



Memorandum

TO: HONORABLE MAYOR AND
CITY COUNCIL

FROM: Roberto L. Peña

**SUBJECT: OFFICE OF RETIREMENT
SERVICES' FY19-20 PROPOSED
ADMINISTRATIVE BUDGET**

DATE: May 8, 2019

RECOMMENDATION

Approve the Office of Retirement Services' (ORS) proposed administrative budget for Fiscal Year 2019-2020.

BACKGROUND

In October 2017, the City Auditor issued Report 17-06, *Audit of Retirement Services: Greater Transparency Needed in the Budgeting Process, Interactions Among Stakeholders, Investment Policies, and Plan Administration*. The first finding that the City Auditor outlined in the report was that ORS' budget process was not well defined. Thus, the City Auditor provided several recommendations, which were related to the approval of the budget by City Council:

- Recommendation #2: The Office of Retirement Services should include its proposed personnel budget and staffing plan for City Council approval as part of the comprehensive annual budget outlined in Recommendation #3.
- Recommendation #3: The Office of Retirement Services should prepare a comprehensive annual budget document covering the entire aggregate expense of administering each plan.
- Recommendation #4: In compliance with the City Charter, the Office of Retirement Services should formally request each retirement board annually adopt the annual budget document that has also been approved by the City Council.

In order to comply with the recommendations by the City Auditor, ORS combined proposed administrative expense budget is being brought forward through the Manager's Budget Addendum (MBA) process to be approved as part of the Mayor's June Budget Message.

ANALYSIS

Proposed Administrative Budget

Historically, ORS prepared an annual administrative expense budget that was approved by both the Police and Fire Department Retirement Plan and Federated City Employees' Retirement System Boards individually at their March meetings (Attachments A and D). Due to the City

Auditor's recommendations, last year was the first year that ORS prepared a comprehensive budget through the Manager's Budget Addendum (MBA) process. MBA #2 consisted of the comprehensive budget and MBA #3 consisted of the estimated investment fees for the upcoming fiscal year. Please note this year both MBAs are being combined into one.

The administrative budget is divided into four categories: personal services, non-personal/equipment, professional services, and medical providers. Table 1 below shows the combined ORS administrative expense budget for both plans. The year-end estimate amount is lower than the adopted budget for fiscal year 2018-2019 mainly due to the vacancies in personnel and savings in all the other categories due to planned projects not being completed from lack of resources and/ or general costs savings. The proposed budget for personnel services increased slightly mostly due to increased benefit rates; while the proposed budget for non-personnel equipment increased due to added analytical and research programs in the investments division.

The proposed budget for professional services decreased mainly due to the reduction for temporary staffing services since the pensionable earnings correction project has been completed, as well as the implementation of a significant portion of the new pension administration system. The proposed decreased budget for medical services is due to reduction on the backlog of disability cases. The total proposed budget increased slightly by 0.9% to \$12.2 million, which is the amount that ORS is requesting the City Council to approve.

TABLE 1 – Office of Retirement Services Proposed Administrative Budget

| Expense Category | 2018-2019 Adopted (A) | 2018-2019 Estimate (B) | 2019-2020 Proposed (C) | % Increase (Decrease) (A to C) | % Increase (Decrease) (B to C) |
|-------------------------|--------------------------------------|---------------------------------------|---------------------------------------|---|---|
| Personal Services | \$7,118,000 | \$6,201,733 | \$7,387,000 | 3.8% | 19.1% |
| Non-Personal/Equipment | \$2,624,000 | \$2,283,328 | \$2,816,000 | 7.3% | 23.3% |
| Professional Services | \$1,878,000 | \$1,413,270 | \$1,607,000 | (14.4%) | 13.7% |
| Medical Services | \$438,000 | \$336,270 | \$355,000 | (18.9%) | 5.6% |
| TOTAL | \$12,058,000 | \$10,234,601 | \$12,165,000 | 0.9% | 18.9% |

The categories in the table above are included in the source and use statements, which are part of the City's operating budget. The source and use statements in the operating budget are shown for display purposes only, and the medical providers category is combined with the professional fees in those statements. It should be noted that the personal services costs reflected in the above table can vary from the amount included in the 2019-2020 Proposed Operating Budget due to revisions to salary, retirement, and benefit costs when compared to those that were approved by the Federated Retirement Board and the Police and Fire Retirement Board in March. The 2019-2020 Adopted Budget source and use statements will be adjusted to align with the figures above.

Comprehensive Budget

As part of recommendation #3 by the City Auditor, the ORS prepared a comprehensive proposed budget that encompassed both revenue and expenses of the plans described in Table 2 below. The budget documents consisted of the typical presentation that was historically presented to the

Boards (Attachments A and D), as well as a memo explaining the various components of the budget and the proposed budget itself (Attachments B and E). These presentations, memos and budgets were presented to the Boards individually at the March meetings for both the Federated and the Police and Fire Board. The table below combines both plans to represent the ORS' proposed comprehensive budget.

TABLE 2 – Office of Retirement Services Proposed Comprehensive Budget

| | 2017-2018 Actual | 2018-2019 Adopted | 2018-2019 Estimate | 2019-2020 Proposed |
|--|-----------------------------|------------------------------|-------------------------------|-------------------------------|
| Source of Funds | | | | |
| Beginning Balance – Claims Reserve | \$5,676,101,000 | \$6,005,301,000 | \$6,005,301,000 | \$6,302,041,932 |
| COLAs | 41,523 | 40,000 | 38,741 | 38,868 |
| City Contributions | 372,261,000 | 376,197,533 | 380,058,257 | 411,516,000 |
| Participant Contributions | 76,014,000 | 72,685,382 | 70,281,554 | 75,080,966 |
| Investment Income, net of expenses* | 370,375,000 | 324,786,076 | 324,946,585 | 341,991,346 |
| Total Source of Funds | \$6,494,792,523 | \$6,779,009,991 | \$6,780,626,137 | \$7,130,669,112 |
| Use of Funds | | | | |
| COLAs | 41,523 | 40,000 | 38,741 | 38,868 |
| Benefits | 400,030,000 | 422,117,120 | 413,757,635 | 433,829,903 |
| Health Insurance | 57,410,000 | 56,492,663 | 54,534,328 | 56,662,277 |
| VEBA Withdrawals | 21,394,000 | 0 | 18,900 | 0 |
| Personal Services | 6,092,865 | 7,118,000 | 6,201,733 | 7,387,000 |
| Non-Personal/ Equipment | 2,430,426 | 2,624,000 | 2,283,328 | 2,816,000 |
| Professional Fees | 2,092,709 | 2,316,000 | 1,749,540 | 1,962,000 |
| Ending Balance – Claims Reserve | \$6,005,301,000 | \$6,288,302,208 | \$6,302,041,932 | \$6,627,973,064 |
| Total Use of Funds | \$6,494,792,523 | \$6,779,009,991 | \$6,780,626,137 | \$7,130,669,112 |

* Based on the 2017 Annual Fee Reports, total management and incentive fees for the pension and healthcare trusts for the Police and Fire Plan was \$43.7 million and for the Federated System was \$24.9 million for a total of \$68.6 million.

As described above, the personal services costs reflected in the above table can vary from the amount included in the 2019-2020 Proposed Budget. There are also small variances in the COLAs.

This combined comprehensive budget nets the investment manager fees and other consultant expenses against investment income. Please see Attachments C and F for the most recent calendar year Comprehensive Annual Fee reports that were presented to the Boards. As indicated in the Fee reports for calendar year 2017, the management and incentive fees for the Police and Fire and Federated pension plans and healthcare trusts totaled \$43.7 million with a fee ratio of 1.24% and \$24.9 million with a fee ratio of 1.07%, respectively, for a combined total of \$68.6 million. The Fee reports include management fees, incentive fees, consultant fees and other investment fees, some of which were based on calculations by the investment managers. Please note the Fee reports for calendar year 2018 are expected to be completed in August and will be presented to the City Council in September.

Investment Fee Analysis

Since the Comprehensive Fee Report for calendar year 2018 will not be available until August and ORS' commitment to transparency and desire to meet the spirit of the City Auditor's recommendation #3, ORS has prepared a Pro Forma Investment Fee Analysis of potential investment fees for the 2019-2020 fiscal year.

Below are updated pro forma fee projections in dollar terms calculated by multiplying each plan's actual asset class fund type balances as of December 31, 2018 by their calendar year 2017 fee ratios. The pro forma calculations use the actual fund type (passive, active, hedged, private) balances for each asset class with asset class fees reflecting a sum of the underlying fund types to better reflect the current weightings of each plan. The pro forma Total Plan fees reflect a sum of the pro forma fees for each asset class (highlighted in blue). **Please note these projections are based on many assumptions with a wide margin of error.**

Notes on Methodology

- The Pro Forma fees shown are approximations of current fees with a wide margin of error.
- Actual fund management fees will vary as the composition of underlying funds and fund types changes over time.
- Incentive fees do not reduce the Fund's income from investments. Such "fees" (carried interest) are a profit share that affords the fund manager an ownership alignment with the other equity partners. The IRS does not treat carried interest income the same as fee income to managers. Accordingly, while for convenient reference we refer to the managers' equity interest as a "fee", that reference needs to be understood in the context of aligning our interests with the managers. Unlike a fee, the manager only earns the incentive amount if we also earn a profit over a set hurdle amount.
- Actual incentive fees will vary from the values shown since incentive fees are calculated based on the actual performance of underlying funds which is uncertain and subject to change. Calendar year 2017 incentive fee ratios are used as the reference point for estimation purposes, but do not reflect the current performance or expected future performance of investments.
- On the individual plan projections, the 2017 fee ratios (shown in gray text) for asset classes and Total Plan were not used for calculating pro forma fees. As previously mentioned, the 2017 fee ratios for each fund type within an asset class was used for calculation purposes. The pro forma asset class fees are a sum of the fees for the fund types (passive, active, hedged, private) within each asset class. The pro forma Total Plan fees reflect a sum of the pro forma fees for each asset class (highlighted in blue).
- Other investment-related costs include salary and benefits compensation for investment staff (including a 50% allocation for the CEO), cost of consultants (general, absolute return, risk), custodian bank, other third party vendors utilized by the investment program, and investment staff travel.
- The calendar year 2018 Fee Report is expected to be available in August 2019 and presented to the City Council in September 2019.

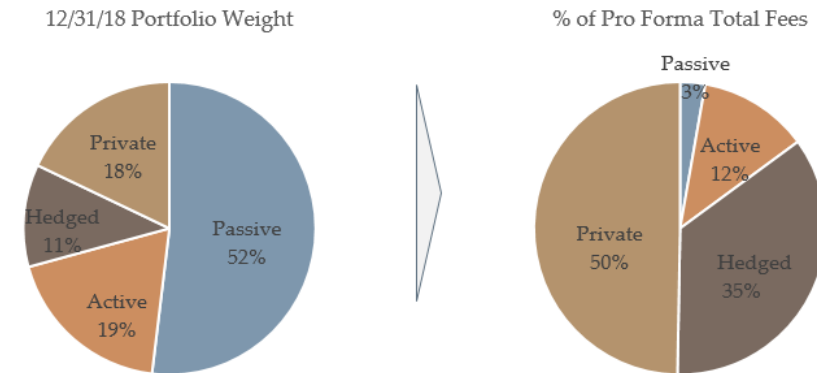
A summary of the pro forma fees for a combination of all four retirement plans is below and followed by a breakdown of each plan individually. The total pro forma fund management fees, incentive fees, and operating expenses of \$65.1 million with a fee ratio of 1.10% compares to \$75.7 million with a fee ratio of 1.29% in calendar year 2017 as shown in the 2017 Fee Reports. Total pro forma other investment-related costs of \$5.5 million with a fee ratio of 0.09% compares to \$4.7 million with a fee ratio of 0.08% in calendar year 2017 as shown in the 2017 Fee Reports.

All Retirement Plans - Pro Forma Estimated Fund Management Fees by Asset Class:

| Asset Class | As of Dec 31, 2018 | | Pro Forma Fees | | | | Pro Forma Fee Ratios | | | |
|---------------------|--------------------|------------------|-----------------|----------------|--------------------|----------------|----------------------|----------------|--------------------|----------------|
| | Portfolio Balance | Portfolio Weight | Management Fees | Incentive Fees | Operating Expenses | Total Expenses | Management Fees | Incentive Fees | Operating Expenses | Total Expenses |
| | (\$ million) | | (\$ million) | (\$ million) | (\$ million) | (\$ million) | Fees | Fees | Expenses | Expenses |
| Global Equity | 1,895 | 32.1% | 10.1 | 3.8 | 0.5 | 14.4 | 0.53% | 0.20% | 0.02% | 0.76% |
| Passive | 846 | 14.3% | 0.5 | - | 0.1 | 0.6 | 0.06% | 0.00% | 0.01% | 0.07% |
| Active | 896 | 15.2% | 6.6 | - | 0.1 | 6.7 | 0.73% | 0.00% | 0.01% | 0.74% |
| Hedged | 153 | 2.6% | 3.1 | 3.8 | 0.2 | 7.1 | 2.00% | 2.49% | 0.16% | 4.65% |
| Private Equity | 862 | 14.6% | 6.2 | 5.9 | 2.2 | 14.3 | 0.73% | 0.69% | 0.25% | 1.67% |
| Passive | 563 | 9.5% | 0.2 | - | 0.1 | 0.2 | 0.03% | 0.00% | 0.01% | 0.04% |
| Private | 298 | 5.1% | 6.1 | 5.9 | 2.1 | 14.1 | 2.04% | 1.99% | 0.71% | 4.74% |
| Global Fixed Income | 1,624 | 27.5% | 2.5 | 1.2 | 0.3 | 4.0 | 0.16% | 0.07% | 0.02% | 0.24% |
| Passive | 1,404 | 23.8% | 0.6 | - | 0.0 | 0.7 | 0.05% | 0.00% | 0.00% | 0.05% |
| Active | 103 | 1.7% | 0.5 | - | 0.0 | 0.6 | 0.50% | 0.00% | 0.04% | 0.54% |
| Hedged | 117 | 2.0% | 1.4 | 1.2 | 0.2 | 2.8 | 1.16% | 1.02% | 0.17% | 2.35% |
| Private Debt | 241 | 4.1% | 2.7 | -0.7 | 0.6 | 2.6 | 1.12% | -0.29% | 0.26% | 1.09% |
| Private | 241 | 4.1% | 2.7 | -0.7 | 0.6 | 2.6 | 1.12% | -0.29% | 0.26% | 1.09% |
| Real Assets | 632 | 10.7% | 9.9 | 4.8 | 1.5 | 16.3 | 1.57% | 0.76% | 0.25% | 2.57% |
| Active | 113 | 1.9% | 0.6 | - | 0.1 | 0.7 | 0.49% | 0.00% | 0.12% | 0.61% |
| Private | 518 | 8.8% | 9.3 | 4.8 | 1.4 | 15.6 | 1.80% | 0.93% | 0.27% | 3.00% |
| Absolute Return | 399 | 6.8% | 6.3 | 5.7 | 1.2 | 13.2 | 1.57% | 1.42% | 0.31% | 3.30% |
| Hedged | 399 | 6.8% | 6.3 | 5.7 | 1.2 | 13.2 | 1.57% | 1.42% | 0.31% | 3.30% |
| Cash | 252 | 4.3% | 0.3 | - | - | 0.3 | 0.12% | 0.00% | 0.00% | 0.12% |
| Passive | 252 | 4.3% | 0.3 | - | - | 0.3 | 0.12% | 0.00% | 0.00% | 0.12% |
| Total Plan | 5,904 | 100.0% | 38.1 | 20.7 | 6.3 | 65.1 | 0.64% | 0.35% | 0.11% | 1.10% |

