



City and County of San Francisco Employees' Retirement System

GASB 67/68 Report as of June 30, 2019

Produced by Cheiron

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**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
GASB 67 AND 68 REPORTING FOR JUNE 30, 2019 MEASUREMENT DATE**

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, 2019,
- 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, 2019. Measurements are based on the fair value of assets as of June 30, 2019 and the Total Pension Liability as of the valuation date, June 30, 2018, updated to June 30, 2019.

The beginning and end of year measurements are based on different discount rates and 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	
		6/30/2019	6/30/2018
Net Pension Liability	\$	4,476,640	\$ 4,282,707
Deferred Outflows		(669,827)	(702,507)
Deferred Inflows		874,194	809,598
Net Impact on Statement of Net Position	\$	4,681,007	\$ 4,389,798
Pension Expense (\$ Amount)	\$	936,265	\$ 519,806
Pension Expense (% of Payroll)		27.74%	16.14%

Amounts in Thousands

As of the end of the measurement year, the System and its participating employers in aggregate report a Net Pension Liability of \$4,476,640,000, Deferred Inflows of \$874,194,000, and

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SECTION I – BOARD SUMMARY

Deferred Outflows of \$669,827,000. Consequently, the net impact on the aggregate of participating employers' Statements of Net Position due to the System is \$4,681,007,000 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) increased by about \$193 million since the prior measurement date, primarily due to assumption changes (\$352 million) offset by investment gains (\$147 million). The assumption changes consisted of a reduction in the discount rate from 7.5% to 7.4% and an increased likelihood of future Supplemental COLAs. There were also experience losses on the Total Pension Liability (\$12 million) that increased the NPL. The investment gains are recognized over five years, and the actuarial gains 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, 2019, the collective annual pension expense is \$936,265,000 or 27.74% of covered payroll. This amount is not related to participating employers' contributions to the System (\$645,056,000), but instead represents the change in the net impact on participating employers' Statements of Net Position plus employer contributions (\$4,681,007,000 – \$4,389,798,000 + \$645,056,000). The collective pension expense of \$936,265,000 is larger than the collective expense for the prior year of \$519,806,000. 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.

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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.

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.

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
Consulting Actuary



Anne D. Harper, FSA, EA, MAAA
Principal Consulting Actuary

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SECTION III – DETERMINATION OF DISCOUNT RATE

The discount rate used to measure the Total Pension Liability was 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. Employer contributions were assumed to be made in accordance with the contribution policy in effect for the July 1, 2018 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. The full amortization payment for the 2015 assumption changes is phased in over a period of 5 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 3.5% 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 at the beginning of the year 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.

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SECTION III – DETERMINATION OF DISCOUNT RATE

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, 2019 for the probability and amount of Supplemental COLA for each future year. We have assumed that a partial Supplemental COLA will be paid to all Post 97 Retirees effective July 1, 2019. The table below 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.

Assumed Supplemental COLA for Members with a 2.00% Basic COLA		
July 1,	96 – Prop C	Before 96 or After Prop C
2019	1.00%	0.000%
2021	0.75%	0.270%
2023	0.75%	0.340%
2025	0.75%	0.360%
2027	0.75%	0.370%
2030+	0.75%	0.375%

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 projected future benefit payments for current members for all future years. 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 3.50% to the extent they are not available. The single equivalent rate used to determine the Total Pension Liability as of June 30, 2019 rounded to four decimals is 7.40%.

Appendix D shows the details of this calculation.

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SECTION IV – PROJECTION OF TOTAL PENSION LIABILITY

The Total Pension Liability (TPL) at the end of the measurement year, June 30, 2019, is measured as of a valuation date of June 30, 2018 and projected to June 30, 2019. Because the TPL shown in the prior report was measured as of June 30, 2017 and projected to June 30, 2018, it will not match the amounts measured as of June 30, 2018 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.

Table IV-1			
Projection of Collective TPL from Valuation to Measurement Date			
Discount Rate	6.40%	7.40%	8.40%
Collective Total Pension Liability, 6/30/2018			
Actives	\$ 13,142,478	\$ 11,152,659	\$ 9,544,301
Inactives	\$ 19,889,825	\$ 18,051,540	\$ 16,497,884
Total	\$ 33,032,303	\$ 29,204,199	\$ 26,042,185
Service Cost	\$ 857,872	\$ 675,065	\$ 537,171
Benefit Payments	\$ 1,456,682	\$ 1,456,682	\$ 1,456,682
Interest	\$ 2,095,203	\$ 2,132,707	\$ 2,149,703
Collective Total Pension Liability, 6/30/2019	\$ 34,528,696	\$ 30,555,289	\$ 27,272,377

Amounts in Thousands

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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)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 6/30/2018	\$ 28,840,673	\$ 24,557,966	\$ 4,282,707
Changes for the year:			
Service cost	675,065		675,065
Interest	2,131,847		2,131,847
Changes of benefits	0		0
Differences between expected and actual experience	12,484		12,484
Changes of assumptions	351,902		351,902
Contributions - employer		645,056	(645,056)
Contributions - member		380,980	(380,980)
Net investment income		1,970,312	(1,970,312)
Benefit payments	(1,456,682)	(1,456,682)	0
Administrative expense		(18,983)	18,983
Net changes	<u>\$ 1,714,616</u>	<u>\$ 1,520,683</u>	<u>\$ 193,933</u>
Balances at 6/30/2019	<u>\$ 30,555,289</u>	<u>\$ 26,078,649</u>	<u>\$ 4,476,640</u>

During the measurement year, the collective NPL increased by approximately \$193 million. The service cost and interest cost increased the collective NPL by approximately \$2,807 million while contributions and investment income offset by administrative expenses decreased the collective NPL by approximately \$2,977 million.

