + \$836,559,000). The collective pension income of \$1,010,026,000 is a significant improvement from the collective expense for the prior year of \$989,317,000. Volatility in pension expense from year to year is to be expected. It will largely be driven by investment gains or losses, but other changes can also have a significant impact. A breakdown of the components of the collective net pension expense is shown in Section VI of the report.



SECTION II - CERTIFICATION

The purpose of this report is to provide accounting and financial reporting information under GASB 67 for the City and County of San Francisco Employees' Retirement System ("System") and under GASB 68 for the employers that participate in the System. This report is for the use of the System, the participating employers, and their auditors in preparing financial reports in accordance with applicable law and accounting requirements. This report is not appropriate for other purposes, including the measurement of funding requirements for the System.

In preparing our report, we relied on information (some oral and some written) supplied by the System. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Cheiron utilizes ProVal actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have a basic understanding of ProVal and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this GASB 67/68 valuation, including inputs to the crossover test. The probability of future supplemental COLAs was developed using R-scan, our proprietary stochastic projection tool for assessing probabilities of different outcomes. We have relied on Cheiron colleagues who developed the tool, and we have used the tool in accordance with its purpose. The stochastic projections of investment returns are based on an assumption that each future year's investment return is independent from all other years and is identically distributed according to a lognormal distribution. This assumption may result in an unrealistically wide range of compound investment returns over longer periods of time.

Future actuarial measurements may differ significantly from the current measurements 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; and, changes in plan provisions or applicable law.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.



SECTION II - CERTIFICATION

This report was prepared for the System for the purposes described herein and for the use by the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

William R. Hallmark, ASA, EA, FCA, MAAA

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Consulting Actuary

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SECTION III – DETERMINATION OF DISCOUNT RATE

The discount rate used to measure the Total Pension Liability is 7.40%.

The projection of cash flows used to determine the discount rate assumed that plan member contributions will continue to be made at the rates specified in the Charter of the City and County of San Francisco. Employer contributions are assumed to be made in accordance with the contribution policy in effect for the July 1, 2020 actuarial valuation. That policy includes contributions equal to the employer portion of the Entry Age normal cost for members as of the valuation date, a payment for the expected administrative expenses, and an amortization payment on the Unfunded Actuarial Liability.

The amortization payment is based on closed periods that vary in length depending on the source. Charter amendments prior to July 1, 2014 are amortized over 20 years. After July 1, 2014, any Charter changes to active member benefits are amortized over 15 years and changes to inactive member benefits, including Supplemental COLAs, are amortized over 5 years. The remaining Unfunded Actuarial Liability not attributable to Charter amendments as of July 1, 2013 is amortized over a 19-year period commencing July 1, 2014. Experience gains and losses and assumption or method changes on or after July 1, 2014 are amortized over 20 years. For the July 1, 2016 valuation, the increase in the Unfunded Actuarial Liability attributable to the Supplemental COLAs granted on July 1, 2013 and July 1, 2014 are amortized over 17-years and 5-years, respectively. All amortization schedules are established as a level percentage of payroll so payments increase 3.25% each year.

The Unfunded Actuarial Liability is based on an Actuarial Value of Assets that smooths investment gains and losses over five years and a measurement of the Actuarial Liability that excludes the value of any future Supplemental COLAs.

While the contributions and measure of Actuarial Liability in the funding valuation do not anticipate any future Supplemental COLAs, the projected contributions for the determination of the discount rate include the anticipated future amortization payments on future Supplemental COLAs for current members when they are expected to be granted. For members who worked after November 6, 1996 and before Proposition C passed (Post 97 Retirees), a Supplemental COLA is granted if the actual investment earnings during the year exceed the expected investment earnings on the Actuarial Value of Assets. For members who did not work after November 6, 1996 and before Proposition C passed, the Market Value of Assets must also exceed the Actuarial Liability for a Supplemental COLA to be granted. When a Supplemental COLA is granted, the amount depends on the amount of excess earnings and the basic COLA amount for each membership group. The large majority of members receive a 1.50% Supplemental COLA when a full Supplemental COLA is granted.

Because the probability of a Supplemental COLA depends on the current funded level of the System for certain members, we developed an assumption as of June 30, 2021 for the probability and amount of Supplemental COLA for each future year. A full Supplemental COLA will be paid to all retired members, and their beneficiaries, who were retired effective July 1, 2021. The table on the next page shows the net assumed Supplemental COLA for members with a 2.00% Basic COLA for sample years. Appendix B contains complete information on the assumption.



SECTION III – DETERMINATION OF DISCOUNT RATE

Assumed Supplemental COLA for Members with a 2.00% Basic COLA												
July 1,	96 – Prop C	Before 96 or After Prop C										
2021	1.50%	1.50%										
2023	0.75%	0.70%										
2025	0.75%	0.70%										
2027	0.75%	0.60%										
2029	0.75%	0.60%										
2031	0.75%	0.60%										
2033+	0.75%	0.50%										

The projection of benefit payments to current members for determining the discount rate includes the payment of anticipated future Supplemental COLAs.

Based on these assumptions, the System's fiduciary net position was projected to be available to make all future benefit payments for current members. Projected benefit payments are discounted at the long-term expected return on assets of 7.40% to the extent the fiduciary net position is available to make the payments and at the municipal bond rate of 2.16% to the extent they are not available. The single equivalent rate used to determine the Total Pension Liability as of June 30, 2021 rounded to four decimals is 7.40%.

Appendix D shows the details of this calculation.



SECTION IV - PROJECTION OF TOTAL PENSION LIABILITY

The Total Pension Liability (TPL) at the end of the measurement year, June 30, 2021 is measured as of a valuation date of June 30, 2020 and projected to June 30, 2021. Because the TPL shown in the prior report was measured as of June 30, 2019 and projected to June 30, 2020, it will not match the amounts measured as of June 30, 2020 that are shown in this exhibit.

The table below shows the projection of the TPL at discount rates equal to the rate used for disclosure and plus and minus one percent from the rate used for disclosure.

Projection of Collec	Table IV-1 Projection of Collective Total Pension Liability From Valuation to Measurement Date														
Discount Rate 6.40% 7.40% 8.40%															
Valuation Collective Total Pension Liabil	ity, 6	/30/2020													
Actives	\$	13,897,367	\$	11,760,630	\$	10,036,705									
Inactives		21,932,411		19,917,672		18,214,767									
Total	\$	35,829,778	\$	31,678,302	\$	28,251,472									
Service Cost	\$	915,764	\$	718,771	\$	570,548									
Benefit Payments	\$	1,619,761	\$	1,619,761	\$	1,619,761									
Interest	\$	2,270,927	\$	2,311,453	\$	2,329,945									
Collective Total Pension Liability, 6/30/2021	\$	37,396,708	\$	33,088,765	\$	29,532,204									



SECTION V – GASB 67 REPORTING INFORMATION

Note Disclosures

The table below shows the changes in the Total Pension Liability, the Plan Fiduciary Net Position (i.e., fair value of System assets), and the Net Pension Liability during the measurement year.

Table V-1 Change in Collective Net Pension Liability														
	Increase (Decrease)													
	To	et Pension Liability (a) - (b)												
Balances at 6/30/2020	\$	32,031,018	\$	26,620,218	\$	5,410,800								
Changes for the year:														
Service cost		718,771				718,771								
Interest		2,302,075				2,302,075								
Changes of benefits		0				0								
Differences between expected and actual														
experience		136,097				136,097								
Changes of assumptions		(479,435)				(479,435)								
Contributions - employer				836,559		(836,559)								
Contributions - member				409,398		(409,398)								
Net investment income				9,447,669		(9,447,669)								
Benefit payments		(1,619,761)		(1,619,761)		0								
Administrative expense				(20,249)		20,249								
Net changes		1,057,747		9,053,616		(7,995,869)								
Balances at 6/30/2021	\$	33,088,765	\$	35,673,834	\$	(2,585,069)								

Amounts in Thousands

During the measurement year, the collective NPL decreased by approximately \$8.0 billion. The service cost and interest cost increased the collective NPL by approximately \$3.0 billion while contributions and investment income offset by administrative expenses decreased the collective NPL by approximately \$10.7 billion.