All Retirement Plans - Pro Forma Estimated Fund Management Fees by Fund Type:

| Fund Type | Portfolio Balance | Management Fees | Incentive Fees | Operating Expenses | Total Expenses | Total Expense Ratio |
|--------------|-------------------|-----------------|----------------|--------------------|----------------|---------------------|
| | (\$ million) | (\$ million) | (\$ million) | (\$ million) | (\$ million) | |
| Passive | 3,065 | 1.6 | - | 0.2 | 1.8 | 0.06% |
| Active | 1,112 | 7.6 | - | 0.3 | 7.9 | 0.71% |
| Hedged | 669 | 10.7 | 10.7 | 1.7 | 23.0 | 3.44% |
| Private | 1,058 | 18.1 | 10.1 | 4.2 | 32.4 | 3.06% |
| Total | 5,904 | 38.1 | 20.7 | 6.3 | 65.1 | 1.10% |



All Retirement Plans - Pro Forma Estimated Other Costs:

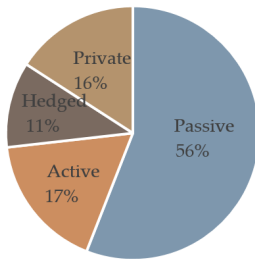
| Other Vendors and Total Other | | | | | |
|--|---------------------|-------------------|----------------|---------------|-----------------------|
| Investment Staff Salary and Benefits (\$ mm) | Consultants (\$ mm) | Custodian (\$ mm) | Travel (\$ mm) | Costs (\$ mm) | Other Costs Fee Ratio |
| 1.9 | 1.5 | 1.0 | 1.2 | 5.5 | 0.09% |

Federated Pension Fund Management Fees by Asset Class:

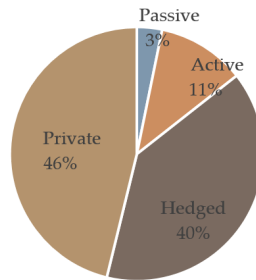
| Asset Class | As of Dec 31, 2018 | | 2017 Fee Ratios | | | | Pro Forma Fees | | | |
|----------------------------|--------------------------------|------------------|-----------------|----------------|--------------------|---------------------|------------------------------|-----------------------------|---------------------------------|-----------------------------|
| | Portfolio Balance (\$ million) | Portfolio Weight | Management Fees | Incentive Fees | Operating Expenses | Total Expense Ratio | Management Fees (\$ million) | Incentive Fees (\$ million) | Operating Expenses (\$ million) | Total Expenses (\$ million) |
| Global Equity | 608 | 29.9% | 0.66% | 0.37% | 0.03% | 1.06% | 3.2 | 1.5 | 0.2 | 4.8 |
| Passive | 286 | 14.1% | 0.05% | 0.00% | 0.02% | 0.07% | 0.1 | - | 0.0 | 0.2 |
| Active | 261 | 12.8% | 0.70% | 0.00% | 0.01% | 0.71% | 1.8 | - | 0.0 | 1.8 |
| Hedged | 60 | 3.0% | 1.98% | 2.48% | 0.16% | 4.62% | 1.2 | 1.5 | 0.1 | 2.8 |
| Private Equity | 385 | 18.9% | 2.75% | 1.81% | 0.79% | 5.35% | 2.4 | 1.5 | 0.7 | 4.6 |
| Passive | 302 | 14.8% | 0.03% | 0.00% | 0.01% | 0.03% | 0.1 | - | 0.0 | 0.1 |
| Private | 83 | 4.1% | 2.75% | 1.81% | 0.79% | 5.35% | 2.3 | 1.5 | 0.7 | 4.5 |
| Global Fixed Income | 467 | 22.9% | 0.30% | 0.14% | 0.02% | 0.46% | 0.5 | - | 0.0 | 0.5 |
| Passive | 402 | 19.8% | 0.05% | 0.00% | 0.00% | 0.05% | 0.2 | - | 0.0 | 0.2 |
| Active | 65 | 3.2% | 0.49% | 0.00% | 0.03% | 0.53% | 0.3 | - | 0.0 | 0.3 |
| Hedged | - | 0.0% | 1.40% | 1.45% | 0.13% | 2.97% | - | - | - | - |
| Private Debt | 61 | 3.0% | 1.26% | -0.98% | 0.17% | 0.45% | 0.8 | -0.6 | 0.1 | 0.3 |
| Private | 61 | 3.0% | 1.26% | -0.98% | 0.17% | 0.45% | 0.8 | -0.6 | 0.1 | 0.3 |
| Real Assets | 204 | 10.0% | 0.78% | 0.21% | 0.12% | 1.12% | 3.3 | 1.1 | 0.5 | 4.9 |
| Passive | - | 0.0% | 0.07% | 0.00% | 0.00% | 0.07% | - | - | - | - |
| Active | 25 | 1.2% | 0.39% | 0.00% | 0.10% | 0.49% | 0.1 | - | 0.0 | 0.1 |
| Hedged | - | 0.0% | 2.65% | 0.61% | 0.53% | 3.79% | - | - | - | - |
| Private | 179 | 8.8% | 1.80% | 0.62% | 0.24% | 2.67% | 3.2 | 1.1 | 0.4 | 4.8 |
| Absolute Return | 162 | 8.0% | 1.56% | 1.42% | 0.31% | 3.29% | 2.5 | 2.3 | 0.5 | 5.3 |
| Hedged | 162 | 8.0% | 1.56% | 1.42% | 0.31% | 3.29% | 2.5 | 2.3 | 0.5 | 5.3 |
| Cash | 148 | 7.3% | 0.12% | 0.00% | 0.00% | 0.12% | 0.2 | - | - | 0.2 |
| Passive | 148 | 7.3% | 0.12% | 0.00% | 0.00% | 0.12% | 0.2 | - | - | 0.2 |
| Total Plan | 2,035 | 100.0% | 0.77% | 0.38% | 0.11% | 1.26% | 12.8 | 5.8 | 2.0 | 20.6 |

Federated Pension Fund Management Fees by Fund Type:

12/31/18 Portfolio Weight



% of Pro Forma Total Fees



Federated Pension Other Costs:

| Investment Staff Salary and Benefits (\$ mm) | Consultants (\$ mm) | Custodian (\$ mm) | Other Vendors and Total Other Costs | | | Other Costs Fee Ratio |
|--|------------------------|----------------------|-------------------------------------|------------------|-------|--------------------------|
| | | | Travel (\$ mm) | Costs (\$ mm) | | |
| 0.7 | 0.6 | 0.3 | 0.5 | 2.2 | 0.11% | |

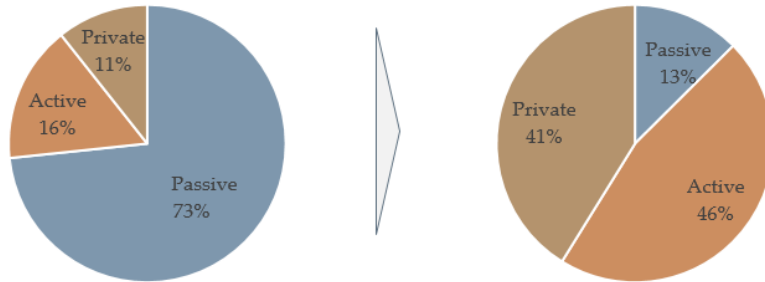
Federated Health Care Trust Fund Management Fees by Asset Class:

| Asset Class | As of Dec 31, 2018 | | 2017 Fee Ratios | | | | Pro Forma Fees | | | |
|---------------------|-----------------------------------|------------------|-----------------|----------------|--------------------|---------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|
| | Portfolio Balance (\$ million) | Portfolio Weight | Management Fees | Incentive Fees | Operating Expenses | Total Expense Ratio | Management Fees (\$ million) | Incentive Fees (\$ million) | Operating Expenses (\$ million) | Total Expenses (\$ million) |
| Global Equity | 149 | 53.1% | 0.47% | 0.00% | 0.01% | 0.48% | 0.4 | - | 0.0 | 0.4 |
| Passive | 115 | 41.1% | 0.05% | 0.00% | 0.01% | 0.06% | 0.1 | - | 0.0 | 0.1 |
| Active | 34 | 12.0% | 1.04% | 0.00% | 0.00% | 1.04% | 0.4 | - | - | 0.4 |
| Global Fixed Income | 86 | 30.8% | 0.03% | 0.00% | 0.01% | 0.04% | 0.0 | - | 0.0 | 0.0 |
| Passive | 86 | 30.8% | 0.03% | 0.00% | 0.01% | 0.04% | 0.0 | - | 0.0 | 0.0 |
| Real Assets | 41 | 14.6% | 0.56% | 0.04% | 0.09% | 0.69% | 0.4 | - | 0.1 | 0.4 |
| Passive | - | 0.0% | 0.07% | 0.00% | 0.00% | 0.07% | - | - | - | - |
| Active | 11 | 4.0% | 0.39% | 0.00% | 0.10% | 0.49% | 0.0 | - | 0.0 | 0.1 |
| Hedged | - | 0.0% | 2.65% | 0.61% | 0.53% | 3.79% | - | - | - | - |
| Private | 30 | 10.7% | 1.07% | 0.00% | 0.13% | 1.20% | 0.3 | - | 0.0 | 0.4 |
| Cash | 4 | 1.4% | 0.12% | 0.00% | 0.00% | 0.12% | 0.0 | - | - | 0.0 |
| Passive | 4 | 1.4% | 0.12% | 0.00% | 0.00% | 0.12% | 0.0 | - | - | 0.0 |
| Total Plan | 281 | 100.0% | 0.31% | 0.01% | 0.02% | 0.34% | 0.8 | - | 0.1 | 0.9 |

Federated Health Care Trust Fund Management Fees by Fund Type:

12/31/18 Portfolio Weight

% of Pro Forma Total Fees



Federated Health Care Trust Other Costs:

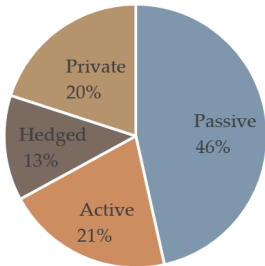
| Investment Staff Salary and Benefits (\$ mm) | Consultants (\$ mm) | Custodian (\$ mm) | Other Vendors and Travel (\$ mm) | Total Other Costs (\$ mm) | Other Costs Fee Ratio |
|--|---------------------|-------------------|----------------------------------|---------------------------|-----------------------|
| 0.1 | 0.1 | 0.1 | 0.0 | 0.3 | 0.12% |

Police & Fire Pension Fund Management Fees by Asset Class:

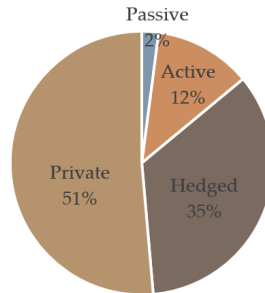
| Asset Class | As of Dec 31, 2018 | | 2017 Fee Ratios | | | | Pro Forma Fees | | | |
|---------------------|--------------------------------|------------------|-----------------|----------------|--------------------|---------------------|------------------------------|-----------------------------|---------------------------------|-----------------------------|
| | Portfolio Balance (\$ million) | Portfolio Weight | Management Fees | Incentive Fees | Operating Expenses | Total Expense Ratio | Management Fees (\$ million) | Incentive Fees (\$ million) | Operating Expenses (\$ million) | Total Expenses (\$ million) |
| Global Equity | 1,065 | 30.8% | 0.57% | 0.23% | 0.03% | 0.83% | 6.5 | 2.3 | 0.3 | 9.1 |
| Passive | 372 | 10.8% | 0.05% | 0.00% | 0.02% | 0.07% | 0.2 | - | 0.1 | 0.3 |
| Active | 601 | 17.4% | 0.73% | 0.00% | 0.01% | 0.74% | 4.4 | - | 0.1 | 4.5 |
| Hedged | 92 | 2.7% | 2.02% | 2.50% | 0.16% | 4.68% | 1.9 | 2.3 | 0.1 | 4.3 |
| Private Equity | 476 | 13.8% | 1.07% | 1.24% | 0.41% | 2.72% | 3.9 | 4.4 | 1.5 | 9.8 |
| Passive | 262 | 7.6% | 0.03% | 0.00% | 0.01% | 0.04% | 0.1 | - | 0.0 | 0.1 |
| Private | 215 | 6.2% | 1.77% | 2.06% | 0.68% | 4.51% | 3.8 | 4.4 | 1.5 | 9.7 |
| Global Fixed Income | 1,029 | 29.8% | 0.69% | 0.41% | 0.09% | 1.19% | 2.0 | 1.2 | 0.2 | 3.4 |
| Passive | 874 | 25.3% | 0.05% | 0.00% | 0.00% | 0.05% | 0.4 | - | - | 0.4 |
| Active | 38 | 1.1% | 0.51% | 0.00% | 0.04% | 0.56% | 0.2 | - | 0.0 | 0.2 |
| Hedged | 117 | 3.4% | 1.16% | 1.02% | 0.17% | 2.35% | 1.4 | 1.2 | 0.2 | 2.8 |
| Private Debt | 180 | 5.2% | 1.07% | -0.05% | 0.29% | 1.31% | 1.9 | -0.1 | 0.5 | 2.4 |
| Private | 180 | 5.2% | 1.07% | -0.05% | 0.29% | 1.31% | 1.9 | -0.1 | 0.5 | 2.4 |
| Real Assets | 367 | 10.6% | 1.20% | 0.52% | 0.22% | 1.93% | 5.8 | 3.7 | 1.0 | 10.5 |
| Passive | - | 0.0% | 0.15% | 0.00% | 0.00% | 0.15% | - | - | - | - |
| Active | 70 | 2.0% | 0.52% | 0.00% | 0.11% | 0.64% | 0.4 | - | 0.1 | 0.4 |
| Hedged | - | 0.0% | 2.65% | 0.61% | 0.53% | 3.79% | - | - | - | - |
| Private | 296 | 8.6% | 1.85% | 1.25% | 0.31% | 3.40% | 5.5 | 3.7 | 0.9 | 10.1 |
| Absolute Return | 237 | 6.9% | 1.57% | 1.42% | 0.31% | 3.30% | 3.7 | 3.4 | 0.7 | 7.8 |
| Hedged | 237 | 6.9% | 1.57% | 1.42% | 0.31% | 3.30% | 3.7 | 3.4 | 0.7 | 7.8 |
| Cash | 99 | 2.9% | 0.12% | 0.00% | 0.00% | 0.12% | 0.1 | - | - | 0.1 |
| Passive | 99 | 2.9% | 0.12% | 0.00% | 0.00% | 0.12% | 0.1 | - | - | 0.1 |
| Total Plan | 3,454 | 100.0% | 0.84% | 0.43% | 0.14% | 1.40% | 23.9 | 14.9 | 4.2 | 43.1 |

Police & Fire Pension Fund Management Fees by Fund Type:

12/31/18 Portfolio Weight



% of Pro Forma Total Fees



Police & Fire Pension Other Costs:

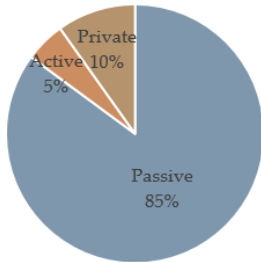
| Investment Staff Salary and Benefits (\$ mm) | Consultants (\$ mm) | Custodian (\$ mm) | Other Vendors and Travel (\$ mm) | Total Other Costs (\$ mm) | Other Costs Fee Ratio |
|--|------------------------|----------------------|--|---------------------------------|--------------------------|
| 1.1 | 0.7 | 0.4 | 0.6 | 2.9 | 0.08% |

Police & Fire Health Care Trust Fund Management Fees by Asset Class:

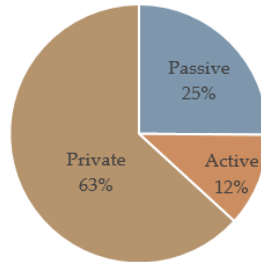
| Asset Class | As of Dec 31, 2018 | | 2017 Fee Ratios | | | | Pro Forma Fees | | | |
|---------------------|--------------------------------------|---------------------|--------------------|-------------------|-----------------------|---------------------------|------------------------------------|-----------------------------------|---------------------------------------|-----------------------------------|
| | Portfolio Balance (\$ million) | Portfolio Weight | Management Fees | Incentive Fees | Operating Expenses | Total Expense Ratio | Management Fees (\$ million) | Incentive Fees (\$ million) | Operating Expenses (\$ million) | Total Expenses (\$ million) |
| Global Equity | 72 | 53.9% | 0.09% | 0.00% | 0.00% | 0.09% | 0.1 | - | - | 0.1 |
| Passive | 72 | 53.9% | 0.09% | 0.00% | 0.00% | 0.09% | 0.1 | - | - | 0.1 |
| Global Fixed Income | 42 | 31.0% | 0.04% | 0.00% | 0.00% | 0.04% | 0.0 | - | - | 0.0 |
| Passive | 42 | 31.0% | 0.04% | 0.00% | 0.00% | 0.04% | 0.0 | - | - | 0.0 |
| Real Assets | 20 | 14.9% | 0.30% | 0.00% | 0.08% | 0.38% | 0.4 | - | 0.1 | 0.4 |
| Passive | - | 0.0% | 0.12% | 0.00% | 0.00% | 0.12% | - | - | - | - |
| Active | 7 | 5.0% | 0.45% | 0.00% | 0.15% | 0.60% | 0.1 | - | 0.0 | 0.1 |
| Private | 13 | 9.9% | 1.07% | 0.00% | 0.13% | 1.20% | 0.3 | - | 0.0 | 0.4 |
| Cash | 0 | 0.1% | 0.12% | 0.00% | 0.00% | 0.12% | 0.0 | - | - | 0.0 |
| Passive | 0 | 0.1% | 0.12% | 0.00% | 0.00% | 0.12% | 0.0 | - | - | 0.0 |
| Total Plan | 134 | 100.0% | 0.25% | 0.00% | 0.01% | 0.26% | 0.5 | - | 0.1 | 0.6 |

Police & Fire Health Care Trust Fund Management Fees by Fund Type:

12/31/18 Portfolio Weight



% of Pro Forma Total Fees



Police & Fire Health Care Trust Other Costs:

| Investment Staff Salary and Benefits (\$ mm) | Consultants (\$ mm) | Custodian (\$ mm) | Other Vendors and Travel (\$ mm) | Total Other Costs (\$ mm) | Other Costs Fee Ratio |
|--|------------------------|----------------------|--|---------------------------------|--------------------------|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.10% |

COORDINATION

This memorandum has been coordinated with the City Manager's Budget Office.