There were actuarial experience gains and assumption changes during the year of approximately \$12 million and \$352 million, respectively.

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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 NPL to Changes in Discount Rate			
	1% Decrease 6.40%	Discount Rate 7.40%	1% Increase 8.40%
Total Pension Liability	\$ 34,528,696	\$ 30,555,289	\$ 27,272,377
Plan Fiduciary Net Position	<u>26,078,649</u>	<u>26,078,649</u>	<u>26,078,649</u>
Collective Net Pension Liability	<u>\$ 8,450,047</u>	<u>\$ 4,476,640</u>	<u>\$ 1,193,728</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	75.5%	85.3%	95.6%

Amounts in Thousands

A one percent decrease in the discount rate increases the TPL by approximately 13% and increases the collective NPL by approximately 89%. A one percent increase in the discount rate decreases the TPL by approximately 11% and decreases the collective NPL by approximately 73%.

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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 schedule below shows the changes in collective NPL and related ratios required by GASB for the six years since implementation.

Table V-3						
Schedule of Changes in Collective Net Pension Liability and Related Ratios						
	FYE 2019	FYE 2018	FYE 2017	FYE 2016	FYE 2015	FYE 2014
<u>Total Pension Liability</u>						
Service cost	\$ 675,065	\$ 632,118	\$ 644,277	\$ 567,576	\$ 523,644	\$ 509,200
Interest	2,131,847	2,041,110	1,924,206	1,669,996	1,621,582	1,542,266
Changes of benefit terms	0	0	0	1,293,714	0	0
Differences between expected and actual experience	12,484	(42,382)	57,911	(119,270)	(197,981)	0
Changes of assumptions	351,902	170,699	88,180	1,087,309	216,845	(73,315)
Benefit payments, including refunds of member contributions	(1,456,682)	(1,364,587)	(1,278,140)	(1,256,146)	(1,131,030)	(1,072,526)
Net change in total pension liability	\$ 1,714,616	\$ 1,436,958	\$ 1,436,434	\$ 3,243,179	\$ 1,033,060	\$ 905,625
Total pension liability - beginning	\$ 28,840,673	\$ 27,403,715	\$ 25,967,281	\$ 22,724,102	\$ 21,691,042	20,785,417
Total pension liability - ending	\$ 30,555,289	\$ 28,840,673	\$ 27,403,715	\$ 25,967,281	\$ 22,724,102	\$ 21,691,042
<u>Plan fiduciary net position</u>						
Contributions - employer	\$ 645,056	\$ 619,067	\$ 551,810	\$ 526,805	\$ 592,643	\$ 532,882
Contributions - member	380,980	364,696	316,844	322,764	301,682	289,020
Net investment income	1,970,312	2,549,674	2,683,467	150,190	763,429	3,175,431
Benefit payments, including refunds of member contributions	(1,456,682)	(1,364,587)	(1,278,140)	(1,256,146)	(1,131,030)	(1,072,526)
Administrative expense	(18,983)	(21,234)	(18,134)	(17,179)	(19,262)	(15,745)
Net change in plan fiduciary net position	\$ 1,520,683	\$ 2,147,616	\$ 2,255,847	\$ (273,566)	\$ 507,462	\$ 2,909,062
Plan fiduciary net position - beginning	\$ 24,557,966	\$ 22,410,350	\$ 20,154,503	\$ 20,428,069	\$ 19,920,607	17,011,545
Plan fiduciary net position - ending	\$ 26,078,649	\$ 24,557,966	\$ 22,410,350	\$ 20,154,503	\$ 20,428,069	\$ 19,920,607
Net pension liability - ending	\$ 4,476,640	\$ 4,282,707	\$ 4,993,365	\$ 5,812,778	\$ 2,296,033	\$ 1,770,435
Plan fiduciary net position as a percentage of the total pension liability	85.35%	85.15%	81.78%	77.61%	89.90%	91.84%
Covered payroll	\$ 3,375,447	\$ 3,221,544	\$ 3,041,818	\$ 2,836,498	\$ 2,642,752	\$ 2,507,162
Net pension liability as a percentage of covered payroll	132.62%	132.94%	164.16%	204.93%	86.88%	70.62%

Amounts in Thousands

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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.