There were assumption changes that decreased the TPL of approximately \$0.5 billion offset somewhat by liability experience losses that increased the TPL by \$0.1 billion.



SECTION V – GASB 67 REPORTING INFORMATION

Changes in the discount rate affect the measurement of the TPL. Lower discount rates produce a higher TPL and higher discount rates produce a lower TPL. Because the discount rate does not affect the measurement of assets, the percentage change in the NPL can be very significant for a relatively small change in the discount rate. The table below shows the sensitivity of the collective NPL to the discount rate.

	Table V-2 Sensitivity of Collective Net Pension Liability to Changes in Discount Rate													
		1% Decrease 6.40%		Discount Rate 7.40%		1% Increase 8.40%								
Total Pension Liability Plan Fiduciary Net Position Collective Net Pension Liability	\$ <u>\$</u>	37,396,708 35,673,834 1,722,874	\$ <u>\$</u>	33,088,765 35,673,834 (2,585,069)	\$ <u>\$</u>	29,532,204 35,673,834 (6,141,630)								
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability		95.4%		107.8%		120.8%								

Amounts in Thousands

A one percent decrease in the discount rate increases the TPL by approximately 13%. A one percent increase in the discount rate decreases the TPL by approximately 11%.



SECTION V – GASB 67 REPORTING INFORMATION

Required Supplementary Information

The schedules of Required Supplementary Information generally start with information as of the implementation of GASB 67, and eventually will build up to 10 years of information. The schedules below and on the next page show the changes in collective NPL and related ratios required by GASB for the eight years since implementation.

Schadula of Cha	Table V-3 Schedule of Changes in Collective NPL and Related Ratios														
Schedule of Cha															
T . 17	FYE 2021	FYE 2020	FYE 2019	FYE 2018	FYE 2017										
Total Pension Liability	ф. 510.551	ф 5 04 625	Φ (75.065	Φ 622.110	Φ 644.255										
Service cost (MOY)	\$ 718,771	\$ 704,637	\$ 675,065	\$ 632,118	\$ 644,277										
Interest	2,302,075	2,230,441	2,131,847	2,041,110	1,924,206										
Changes of benefit terms	0	0	0	0	0										
Differences between expected and actual experience	136,097	205,869	12,484	(42,382)	57,911										
Changes of assumptions	(479,435)	(117,141)	351,902	170,699	88,180										
Benefit payments	(1,619,761)	(1,548,077)	(1,456,682)	(1,364,587)	(1,278,140)										
Net change in TPL	\$ 1,057,747	\$ 1,475,729	\$ 1,714,616	\$ 1,436,958	\$ 1,436,434										
TPL - beginning	32,031,018	30,555,289	28,840,673	27,403,715	25,967,281										
TPL - ending	<u>\$33,088,765</u>	<u>\$32,031,018</u>	<u>\$30,555,289</u>	<u>\$28,840,673</u>	<u>\$27,403,715</u>										
Plan fiduciary net position															
Contributions - employer	\$ 836,559	\$ 742,985	\$ 645,056	\$ 619,067	\$ 551,810										
Contributions - member	409,398	400,649	380,980	364,696	316,844										
Net investment income	9,447,669	966,282	1,970,312	2,549,674	2,683,467										
Benefit payments	(1,619,761)	(1,548,077)	(1,456,682)	(1,364,587)	(1,278,140)										
Administrative expense	(20,249)	(20,270)	(18,983)	(21,234)	(18,134)										
Net change in plan fiduciary net position	\$ 9,053,616	\$ 541,569	\$ 1,520,683	\$ 2,147,616	\$ 2,255,847										
Plan fiduciary net position - beginning	26,620,218	26,078,649	24,557,966	22,410,350	20,154,503										
Plan fiduciary net position - ending	<u>\$35,673,834</u>	\$26,620,218	\$26,078,649	\$24,557,966	\$22,410,350										
Net pension liability - ending	<u>\$ (2,585,069)</u>	<u>\$ 5,410,800</u>	<u>\$ 4,476,640</u>	<u>\$ 4,282,707</u>	<u>\$ 4,993,365</u>										
Plan fiduciary net position as a percentage of the TPL	107.81%	83.11%	85.35%	85.15%	81.78%										
Covered payroll	\$ 3,623,898	\$ 3,566,991	\$ 3,375,447	\$ 3,221,544	\$ 3,041,818										
Net pension liability as a percentage of covered payroll	-71.33%	151.69%	132.62%	132.94%	164.16%										



SECTION V – GASB 67 REPORTING INFORMATION

T Schedule of Changes in Co		le V-3 ective NP	L	and Rela	ate	ed Ratios
	F	YE 2016	F	YE 2015	F	YE 2014
Total Pension Liability						
Service cost (MOY)	\$	567,576	\$	523,644	\$	509,200
Interest		1,669,996		1,621,582		1,542,266
Changes of benefit terms		1,293,714		0		0
Differences between expected and actual experience		(119,270)		(197,981)		0
Changes of assumptions		1,087,309		216,845		(73,315)
Benefit payments		(1,256,146)		(1,131,030)		(1,072,526)
Net change in TPL	\$	3,243,179	\$	1,033,060	\$	905,625
TPL - beginning		22,724,102		21,691,042		20,785,417
TPL - ending	\$	25,967,281	\$	22,724,102	\$	21,691,042
Plan fiduciary net position						
Contributions - employer	\$	526,805	\$	592,643	\$	532,882
Contributions - member		322,764		301,682		289,020
Net investment income		150,190		763,429		3,175,431
Benefit payments		(1,256,146)		(1,131,030)		(1,072,526)
Administrative expense		(17,179)		(19,262)		(15,745)
Net change in plan fiduciary net position	\$	(273,566)	\$	507,462	\$	2,909,062
Plan fiduciary net position - beginning		20,428,069		19,920,607	_	17,011,545
Plan fiduciary net position - ending	\$	20,154,503	\$	20,428,069	\$	19,920,607
Net pension liability - ending	\$	5,812,778	\$	2,296,033	\$	1,770,435
Plan fiduciary net position as a percentage of the TPL		77.61%		89.90%		91.84%
Covered payroll	\$	2,836,498	\$	2,642,752	\$	2,507,162
Net pension liability as a percentage of covered payroll	•	204.93%		86.88%		70.62%



SECTION V – GASB 67 REPORTING INFORMATION

Because an Actuarially Determined Contribution (ADC) has been calculated historically, the full 10 years of information in the following schedule is required. The actual covered payroll and the ratio of contributions to covered payroll has been left blank prior to FYE 2013 because we do not have that information. The covered payroll shown in this exhibit is pensionable pay for all years reported.

Schedule of (le V-4 Employer	· Contribu	tions	
	FYE 2021	FYE 2020	FYE 2019	FYE 2018	FYE 2017
Actuarially Determined Contribution Contributions in Relation to the	\$ 836,559	\$ 742,985	\$ 645,056	\$ 619,067	\$ 551,810
Actuarially Determined Contribution	836,559	742,985	645,056	619,067	551,810
Contribution Deficiency/(Excess) Covered Payroll	\$\frac{\$0}{\$3,623,898}	\$\frac{\$0}{\$3,566,991}	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$\frac{\$0}{\$3,041,818}
Contributions as a Percentage of Covered Payroll	23.08%	20.83%	19.11%	19.22%	18.14%
	FYE 2016	FYE 2015	FYE 2014	FYE 2013	FYE 2012
Actuarially Determined Contribution Contributions in Relation to the	\$ 526,805	\$ 592,643	\$ 532,882	\$ 442,870	\$ 410,797
Actuarially Determined Contribution	526,805	592,643	532,882	442,870	410,797
Contribution Deficiency/(Excess)	\$ 0	\$ 0	\$ 0	\$ 0	<u>\$ 0</u>
Covered Payroll	\$2,836,498	\$2,642,752	\$2,507,162	\$2,448,734	n/a
Contributions as a Percentage of Covered Payroll	18.57%	22.43%	21.25%	18.09%	n/a



SECTION V – GASB 67 REPORTING INFORMATION

The notes below summarize the key methods and assumptions used to determine the ADC for FYE 2021.