/s/
ROBERTO L. PEÑA
Chief Executive Officer

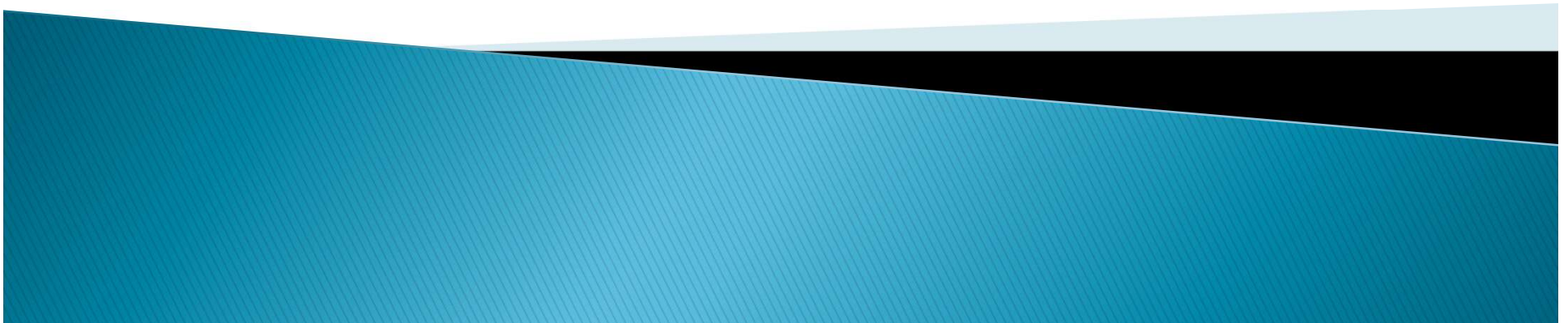
For more information on this memorandum, please contact Roberto L. Peña, CEO, 408-794-1000.

- Attachment A: Police and Fire Department Retirement Plan Budget Proposal Presentation
- Attachment B: Police and Fire Department Plan FY 19-20 Proposed Budget
- Attachment C: Police and Fire Department Plan Comprehensive Annual Fee Report for Calendar Year 2017
- Attachment D: Federated Retirement System Budget Proposal Presentation
- Attachment E: Federated Retirement System FY19-20 Proposed Budget
- Attachment F: Federated Retirement System Comprehensive Annual Fee Report for Calendar Year 2017

ATTACHMENT A

**POLICE AND FIRE DEPARTMENT
RETIREMENT PLAN
FISCAL YEAR 2019-2020
BUDGET PROPOSAL**

March 7, 2019



2019–2020 Budget at a Glance

- ▶ Development of the budget
- ▶ Administrative expense breakdown
- ▶ Sources of funds
- ▶ Uses of funds
- ▶ Proposed administrative budget
- ▶ Personnel services analysis
- ▶ Non–personnel/equipment analysis
- ▶ Professional services analysis
- ▶ Medical services analysis
- ▶ Analysis and comparisons to other CA plans

Development of the Police & Fire Department Retirement Plan's FY19–20 Proposed Budget

The Proposed Budget is broken down into the following categories:

▶ Sources of Funds

- **City contributions** – Estimated based on the contribution rates and total covered payroll shown in the actuarial reports for June 30, 2018
- **Participant income** – Estimated based on the contribution rates and total covered payroll shown in the actuarial reports for June 30, 2018
- **Investment income** – Calculated using the assumed rate of return based on reserve plus City's contributions for the whole year and other activities for half a year

▶ Uses of Funds

- **Benefits and health insurance** – pension payments, health insurance subsidy, return of contributions and death benefits. Amounts were calculated based on the average increase for the past 5 years
- **Administrative expense** – this represents the operating expenses for the Office of Retirement Services. The detail is shown in the following slide.



Administrative Expense Budget FY19–20

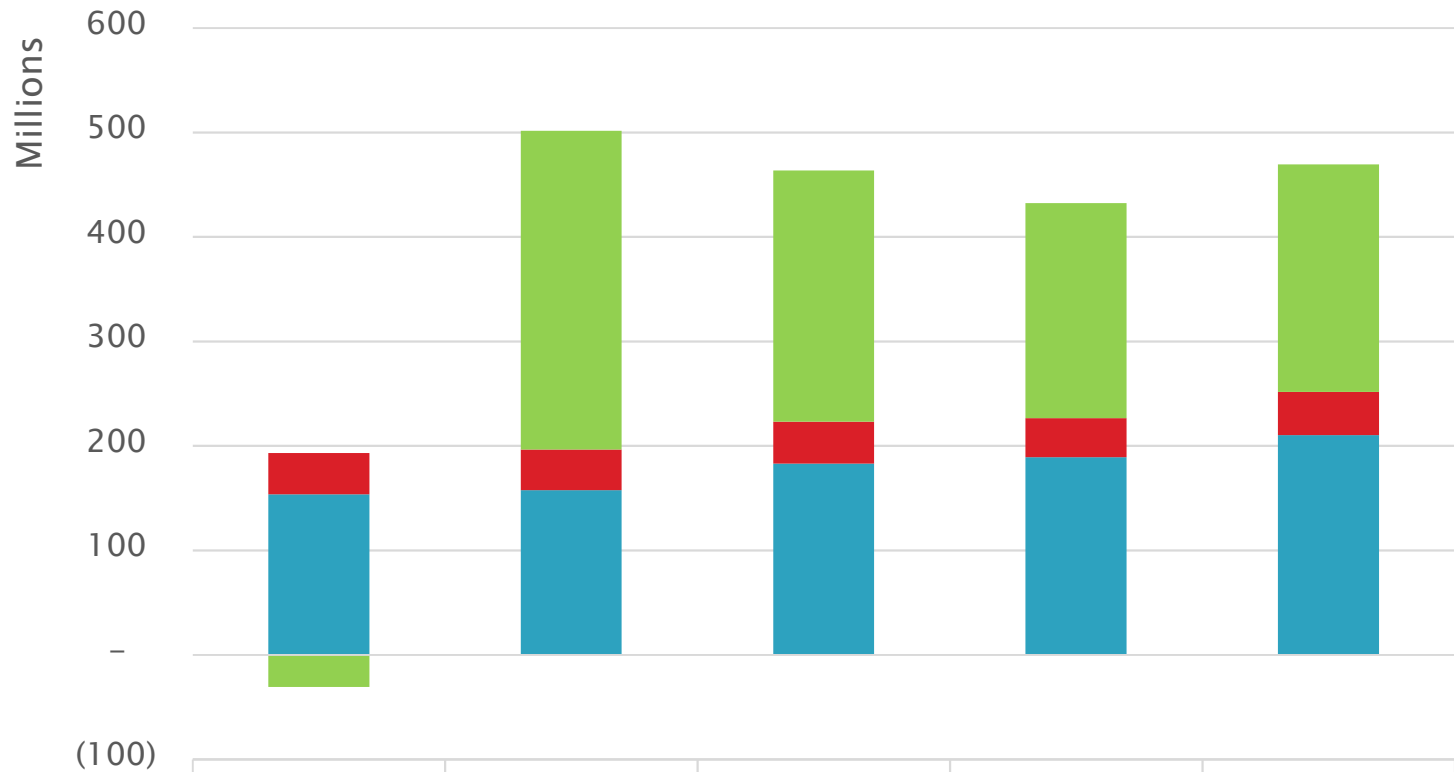
The Administrative Expense Budget portion is categorized into the following line items:

- ▶ **Personnel services** – 50% of the Office of Retirement Services direct staff labor costs including salary and benefits based on the City’s Budget Office labor reports, except for Investments staff which is split based on market value (60% PF and 40% Fed).
- ▶ **Non–personnel/equipment** – administrative overhead cost such as rent, supplies, equipment, etc., excluding professional services.
- ▶ **Professional services** – non–investment professional services including actuarial, legal, IT and other professional consulting services.
- ▶ **Medical services*** – this represents an estimate for a contracted medical advisor and other independent medical examiners.

The Administrative Budget does **NOT** include investment professional services, consultants and investment manager fees and capitalized costs.

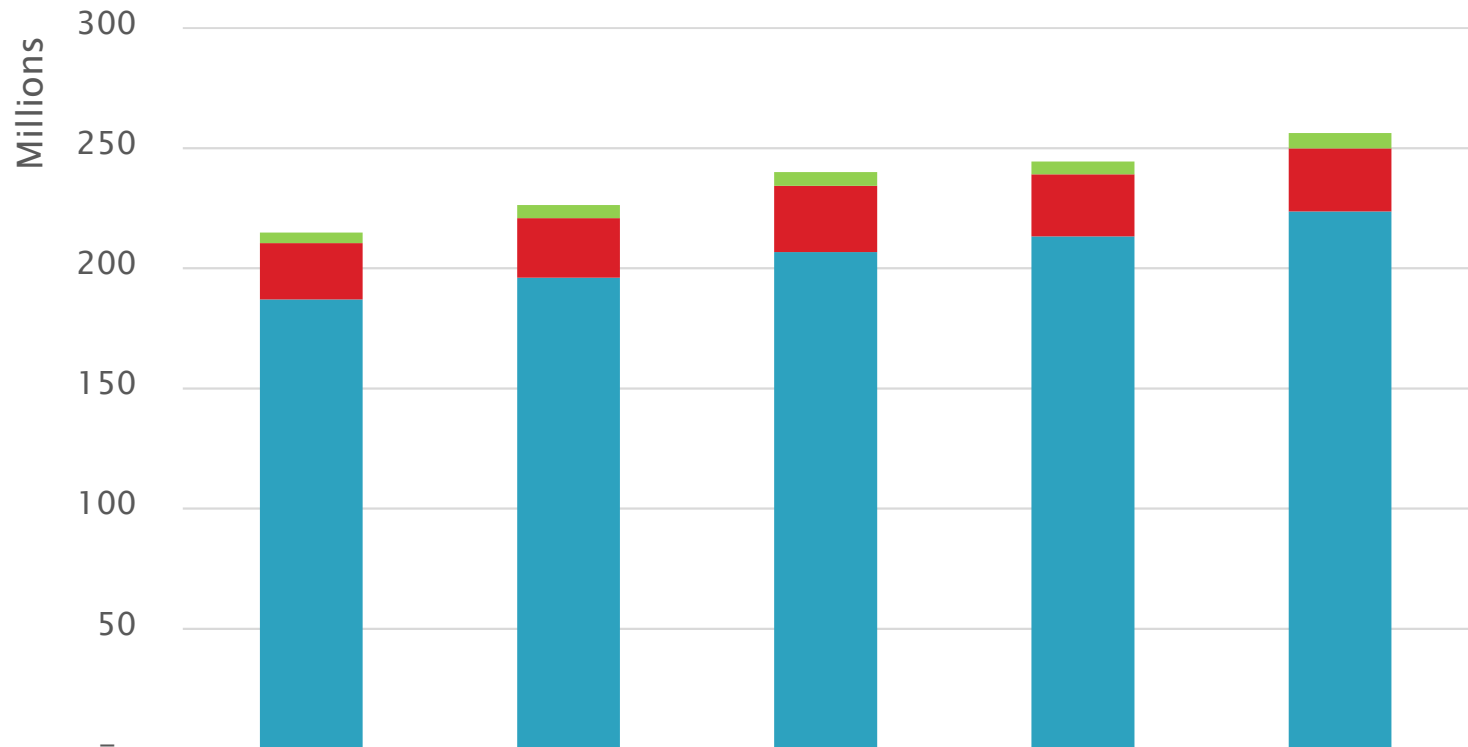
* This was a medical director and staff prior to the FY16–17 budget.

Sources of Funds



| | FY 15-16 (Actual) | FY 16-17 (Actual) | FY 17-18 (Actual) | FY 18-19 (Forecast) | FY 19-20 (Proposed) |
|---------------------------|-------------------|-------------------|-------------------|---------------------|---------------------|
| Investment Income | (30,889,000) | 305,187,000 | 240,546,000 | 205,915,177 | 217,920,915 |
| Participant Contributions | 39,515,000 | 38,696,000 | 39,968,000 | 37,272,623 | 41,372,366 |
| City Contributions | 153,545,000 | 157,624,000 | 183,094,000 | 189,154,538 | 210,168,000 |

Uses of Funds



| | FY 15-16 (Actual) | FY 16-17 (Actual) | FY 17-18 (Actual) | FY 18-19 (Forecast) | FY 19-20 (Proposed) |
|------------------------|----------------------|----------------------|----------------------|------------------------|------------------------|
| Administrative Expense | 4,393,000 | 5,384,798 | 5,623,000 | 5,409,218 | 6,369,000 |
| Health Insurance | 23,449,000 | 24,799,000 | 27,686,000 | 25,760,000 | 26,231,000 |
| Pension Benefits | 186,940,000 | 196,032,000 | 206,630,000 | 213,240,311 | 223,653,000 |

Police & Fire Proposed Administrative Budget for FY 2019–2020

The following is a comparison of previous fiscal year actual figures, current year adopted budget and forecast, and proposed next year budget:

| Expenses | 2017– 2018 Actual (A) | 2018– 2019 Adopted (B) | 2018– 2019 Forecast (C) | 2019–2020 Proposed ⁽¹⁾ (D) | % Increase (Decrease) (B to D) | % Increase (Decrease) (C to D) |
|------------------------------|--------------------------------|---------------------------------|----------------------------------|---|--------------------------------------|--------------------------------------|
| Personnel Services | \$3,193,583 | \$3,778,000 | \$3,278,391 | \$3,898,000 | 3.18% | 18.90% |
| Non-Personnel / Equipment | 1,221,953 | 1,312,000 | 1,155,867 | 1,408,000 | 7.32% | 21.81% |
| Professional Services | 996,014 | 939,000 | 747,722 | 845,000 | (10.01%) | 13.01% |
| Medical Services | 211,450 | 230,000 | 227,238 | 218,000 | (5.22%) | (4.07%) |
| Total | \$5,623,000 | \$6,259,000 | \$5,409,218 | \$6,369,000 | 1.76% | 17.74% |