Table V-4					
Schedule of Collective Employer Contributions					
	FYE 2019	FYE 2018	FYE 2017	FYE 2016	FYE 2015
Actuarially Determined Contribution Contributions in Relation to the Actuarially Determined Contribution	\$ 645,056	\$ 619,067	\$ 551,810	\$ 526,805	\$ 592,643
	<u>645,056</u>	<u>619,067</u>	<u>551,810</u>	<u>526,805</u>	<u>592,643</u>
Contribution Deficiency/(Excess)	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>
Covered Payroll	\$ 3,375,447	\$3,221,544	\$3,041,818	\$2,836,498	\$2,642,752
Contributions as a Percentage of Covered Payroll	19.11%	19.22%	18.14%	18.57%	22.43%
	FYE 2014	FYE 2013	FYE 2012	FYE 2011	FYE 2010
Actuarially Determined Contribution Contributions in Relation to the Actuarially Determined Contribution	\$ 532,882	\$ 442,870	\$ 410,797	\$ 308,823	\$ 223,614
	<u>532,882</u>	<u>442,870</u>	<u>410,797</u>	<u>308,823</u>	<u>223,614</u>
Contribution Deficiency/(Excess)	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>
Covered Payroll	\$ 2,507,162	\$2,448,734	n/a	n/a	n/a
Contributions as a Percentage of Covered Payroll	21.25%	18.09%	n/a	n/a	n/a

Amounts in Thousands

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SECTION V – GASB 67 REPORTING INFORMATION

The notes below summarize the key methods and assumptions used to determine the ADC for FYE 2019.

Notes to Schedule

Valuation Date	7/1/2017
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	7.50%
Amortization growth rate	3.50%
Price inflation	3.00%
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, 2019 can be found in the July 1, 2017 actuarial valuation report.

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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, 2020 reporting dates and the schedules from our prior report are to be used for employer reporting as of June 30, 2019.

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 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 measurement date, this recognition period was 5.0 years.

During the year, there was an experience loss of approximately \$12 million. Approximately \$2 million of that loss was recognized as an increase in collective pension expense in the current year (and identical amounts will be recognized in each of the next four years). Unrecognized increases in the TPL from prior experience losses were approximately \$35 million, of which \$11 million was recognized as an increase in collective pension expense in the current year. The combination of unrecognized current and prior experience losses results in a collective deferred outflow of \$33 million as of June 30, 2019.

Unrecognized experience gains from prior periods were approximately \$121 million, of which \$72 million was recognized as a reduction in collective pension expense in the current year, resulting in a collective deferred inflow of \$49 million as of June 30, 2019.

Assumption changes since the last measurement date increased the TPL by \$352 million. Approximately \$70 million of that increase was recognized as an increase in pension expense in the current year and an identical amount will be recognized in each of the next four years. Unrecognized increases to the TPL from prior period assumption changes were approximately \$668 million, of which \$313 million was recognized as an increase in collective pension expense in the current year. The combination of the unrecognized current and prior assumption changes that increased the TPL results in a collective deferred outflow of resources as of June 30, 2019 of approximately \$637 million.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment gain of approximately \$147 million. Approximately \$29 million of that gain was recognized in the current year and an identical amount will be recognized in each of the next four years. The combination of unrecognized net investment gains and losses from prior periods was a gain of approximately \$688 million. However, due to the timing of prior gains and losses, approximately \$19 million was recognized as an increase in collective pension expense in the current year. The combination of unrecognized investment gains this year and unrecognized net investment gains and losses from prior periods results in a collective deferred inflow of resources as of June 30, 2019 of approximately \$825 million.

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SECTION VI – GASB 68 COLLECTIVE INFORMATION

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.

Table VI-1		
Schedule of Collective Deferred Inflows and Outflows of Resources		
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 33,152	\$ 49,284
Changes in assumptions	636,675	0
Net difference between projected and actual earnings on pension plan investments	0	824,910
Total	<u>\$ 669,827</u>	<u>\$ 874,194</u>
Amounts reported as deferred outflows and deferred inflows of resources will be recognized in pension expense as follows:		
Measurement year ended June 30:		
2020	162,863	
2021	(307,641)	
2022	(103,163)	
2023	43,574	
2024	0	
Thereafter	\$ 0	

Amounts in Thousands

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 on the following page, we believe it helps to understand the level and volatility of the collective pension expense.

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SECTION VI – GASB 68 COLLECTIVE INFORMATION

Table VI-2 Calculation of Collective Pension Expense		
	Measurement Year Ending	
	2019	2018
Change in Net Pension Liability	\$ 193,933	\$ (710,658)
Change in Deferred Outflows	32,680	153,490
Change in Deferred Inflows	64,596	457,907
Employer Contributions	<u>645,056</u>	<u>619,067</u>
Pension Expense	\$ 936,265	\$ 519,806
Pension Expense as % of Payroll	27.74%	16.14%
Operating Expenses		
Service cost	\$ 675,065	\$ 632,118
Employee contributions	(380,980)	(364,696)
Administrative expenses	<u>18,983</u>	<u>21,234</u>
Total	\$ 313,068	\$ 288,656
Financing Expenses		
Interest cost	\$ 2,131,847	\$ 2,041,110
Expected return on assets	<u>(1,823,792)</u>	<u>(1,687,693)</u>
Total	\$ 308,055	\$ 353,417
Changes		
Benefit changes	\$ 0	\$ 0
Recognition of assumption changes	382,987	297,944
Recognition of liability gains and losses	(57,847)	(60,344)
Recognition of investment gains and losses	<u>(9,998)</u>	<u>(359,867)</u>
Total	\$ 315,142	\$ (122,267)
Pension Expense	\$ 936,265	\$ 519,806

Amounts in Thousands

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.

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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SECTION VI – GASB 68 COLLECTIVE INFORMATION

The total collective pension expense increased from the prior year by about \$416 million. The recognition of changes increased by approximately \$437 million, accounting for more than the total change in pension expense.