Notes to Schedule

Valuation Date 7/1/2019

Timing Actuarially determined contribution rates are calculated in the

actuarial valuation one year prior to the beginning of the plan year

Key Methods and Assumptions Used to Determine Contribution Rates:

Actuarial cost method Entry Age

Asset valuation method 5-year smoothed market

Amortization method Benefit changes made prior to July 1, 2014 are amortized over closed

20-year periods as a level percentage of payroll.

The UAL as of July 1, 2013 not attributable to benefit changes was amortized over a closed 19-year period starting July 1, 2014. Assumption changes and experience gains and losses are amortized over a closed 20-year period as a level percentage of payroll. Increases in the UAL due to Supplemental COLAs are

amortized over a closed 5-year period.

Discount rate 7.40% Amortization growth rate 3.50% Price inflation 2.75%

Salary increases 3.50% plus merit component based on employee classification

and years of service

Mortality For healthy annuitants, the sex distinct 2009 CalPERS healthy annuitant

mortality table, adjusted 1.014 for females and 0.909 for males.

For active members, the sex distinct 2009 CalPERS employee mortality tables,

adjusted 0.918 for females and 0.948 for males.

Rates are projected generationally from the base year using a modified version

of the MP-2015 projection scale.

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2021 can be found in the July 1, 2019 actuarial valuation report.



SECTION VI – GASB 68 COLLECTIVE INFORMATION

We understand that all of the employers elected to use the 2014 measurement date for their initial reporting under GASB 68 on their June 30, 2015 reporting date. As a result, the schedules in this report are to be used for employer reporting as of June 30, 2022 reporting dates and the schedules from our prior report are to be used for employer reporting as of June 30, 2021.

Because the System is a cost-sharing multiple-employer pension plan, each employer participating in the System must reflect a portion of the collective Net Pension Liability, Pension Expense, and Deferred Outflows and Inflows in their financial statements. This section develops the collective amounts that are allocated to participating employers.

The table below summarizes the current balances of collective deferred outflows and deferred inflows of resources along with the net recognition over the next five years.

Schedule of Collective Deferred In	VI-1 nflows and	Outflows of	Resou	ırces
	O	Deferred Outflows of Resources	I	Deferred Inflows of Resources
Differences between expected and actual experience	\$	237,392	\$	8,478
Changes in assumptions		174,901		453,833
Net difference between projected and actual earnings	on			
pension plan investments		0		5,615,805
Total	\$	412,293	\$	6,078,116
expense as follows:		ources will be reco	ognized	in pension
•			ognized	in pension
expense as follows:	June 30:	(1,451,554) (1,304,817)	ognized	in pension
expense as follows:	June 30: 2022	(1,451,554)	ognized	in pension
expense as follows:	June 30: 2022 2023	(1,451,554) (1,304,817)	ognized	in pension
Amounts reported as deferred outflows and deferred is expense as follows: Measurement year ended of the second of	June 30: 2022 2023 2024	(1,451,554) (1,304,817) (1,348,392)	ognized	in pension

Amounts in Thousands

The impact of experience gains or losses and assumption changes on the TPL are recognized in expense over the average expected remaining service life of all active and inactive members of the System. As of the beginning of the measurement period, this recognition period was 5 years.



SECTION VI – GASB 68 COLLECTIVE INFORMATION

The tables below and on the next page provide details on the deferred outflows and inflows of resources, including remaining balances and the amounts recognized in the current and following four years.

			F	Rec	cognition	of	Table VI Experienc			an	d Losses					
Experience Year	Recognition Period	Total Amount	1	BOY EOY Remaining Remaining Amount Amount			Reporting Year 2021 2022 2023 2024								2025	
2021	5.0	\$	136,097	\$	136,097	\$	108,878	\$	27,219	\$	27,219	\$	27,219	\$	27,219	\$ 27,221
2020	5.0		205,869		164,695		123,521		41,174		41,174		41,174		41,173	0
2019	5.0		12,484		7,490		4,993		2,497		2,497		2,496		0	0
2018	5.0		(42,382)		(16,954)		(8,478)		(8,476)		(8,478)		0		0	0
2017	5.0		57,911		11,583		0		11,583		0		0		0	0
Deferred Outfl	ows				319,865		237,392		82,473		70,890		70,889		68,392	27,221
Deferred (Inflo	ows)				(16,954)		(8,478)		(8,476)		(8,478)		0		0	0
Net Increase/(I	Decrease) in Pens	sion	Expense	\$	302,911	\$	228,914	\$	73,997	\$	62,412	\$	70,889	\$	68,392	\$ 27,221



SECTION VI – GASB 68 COLLECTIVE INFORMATION

				Recogni	tio	Table VI on of Assur		an	ıges					
Change Year	Recognition Period		Total Amount	BOY Temaining Amount	I	EOY Remaining Amount	2021		2022	Rep	oorting Year 2023	r	2024	2025
2021	5.0	\$	(479,435)	\$ (479,435)	\$	(383,548)	\$ (95,887)	\$	(95,887)	\$	(95,887)	\$	(95,887) \$	(95,887)
2020	5.0		(117,141)	(93,713)		(70,285)	(23,428)		(23,428)		(23,428)		(23,429)	0
2019	5.0		351,902	211,142		140,762	70,380		70,380		70,382		0	0
2018	5.0		170,699	68,279		34,139	34,140		34,139		0		0	0
2017	5.0		88,180	17,636		0	17,636		0		0		0	0
Deferred Outf	lows			297,057		174,901	122,156		104,519		70,382		0	0
Deferred (Infle	ows)			(573,148)	_	(453,833)	(119,315)		(119,315)		(119,315)		(119,316)	(95,887)
Net Increase/(Decrease) in Pen	sion	Expense	\$ (276,091)	\$	(278,932)	\$ 2,841	\$	(14,796)	\$	(48,933)	\$	(119,316) \$	(95,887)

Amounts in Thousands

	Table VI-2c Recognition of Investment (Gains) and Losses													
Change Year	Recognition Period		Total Amount	I	BOY Remaining Amount	1	EOY Remaining Amount	2021	2022	Reporting Yea	nr 2024	2025		
2021	5.0	\$	(7,461,978)	\$	(7,461,978)	\$	(5,969,582)	\$ (1,492,396)	\$ (1,492,396)	\$ (1,492,396)	\$ (1,492,396)	\$ (1,492,394)		
2020	5.0		974,636		779,709		584,782	194,927	194,927	194,927	194,928	0		
2019	5.0		(146,520)		(87,912)		(58,608)	(29,304)	(29,304)	(29,304)	0	0		
2018	5.0		(861,981)		(344,793)		(172,397)	(172,396)	(172,397)	0	0	0		
2017	5.0		(1,168,505)		(233,701)		0	(233,701)	0	0	0	0		
Deferred Outfl	lows			779,709		584,782	194,927	194,927	194,927	194,928	0			
Deferred (Inflo	ows)				(8,128,384)		(6,200,587)	(1,927,797)	(1,694,097)	(1,521,700)	(1,492,396)	(1,492,394)		
Net Increase/(Decrease) in Pens	sion	Expense	\$	(7,348,675)	\$	(5,615,805)	\$ (1,732,870)	\$ (1,499,170)	\$ (1,326,773)	\$ (1,297,468)	\$ (1,492,394)		



SECTION VI – GASB 68 COLLECTIVE INFORMATION

The collective annual pension expense recognized by the employers can be calculated two different ways. It is the change in the amounts reported on the employers' Statements of Net Position that relate to the System and are not attributable to employer contributions. That is, it is the change in collective NPL plus the changes in collective deferred outflows and inflows plus participating employer contributions.