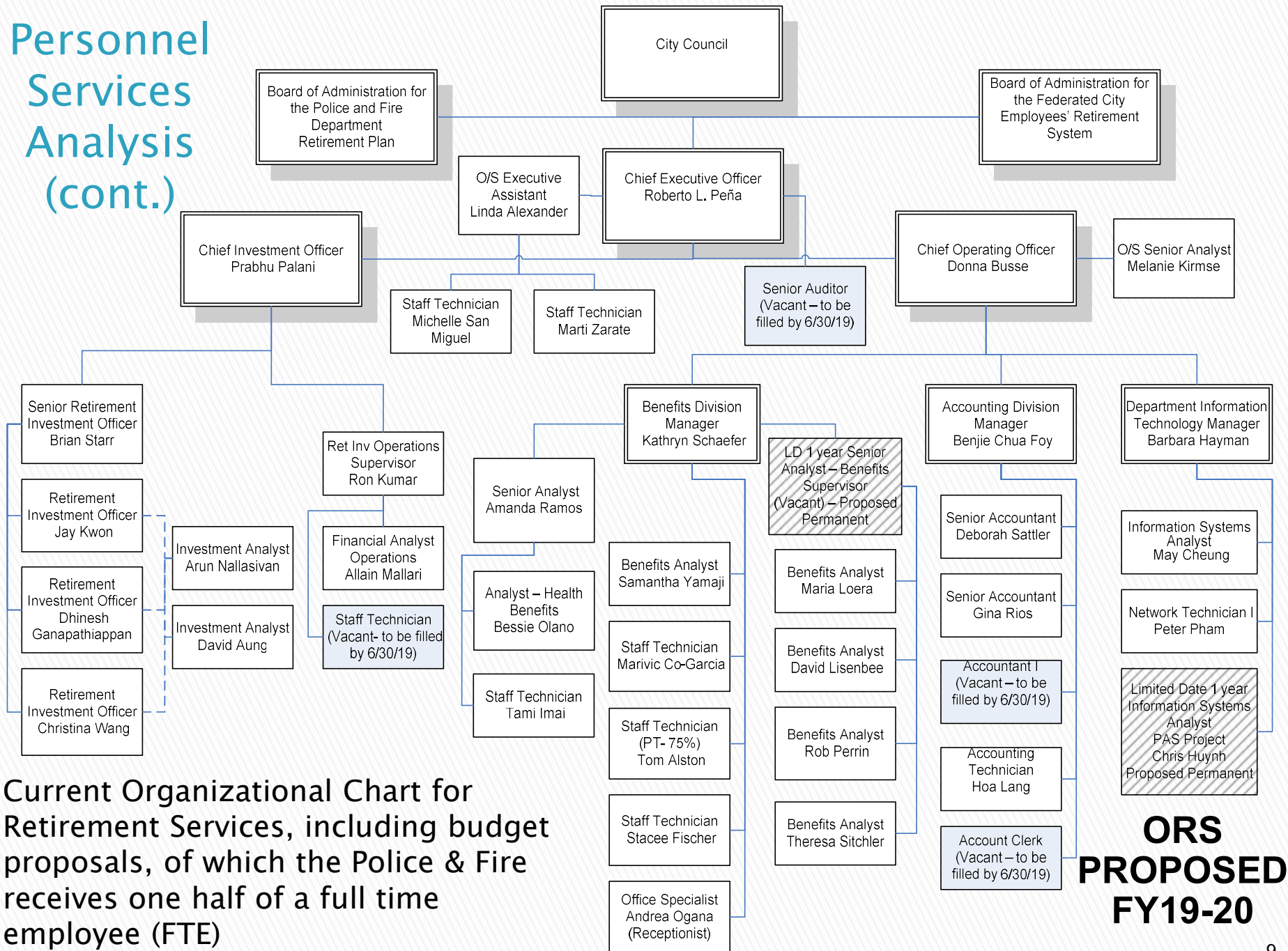
⁽¹⁾ – Detail for changes provided in the following slides

Personnel Services Analysis

| Expenses | 2017-2018 Actual (1) | 2018-2019 Adopted (2) | 2018-2019 Forecast (3) | 2019-2020 Proposed (4) | % Increase (Decrease) (2 to 4) | % Increase (Decrease) (3 to 4) |
|--|----------------------|-----------------------|------------------------|------------------------|--------------------------------|--------------------------------|
| Personnel Services | \$3,193,583 | \$3,778,000 | \$3,278,391 | \$3,898,000 | 3.18% | 18.90% |
| Authorized positions for both plans | 39.75 | 39.75 | 39.75 | 39.75 | 0 | 0 |
| Full time employee (FTE) allocated to Plan | 19.875 | 19.875 | 19.875 | 19.875 | 0 | 0 |
| Actual filled FTEs for both plans | 33.75 | | 38.75 | | | |
| FTEs allocated to Plan | 16.875 | | 19.375 | | | |

- ▶ Personnel Services increased from last year's budget due to:
 - Planning on having ORS fully staffed, budgeting two return to work retirees and increased benefit rates
- ▶ Proposals for FY19-20 included in budget
 - Request is to make the limited-date Information Systems Analyst and Benefits Senior Analyst that expires 6/30/19 permanent

Personnel Services Analysis (cont.)



Current Organizational Chart for Retirement Services, including budget proposals, of which the Police & Fire receives one half of a full time employee (FTE)

**ORS
PROPOSED
FY19-20**

Non-Personnel/Equipment Analysis

| Expenses | 2017-2018 Actual (1) | 2018-2019 Adopted (2) | 2018-2019 Forecast (3) | 2019-2020 Proposed (4) | % Increase (Decrease) (2 to 4) | % Increase (Decrease) (3 to 4) |
|-------------------------|----------------------|-----------------------|------------------------|------------------------|--------------------------------|--------------------------------|
| Non-personnel/Equipment | \$1,221,953 | \$1,312,000 | \$1,155,867 | \$1,408,000 | 7.32% | 21.81% |

- ▶ Non-Personnel/Equipment increased from prior year budget by \$96,000 mainly to an increase in the investment analytics and research budget
 - Investment analytics and research budget is comprised of investment-related expenses for cost-analysis, Bloomberg terminals and risk advisory services
 - Increase due to additional services added
 - Rest of increase due to CPI increases in various categories



Non-Personnel/Equipment Analysis (cont.)

Below is a list of major non-personnel/equip. categories and budget amounts

| Minor Budget Category | 2019-2020 Budget Basis | FY19-20 Proposed Budget Amount |
|--|---|--------------------------------|
| Investment analytics and research | Investments data processing Abel/Noser, Barra LLC, BCA Research, Bloomberg, Dynamo, eVestments and Klarifyfx. Also includes risk advisory services and State Street services for performance analysis, compliance and attribution analytics | \$569,000 |
| Rent | Rent for Office of Retirement Services (ORS) based on lease amount, as well as CAM and amortization of construction costs for consolidation | 210,000 |
| Insurance | Fiduciary and commercial liability Insurance | 193,000 |
| LRS - annual maintenance fee | Pension administration system annual maintenance fee based on contract amount | 110,000 |
| IT hardware / software | Includes proposed website overhaul, new scanner and server and yearly PC replacements | 97,000 |
| Postage and printing | Postage, shipping and printing costs for open enrollment, Choices mailings and other communication | 90,000 |
| Training/Travel | Board and staff travel including conferences, roundtables, due diligence, etc. | 65,000 |
| Other non-personnel and equipment | Includes lease, mileage, communication, dues and subscriptions, equipment/furniture, training, supplies, etc. | 74,000 |
| NON-PERSONNEL / EQUIPMENT TOTAL | | \$1,408,000 |

Professional Services Analysis

| Expenses | 2017-2018 Actual (1) | 2018-2019 Adopted (2) | 2018-2019 Forecast (3) | 2019-2020 Proposed (4) | % Increase (Decrease) (2 to 4) | % Increase (Decrease) (3 to 4) |
|-----------------------|----------------------------|-----------------------------|------------------------------|------------------------------|--------------------------------------|--------------------------------------|
| Professional Services | \$996,014 | \$939,000 | \$747,722 | \$845,000 | (10.01%) | 13.01% |

- ▶ Professional Services decreased from last year's budget due to netting of the following changes:
 - Cheiron increased by \$40,000 due to experience study planned in FY19-20
 - Significant decrease in temp services by \$125,000 due to completion of pensionable pay project and implementation of PAS in current year
 - Addition of \$25,000 for a communications consultant
 - Other minor realignment and reduction in other categories to be in line with previous years

- ▶ Other considerations
 - Cost associated with the new pension administration system are NOT included in the budget as those costs are being capitalized.

- ▶ The following slide is a list major professional services categories, budget basis and budget amounts.

Professional Services – Other Analysis (cont.)

Below is a list of major professional services categories and budget amounts

| Minor budget category | 2019–20 Budget Basis | FY19–20 Budget Amount |
|------------------------------------|---|-----------------------|
| Legal | Legal services provided by Reed Smith, Saltzman and Johnson and Ice Miller LLP – note this budget line excludes investment legal. | \$326,000 |
| Actuary | Annual valuation for Pension & OPEB, possible Measure F costs, calculation for 415 matters as well as PAS consultation | 270,000 |
| Other Professional Services | Includes retiree search agency, governance services, communications consultant, contingency amount, etc. | 88,500 |
| Audit | Annual Financial audit agreement amount plus other services | 80,000 |
| Temp Agencies | Temporary staffing to fill vacant positions and to assist IT with PAS implementation | 44,000 |
| Pension Admin System (PensionGold) | Ad hoc web changes billed per hour; BCP Monthly charge; Ad hoc change request enhancements, Web Hosting Fee Monthly charge | 36,500 |
| | PROFESSIONAL SERVICES OTHER BUDGET TOTAL | \$845,000 |

Medical Services Analysis

| Expenses | 2017-2018 Actual (1) | 2018-2019 Adopted (2) | 2018-2019 Forecast (3) | 2019-2020 Proposed (4) | % Increase (Decrease) (2 to 4) | % Increase (Decrease) (3 to 4) |
|------------------|----------------------|-----------------------|------------------------|------------------------|--------------------------------|--------------------------------|
| Medical Services | \$211,450 | \$230,000 | \$227,238 | \$218,000 | (5.22%) | (4.07%) |

- ▶ **Medical services decreased compared to prior year:**
 - Better handle on how many cases handled per month
 - To be in line with prior year expenses

- ▶ **Other considerations:**
 - No longer having a City employee providing medical services
 - Outside advisor is more expensive
 - Based on estimate of having 3 cases per month for the medical advisor and 24 cases annually for the other independent medical examiners

- ▶ **Below is a summary of medical services provided:**
 - Obtain medical information from disability applicants, attorneys and workers' compensation
 - Review all medical reports received
 - Refer to independent medical examiners
 - Summarize relevant medical information and prepare medical report regarding causation, disability, and medical support of injury
 - Attend monthly Disability Committee hearings

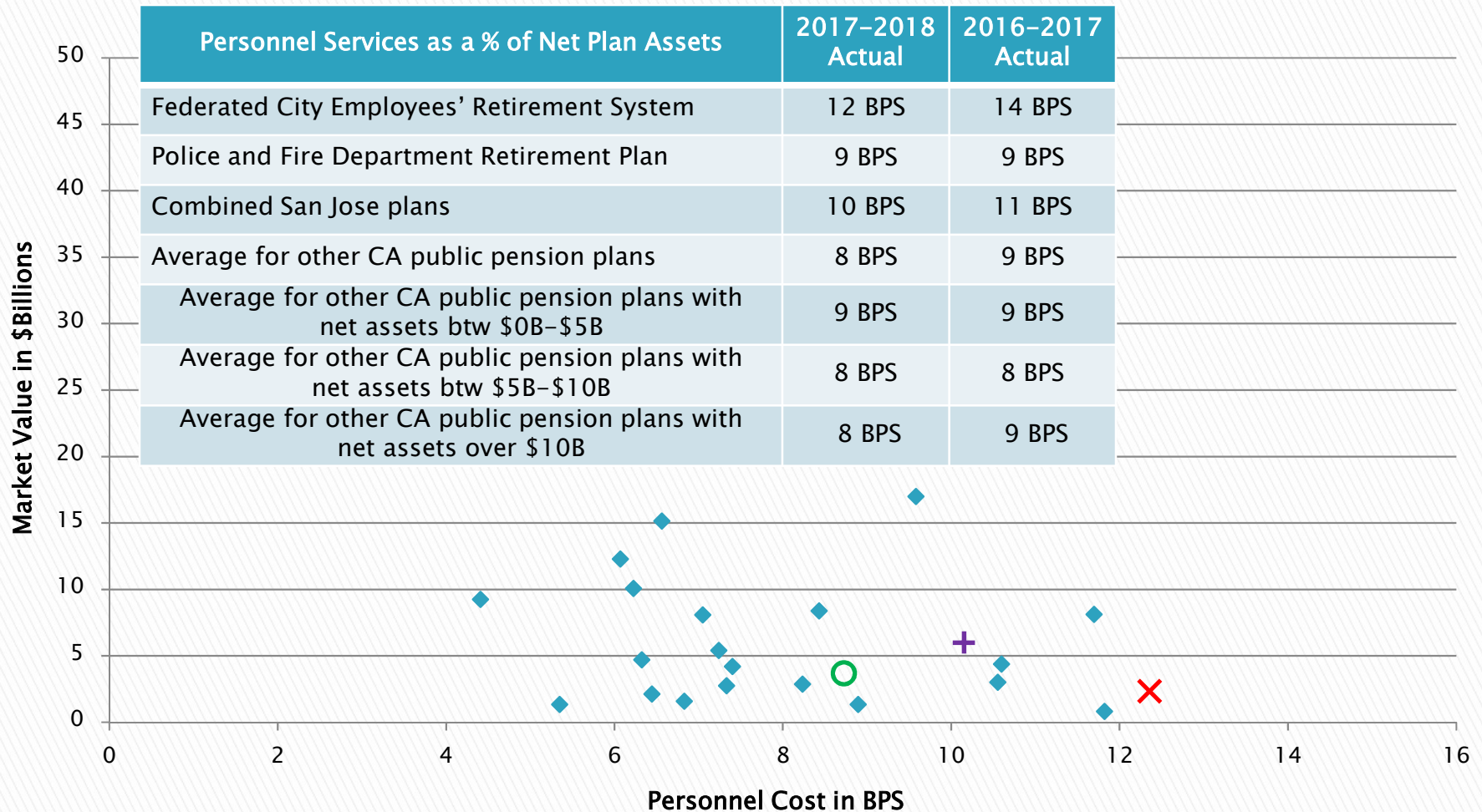
Personnel Services Analysis – in BPS (cont.)