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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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.

Table VII-1 Determination of Employers' Proportionate Share					
Employer	June 30, 2019		June 30, 2018		
	Employer Contribution	Proportionate Share	Employer Contribution	Proportionate Share	
City and County	\$ 607,183	94.1288%	\$ 582,568	94.1042%	
Trial Courts	7,192	1.1149%	7,176	1.1592%	
Unified School District	20,495	3.1772%	19,533	3.1552%	
Community College District	10,186	1.5791%	9,790	1.5814%	
Total	\$ 645,056	100.0000%	\$ 619,067	100.0000%	

Amounts in Thousands

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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, 2019.

Table VII-2 Schedule of Employers' Proportionate Share of Collective Amounts at June 30, 2019							
Employer	Proportionate Share	Share of NPL @ 6.40%	Share of NPL @ 7.40%	Share of NPL @ 8.40%	Share of Deferred Outflows	Share of Deferred Inflows	Pension Expense
City and County	94.1288%	\$ 7,953,927	\$ 4,213,807	\$ 1,123,642	\$ 630,500	\$ 822,869	\$ 881,295
Trial Courts	1.1149%	94,210	49,910	13,309	7,468	9,746	10,438
Unified School District	3.1772%	268,475	142,232	37,927	21,281	27,775	29,747
Community College District	1.5791%	133,435	70,691	18,850	10,578	13,804	14,785
Total	100.0000%	\$ 8,450,047	\$ 4,476,640	\$ 1,193,728	\$ 669,827	\$ 874,194	\$ 936,265

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.

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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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.

Table VII-3 Schedule of Employers' Changes in Proportion and Contribution Differences									
Employer	Proportionate Shares		Impact of Change in Proportion				Contributions		
	6/30/2018	6/30/2019	Net Pension Liability	Deferred Outflows	Deferred Inflows	Net Effect	Actual	Proportionate Share	Difference
City and County	94.1042%	94.1288%	\$ 1,054	\$ 172	\$ (200)	\$ 1,082	\$ 607,183	\$ 607,183	\$ 0
Trial Courts	1.1592%	1.1149%	(1,897)	(311)	359	(1,945)	7,192	7,192	0
Unified School District	3.1552%	3.1772%	942	155	(178)	965	20,495	20,495	0
Community College District	1.5814%	1.5791%	(99)	(16)	19	(102)	10,186	10,186	0
Total	100.0000%	100.0000%	\$ 0	\$ 0	\$ 0	\$ 0	\$ 645,056	\$ 645,056	\$ 0

Amounts in Thousands

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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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.

**Table VII-4
Reconciliation of Deferred Outflows and Inflows Due to Proportion Change**

Employer	Deferred Outflows				Deferred Inflows			
	6/30/2018	Current Year Net Effect	Recognition	6/30/2019	6/30/2018	Current Year Net Effect	Recognition	6/30/2019
City and County	\$ 5,730	\$ 1,082	\$ 3,155	\$ 3,657	\$ (3,836)	\$ 0	\$ (1,279)	\$ (2,557)
Trial Courts	0	0	0	0	(7,292)	(1,945)	(2,924)	(6,313)
Unified School District	6,340	965	2,758	4,547	(1,708)	0	(855)	(853)
Community College District	3,104	0	912	2,192	(2,338)	(102)	(1,767)	(673)
Total	\$ 15,174	\$ 2,047	\$ 6,825	\$ 10,396	\$ (15,174)	\$ (2,047)	\$ (6,825)	\$ (10,396)

Amounts in Thousands

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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SECTION VII – GASB 68 REPORTING INFORMATION FOR EMPLOYERS

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

**Table VII-5
Reconciliation of Deferred Outflows and Inflows Due to Contribution Differences**

Employer	Deferred Outflows				Deferred Inflows			
	6/30/2018	Current Year Difference	Recognition	6/30/2019	6/30/2018	Current Year Difference	Recognition	6/30/2019
City and County	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Trial Courts	0	0	0	0	0	0	0	0
Unified School District	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

Amounts in Thousands

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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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.

Table VII-6										
Schedule of Employers' Deferred Outflows at June 30, 2019										
Employer	Proportionate Shares	Experience	Assumption Changes	Investment Return	Proportion Change	Contribution Difference				
City and County	94.1288%	\$ 31,205	\$ 599,295	\$ 0	\$ 3,657	\$ 0				
Trial Courts	1.1149%	370	7,098	0	0	0				
Unified School District	3.1772%	1,053	20,228	0	4,547	0				
Community College District	1.5791%	524	10,054	0	2,192	0				
Total	100.0000%	\$ 33,152	\$ 636,675	\$ 0	\$ 10,396	\$ 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, 2019										
Employer	Proportionate Shares	Experience	Assumption Changes	Investment Return	Proportion Change	Contribution Difference				
City and County	94.1288%	\$ 46,391	\$ 0	\$ 776,478	\$ 2,557	\$ 0				
Trial Courts	1.1149%	549	0	9,197	6,313	0				
Unified School District	3.1772%	1,566	0	26,209	853	0				
Community College District	1.5791%	778	0	13,026	673	0				
Total	100.0000%	\$ 49,284	\$ 0	\$ 824,910	\$ 10,396	\$ 0				

Amounts in Thousands

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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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.