Alternatively, annual pension expense can be calculated by its individual components. While GASB does not require or suggest the organization of the individual components shown in the table below, we believe it helps to understand the level and volatility of the collective pension expense.

Table Calculation of Collec	e VI-3 tive Pens	ion Expense		
		Measurement	Year	Ending
		2021		2020
Change in Net Pension Liability	\$	(7,995,869)	\$	934,160
Change in Deferred Outflows		181,835		75,699
Change in Deferred Inflows		5,967,449		(763,527)
Employer Contributions		836,559		742,985
Pension Expense	\$	(1,010,026)	\$	989,317
Pension Expense as % of Payroll		-27.87%		27.74%
Operating Expenses				
Service cost	\$	718,771	\$	704,637
Employee contributions		(409,398)		(400,649)
Administrative expenses		20,249		20,270
Total	\$	329,622	\$	324,258
Financing Expenses				
Interest cost	\$	2,302,075	\$	2,230,441
Expected return on assets		(1,985,691)		(1,940,918)
Total	\$	316,384	\$	289,523
Changes				
Benefit changes	\$	0	\$	0
Recognition of assumption changes		2,841		316,190
Recognition of liability gains and losses		73,997		22,923
Recognition of investment gains and losses		(1,732,870)		36,423
Total	\$	(1,656,032)	\$	375,536
Pension Expense	\$	(1,010,026)	\$	989,317



SECTION VI – GASB 68 COLLECTIVE INFORMATION

Operating expenses are items directly attributable to the operation of the plan during the measurement year. Service cost less employee contributions represents the increase in employer-provided benefits attributable to the year, and administrative expenses are the cost of operating the System for the year.

The financing expenses are the interest on the Total Pension Liability, including service cost, less the expected return on assets.

The recognition of changes will drive most of the volatility in pension expense from year to year. It includes any changes in benefits made during the year and the recognized amounts due to assumption changes, gains or losses on the TPL, and investment gains or losses.

The total collective pension expense decreased from the prior year by about \$2.0 billion. The recognition of changes also decreased by approximately \$2.0 billion, accounting for slightly more than the total change in pension expense.



SECTION VII – GASB 68 REPORTING INFORMATION FOR EMPLOYERS

Proportionate Shares

GASB 68 requires that the proportionate share for each employer be determined based on the "employer's projected long-term contribution effort to the pension ... as compared to the total projected long-term contribution effort of all employers ..." Proportionate shares for each participating employer in the System are determined based on the ratio of each participating employer's actual contribution to the System during the measurement year to the sum of the actual contributions for all participating employers. The table below shows the actual employer contributions and proportionate shares for each participating employer for the current and prior measurement years.

Determina	tion		ole VII-1 oyers' Propor	tion	ate Share	,									
June 30, 2021 June 30, 2020															
	Employer Proportionate Employer Proportionate														
Employer	Co	ntribution	Share	Co	ntribution	Share									
City and County	\$	791,737	94.6421%	\$	701,306	94.3903%									
Trial Courts		8,033	0.9602%		7,573	1.0193%									
Unified School Disctrict		25,105	3.0010%		23,514	3.1648%									
Community College District		11,684	1.3967%		10,592	1.4256%									
Total	\$	836,559	100.0000%	\$	742,985	100.0000%									



SECTION VII – GASB 68 REPORTING INFORMATION FOR EMPLOYERS

The table below shows the proportionate share of the collective NPL (using three different discount rates), the collective deferred outflows, the collective deferred inflows, and the collective pension expense allocated to each participating employer as of June 30, 2021.

Schedul	e of Employer	s' Proportio	Table VII-2 nate Share of		mounts at Ju	ıne 30, 2021								
Share of Share of Proportionate Share of NPL Share of NPL Deferred Deferred Pension Employer Share @ 6.40% @ 7.40% @ 8.40% Outflows Inflows Expense														
City and County	94.6421%	1,630,565	(2,446,563)	(5,812,568)	390,203	5,752,457	(955,910)							
Trial Courts	0.9602%	16,543	(24,822)	(58,972)	3,958	58,362	(9,698)							
Unified School Disctrict	3.0010%	51,703	(77,578)	(184,310)	12,373	182,404	(30,311)							
Community College District	1.3967%	24,063	(36,106)	(85,780)	5,759	84,893	(14,107)							
Total	100.0000%	\$ 1,722,874	\$ (2,585,069)	\$ (6,141,630)	\$ 412,293	\$ 6,078,116	\$ (1,010,026)							

Amounts in Thousands

The proportionate share allocated to each individual employer will change on each measurement date. The net effect of the change in proportion on the share of the collective NPL, collective deferred outflows, and collective deferred inflows allocated to each employer becomes a deferred outflow or inflow for that employer and is recognized over the average future working life of the System's active and inactive members (5 years).

Similarly, the difference between each employer's actual contributions and the employer's proportionate share of collective employer contributions becomes a deferred outflow or inflow for that employer and is recognized over the average future working life of the System's active and inactive members (5 years). Because proportionate shares are determined based on each employer's actual contributions, there is no difference between the actual contributions and the proportionate share of collective contributions for each employer.



SECTION VII – GASB 68 REPORTING INFORMATION FOR EMPLOYERS

The table below shows the change in proportion and the impact of that change in proportion on the proportionate share of the collective NPL, collective deferred outflows, and collective deferred inflows. It also shows any contribution differences.

Sch	Table VII-3 Schedule of Employers' Changes in Proportion and Contribution Differences															
	Proportion	ate Shares		of Chang	ge in	Propor	tio	n			Coı	ntributions	S			
Employer	6/30/2020	6/30/2021		Pension iability		ferred utflows		ferred flows	Ne	t Effect		Actual	Pr	oportionate Share	Differe	nce
City and County	94.3903%	94.6421%	\$	13,625	\$	1,496	\$	(278)	\$	12,407	\$	791,737	\$	791,737	\$	0
Trial Courts	1.0193%	0.9602%		(3,198)		(351)		65		(2,912)		8,033		8,033		0
Unified School Disctrict	3.1648%	3.0010%		(8,863)		(973)		181		(8,071)		25,105		25,105		0
Community College District	1.4256%	1.3967%		(1,564)		(172)		32		(1,424)		11,684		11,684		0
Total	100.0000%	100.0000%	\$	0	\$	0	\$	0	\$	0	\$	836,559	\$	836,559	\$	0



SECTION VII – GASB 68 REPORTING INFORMATION FOR EMPLOYERS

The table below shows the reconciliation of deferred outflows and inflows due to proportion changes for each participating employer from the prior measurement date to the current measurement date.

Recon	Table VII-4 Reconciliation of Deferred Outflows and Inflows Due to Proportion Change															
					Deferre Current	d I	nflows									
Employer	6/.	30/2020		ear Net Effect	Re	cognition	6/.	30/2021	6	/30/2020	Y	ear Net Effect	Re	ecognition	6/30	0/2021
City and County	\$	11,104	\$	12,407	\$	5,474	\$	18,037	\$	(1,278)	\$	0	\$	(1,278)	\$	0
Trial Courts		0		0		0		0		(7,575)		(2,912)		(3,436)		(7,051)
Unified School Disctrict								943		(464)		(8,071)		(1,730)		(6,805)
Community College District	1,280 0					911		369		(5,811)		(1,424)		(1,742)		(5,493)
Total	\$	15,128	\$	12,407	\$	8,186	\$	19,349	\$	(15,128)	\$	(12,407)	\$	(8,186)	\$ (19,349)



SECTION VII - GASB 68 REPORTING INFORMATION FOR EMPLOYERS

The table below shows the reconciliation of deferred outflows and inflows due to differences between actual contributions and the proportionate share of contributions for each participating employer from the prior measurement date to the current measurement date.