Personnel Expense in BPS of Market Value of Assets – Actual as of 6/30/18 or most recent financial statement ⁽¹⁾

“X” below represents the Federated System, \$2,899,282

“O” below represents the Police and Fire Plan, \$3,193,583

“+” below represents the combined San Jose plans, \$6,092,865



¹ Retirement Services gathered and compiled most recent financial information from 23 public pension plans' CAFRs

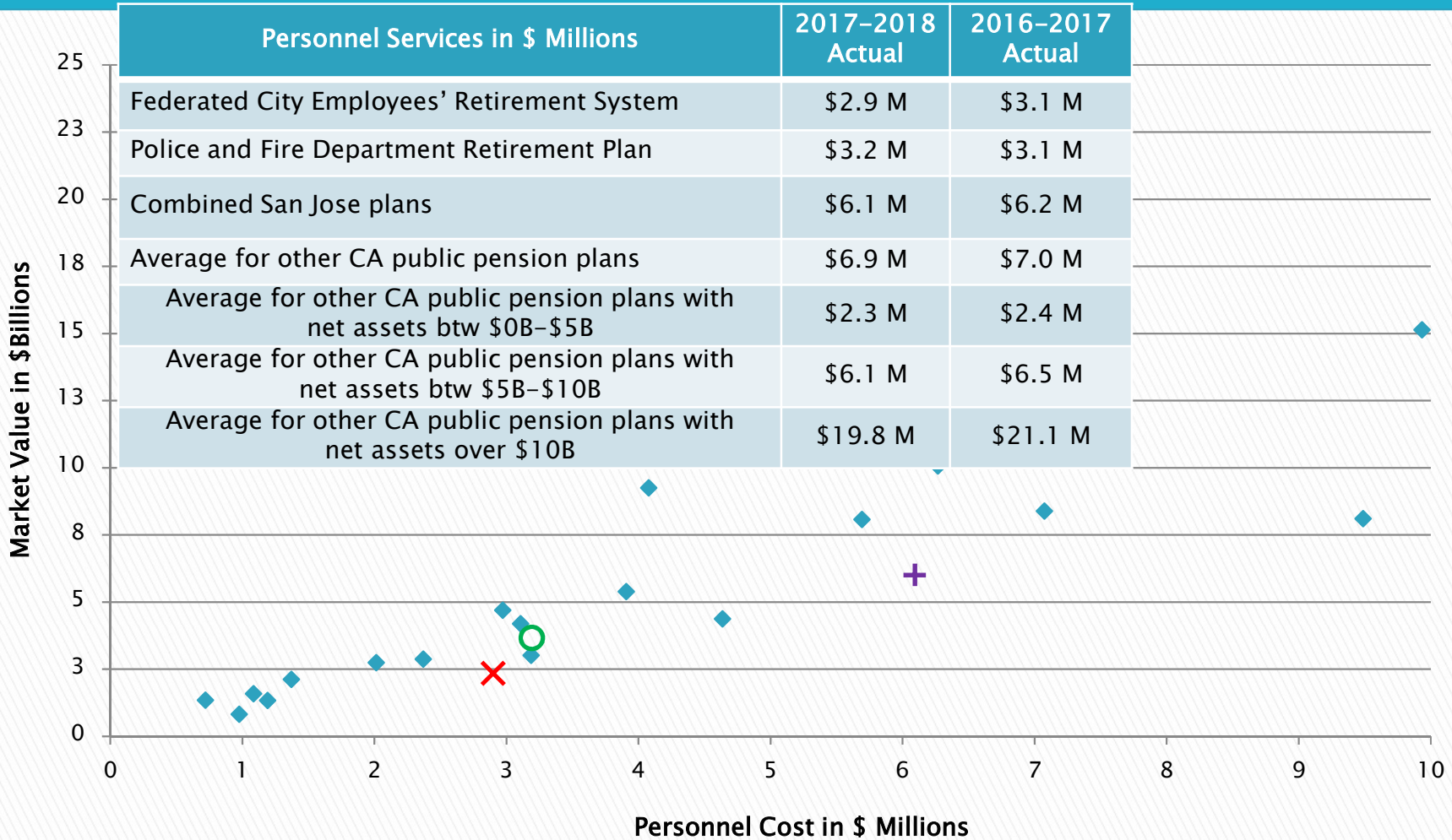
Personnel Services Analysis – in \$ (cont.)

Personnel Expense in \$ Millions – Actual as of 6/30/18 or most recent financial statement ⁽¹⁾

“X” below represents the Federated System, \$2,899,282

“O” below represents the Police and Fire Plan, \$3,193,583

“+” below represents the combined San Jose plans, \$6,092,865



¹ Retirement Services gathered and compiled most recent financial information from 23 public pension plans' CAFRs

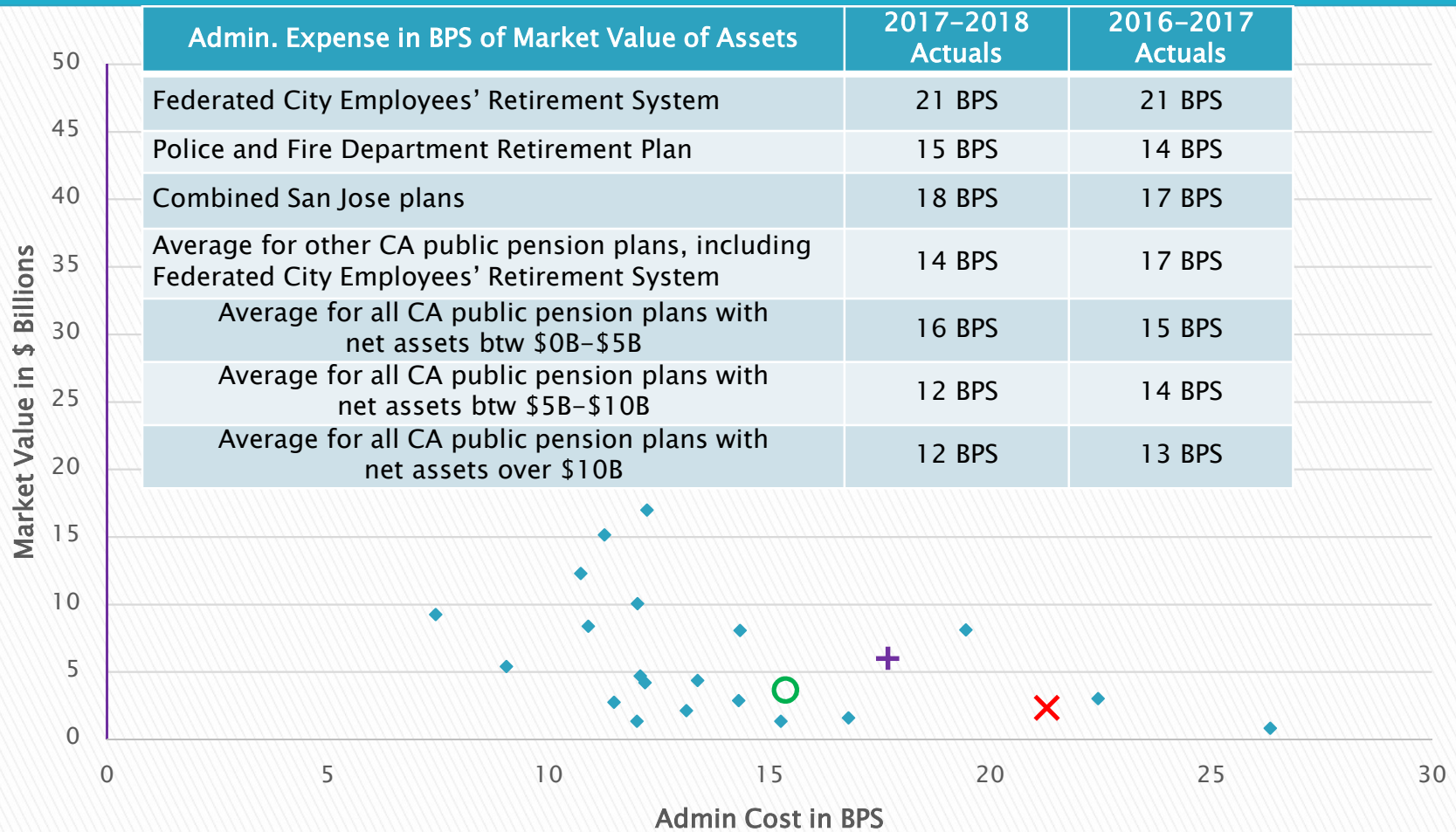
Administrative Cost Comparison – in BPS

Administrative Expense in BPS of Market Value of Assets – Actual as of 6/30/18 or most recent financial statement ⁽¹⁾

“X” below represents the Federated System , \$4,993,000

“O” below represents the Police and Fire Plan, \$5,623,000

“+” below represents the combined San Jose plans, \$10,616,000



¹ Retirement Services gathered and compiled most recent financial information from 23 public pension plans' CAFRs

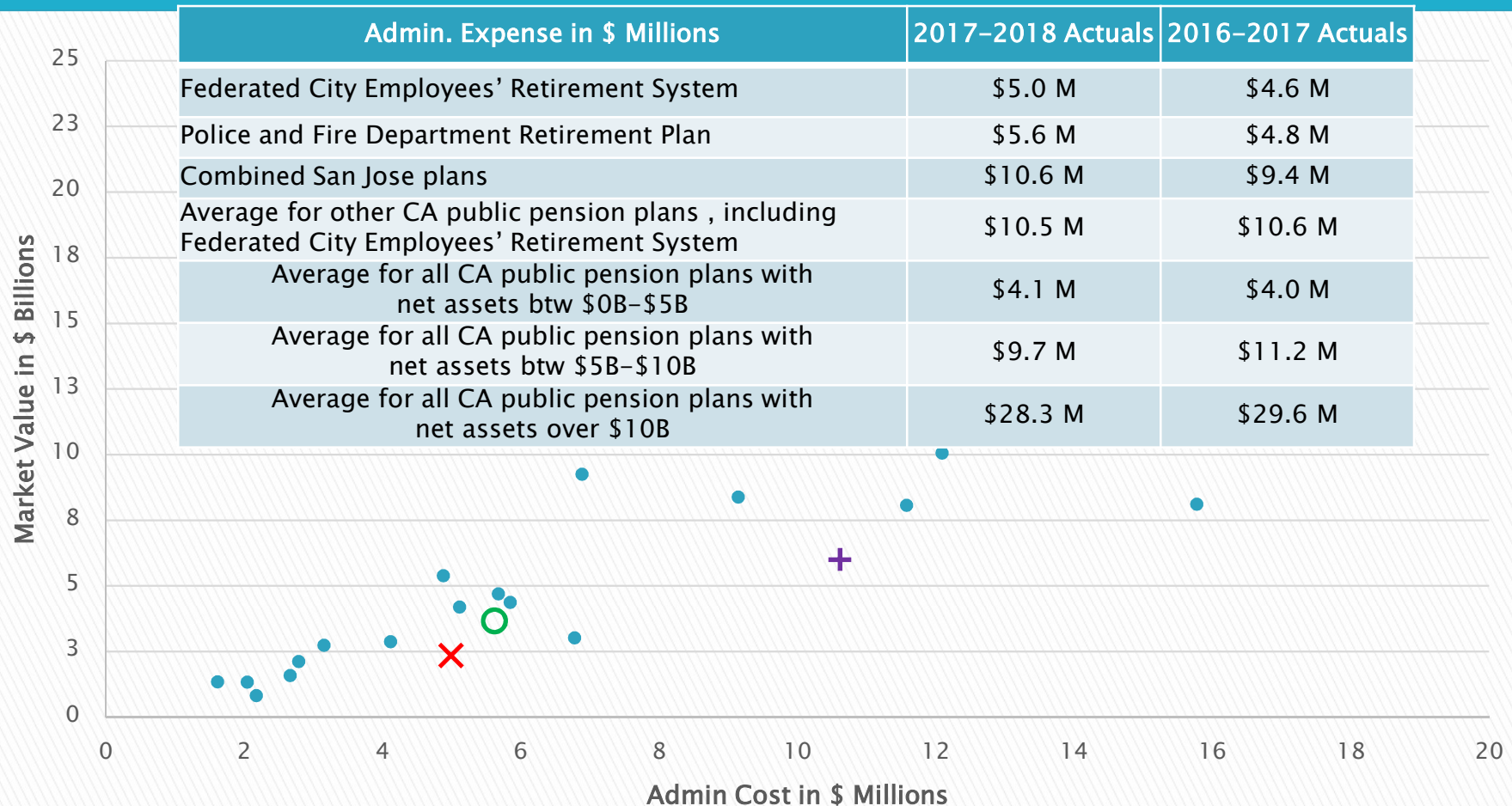
Administrative Cost Comparison – in \$

Administrative Expense in BPS of Market Value of Assets – Actual as of 6/30/18 or most recent financial statement ⁽¹⁾

“X” below represents the Federated System , \$4,993,000

“O” below represents the Police and Fire Plan, \$5,623,000

“+” below represents the combined San Jose plans, \$10,616,000



¹ Retirement Services gathered and compiled most recent financial information from 23 public pension plans public information



Memorandum

**TO: Board of Administration for the
Police and Fire Plan**

FROM: Benjie Chua Foy

**SUBJECT: Consideration of Proposed Budget
for Fiscal Year 2019-2020**

DATE: February 27, 2019

Approved

Date

RECOMMENDATION

Discussion and action on the proposed budget for fiscal year 2019-2020.

BACKGROUND

The Board approves the contribution rates recommended by the actuary which is made by the City. The Board also approves the administrative expense budget for reporting on the Source and Use Statements submitted for inclusion in the City's operating budget. The amounts approved by the Board are the total category amounts and not the individual line items. If the individual line item goes over budget, no approval is required from the Board as long as the total category amount remains under budget. This proposed budget is provided to the Board for discussion and approval, and if necessary, a revised and final budget will be prepared for approval at the next meeting. Highlights of the proposed budget are as follows:

ANALYSIS

SOURCES OF FUNDS

CITY CONTRIBUTIONS

The City contribution for the retirement and health benefit plan for the coming fiscal year is estimated to be \$210,168,000.

The actual contribution amount is based on the City contribution rates recommended by the actuary and adopted by the Board, applied as a factor against the City's total covered payroll. The FY20 contribution amounts assume the Board's adoption in April/May inclusive of the changes from Measure F, as shown in the June 30, 2018 actuarial reports for pension and healthcare, using the middle of the year amounts and no prefunding.

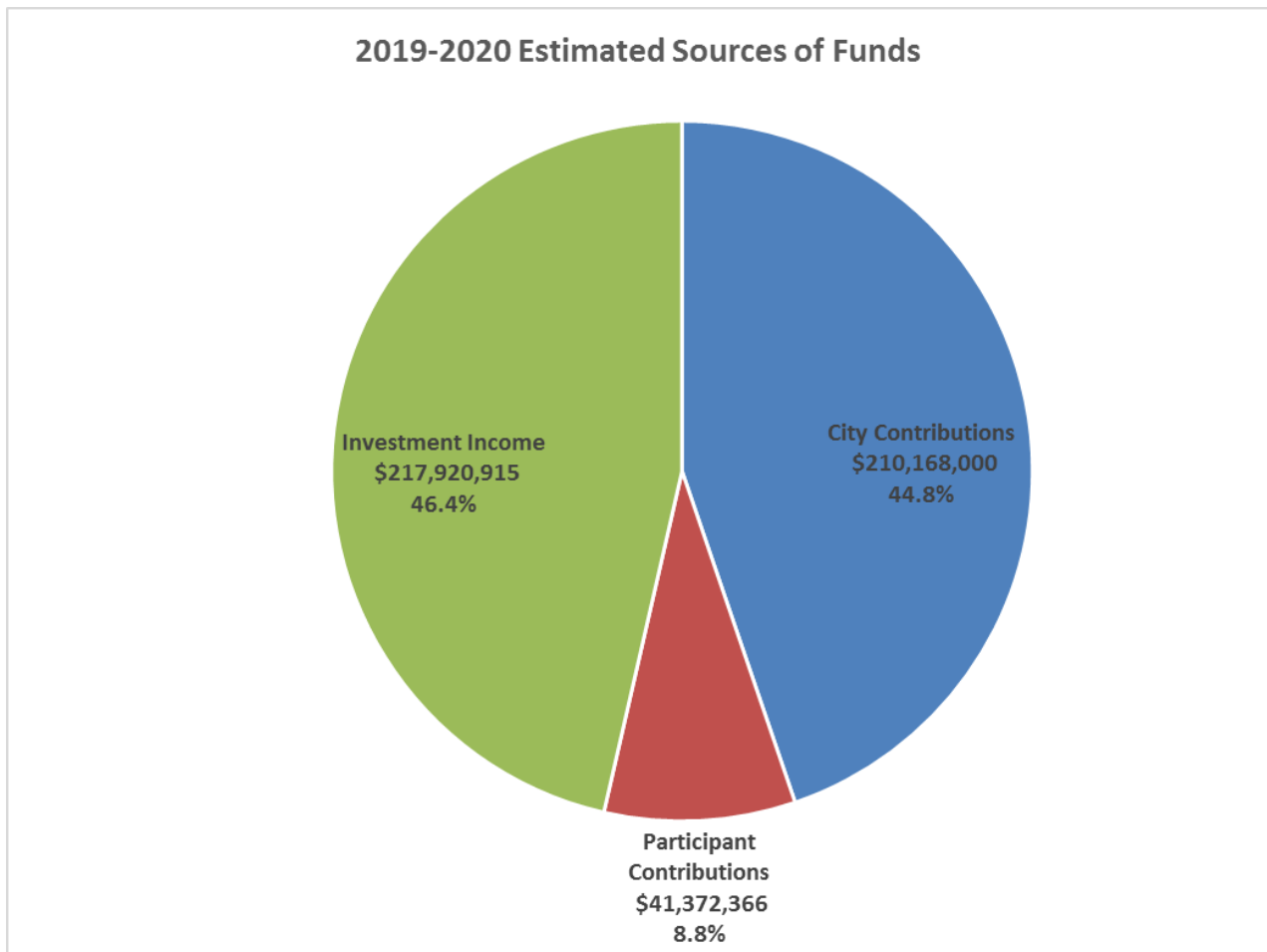
PARTICIPANT CONTRIBUTIONS

Total member contributions are estimated at \$41,372,366, an 11.00% increase from the 2018-2019 adopted amount. Member contributions are calculated based on the contribution rate for each tier. Police Tier 1 contribution rates for pension increased from 10.28% to 10.70% while their covered payroll decreased slightly from \$92.6 million to \$91.7 million. Fire Tier 1 contribution rates for pension increased slightly from 11.09% to 11.50% while covered payroll decreased slightly from \$74.8 million to \$74.1 million. Police Tier 2 contribution rates for pension increased from 13.71% to 14.10% and covered

payroll increased from \$31.6 million to \$49.7 million, while Fire Tier 2 contribution rates for pension increased from 15.13% to 15.40% while covered payroll increased from \$11.4 million to \$17.9 million. Healthcare contribution rates remain at 8.0% per the Municipal Code for Tier 1 members, while Tier 2 are required to go into the VEBA.