Table VII-8									
Schedule of Employers' Recognition of Deferred Outflows and Inflows at June 30, 2019									
Employer	Recognition for Measurement Year Ending								
	2020	2021	2022	2023	2024	Thereafter			
City and County	\$ 154,369	\$ (290,312)	\$ (96,559)	\$ 41,234	\$ 0	\$ 0			
Trial Courts	(503)	(5,389)	(2,796)	97	0	0			
Unified School District	6,124	(7,973)	(2,528)	1,577	0	0			
Community College District	2,873	(3,967)	(1,280)	666	0	0			
Total	\$ 162,863	\$ (307,641)	\$ (103,163)	\$ 43,574	\$ 0	\$ 0			

Amounts in Thousands

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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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.

Table VII-9 Schedule of Employers' Pension Expense for the Measurement Year Ending June 30, 2019									
Employer	Collective			Employer Pension Expense	Change in Employer			Employer Contributions	Employer Pension Expense
	Pension Expense	Change in Proportion	Contribution Difference		Net Pension Liability	Deferred Outflows	Deferred Inflows		
City and County	\$ 881,295	\$ 1,876	\$ 0	\$ 883,171	\$ 183,602	\$ 32,662	\$ 59,724	\$ 607,183	\$ 883,171
Trial Courts	10,438	(2,924)	0	7,514	264	676	(618)	7,192	7,514
Unified School District	29,747	1,903	0	31,650	7,102	2,677	1,376	20,495	31,650
Community College District	14,785	(855)	0	13,930	2,965	1,443	(664)	10,186	13,930
Total	\$ 936,265	\$ 0	\$ 0	\$ 936,265	\$ 193,933	\$ 37,458	\$ 59,818	\$ 645,056	\$ 936,265

Amounts in Thousands

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

Table VII-10 Schedule of Employers' RSI Information at June 30, 2019									
Employer	Proportionate Shares	Proportionate Share of NPL	Covered Payroll	NPL as a Fiduciary Contractually			Actual Contributions	Contribution Deficiency	Contributions as a % of Payroll
				% of Payroll	Net Position	Required Contribution			
City and County	94.1288%	\$ 4,213,807	\$ 3,186,405	132.2%	85.3%	\$ 607,183	\$ 607,183	\$ 0	19.1%
Trial Courts	1.1149%	49,910	39,449	126.5%	85.3%	7,192	7,192	0	18.2%
Unified School District	3.1772%	142,232	99,520	142.9%	85.3%	20,495	20,495	0	20.6%
Community College District	1.5791%	70,691	50,074	141.2%	85.3%	10,186	10,186	0	20.3%
Total	100.0000%	\$ 4,476,640	\$ 3,375,447	132.6%	85.3%	\$ 645,056	\$ 645,056	\$ 0	19.1%

Amounts in Thousands

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

Active Member Data - By Group			
	July 1, 2018	July 1, 2017	% Change
Total			
Count	33,946	33,447	1.5%
Average Current Age	46.6	46.7	-0.1
Average Service	10.6	10.8	-0.2
Annual Pensionable Earnings	\$ 3,235,979,830	\$ 3,102,672,358	4.3%
Average Pensionable Earnings	\$ 95,327	\$ 92,764	2.8%
Police			
Count	2,394	2,293	4.4%
Average Current Age	40.6	41.0	-0.4
Average Service	12.0	12.4	-0.4
Annual Pensionable Earnings	\$ 291,499,014	\$ 276,596,552	5.4%
Average Pensionable Earnings	\$ 121,762	\$ 120,626	0.9%
Fire			
Count	1,642	1,609	2.1%
Average Current Age	44.0	44.3	-0.3
Average Service	13.4	13.8	-0.4
Annual Pensionable Earnings	\$ 210,854,043	\$ 204,443,368	3.1%
Average Pensionable Earnings	\$ 128,413	\$ 127,062	1.1%
Miscellaneous			
Count	29,910	29,545	1.2%
Average Current Age	47.3	47.3	0.0
Average Service	10.4	10.5	-0.1
Annual Pensionable Earnings	\$ 2,733,626,773	\$ 2,621,632,438	4.3%
Average Pensionable Earnings	\$ 91,395	\$ 88,734	3.0%

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

Non-Active Member Data - Total System			
	July 1, 2018	July 1, 2017	Change
Retired			
Count	23,404	22,587	3.6%
Average Age	70.5	70.4	0.1
Total Annual Benefit*	\$ 1,124,937,875	\$ 1,045,974,914	7.5%
Average Annual Benefit	\$ 48,066	\$ 46,309	3.8%
Disabled			
Count	2,554	2,572	-0.7%
Average Age	69.1	68.8	0.3
Total Annual Benefit*	\$ 164,031,034	\$ 157,954,899	3.8%
Average Annual Benefit	\$ 64,225	\$ 61,413	4.6%
Beneficiaries			
Count	4,007	3,968	1.0%
Average Age	77.4	77.3	0.1
Total Annual Benefit*	\$ 135,355,732	\$ 128,500,450	5.3%
Average Annual Benefit	\$ 33,780	\$ 32,384	4.3%
Payee Total			
Count	29,965	29,127	2.9%
Average Age	71.3	71.2	0.1
Total Annual Benefit*	\$ 1,424,324,641	\$ 1,332,430,263	6.9%
Average Annual Benefit	\$ 47,533	\$ 45,746	3.9%
Inactives			
Count	9,183	8,420	9.1%
Average Age	47.1	47.3	-0.2
Total Contribution Balance with Interest	\$ 255,588,224	\$ 228,851,427	11.7%
Average Contribution Balance with Interest	\$ 27,833	\$ 27,180	2.4%

* Benefits provided in June 30 valuation data, plus estimated Basic and Supplemental COLA effective July 1, 2018.