Reconcili	Table VII-5 Reconciliation of Deferred Outflows and Inflows Due to Contribution Differences															
	Deferred Outflows												d Inf	lows		
Current Year											Cı	ırrent				
											7	Year				
Employer 6/30/2020 Difference Recognition 6/30/20)/2021	6/30	/2020	Diff	erence	Rec	ognition	6/30/2	2021		
City and County	\$	0	\$	0	\$	0	\$	0	\$	0	\$	0	\$	0	\$	0
Trial Courts		0		0		0		0		0		0		0		0
Unified School Disctrict		0		0		0		0		0		0		0		0
Community College District		0		0		0		0		0		0		0		0
Total	\$	0	\$	0	\$	0	\$	0	\$	0	\$	0	\$	0	\$	0



SECTION VII – GASB 68 REPORTING INFORMATION FOR EMPLOYERS

The table below summarizes the deferred outflows allocated to each employer for experience, assumption changes, investment returns, proportion changes, and contribution differences.

	Schedule of E	mp			e VII-6 red Outflo	ws	at June 30	, 2	021	
Employer	Proportionate Shares	E	xperience	A	Assumption Changes]	Investment Return		Proportion Change	ontribution Difference
City and County	94.6421%	\$	224,673	\$	165,530	\$	0	\$	18,037	\$ 0
Trial Courts	0.9602%		2,279		1,679		0		0	0
Unified School Disctrict	3.0010%		7,124		5,249		0		943	0
Community College District	1.3967%		3,316		2,443		0		369	0
Total	100.0000%	\$	237,392	\$	174,901	\$	0	\$	19,349	\$ 0

Amounts in Thousands

The table below summarizes the deferred inflows allocated to each employer for experience, assumption changes, investment returns, proportion changes, and contribution differences.

	Table VII-7 Schedule of Employers' Deferred Inflows at June 30, 2021														
Employer	Proportionate Shares		Experience		Assumption Changes		Investment Return		Proportion Change	(Contribution Difference				
City and County	94.6421%	\$	8,025	\$	429,516	\$	5,314,916	\$	0	\$	0				
Trial Courts	0.9602%		81		4,358		53,923		7,051		0				
Unified School Disctrict	3.0010%		254		13,620		168,530		6,805		0				
Community College District	1.3967%		118		6,339		78,436		5,493		0				
Total	100.0000%	\$	8,478	\$	453,833	\$	5,615,805	\$	19,349	\$	0				



SECTION VII – GASB 68 REPORTING INFORMATION FOR EMPLOYERS

The table below shows the net amount of deferred outflows and inflows to be recognized in each of the next five years and the total thereafter.

Schedule o	Table VII-8 Schedule of Employers' Recognition of Deferred Outflows and Inflows at June 30, 2021														
Recognition for Measurement Year Ending															
Employer		2022	2023	2024	2025	2026	Thereafter								
City and County	\$	(1,368,305) \$	(1,229,759) \$	(1,271,216) \$	(1,474,938) \$	0	\$	0							
Trial Courts		(17,061)	(14,395)	(14,425)	(15,573)	0		0							
Unified School Disctrict		(44,541)	(40,695)	(42,195)	(48,462)	0		0							
Community College District		(21,647)	(19,968)	(20,556)	(22,087)	0		0							
Total	\$	(1,451,554) \$	(1,304,817) \$	(1,348,392) \$	(1,561,060) \$	0	\$	0							



SECTION VII – GASB 68 REPORTING INFORMATION FOR EMPLOYERS

The table below shows the calculation of the pension expense for each participating employer. The calculation is shown first as the sum of the proportionate share of the collective pension expense and the amounts recognized for proportion changes and contribution differences. The right side of the table shows the calculation as the sum of the changes in NPL and deferred amounts not attributable to contributions.

Schedule	of	Employ	ers	s' Pens	ion Expe		Table VII-9 e for the N) Measuremer	ıt Year E	Inding Jui	ne (30, 2021		
Collective Employer Change in Employer														Employer
		Pension	Ch	ange in	Contribution		Pension	Net Pension	Deferred	Deferred	I	Employer		Pension
Employer]	Expense	Pro	portion	Difference		Expense	Liability	Outflows	Inflows	Co	ntributions]	Expense
City and County	\$	(955,910)	\$	4,196	\$ 0	\$	(951,714)	\$ (7,553,833)	\$ 163,663	\$ 5,646,720	\$	791,737	\$	(951,713)
Trial Courts		(9,698)		(3,436)	0		(13,134)	(79,974)	2,097	56,710		8,033		(13,134)
Unified School Disctrict		(30,311)		71	0		(30,240)	(248,820)	8,231	185,243		25,105		(30,241)
Community College District		(14,107)		(831)	0		(14,938)	(113,242)	3,623	82,997		11,684		(14,938)
Total	\$	(1,010,026)	\$	0	\$ 0	\$	(1,010,026)	\$ (7,995,869)	\$ 177,614	\$ 5,971,670	\$	836,559	\$ ((1,010,026)

Amounts in Thousands

The table below summarizes the information needed for each employer's schedules of required supplementary information.

	Scheo	lul	e of Emp	oloyei		ble VII-1 SI Info	0 rmation a	t J	June 30,	20	21		
Employer	Proportionate Shares		oportionate	Cow Payı		Share of NPL as a % of Payroll	Plan Fiduciary Net Position as % of TPL		ontractually Required ontribution		Actual ntributions	tribution ficiency	Contributions as a % of Payroll
City and County	94.6421%	\$	(2,446,563)	\$ 3,43	34,713	-71.2%	107.8%	\$	791,737	\$	791,737	\$ 0	23.1%
Trial Courts	0.9602%		(24,822)	3	35,782	-69.4%	107.8%	\$	8,033		8,033	0	22.5%
Unified School Disctrict	3.0010%		(77,578)	10	3,692	-74.8%	107.8%	\$	25,105		25,105	0	24.2%
Community College District	1.3967%		(36,106)	4	9,711	-72.6%	107.8%	\$	11,684		11,684	0	23.5%
Total	100.0000%	\$	(2,585,069)	\$ 3,623	3,898	-71.3%	107.8%	\$	836,559	\$	836,559	\$ 0	23.1%



APPENDIX A – MEMBERSHIP INFORMATION

A	ctive	Member Data - B	y G	roup	
		July 1, 2020		July 1, 2019	% Change
Total					
Count		34,521		34,202	0.9%
Average Current Age		46.7		46.6	0.1
Average Service		10.6		10.6	0.0
Annual Pensionable Earnings	\$	3,583,266,358	\$	3,378,714,262	6.1%
Average Pensionable Earnings	\$	103,800	\$	98,787	5.1%
Police					
Count		2,534		2,471	2.5%
Average Current Age		40.8		40.6	0.2
Average Service		12.3		12.1	0.2
Annual Pensionable Earnings	\$	336,710,528	\$	312,984,374	7.6%
Average Pensionable Earnings	\$	132,877	\$	126,663	4.9%
Fire					
Count		1,660		1,675	-0.9%
Average Current Age		43.9		43.7	0.2
Average Service		13.4		13.3	0.1
Annual Pensionable Earnings	\$	230,760,703	\$	222,140,313	3.9%
Average Pensionable Earnings	\$	139,012	\$	132,621	4.8%
Miscellaneous					
Count		30,327		30,056	0.9%
Average Current Age		47.4		47.3	0.1
Average Service		10.4		10.3	0.1
Annual Pensionable Earnings	\$	3,015,795,127	\$	2,843,589,575	6.1%
Average Pensionable Earnings	\$	99,443	\$	94,610	5.1%