INVESTMENT INCOME

Investment earnings are calculated based on the actuarial assumed rate of return of 6.75%. The beginning fund balance, along with the City’s contributions and member contributions offset with the expenditures are expected to earn less than the full rate since these amounts will occur throughout the year.



USES OF FUNDS

PENSION BENEFITS AND HEALTH INSURANCE

The pension benefits budget increased to \$223,653,000, an increase of \$10,537,000, or 4.94%, which is the average increase for the past five years. Pension benefits include service pensions, disability and survivorship pensions, death benefits and refunds of contributions.

The health insurance budget increased to \$26,231,000, an increase of \$2,739,000, or 11.66%. Health insurance includes health and dental insurance subsidies, as well as Medicare reimbursements.

VEBA withdrawals represent the funds taken out of the healthcare plan by Tier 1 members who opted out and the mandatory movement of Tier 2 members out of the healthcare plan. Last fiscal year will have the largest amount as it was the first year of the opt-in to the VEBA and will continue through calendar year 2022 for rehired employees with healthcare contributions.

ADMINISTRATIVE EXPENSE BUDGET

The proposed administrative expenses budget of \$6,701,000 is a net increase of 7.06% or \$442,000 from the prior year proposed budget of \$6,259,000.

PERSONNEL SERVICES

The budget for personnel services was increased to \$3,898,000, an increase of \$120,000, or 3.18% over the prior year adopted budget of \$3,778,000. The Budget Office's labor distribution report drives the personnel budget, which covers all the staff in Retirement Services. The salaries and benefits of all staff, except for investment staff, is split 50/50 between the Plan and the Federated City Employees' Retirement System (System). The investment staff is split 60/40 between the Plan and the System, which is roughly based on asset size. The number of positions in Retirement Services remained at 39.75. However, two of the positions are limited-date positions which expire on June 30, 2019. The proposed personnel changes for FY19-20 were requested to convert the limited-date positions to permanent positions, and after discussions with the Mayor's Office, we understand they are in support of approving the two limited-date positions. The main reason for the increase is due to the increased benefit rates, as well as adding two return to work retirees in the budget.

NON-PERSONNEL / EQUIPMENT

The budget for non-personnel / equipment was increased to \$1,408,000, an increase of \$96,000, or 7.32% over the prior year adopted budget of \$1,312,000. This category includes data processing costs for investments, rent, insurance, information technology hardware/software, pension administration annual maintenance fee, postage and printing, training, travel, and other office expenses. This increase was mainly due to an increase of \$54,000 in the investment analytics and research budget for added services. The rest of the increase is due to CPI increases in various categories.

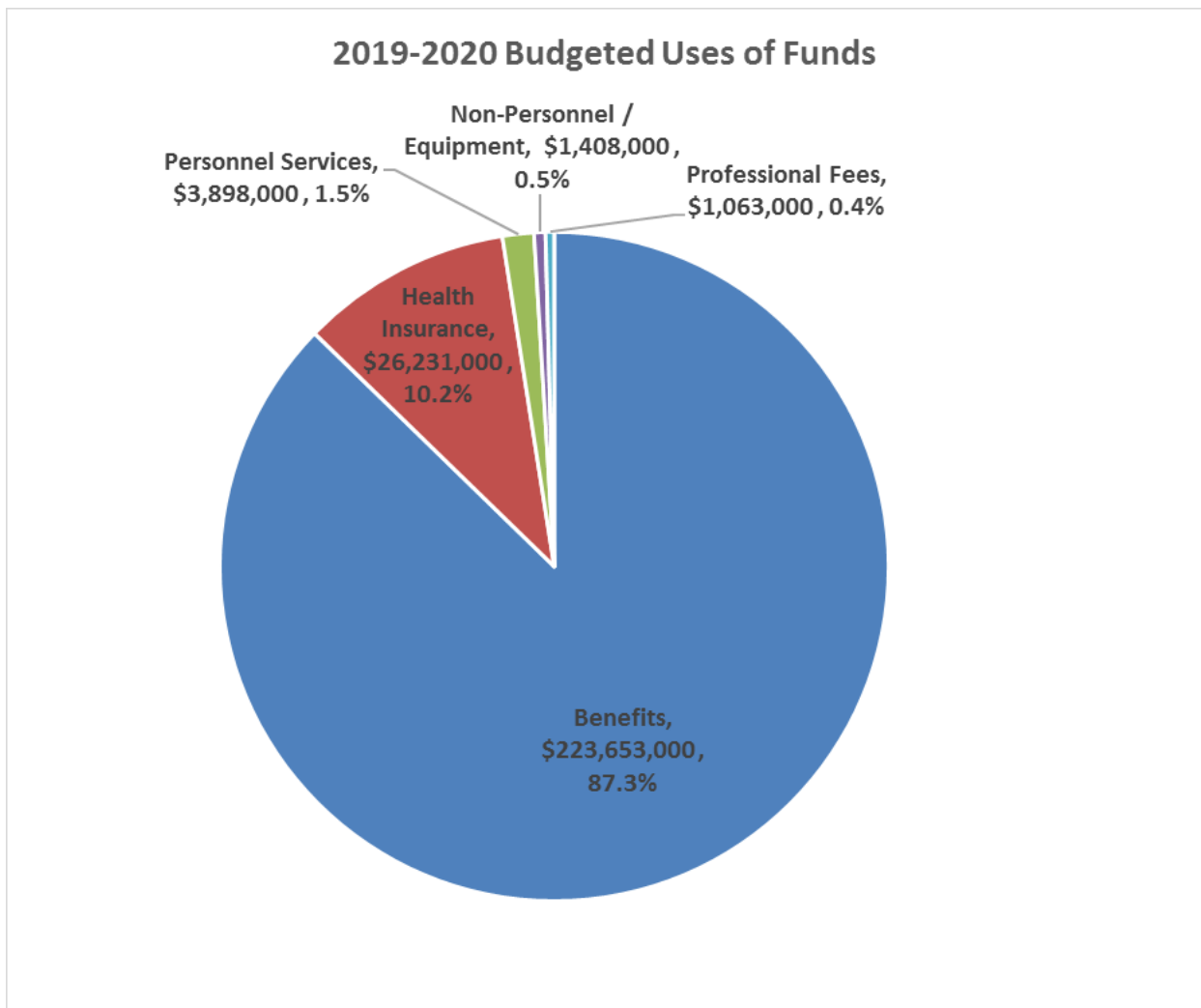
PROFESSIONAL SERVICES

The budget for professional services was reduced to \$845,000, a decrease of \$94,000, or 10.01% over the prior year adopted budget of \$939,000. Funding is required to continue the professional services necessary to meet core business needs in the area of actuarial services, financial audit services, legal services, and temporary staffing services. Decreases in budgetary amounts for core professional services resulted from reducing the budgetary amounts to be in line with prior year trends which were offset by planned projects for FY19-20. These include the following:

- \$125,000 reduction in temporary staffing services due to completion of pensionable earnings correction project and implementation of the new pension administration system
- \$40,000 increase in actuarial services due to planned experience study
- \$25,000 addition for a communications consultant
- \$34,000 reduction in other professional services budget to be consistent with past trends

MEDICAL SERVICES

The budget for medical services was reduced to \$218,000, a decrease of \$12,000, or 5.22% from the prior year adopted budget of \$230,000. This category is for expenses related to the processing of disability applicants, which include costs for a medical advisor and medical services from independent medical examiners (IME). The main reason for the decrease is to be in line with prior year expenditures and cases handled.



PROPOSED BUDGET

FISCAL YEAR 2019-2020

POLICE AND FIRE DEPARTMENT RETIREMENT PLAN

March 7, 2019

POLICE & FIRE DEPARTMENT RETIREMENT PLAN

Statement of Source and Use of Funds

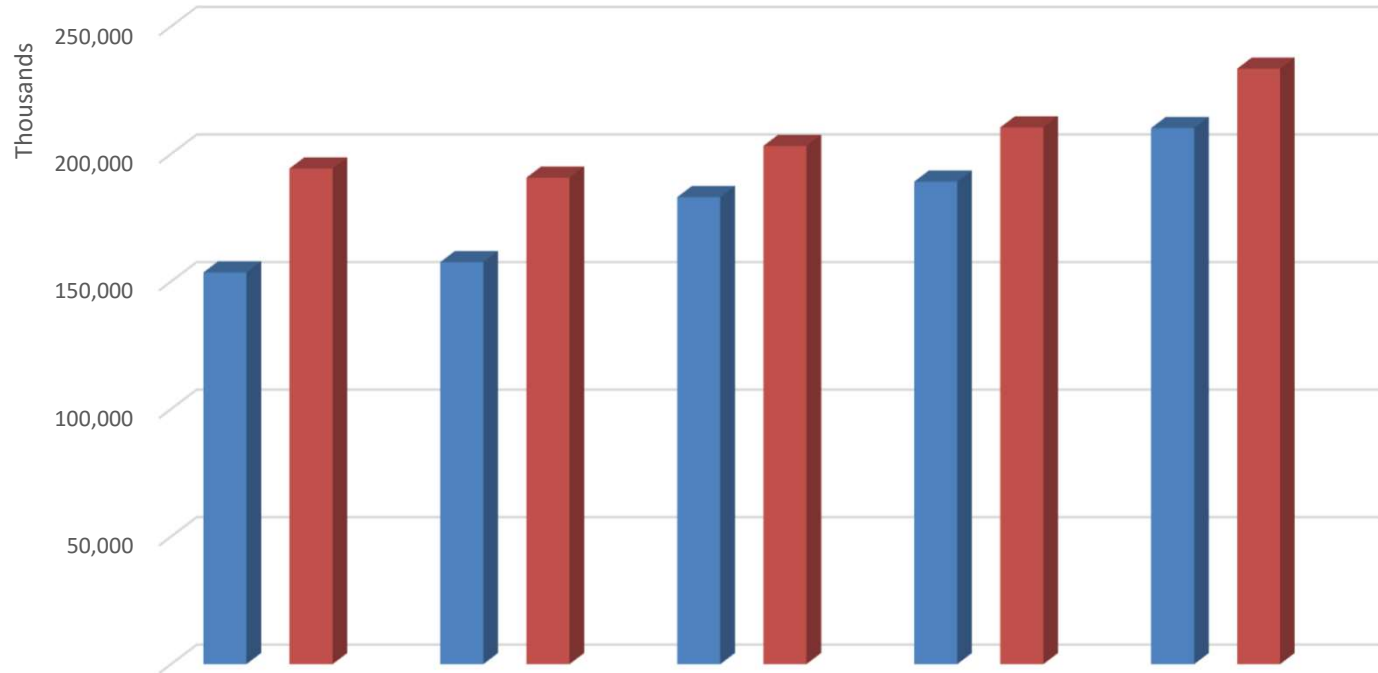
| | (A) 2017-2018 Actual | (B) 2018-2019 Modified | (C) 2018-2019 Forecast | (D) 2019-2020 Proposed | (A) to (B) Increase (Decrease) | (B) - (C) Increase (Decrease) | (C) - (D) Increase (Decrease) |
|------------------------------------|---|---|---|---|---|--|--|
| SOURCE OF FUNDS | | | | | | | |
| Beginning Fund Balance | | | | | | | |
| Claims Reserve | 3,442,939,000 | 3,658,711,000 | 3,658,711,000 | 3,846,643,809 | 215,772,000 | 0 | 187,932,809 |
| Total Beginning Fund Balance | 3,442,939,000 | 3,658,711,000 | 3,658,711,000 | 3,846,643,809 | 215,772,000 | 0 | 187,932,809 |
| Transfers | | | | | | | |
| City Contributions | 183,094,000 | 184,231,413 | 189,154,538 | 210,168,000 | 1,137,413 | 4,923,125 | 21,013,462 |
| 1970 COLA | 534 | 475 | 534 | 540 | (59) | 59 | 6 |
| 1980 COLA | 9,927 | 9,075 | 8,818 | 8,820 | (852) | (257) | 2 |
| 1990 COLA | 3,758 | 3,500 | 3,801 | 3,804 | (258) | 301 | 3 |
| Total Transfers | 183,108,219 | 184,244,463 | 189,167,691 | 210,181,164 | 1,136,244 | 4,923,228 | 21,013,473 |
| Revenue | | | | | | | |
| Participant Income | 39,968,000 | 37,272,734 | 37,272,623 | 41,372,366 | (2,695,266) | (111) | 4,099,743 |
| Investment Income, net of expenses | 240,546,000 | 208,423,486 | 205,915,177 | 218,007,171 | (32,122,514) | (2,508,309) | 12,091,994 |
| Total Revenue | 280,514,000 | 245,696,220 | 243,187,800 | 259,379,537 | (34,817,780) | (2,508,420) | 16,191,737 |
| TOTAL SOURCE OF FUNDS | 3,906,561,219 | 4,088,651,683 | 4,091,066,491 | 4,316,204,510 | 182,090,464 | 2,414,808 | 225,138,019 |
| USE OF FUNDS | | | | | | | |
| Expenditures | | | | | | | |
| Benefits | 206,630,000 | 213,116,000 | 213,240,311 | 223,653,000 | 6,486,000 | 124,311 | 10,412,689 |
| Health Insurance | 27,686,000 | 23,492,000 | 25,760,000 | 26,231,000 | (4,194,000) | 2,268,000 | 471,000 |
| VEBA withdrawals | 7,897,000 | 0 | 0 | 0 | (7,897,000) | 0 | 0 |
| Personnel Services (Ret.) | 3,193,583 | 3,778,000 | 3,278,391 | 3,898,000 | 584,417 | (499,609) | 619,609 |
| Non-Personnel/Equipment | 1,221,953 | 1,312,000 | 1,155,867 | 1,408,000 | 90,047 | (156,133) | 252,133 |
| Professional Fees | 1,207,464 | 1,169,000 | 974,960 | 1,063,000 | (38,464) | (194,040) | 88,040 |
| 1970 COLA | 534 | 475 | 534 | 540 | (59) | 59 | 6 |
| 1980 COLA | 9,927 | 9,075 | 8,818 | 8,820 | (852) | (257) | 2 |
| 1990 COLA | 3,758 | 3,500 | 3,801 | 3,804 | (258) | 301 | 3 |
| Total Expenditures | 247,850,219 | 242,880,050 | 244,422,682 | 256,266,164 | (4,970,169) | 1,542,632 | 11,843,482 |
| Ending Fund Balance | | | | | | | |
| Claims Reserve | 3,658,711,000 | 3,845,771,633 | 3,846,643,809 | 4,059,938,346 | 187,060,633 | 872,176 | 213,294,537 |
| Total Ending Fund Balance | 3,658,711,000 | 3,845,771,633 | 3,846,643,809 | 4,059,938,346 | 187,060,633 | 872,176 | 213,294,537 |
| TOTAL USE OF FUNDS | 3,906,561,219 | 4,088,651,683 | 4,091,066,491 | 4,316,204,510 | 182,090,464 | 2,414,808 | 225,138,019 |