If applicable, limited by Section 415(b) of the Internal Revenue Code.

Please refer to the July 1, 2018 actuarial valuation report for a more complete summary of the data.

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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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, 2019 is provided below, including any assumptions that differ from those used in the July 1, 2018 actuarial valuation. Please refer to the July 1, 2018 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 3.87 percent as of June 30, 2018
3.50 percent as of June 30, 2019
Bond Buyer 20-Bond GO Index, June 28, 2018 and June 27, 2019

Discount Rate 7.40 percent

Administrative Expenses 0.60 percent of payroll

Basic COLA:

Old Miscellaneous and all New Plans	Old Police & Fire, Pre 7/1/75 Retirements	Old Police & Fire, Charters A8.595 and A8.596	Old Police & Fire, Charters A8.559 and A8.585
2.00%	2.50%	3.10%	4.20%

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Supplemental COLA: Before 96 or After Prop C Group

July 1,	June 30, 2018			June 30, 2019		
	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
2019	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
2020	0.170%	0.120%	0.050%	0.200%	0.140%	0.050%
2021	0.240%	0.160%	0.060%	0.270%	0.180%	0.070%
2022	0.290%	0.190%	0.080%	0.310%	0.210%	0.080%
2023	0.330%	0.220%	0.090%	0.340%	0.230%	0.090%
2024	0.330%	0.220%	0.090%	0.350%	0.240%	0.090%
2025	0.350%	0.230%	0.090%	0.360%	0.240%	0.100%
2026	0.360%	0.240%	0.100%	0.370%	0.240%	0.100%
2027	0.360%	0.240%	0.100%	0.370%	0.250%	0.100%
2028	0.360%	0.240%	0.100%	0.370%	0.250%	0.100%
2029	0.370%	0.250%	0.100%	0.375%	0.250%	0.100%
2030	0.375%	0.250%	0.100%	0.375%	0.250%	0.100%
2031+	0.375%	0.250%	0.100%	0.375%	0.250%	0.100%

Supplemental COLA: After 96 and Before Prop C:

June 30, 2018: Old Misc. and New Plans – 1.5% for July 1, 2018; 0.75% thereafter
Old Safety Plans – For July 1, 2018, (3.5% less assumed Basic COLA),
not less than zero; After 2017 – ½ x (3.5% less assumed Basic COLA),
not less than zero

June 30, 2019: Old Misc. and New Plans – 1.0% for July 1, 2019; 0.75% thereafter
Old Safety Plans – For July 1, 2019, (3.0% less assumed Basic COLA),
not less than zero; After 2019 – ½ x (3.5% less assumed Basic COLA),
not less than zero

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 3.5% 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

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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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).

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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APPENDIX C – SUMMARY OF PLAN PROVISIONS

The plan provisions are the same as those summarized in the July 1, 2018 actuarial valuation report.

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
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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
2020	\$ 26,078,649	\$ 604,709	\$ 506,935	\$ 20,181	\$ 1,593,507	\$ 1,906,656	\$ 27,483,261	\$ 1,593,507	\$ 0
2021	27,483,261	587,263	574,162	19,567	1,685,111	2,008,817	28,948,826	1,685,111	0
2022	28,948,826	569,525	566,093	18,968	1,777,660	2,112,704	30,400,520	1,777,660	0
2023	30,400,520	551,500	512,450	18,387	1,872,068	2,213,824	31,787,839	1,872,068	0
2024	31,787,839	532,969	431,060	17,809	1,968,927	2,309,057	33,074,188	1,968,927	0
2025	33,074,188	513,446	408,285	17,228	2,068,221	2,398,816	34,309,286	2,068,221	0
2026	34,309,286	493,066	419,887	16,625	2,168,288	2,485,970	35,523,296	2,168,288	0
2027	35,523,296	472,089	427,608	15,996	2,268,328	2,571,404	36,710,073	2,268,328	0
2028	36,710,073	451,517	438,374	15,368	2,366,027	2,655,040	37,873,608	2,366,027	0
2029	37,873,608	431,503	449,662	14,747	2,461,482	2,737,084	39,015,627	2,461,482	0
2030	39,015,627	411,875	341,651	14,137	2,555,157	2,813,283	40,013,141	2,555,157	0
2031	40,013,141	392,283	338,587	13,527	2,646,933	2,882,680	40,966,232	2,646,933	0
2032	40,966,232	372,987	342,404	12,912	2,736,368	2,949,142	41,881,486	2,736,368	0
2033	41,881,486	353,688	345,229	12,301	2,822,998	3,012,879	42,757,983	2,822,998	0
2034	42,757,983	334,306	346,692	11,685	2,906,240	3,073,829	43,594,885	2,906,240	0
2035	43,594,885	315,194	(93,737)	11,078	2,985,532	3,115,956	43,935,688	2,985,532	0
2036	43,935,688	296,032	(33,127)	10,471	3,060,970	3,139,729	44,266,881	3,060,970	0
2037	44,266,881	276,471	(111,488)	9,854	3,134,227	3,157,813	44,445,595	3,134,227	0
2038	44,445,595	255,827	(139,507)	9,222	3,206,444	3,166,446	44,512,694	3,206,444	0
2039	44,512,694	234,291	(107,946)	8,551	3,276,635	3,169,032	44,522,886	3,276,635	0
2040	44,522,886	212,932	(110,401)	7,867	3,341,048	3,166,406	44,442,908	3,341,048	0
2041	44,442,908	191,833	(118,184)	7,202	3,400,346	3,157,124	44,266,133	3,400,346	0
2042	44,266,133	170,861	(115,185)	6,534	3,453,113	3,141,334	44,003,496	3,453,113	0
2043	44,003,496	149,673	(57,851)	5,864	3,501,953	3,121,311	43,708,813	3,501,953	0
2044	43,708,813	128,763	(22,944)	5,188	3,545,129	3,098,335	43,362,651	3,545,129	0