APPENDIX A – MEMBERSHIP INFORMATION

Non-Active Member Data - Total System										
	July 1, 2020		July 1, 2019 ²	Change						
	23,519		22,934	2.6%						
	71.3		71.1	0.2						
\$	53,684	\$	52,422	2.4%						
	2,523		2,529	-0.2%						
	69.5		69.3	0.2						
\$	69,852	\$	67,078	4.1%						
	4,086		4,027	1.5%						
	77.8		77.5	0.3						
\$	36,504	\$	35,149	3.9%						
	30,128		29,490	2.2%						
	72.1		71.8	0.3						
\$	52,708	\$	51,320	2.7%						
	10,549		9,955	6.0%						
	47.3		47.1	0.2						
est \$	315,944,777	\$	294,295,619	7.4%						
terest \$	29,950	\$	29,563	1.3%						
	\$ \$ \$ \$ est \$	July 1, 2020 23,519 71.3 \$ 53,684 2,523 69.5 \$ 69,852 4,086 77.8 \$ 36,504 30,128 72.1 \$ 52,708 10,549 47.3 est \$ 315,944,777	July 1, 2020 23,519 71.3 \$ 53,684 \$ 2,523 69.5 \$ 69,852 \$ 4,086 77.8 \$ 36,504 \$ 30,128 72.1 \$ 52,708 \$ 10,549 47.3 est \$ 315,944,777 \$	July 1, 2020 July 1, 2019² 23,519 22,934 71.3 71.1 \$ 53,684 \$ 52,422 2,523 2,529 69.5 69.3 \$ 69,852 \$ 67,078 4,086 4,027 77.8 77.5 \$ 36,504 \$ 35,149 30,128 29,490 72.1 71.8 \$ 52,708 \$ 51,320 10,549 9,955 47.3 47.1 est \$ 315,944,777 \$ 294,295,619						

Benefits provided in June 30 valuation data; there was no Basic COLA effective July 1, 2020 for the Old Safety COLA groups. If applicable, limited by Section 415(b) of the Internal Revenue Code.

Please refer to the July 1, 2020 actuarial valuation report for a more complete summary of the data.



² Member data as of July 1, 2019 has been restated to reflect combining records for 1,284 Retired and 4 Disabled members who have both a Safety and Miscellaneous benefit.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

A summary of the actuarial assumptions and methods used to calculate the Total Pension Liability as of June 30, 2021 is provided below, including any assumptions that differ from those used in the July 1, 2020 actuarial valuation. Please refer to the July 1, 2020 actuarial valuation report for a complete description of all other assumptions.

Key Actuarial Assumptions

Expected

Return on Assets 7.40 percent net of investment expenses

Municipal Bond Yield 2.21 percent as of June 30, 2020 2.16 percent as of June 30, 2021

Bond Buyer 20-Bond GO Index, June 25, 2020 and June 24, 2021

Discount Rate

7.40 percent

Administrative

0.60 percent of payroll

Expenses

Basic COLA:

Old	Old Police &	Old Police &	Old Police &
Miscellaneous	Fire,	Fire, Charters	Fire, Charters
and all New	Pre 7/1/75	A8.595 and	A8.559 and
Plans	Retirements	A8.596	A8.585
2.00%	1.90%	2.50%	



APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Supplemental COLA: Before 96 or After Prop C Group

	J	une 30, 2020	J	June 30, 2021						
July 1,	Old Miscellaneous and all New Plans	Old Police & Fire, pre 7/1/75 Retirements	Old Police & Fire Charter A8.595 and A8.596	Old Miscellaneous and all New Plans	Old Police & Fire, pre 7/1/75 Retirements	Old Police & Fire Charter A8.595 and A8.596				
2021	0.11%	0.07%	0.03%	1.50%	1.60%	1.00%				
2022	0.19%	0.13%	0.05%	0.80%	0.80%	0.50%				
2023	0.23%	0.15%	0.06%	0.70%	0.80%	0.50%				
2024	0.27%	0.18%	0.07%	0.70%	0.70%	0.50%				
2025	0.29%	0.19%	0.08%	0.70%	0.70%	0.40%				
2026	0.30%	0.20%	0.08%	0.60%	0.70%	0.40%				
2027	0.32%	0.21%	0.08%	0.60%	0.70%	0.40%				
2028	0.33%	0.22%	0.09%	0.60%	0.60%	0.40%				
2029	0.34%	0.23%	0.09%	0.60%	0.60%	0.40%				
2030	0.35%	0.23%	0.09%	0.60%	0.60%	0.40%				
2031	0.36%	0.24%	0.10%	0.60%	0.60%	0.40%				
2032	0.37%	0.24%	0.10%	0.50%	0.60%	0.40%				
2033	0.37%	0.25%	0.10%	0.50%	0.60%	0.40%				
2034+	0.38%	0.25%	0.10%	0.50%	0.60%	0.40%				

Supplemental COLA: After 96 and Before Prop C:

June 30, 2020: Old Misc. and New Plans – 0.0% for July 1, 2020; 0.75% thereafter

Old Safety Plans – 0.0% for July 1, 2020; After 2020 – ½ x (3.5% less

assumed Basic COLA), not less than zero

June 30, 2021: Old Misc. and New Plans – 1.5% for July 1, 2021; 0.75% thereafter

Old Safety Plans – For July 1, 2021, (3.5% less assumed Basic COLA), not less than zero; After $2021 - \frac{1}{2}x$ (3.5% less assumed Basic COLA),

not less than zero

Changes Since Last GASB 67/68 Valuation

Wage Inflation was changed from 3.50% for all years to bargained increases through July 1, 2022 followed by 3.25% compounded annually thereafter.

Consumer Price Inflation was changed from 2.75% to 2.50% compounded annually.

Supplemental COLA assumptions were updated.

Details of all demographic assumption changes can be found in the demographic experience study report for the period covering July 1, 2014 to June 30, 2019. The assumptions were adopted at the December 9, 2020 Board meeting.



APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Contribution Allocation Procedure

The contribution allocation procedure primarily consists of an actuarial cost method, an asset smoothing method, and an amortization method as described below.

1. Actuarial Cost Method

The Entry Age actuarial cost method was used for active employees, whereby the normal cost is computed as the level annual percentage of pay required to fund the retirement benefits between each member's date of hire and assumed retirement. The Actuarial Liability is the difference between the present value of future benefits and the present value of future normal costs. The normal cost and Actuarial Liability are calculated on an individual basis. The sum of the individual amounts is the normal cost and Actuarial Liability for the System.

2. Asset Valuation Method

For the purpose of determining contribution rates, an Actuarial Value of Assets is used that dampens the volatility in the Market Value of Assets, resulting in a smoother pattern of contribution rates.

The Actuarial Value of Assets is calculated by recognizing 20% of each of the past five years of actual investment earnings compared to the expected earnings on the Actuarial Value of Assets.

3. Amortization Method

The Unfunded Actuarial Liability is the difference between the Actuarial Liability and the Actuarial Value of Assets. Effective with the July 1, 2014 actuarial valuation, the Board adopted changes to the amortization methods. The amortization is based on level percent of pay, assuming pay increases 3.25% a year.

Source	Method
Charter amendments	15-year closed for active members and 5-year closed for inactive members effective July 1, 2014 20-year closed for amortizations established prior to July 1, 2014
Actuarial gains and losses, assumption, and method changes	20-year closed Remaining portion of 2013 amortization is re-amortized over 19 years as of July 1, 2014 2015 assumption change amortization is phased in over 5 years
Supplemental COLAs	5-year closed Remaining portion of 2013 amortization is re-amortized over 19 years as of July 1, 2014



APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

4. Contributions

The normal cost for members as of the valuation date, increased with interest to the middle of the year, is divided by the total salary expected to be paid during the year (including new entrants) to determine the total normal cost rate. The employer's normal cost rate is the total normal cost rate less the employee contribution rate.

The total employer contribution rate is the sum of the employer normal cost rate, the administrative expense rate, and the UAL rate. The UAL payments are adjusted for interest from the valuation date to the date of expected payment in the following fiscal year. The UAL rate is determined by dividing the UAL payments by the total expected payroll for the fiscal year (including new entrants).