Amount not included in budget since no cash outlay:

Amortization estimate for PG3 (to be placed in service February 2019 = 5 months for FY18-19;
PG3 to be amortized over 10 years)

\$ 162,503 \$ 390,007

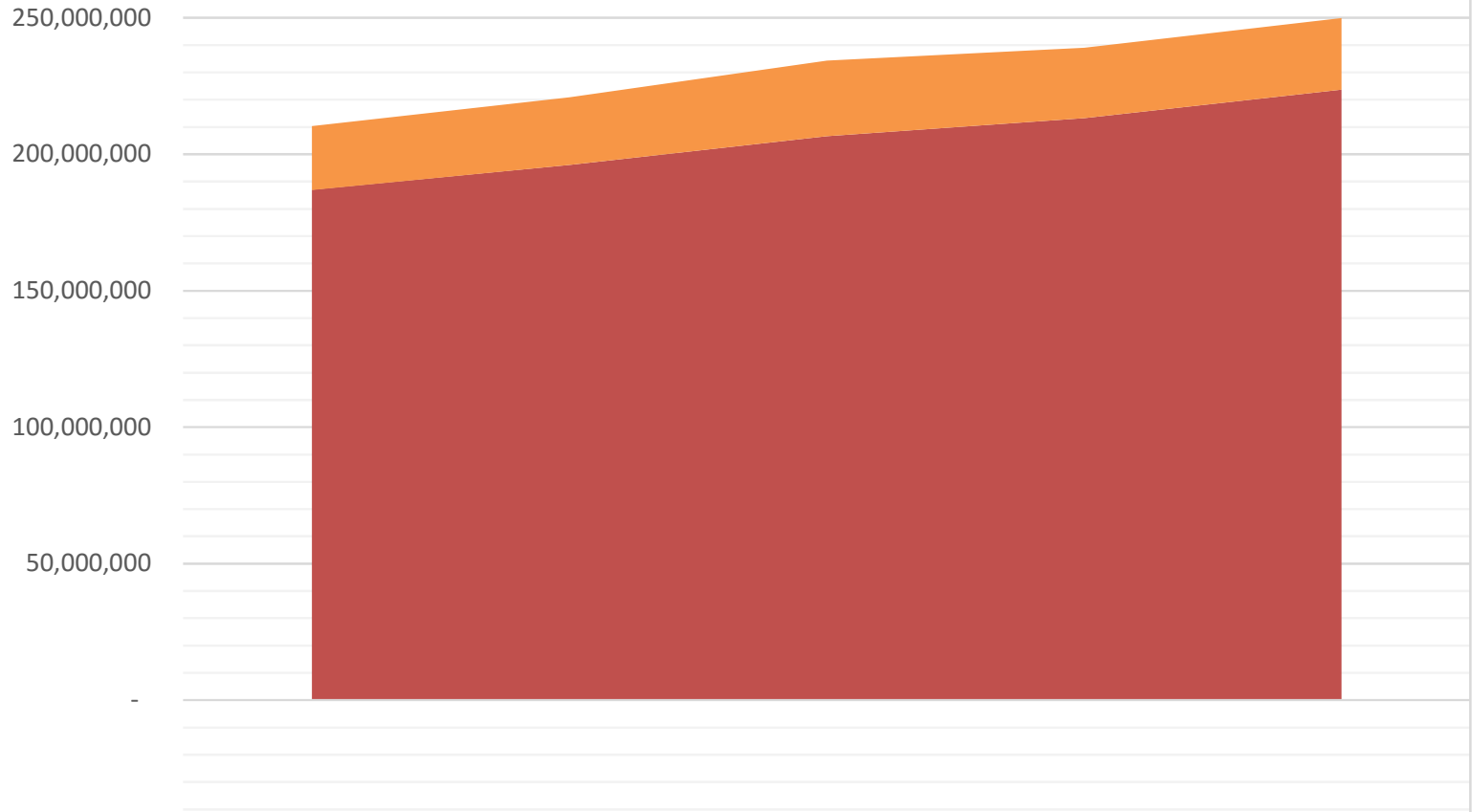
POLICE & FIRE DEPARTMENT RETIREMENT PLAN Total City Contributions & Covered Payroll



| | FY 15-16 | FY 16-17 | FY 17-18 | FY 18-19 (Forecast) | FY 19-20 (Estimate) |
|--|-------------|-------------|-------------|------------------------|------------------------|
| ■ Total City Contributions | 153,545,000 | 157,624,000 | 183,094,000 | 189,154,538 | 210,168,000 |
| Total City Contribution % Change | 2.2% | 2.7% | 16.2% | 3.3% | 11.1% |
| ■ Total Covered Payroll | 194,304,844 | 190,736,887 | 203,164,000 | 210,440,473 | 233,474,797 |
| Total Covered Payroll % Change | 3.2% | -1.8% | 6.5% | 3.6% | 10.9% |

POLICE & FIRE DEPARTMENT RETIREMENT PLAN

Pension Benefits and Health Insurance



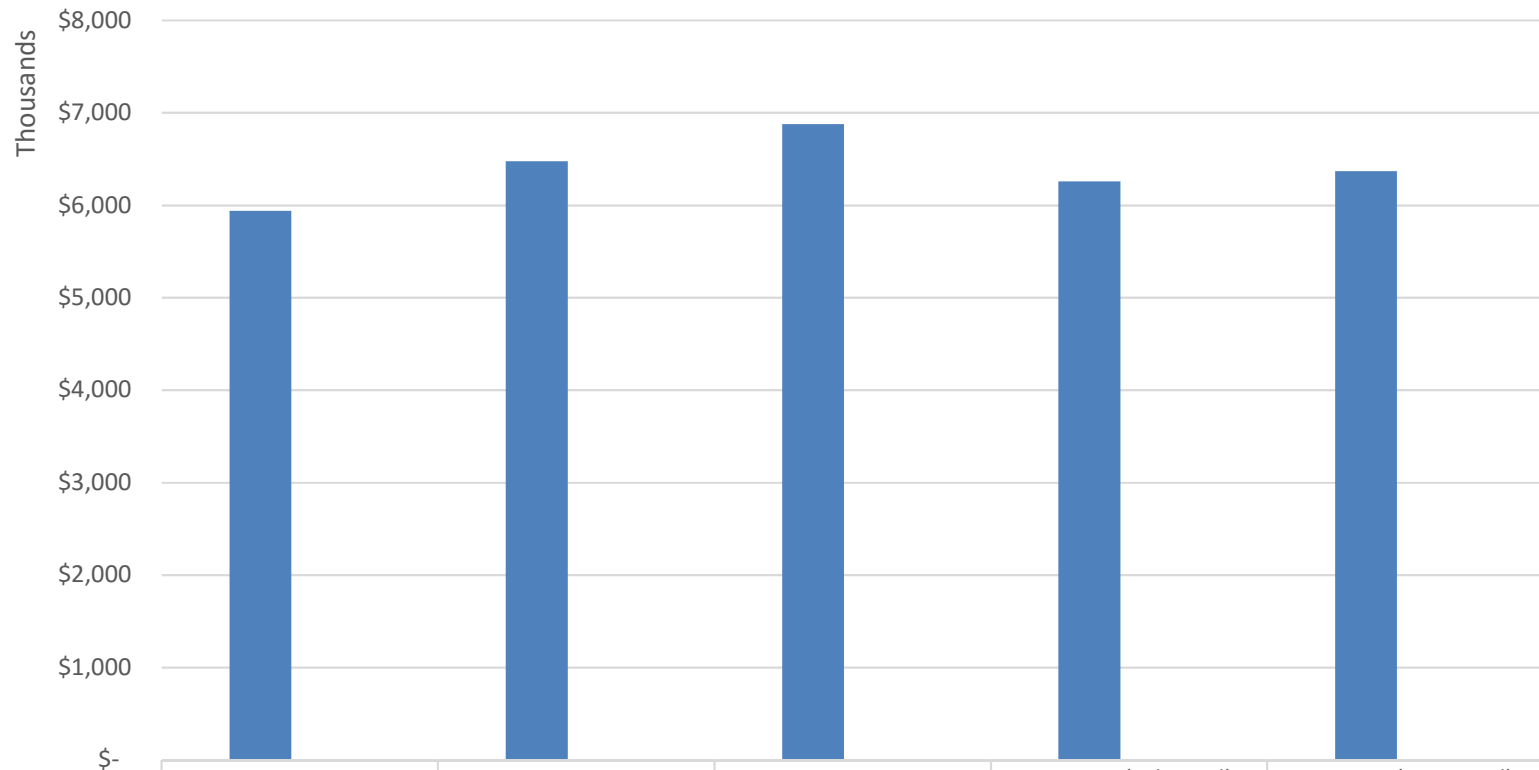
| | FY 2016 - Actual | FY 2017 - Actual | FY 2018 - Actual | FY 2019 - Forecast | FY 2020 - Proposed |
|---------------------------|------------------|------------------|------------------|--------------------|--------------------|
| Total Benefits | 210,389,000 | 220,831,000 | 234,316,000 | 239,000,311 | 249,884,000 |
| Health Insurance | 23,449,000 | 24,799,000 | 27,686,000 | 25,760,000 | 26,231,000 |
| Pension Benefits | 186,940,000 | 196,032,000 | 206,630,000 | 213,240,311 | 223,653,000 |
| Health Insurance % Change | -3.1% | 5.8% | 11.6% | -7.0% | 1.8% |
| Pension Benefits % Change | 6.1% | 4.9% | 5.4% | 3.2% | 4.9% |

POLICE & FIRE DEPARTMENT RETIREMENT PLAN

Administrative Expenses: FY 2019-2020

| | (A) 2017-2018 Actual | (B) 2018-2019 Adopted | (C) 2018-2019 Forecast | (D) 2019-2020 Proposed | (A) to (B) Increase (Decrease) | (B) - (C) Increase (Decrease) | (C) - (D) Increase (Decrease) |
|--|----------------------------|-----------------------------|------------------------------|------------------------------|--------------------------------------|-------------------------------------|-------------------------------------|
| PERSONNEL SERVICES | | | | | | | |
| Salaries and employee benefits | 3,193,583 | 3,778,000 | 3,278,391 | 3,898,000 | 584,417 | (499,609) | 619,609 |
| Total Personnel Services | 3,193,583 | 3,778,000 | 3,278,391 | 3,898,000 | 584,417 | (499,609) | 619,609 |
| NON-PERSONNEL / EQUIPMENT | | | | | | | |
| Investment analytics and research | 556,873 | 515,000 | 523,633 | 569,000 | (41,873) | 8,633 | 45,367 |
| Insurance | 170,079 | 190,000 | 191,834 | 193,000 | 19,921 | 1,834 | 1,166 |
| IT hardware / software | 44,789 | 90,000 | 62,901 | 97,000 | 45,211 | (27,099) | 34,099 |
| LRS - annual maintenance fee | 106,829 | 110,000 | 44,510 | 110,000 | 3,171 | (65,490) | 65,490 |
| Postage and printing | 50,535 | 90,000 | 47,797 | 90,000 | 39,465 | (42,203) | 42,203 |
| Rent | 196,107 | 200,000 | 198,446 | 210,000 | 3,893 | (1,554) | 11,554 |
| Training and travel | 28,638 | 70,000 | 37,288 | 65,000 | 41,362 | (32,712) | 27,712 |
| Office supplies and board meeting expenses | 32,888 | 30,000 | 21,986 | 30,000 | (2,888) | (8,014) | 8,014 |
| Other non-personnel / equipment | 35,215 | 17,000 | 27,472 | 44,000 | (18,215) | 10,472 | 16,528 |
| Total Non-personnel / Equipment | 1,221,953 | 1,312,000 | 1,155,867 | 1,408,000 | 90,047 | (156,133) | 252,133 |
| PROFESSIONAL SERVICES | | | | | | | |
| Actuary | 292,748 | 230,000 | 225,700 | 270,000 | (62,748) | (4,300) | 44,300 |
| External auditor | 62,232 | 70,000 | 77,588 | 80,000 | 7,768 | 7,588 | 2,412 |
| Legal | 283,291 | 330,000 | 199,444 | 326,000 | 46,709 | (130,556) | 126,556 |
| Pension administrative system | 39,561 | 35,500 | 43,959 | 36,500 | (4,061) | 8,459 | (7,459) |
| Temporary staffing agencies | 166,886 | 169,000 | 157,061 | 44,000 | 2,114 | (11,939) | (113,061) |
| Other professional services | 151,296 | 104,500 | 43,970 | 88,500 | (46,796) | (60,530) | 44,530 |
| Total Professional Services | 996,014 | 939,000 | 747,722 | 845,000 | (57,014) | (191,278) | 97,278 |
| MEDICAL SERVICES | | | | | | | |
| Independent medical examiners | 116,388 | 140,000 | 88,900 | 112,000 | 23,612 | (51,100) | 23,100 |
| Medical consultant | 95,062 | 90,000 | 138,338 | 106,000 | (5,062) | 48,338 | (32,338) |
| Total Medical Services | 211,450 | 230,000 | 227,238 | 218,000 | 18,550 | (2,762) | (9,238) |
| TOTAL ADMINISTRATIVE EXPENSES | 5,623,000 | 6,259,000 | 5,409,218 | 6,369,000 | 636,000 | (849,782) | 959,782 |

POLICE & FIRE DEPARTMENT RETIREMENT PLAN
Administrative Expense Budget
FY 2015-2016 to FY 2019-2020



| | FY 15-16 | FY 16-17 | FY 17-18 | FY 18-19 (Adopted) | FY 19-20 (Proposed) |
|---------------------|-------------|-------------|-------------|--------------------|---------------------|
| ■ Admin Exp Budget* | \$5,940,703 | \$6,479,200 | \$6,876,800 | \$6,259,000 | \$6,369,000 |
| ■ % Change | 3.0% | 9.1% | 6.1% | -9.0% | 1.8% |

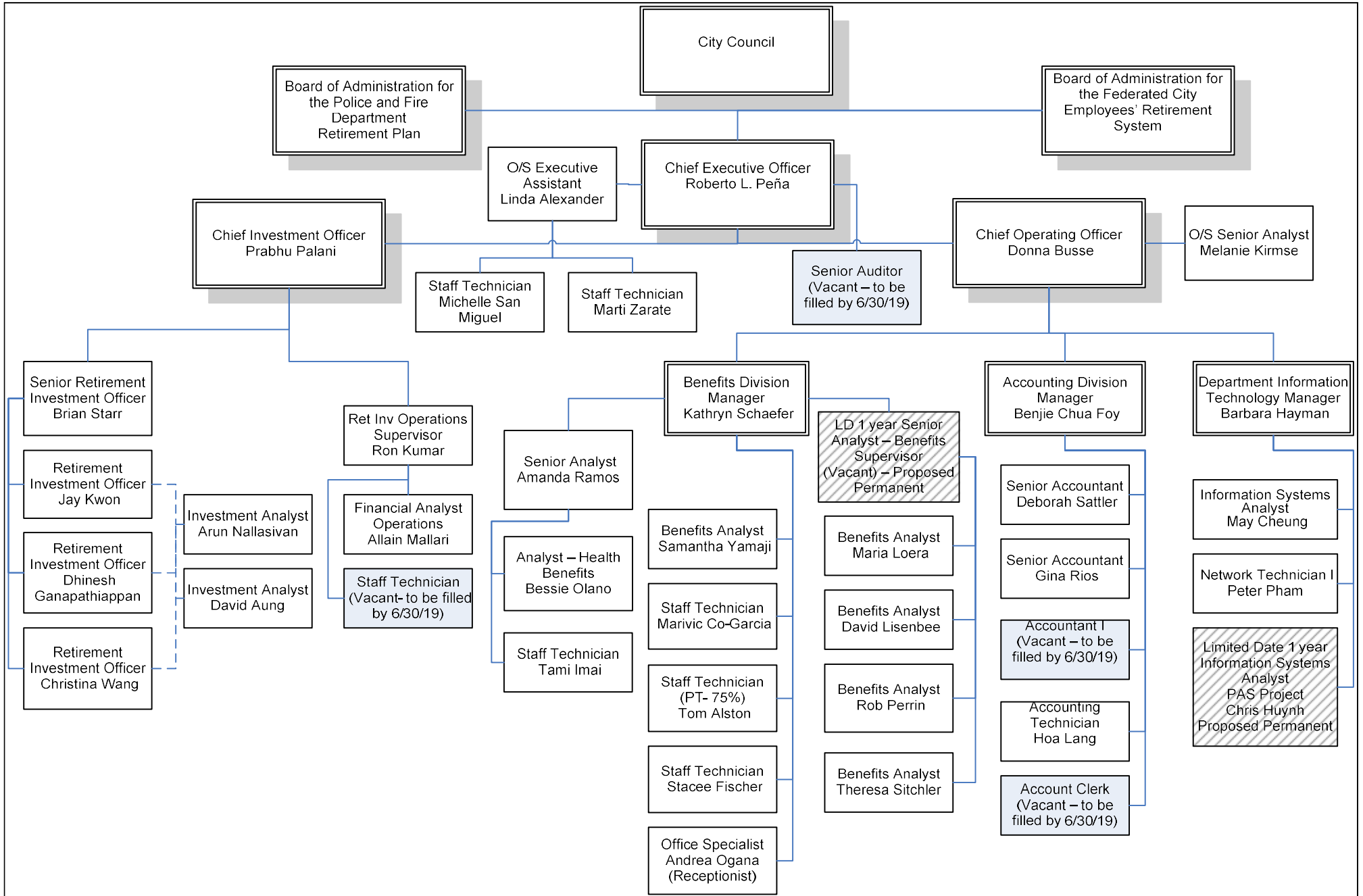
* Amount includes budget for operations only.