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
GASB 67 AND 68 REPORTING FOR JUNE 30, 2019 MEASUREMENT DATE**

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
2045	\$ 43,362,651	\$ 108,928	\$ (13,168)	\$ 4,531	\$ 3,579,597	\$ 3,071,019	\$ 42,945,302	\$ 3,579,597	\$ 0
2046	42,945,302	90,019	(22,496)	3,897	3,607,212	3,038,043	42,439,760	3,607,212	0
2047	42,439,760	72,258	(41,516)	3,278	3,627,193	2,998,531	41,838,562	3,627,193	0
2048	41,838,562	56,275	(56,275)	2,697	3,637,374	2,952,545	41,151,036	3,637,374	0
2049	41,151,036	42,797	(42,797)	2,163	3,635,316	2,901,769	40,415,325	3,635,316	0
2050	40,415,325	32,121	(32,121)	1,713	3,619,949	2,847,948	39,641,611	3,619,949	0
2051	39,641,611	23,875	(23,875)	1,340	3,592,100	2,791,805	38,839,977	3,592,100	0
2052	38,839,977	17,594	(17,594)	1,036	3,553,264	2,734,026	38,019,703	3,553,264	0
2053	38,019,703	12,823	(12,823)	793	3,505,272	2,675,227	37,188,865	3,505,272	0
2054	37,188,865	9,229	(9,229)	597	3,449,527	2,615,950	36,354,691	3,449,527	0
2055	36,354,691	6,548	(6,548)	440	3,386,966	2,556,693	35,523,978	3,386,966	0
2056	35,523,978	4,547	(4,547)	320	3,318,725	2,497,915	34,702,848	3,318,725	0
2057	34,702,848	3,104	(3,104)	226	3,245,330	2,440,049	33,897,341	3,245,330	0
2058	33,897,341	2,059	(2,059)	157	3,167,687	2,383,505	33,113,003	3,167,687	0
2059	33,113,003	1,310	(1,310)	105	3,086,363	2,328,672	32,355,206	3,086,363	0
2060	32,355,206	823	(823)	68	3,001,581	2,275,939	31,629,496	3,001,581	0
2061	31,629,496	495	(495)	44	2,914,049	2,225,689	30,941,093	2,914,049	0
2062	30,941,093	279	(279)	27	2,824,087	2,178,295	30,295,273	2,824,087	0
2063	30,295,273	150	(150)	15	2,731,919	2,134,138	29,697,477	2,731,919	0
2064	29,697,477	75	(75)	9	2,637,833	2,093,611	29,153,247	2,637,833	0
2065	29,153,247	33	(33)	4	2,542,034	2,057,115	28,668,325	2,542,034	0
2066	28,668,325	13	(13)	2	2,444,673	2,025,070	28,248,720	2,444,673	0
2067	28,248,720	6	(6)	1	2,345,920	1,997,913	27,900,712	2,345,920	0
2068	27,900,712	2	(2)	0	2,245,973	1,976,101	27,630,840	2,245,973	0
2069	27,630,840	0	(0)	0	2,144,986	1,960,112	27,445,966	2,144,986	0