APPENDIX C – SUMMARY OF PLAN PROVISIONS

The plan provisions are the same as those summarized in the July 1, 2020 actuarial valuation report.



APPENDIX D – DETERMINATION OF DISCOUNT RATE

FYE	Projected Beginning Fiduciary Net Position	Co E	Normal Cost ontribution - mployer and Employee	Co	UAL ontribution	rojected Admin Expenses	Projected Benefit Payments]	Projected Investment Earnings	1	Projected Ending Fiduciary Net Position	"Funded" Portion of Benefit Payments	,	'Unfunded'' Portion of Benefit Payments
2022	\$ 35,673,834	\$	639,130	\$	540,833	\$ 20,508	\$ 1,759,270	\$	2,612,635	\$	37,686,654	\$ 1,759,270	\$	0
2023	37,686,654		623,149		410,631	20,021	1,855,790		2,752,484		39,597,108	1,855,790		0
2024	39,597,108		605,388		211,900	19,506	1,953,744		2,882,147		41,323,293	1,953,744		0
2025	41,323,293		586,720		60,869	18,974	2,053,154		2,999,818		42,898,571	2,053,154		0
2026	42,898,571		566,977		(64,592)	18,417	2,157,295		3,107,026		44,332,270	2,157,295		0
2027	44,332,270		546,501		(179,319)	17,839	2,263,300		3,204,048		45,622,362	2,263,300		0
2028	45,622,362		526,436		(245,875)	17,265	2,367,858		3,292,265		46,810,065	2,367,858		0
2029	46,810,065		506,518		(268,167)	16,691	2,471,333		3,374,563		47,934,955	2,471,333		0
2030	47,934,955		486,412		(399,623)	16,107	2,574,750		3,448,241		48,879,127	2,574,750		0
2031	48,879,127		466,308		(422,473)	15,519	2,678,085		3,512,496		49,741,853	2,678,085		0
2032	49,741,853		446,133		(435,153)	14,925	2,781,251		3,571,097		50,527,755	2,781,251		0
2033	50,527,755		425,995		(425,995)	14,333	2,883,499		3,624,845		51,254,769	2,883,499		0
2034	51,254,769		405,800		(405,800)	13,739	2,984,179		3,674,696		51,931,547	2,984,179		0
2035	51,931,547		385,879		(385,879)	13,150	3,082,811		3,720,911		52,556,496	3,082,811		0
2036	52,556,496		365,812		(365,812)	12,553	3,178,915		3,763,390		53,128,417	3,178,915		0
2037	53,128,417		345,366		(345,366)	11,941	3,274,826		3,801,952		53,643,603	3,274,826		0
2038	53,643,603		324,046		(324,046)	11,300	3,371,017		3,836,307		54,097,593	3,371,017		0
2039	54,097,593		301,498		(301,498)	10,619	3,467,139		3,866,137		54,485,972	3,467,139		0
2040	54,485,972		278,526		(278,526)	9,918	3,561,105		3,891,198		54,806,148	3,561,105		0
2041	54,806,148		255,406		(255,406)	9,204	3,652,766		3,911,303		55,055,480	3,652,766		0
2042	55,055,480		232,151		(232,151)	8,480	3,740,427		3,926,324		55,232,895	3,740,427		0
2043	55,232,895		208,543		(208,543)	7,741	3,826,240		3,936,096		55,335,010	3,826,240		0
2044	55,335,010		184,786		(184,786)	6,992	3,909,410		3,940,400		55,359,008	3,909,410		0
2045	55,359,008		161,588		(161,588)	6,251	3,986,472		3,939,165		55,305,450	3,986,472		0
2046	55,305,450		139,252		(139,252)	5,522	4,058,051		3,932,406		55,174,283	4,058,051		0



APPENDIX D – DETERMINATION OF DISCOUNT RATE

FYE	Projected Beginning Fiduciary Net Position	Con En	ormal Cost ntribution - nployer and Employee	Co	UAL ontribution	Projec Adm Expen	in	Projected Benefit Payments	Projected Investment Earnings	ľ	Projected Ending Fiduciary Net Position	"Funded" Portion of Benefit Payments	,	'Unfunded'' Portion of Benefit Payments
2047	\$ 55,174,283	\$	118,192	\$	(118,192)	\$ 4	,817	\$ 4,122,161	\$ 3,920,198	\$	54,967,503	\$ 4,122,161	\$	0
2048	54,967,503		98,552		(98,552)	4	,139	4,178,030	3,902,718		54,688,051	4,178,030		0
2049	54,688,051		80,770		(80,770)	3	,506	4,224,107	3,880,245		54,340,682	4,224,107		0
2050	54,340,682		65,241		(65,241)	2	,930	4,258,199	3,853,216		53,932,770	4,258,199		0
2051	53,932,770		52,129		(52,129)	2	,419	4,279,323	3,822,216		53,473,244	4,279,323		0
2052	53,473,244		41,408		(41,408)	1	,978	4,287,013	3,787,924		52,972,178	4,287,013		0
2053	52,972,178		32,717		(32,717)	1	,603	4,281,786	3,751,065		52,439,854	4,281,786		0
2054	52,439,854		25,582		(25,582)	1	,282	4,265,536	3,712,325		51,885,362	4,265,536		0
2055	51,885,362		19,789		(19,789)	1	,011	4,238,747	3,672,359		51,317,964	4,238,747		0
2056	51,317,964		15,129		(15,129)		786	4,201,855	3,631,834		50,747,157	4,201,855		0
2057	50,747,157		11,365		(11,365)		600	4,156,000	3,591,409		50,181,966	4,156,000		0
2058	50,181,966		8,393		(8,393)		449	4,101,519	3,551,739		49,631,737	4,101,519		0
2059	49,631,737		6,112		(6,112)		332	4,038,888	3,513,495		49,106,013	4,038,888		0
2060	49,106,013		4,362		(4,362)		240	3,968,984	3,477,351		48,614,140	3,968,984		0
2061	48,614,140		3,036		(3,036)		169	3,892,460	3,443,972		48,165,484	3,892,460		0
2062	48,165,484		2,084		(2,084)		117	3,809,663	3,414,038		47,769,741	3,809,663		0
2063	47,769,741		1,404		(1,404)		80	3,721,266	3,388,240		47,436,636	3,721,266		0
2064	47,436,636		917		(917)		53	3,627,831	3,367,275		47,176,026	3,627,831		0
2065	47,176,026		590		(590)		34	3,529,654	3,351,861		46,998,199	3,529,654		0
2066	46,998,199		375		(375)		22	3,427,121	3,342,745		46,913,800	3,427,121		0
2067	46,913,800		229		(229)		14	3,320,602	3,340,699		46,933,884	3,320,602		0
2068	46,933,884		139		(139)		9	3,210,279	3,346,536		47,070,133	3,210,279		0
2069	47,070,133		80		(80)		5	3,096,447	3,361,106		47,334,786	3,096,447		0
2070	47,334,786		41		(41)		3	2,979,312	3,385,309		47,740,781	2,979,312		0
2071	47,740,781		21		(21)		1	2,859,065	3,420,093		48,301,808	2,859,065		0