Amounts in Thousands

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
GASB 67 AND 68 REPORTING FOR JUNE 30, 2019 MEASUREMENT DATE**

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
2070	\$ 27,445,966	\$ 0	\$ (0)	\$ 0	\$ 2,043,112	\$ 1,950,448	\$ 27,353,301	\$ 2,043,112	\$ 0
2071	27,353,301	0	0	0	1,940,532	1,947,635	27,360,404	1,940,532	0
2072	27,360,404	0	0	0	1,837,434	1,952,225	27,475,196	1,837,434	0
2073	27,475,196	0	0	0	1,734,023	1,964,797	27,705,970	1,734,023	0
2074	27,705,970	0	0	0	1,630,538	1,985,955	28,061,386	1,630,538	0
2075	28,061,386	0	0	0	1,527,271	2,016,327	28,550,442	1,527,271	0
2076	28,550,442	0	0	0	1,424,544	2,056,567	29,182,466	1,424,544	0
2077	29,182,466	0	0	0	1,322,702	2,107,352	29,967,117	1,322,702	0
2078	29,967,117	0	0	0	1,222,120	2,169,382	30,914,378	1,222,120	0
2079	30,914,378	0	0	0	1,123,199	2,243,380	32,034,559	1,123,199	0
2080	32,034,559	0	0	0	1,026,357	2,330,091	33,338,293	1,026,357	0
2081	33,338,293	0	0	0	932,037	2,430,286	34,836,542	932,037	0
2082	34,836,542	0	0	0	840,677	2,544,759	36,540,623	840,677	0
2083	36,540,623	0	0	0	752,719	2,674,329	38,462,233	752,719	0
2084	38,462,233	0	0	0	668,629	2,819,843	40,613,447	668,629	0
2085	40,613,447	0	0	0	588,863	2,982,178	43,006,762	588,863	0
2086	43,006,762	0	0	0	513,841	3,162,241	45,655,162	513,841	0
2087	45,655,162	0	0	0	443,930	3,360,979	48,572,212	443,930	0
2088	48,572,212	0	0	0	379,439	3,579,384	51,772,157	379,439	0
2089	51,772,157	0	0	0	320,599	3,818,499	55,270,057	320,599	0
2090	55,270,057	0	0	0	267,540	4,079,436	59,081,954	267,540	0
2091	59,081,954	0	0	0	220,310	4,363,378	63,225,022	220,310	0
2092	63,225,022	0	0	0	178,847	4,671,600	67,717,775	178,847	0
2093	67,717,775	0	0	0	142,973	5,005,478	72,580,280	142,973	0
2094	72,580,280	0	0	0	112,409	5,366,509	77,834,379	112,409	0

Amounts in Thousands

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
GASB 67 AND 68 REPORTING FOR JUNE 30, 2019 MEASUREMENT DATE**

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
2095	\$ 77,834,379	\$ 0	\$ 0	\$ 0	\$ 86,798	\$ 5,756,322	\$ 83,503,904	\$ 86,798	\$ 0
2096	83,503,904	0	0	0	65,721	6,176,698	89,614,880	65,721	0
2097	89,614,880	0	0	0	48,715	6,629,580	96,195,746	48,715	0
2098	96,195,746	0	0	0	35,289	7,117,094	103,277,551	35,289	0
2099	103,277,551	0	0	0	24,936	7,641,556	110,894,171	24,936	0
2100	110,894,171	0	0	0	17,158	8,205,492	119,082,505	17,158	0
2101	119,082,505	0	0	0	11,485	8,811,653	127,882,673	11,485	0
2102	127,882,673	0	0	0	7,481	9,463,023	137,338,215	7,481	0
2103	137,338,215	0	0	0	4,750	10,162,841	147,496,306	4,750	0
2104	147,496,306	0	0	0	2,952	10,914,610	158,407,964	2,952	0
2105	158,407,964	0	0	0	1,814	11,722,118	170,128,268	1,814	0
2106	170,128,268	0	0	0	1,118	12,589,448	182,716,597	1,118	0
2107	182,716,597	0	0	0	707	13,521,000	196,236,890	707	0
2108	196,236,890	0	0	0	469	14,521,511	210,757,932	469	0
2109	210,757,932	0	0	0	331	15,596,074	226,353,675	331	0
2110	226,353,675	0	0	0	248	16,750,162	243,103,589	248	0
2111	243,103,589	0	0	0	195	17,989,658	261,093,052	195	0
2112	261,093,052	0	0	0	158	19,320,880	280,413,773	158	0
2113	280,413,773	0	0	0	129	20,750,614	301,164,259	129	0
2114	301,164,259	0	0	0	104	22,286,151	323,450,305	104	0
2115	323,450,305	0	0	0	84	23,935,319	347,385,541	84	0
2116	347,385,541	0	0	0	66	25,706,527	373,092,003	66	0
2117	373,092,003	0	0	0	50	27,608,806	400,700,759	50	0
2118	400,700,759	0	0	0	38	29,651,855	430,352,576	38	0
2119	430,352,576	0	0	0	27	31,846,090	462,198,639	27	0

Amounts in Thousands

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM
GASB 67 AND 68 REPORTING FOR JUNE 30, 2019 MEASUREMENT DATE**

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
2120	\$ 462,198,639	\$ 0	\$ 0	\$ 0	\$ 19	\$ 34,202,699	\$ 496,401,318	\$ 19	\$ 0
2121	496,401,318	0	0	0	12	36,733,697	533,135,003	12	0
2122	533,135,003	0	0	0	8	39,451,990	572,586,985	8	0
2123	572,586,985	0	0	0	4	42,371,437	614,958,418	4	0
2124	614,958,418	0	0	0	2	45,506,923	660,465,338	2	0
2125	660,465,338	0	0	0	1	48,874,435	709,339,772	1	0
2126	709,339,772	0	0	0	0	52,491,143	761,830,915	0	0
2127	761,830,915	0	0	0	0	56,375,488	818,206,403	0	0
Discount Rate:								7.40%	3.50%
Present Value:								\$ 34,539,624	\$ 0
Total Present Value:								\$	\$ 34,539,624
GASB Discount Rate:									7.40%

Amounts in Thousands

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.



Classic Values, Innovative Advice