APPENDIX D – DETERMINATION OF DISCOUNT RATE

FYE	Projected Beginning Fiduciary Net Position	Normal Cost Contribution - Employer and Employee	UAL Contribution	Projected Admin Expenses	Projected Benefit Payments	Projected Investment Earnings	Projected Ending Fiduciary Net Position	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments
2072	\$ 48,301,808	\$ 10	\$ (10)	\$ 1	\$ 2,735,977	\$ 3,466,462	\$ 49,032,293	\$ 2,735,977	\$ 0
2073	49,032,293	4	(4)	0	2,610,313	3,525,473	49,947,452	2,610,313	0
2074	49,947,452	1	(1)	0	2,482,378	3,598,239	51,063,312	2,482,378	0
2075	51,063,312	0	(0)	0	2,352,515	3,685,933	52,396,730	2,352,515	0
2076	52,396,730	0	(0)	0	2,221,104	3,789,787	53,965,413	2,221,104	0
2077	53,965,413	0	0	0	2,088,581	3,911,094	55,787,926	2,088,581	0
2078	55,787,926	0	0	0	1,955,436	4,051,210	57,883,700	1,955,436	0
2079	57,883,700	0	0	0	1,822,211	4,211,549	60,273,038	1,822,211	0
2080	60,273,038	0	0	0	1,689,507	4,393,593	62,977,123	1,689,507	0
2081	62,977,123	0	0	0	1,557,984	4,598,881	66,018,019	1,557,984	0
2082	66,018,019	0	0	0	1,428,340	4,829,018	69,418,698	1,428,340	0
2083	69,418,698	0	0	0	1,301,312	5,085,677	73,203,063	1,301,312	0
2084	73,203,063	0	0	0	1,177,667	5,370,595	77,395,990	1,177,667	0
2085	77,395,990	0	0	0	1,058,173	5,685,583	82,023,400	1,058,173	0
2086	82,023,400	0	0	0	943,581	6,032,529	87,112,348	943,581	0
2087	87,112,348	0	0	0	834,608	6,413,408	92,691,147	834,608	0
2088	92,691,147	0	0	0	731,893	6,830,289	98,789,543	731,893	0
2089	98,789,543	0	0	0	635,987	7,285,351	105,438,907	635,987	0
2090	105,438,907	0	0	0	547,334	7,780,899	112,672,473	547,334	0
2091	112,672,473	0	0	0	466,237	8,319,381	120,525,616	466,237	0
2092	120,525,616	0	0	0	392,864	8,903,406	129,036,159	392,864	0
2093	129,036,159	0	0	0	327,248	9,535,773	138,244,685	327,248	0
2094	138,244,685	0	0	0	269,290	10,219,489	148,194,884	269,290	0
2095	148,194,884	0	0	0	218,762	10,957,796	158,933,919	218,762	0
2096	158,933,919	0	0	0	175,315	11,754,198	170,512,802	175,315	0



APPENDIX D – DETERMINATION OF DISCOUNT RATE

FYE	Projected Beginning Fiduciary Net Position	Normal Cost Contribution - Employer and Employee	UAL Contribution	Projected Admin Expenses	Projected Benefit Payments	Projected Investment Earnings	Projected Ending Fiduciary Net Position	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments
2097	\$ 170,512,802	\$ 0	\$ 0	\$ 0	\$ 138,500	\$ 12,612,487	\$ 182,986,788	\$ 138,500	\$ 0
2098	182,986,788	0	0	0	107,781	13,536,773	196,415,781	107,781	0
2099	196,415,781	0	0	0	82,562	14,531,513	210,864,731	82,562	0
2100	210,864,731	0	0	0	62,210	15,601,537	226,404,059	62,210	0
2101	226,404,059	0	0	0	46,078	16,752,084	243,110,065	46,078	0
2102	243,110,065	0	0	0	33,528	17,988,823	261,065,360	33,528	0
2103	261,065,360	0	0	0	23,956	19,317,892	280,359,296	23,956	0
2104	280,359,296	0	0	0	16,805	20,745,925	301,088,416	16,805	0
2105	301,088,416	0	0	0	11,572	22,280,087	323,356,931	11,572	0
2106	323,356,931	0	0	0	7,827	23,928,104	347,277,208	7,827	0
2107	347,277,208	0	0	0	5,206	25,698,308	372,970,310	5,206	0
2108	372,970,310	0	0	0	3,412	27,599,668	400,566,567	3,412	0
2109	400,566,567	0	0	0	2,210	29,641,839	430,206,195	2,210	0
2110	430,206,195	0	0	0	1,422	31,835,202	462,039,976	1,422	0
2111	462,039,976	0	0	0	914	34,190,922	496,229,985	914	0
2112	496,229,985	0	0	0	591	36,720,996	532,950,389	591	0
2113	532,950,389	0	0	0	387	39,438,314	572,388,316	387	0
2114	572,388,316	0	0	0	258	42,356,725	614,744,783	258	0
2115	614,744,783	0	0	0	175	45,491,107	660,235,715	175	0
2116	660,235,715	0	0	0	121	48,857,438	709,093,032	121	0
2117	709,093,032	0	0	0	85	52,472,881	761,565,828	85	0
2118	761,565,828	0	0	0	60	56,355,869	817,921,637	60	0
2119	817,921,637	0	0	0	42	60,526,200	878,447,795	42	0
2120	878,447,795	0	0	0	29	65,005,136	943,452,902	29	0
2121	943,452,902	0	0	0	19	69,815,514	1,013,268,397	19	0



APPENDIX D – DETERMINATION OF DISCOUNT RATE

FYE	Projected Beginning Fiduciary Net Position	Normal Cost Contribution - Employer and Employee	UAL Contribution	Projected Admin Expenses	Projected Benefit Payments	Projected Investment Earnings	Projected Ending Fiduciary Net Position	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments
2122	\$ 1,013,268,397	\$ 0	\$ 0	\$ 0	\$ 0	\$ 74,981,861	\$ 1,088,250,258	\$ 0	\$ 0
2123	1,088,250,258	0	0	0	0	80,530,519	1,168,780,777	0	0
2124	1,168,780,777	0	0	0	0	86,489,778	1,255,270,555	0	0
2125	1,255,270,555	0	0	0	0	92,890,021	1,348,160,576	0	0
2126	1,348,160,576	0	0	0	0	99,763,883	1,447,924,459	0	0
2127	1,447,924,459	0	0	0	0	107,146,410	1,555,070,869	0	0
2128	1,555,070,869	0	0	0	0	115,075,244	1,670,146,113	0	0
2129	1,670,146,113	0	0	0	0	123,590,812	1,793,736,925	0	0
							Discount Rate:	7.40%	2.16%
							Present Value:	\$ 38,826,575	\$ 0
						To	otal Present Value:		\$ 38,826,575
						GA	SB Discount Rate:		7.40%



APPENDIX E – GLOSSARY OF TERMS

1. Actuarially Determined Contribution

A target or recommended contribution for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

2. Actuarial Valuation Date

The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

3. Deferred Inflow of Resources

An acquisition of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience gains on the Total Pension Liability, assumption changes reducing the Total Pension Liability, or investment gains that are recognized in future reporting periods.

4. Deferred Outflow of Resources

A consumption of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience losses on the Total Pension Liability, assumption changes increasing the Total Pension Liability, or investment losses that are recognized in future reporting periods.

5. Entry Age Actuarial Cost Method

The actuarial cost method required for GASB 67 and 68 calculations. Under this method, the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this actuarial present value allocated to a valuation year is called the service cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future service costs is called the Total Pension Liability.

6. Measurement Date

The date as of which the Total Pension Liability and Plan Fiduciary Net Position are measured. The Total Pension Liability may be projected from the actuarial valuation date to the measurement date. The measurement date must be the same as the reporting date for the plan.



APPENDIX E – GLOSSARY OF TERMS

7. Net Pension Liability

The liability of employers and nonemployer contributing entities to employees for benefits provided through a defined benefit pension plan. It is calculated as the Total Pension Liability less the Plan Fiduciary Net Position.

8. Plan Fiduciary Net Position

The fair or Market Value of Assets.

9. Reporting Date

The last day of the plan or employer's fiscal year.

10. Service Cost

The portion of the actuarial present value of projected benefit payments that is attributed to the current period of employee service in conformity with the requirements of GASB 67 and 68. The service cost is the normal cost calculated under the Entry Age actuarial cost method.

11. Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of GASB 67 and 68. The Total Pension Liability is the Actuarial Liability calculated under the Entry Age actuarial cost method.