OFFICE OF RETIREMENT SERVICES

Departmental Position Detail

| Position | 2017-2018 Adopted (1) | 2018-2019 Adopted (2) | 2018-2019 Forecast (3) | 2019-2020 Proposed (4) | Increase / (Decrease) (2 to 4) | Increase / (Decrease) (3 to 4) | Explanation |
|---|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|---|---|--|
| Account Clerk II | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Accountant I | 0.00 | 0.00 | 1.00 | 1.00 | 1.00 | - | Reclassification from Senior Account Clerk |
| Accounting Technician | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Analyst I/II | 6.00 | 6.00 | 6.00 | 6.00 | - | - | |
| Assistant Director and Chief Investment Officer | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Department Information Technology Manager | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Deputy Director | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Director of Retirement Services | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Division Manager | 2.00 | 2.00 | 2.00 | 2.00 | - | - | |
| Executive Assistant | 0.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Financial Analyst | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Investments Operations Officer | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Information Systems Analyst | 2.00 | 2.00 | 2.00 | 2.00 | - | - | 1 is a limited-date position that is being requested to be permanent |
| Network Technician I/II/III | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Office Specialist II | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Retirement Investment Analyst I/II | 2.00 | 2.00 | 2.00 | 2.00 | - | - | |
| Retirement Investment Officer | 3.00 | 3.00 | 3.00 | 3.00 | - | - | |
| Senior Account Clerk | 1.00 | 1.00 | 0.00 | 0.00 | (1.00) | - | Reclassification to Accountant I |
| Senior Accountant | 2.00 | 2.00 | 2.00 | 2.00 | - | - | |
| Senior Analyst | 2.00 | 2.00 | 2.00 | 2.00 | - | - | 1 is a limited-date position that is being requested to be permanent |
| Senior Auditor | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Senior Retirement Investment Officer | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Staff Technician | 7.00 | 6.00 | 6.00 | 6.00 | - | - | |
| Staff Technician PT | 0.75 | 0.75 | 0.75 | 0.75 | - | - | |
| Total Positions | 39.75 | 39.75 | 39.75 | 39.75 | 0.00 | 0.00 | |

OFFICE OF RETIREMENT SERVICES
Proposed Organizational Chart
FY19-20



ATTACHMENT C



Police and Fire Annual Fee Report - 2017

Executive Summary

This report marks the third anniversary of our annual Fee Report for the Police and Fire Department Retirement Plan (“Police and Fire”, “Plan”). The goal of the report is to provide transparency and insight into the fees and expenses paid to investment managers along with the costs of operating the investment program. Pension plan fee data is generally underreported by peers, and typically represents only the portion of fees that are observable. This excludes often sizable embedded fees (such as incentive fees) that are deducted from account values of certain fund structures.

It is important to note that fees are a function of asset allocation and portfolio construction, which are byproducts of the Board’s objectives, investment beliefs, and risk tolerance. Each year, the Board typically reviews the asset allocation considering updated capital market assumptions and the expected returns and volatility of the portfolio associated with those assumptions. The asset allocations in effect for the period covered by this report, as illustrated in tables 1 and 2, are an expression of the Board’s Investment Policy Statement that “Investments shall be diversified with the intent to minimize the risk of large investment losses”.

Asset allocation is typically one of the largest determinants of investment management fees at the portfolio level. Asset allocations that introduce alternative asset classes (Private Equity, Private Debt, Real Estate, Hedge Funds, etc.) will have higher levels of investment manager fees, because these asset classes or strategies have higher fee structures than traditional asset classes. In addition, asset class structuring can have a significant impact on fees. The use of active management versus passive management, as well as alternative strategies within traditional asset classes, will increase fees. When evaluating investment managers, staff places a significant emphasis on fees by negotiating for lower fees and analyzing that expected value or return is worth the expected cost.

This year, the report introduces a new category of fees that was not previously captured (fund operating expenses) along with a disclosure in accordance with California Government Code §7514.7 (the result of Assembly Bill 2833), which requires annual reporting of fees paid by California public investment funds as a result of investing in alternative investment vehicles.

For calendar year 2017, management and incentive fees for the pension plan totaled \$43.4 million with a fee ratio of 1.27% as compared to \$38.2 million and 1.21% for 2016 and \$33.3 million and 1.06% for 2015. Fund operating expenses were \$4.6 million in 2017 for a fee ratio of 0.14%. The health care trust management and incentive fees totaled \$0.3 million with a fee ratio of 0.25%, compared to \$0.2 million with a fee ratio of 0.28% in both 2016 and 2015. Other investment-related costs (staff, consultants, custodian bank, investment legal, etc.) for the pension plan in 2017 were \$2.5 million with a fee ratio of 0.07% as compared to \$2.5 million and 0.08% for 2016 and \$2.3 million and 0.07% for 2015. Other investment-related costs for the health care trust totaled \$0.1 million with a fee ratio of 0.08% as compared to \$0.1 million and 0.11% for 2016 and \$0.1 million and 0.10% for 2015.

Table 1 - Pension Average Asset Allocation for 2017

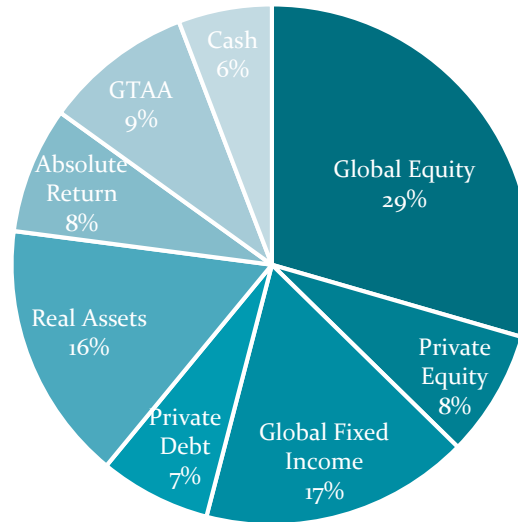
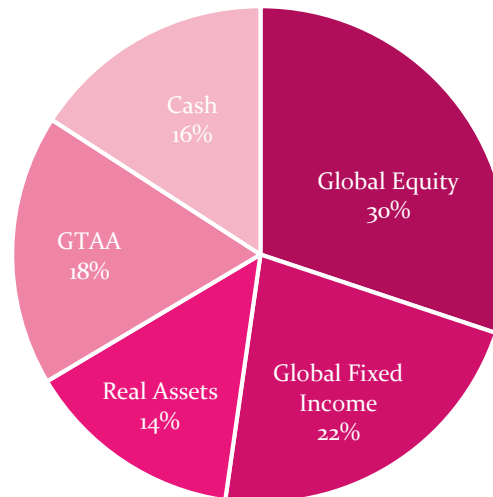


Table 2 - Health Care Trust Average Asset Allocation for 2017



Introduction

The fees in this report represent management fees, incentive fees, fund operating expenses, and other investment-related costs that were incurred during the calendar year. These amounts may include fees that were accrued for the year, but not paid out.

Management fees are fees charged by fund managers to invest and manage assets. Incentive fees are performance-based fees for exceeding a hurdle return and are only applicable to certain fund structures. It is important to note that incentive fees are a form of shared economics that are only paid if the manager has produced positive returns or exceeded a predetermined hurdle rate. In some situations, incentive fees can be negative, reflecting the complexity of fee agreements. Operating expenses include overhead related to managing a fund that are indirectly borne by investors, which may include professional, administration, research, tax, legal, custodial and audit expenses for a fund. Trading expenses such as broker commissions are excluded from this report. Other costs include salary and benefits compensation for investment staff (including a 50% allocation for the CEO), cost of consultants (general, absolute return, risk), custodian, other third party vendors utilized by the investment program, and investment staff travel.

Though best efforts have been made to capture all material fees and expenses, this report may not include all indirect expenses and charges that may be paid to managers' affiliates, consultants, or entities for services rendered to the managers, the funds or portfolio entities held by certain funds. Future iterations of this report will continue to grow in sophistication, benefiting from industry-wide initiatives to gain additional transparency, such as the increasing adoption of the Institutional Limited Partners Association ("ILPA") fee reporting template.

Data Sources

Staff compiled this fee report using the best available information for each fund manager in order to develop a comprehensive view of fees. Fee amounts were reviewed for reasonableness and reconciled to fee schedules. Fees for all managers active at any point during the year are included in this report, including those that were initially funded or terminated mid-year.

Fees for mutual funds, short term investment funds (Cash), and certain public markets commingled funds that deduct fees directly from the funds were calculated by multiplying each funds' fee ratio by the funds' average monthly balance for the year. The average balances were sourced from the Plan custodian bank, State Street.

Absolute Return management and incentive fees were provided by managers with independent re-calculations and reconciliations completed by Plan consultant Albourne. Operating expenses were calculated by Albourne using audited financial statements for each fund. Fees for Private funds were gathered by asking managers to complete the ILPA fee reporting template. The ILPA template is intended to standardize and codify the presentation of fees, expenses, and carried interest information by fund managers to Limited Partners. The remaining manager fees were obtained by having the fund managers fill out a fee template designed by staff.

Within the Other Costs section, consultants, custodian, and other vendor costs were sourced from fee invoices from the vendors. Investment staff salary and benefits were allocated to each of the four San Jose plans by pro-rating the total costs by the average balance of each plan. Similarly, legal costs incurred by Police and Fire were allocated between the pension plan and health care trust by pro-rating the total costs by the average monthly balance of each plan.

Changes from 2016 Report

This years report includes a new category of manager fees that was not previously reported – operating expenses. As previously mentioned, operating expenses generally represent overhead related to managing a fund, which may include professional, administration, research, tax, legal, custodial and audit expenses for a fund.

The year-over-year attribution is more detailed and now breaks out yearly changes from three categories – weight changes, management fee ratio changes, and incentive fee ratio changes. The 2016 report attribution did not distinguish between management fee and incentive fee ratio changes.

Finally, the plan Overlay base fee has now been moved to the Other Vendors category with asset-based fees captured in their respective asset classes.

Total Portfolio Fee Summaries

The tables in this report present fees by asset class and management type. Fees by management type are presented by segregating investments into four “fund type” categories: passive, active, hedged, and private. Passive strategies are intended to generate a return that emulates an index. Active strategies include investment managers that attempt to outperform an index on a long only basis. Hedged strategies generally seek to achieve an absolute return (“alpha”) regardless of market direction (“beta”) by employing

various strategies including long and short positions. Private strategies utilize a diverse set of approaches to invest in illiquid assets, such as equity of privately held companies or real estate.

Year-over-Year Comparisons

The year-over-year comparison tables in this report present a time series of changes in average weights, fees, fee ratios, contribution to total plan fee ratios, and a year-over-year attribution. The year-over-year attribution uses the Brinson-Fachler methodology to decompose the change in contribution to total plan fee ratio into 1) impact due to weight changes, 2) impact due to management fee ratio changes, and 3) impact due to incentive fee ratio changes

California Government Code §7514.7 (AB 2833)

Assembly Bill 2833 (“AB 2833”) was approved on September 14, 2016 adding Section 7514.7 to California Government Code. The addition to the Code requires California public investment funds to make annual disclosures of fees for alternative investment vehicles at a public meeting.

Tables 15-18 of this report are intended to comply with the law.

Note: Some values on the report may not sum due to rounding.

Table 3 - Pension Fees by Asset Class and Management Type

| Asset Class | Management | | | | | Average Balance (\$ mm) | Average Weight | Fee Ratio - Management Fees | Fee Ratio - Incentive Fees | Fee Ratio - Operating Expenses | Fee Ratio - Mgmt and Incent Fees | Fee Ratio - | | |
|---------------------|-------------------------|------------------------|----------------------------|----------------------------|----------------------------------|-------------------------|----------------|-----------------------------|----------------------------|--------------------------------|----------------------------------|--------------------------|--|--------------|
| | Management Fees (\$ mm) | Incentive Fees (\$ mm) | Operating Expenses (\$ mm) | and Incentive Fees (\$ mm) | Mgmt, Incent, and Op Exp (\$ mm) | | | | | | | Mgmt, Incent, and Op Exp | % of Total Contribution Plan Fee to Total Plan Fee Ratio | |
| Global Equity | 5.7 | 2.4 | 0.3 | 8.1 | 8.4 | 1,010 | 29.5% | 0.57% | 0.23% | 0.03% | 0.80% | 0.83% | 17.4% | 0.24% |
| Passive | 0.2 | - | 0.1 | 0.2 | 0.3 | 426 | 12.4% | 0.05% | 0.00% | 0.02% | 0.05% | 0.07% | 0.6% | 0.01% |
| Active | 3.6 | - | 0.1 | 3.6 | 3.6 | 489 | 14.3% | 0.73% | 0.00% | 0.01% | 0.73% | 0.74% | 7.6% | 0.11% |
| Hedged | 1.9 | 2.4 | 0.2 | 4.3 | 4.4 | 94 | 2.8% | 2.02% | 2.50% | 0.16% | 4.52% | 4.68% | 9.2% | 0.13% |
| Private Equity | 2.9 | 3.3 | 1.1 | 6.2 | 7.3 | 269 | 7.9% | 1.07% | 1.24% | 0.41% | 2.31% | 2.72% | 15.3% | 0.21% |
| Passive | 0.0 | - | 0.0 | 0.0 | 0.0 | 108 | 3.1% | 0.03% | 0.00% | 0.01% | 0.03% | 0.04% | 0.1% | 0.00% |
| Private | 2.9 | 3.3 | 1.1 | 6.2 | 7.3 | 162 | 4.7% | 1.77% | 2.06% | 0.68% | 3.83% | 4.51% | 15.2% | 0.21% |
| Global Fixed Income | 4.0 | 2.3 | 0.5 | 6.3 | 6.8 | 572 | 16.7% | 0.69% | 0.41% | 0.09% | 1.10% | 1.19% | 14.1% | 0.20% |
| Passive | 0.0 | - | - | 0.0 | 0.0 | 91 | 2.6% | 0.05% | 0.00% | 0.00% | 0.05% | 0.05% | 0.1% | 0.00% |
| Active | 1.3 | - | 0.1 | 1.3 | 1.4 | 255 | 7.4% | 0.51% | 0.00% | 0.04% | 0.51% | 0.56% | 3.0% | 0.04% |
| Hedged | 2.6 | 2.3 | 0.4 | 4.9 | 5.3 | 226 | 6.6% | 1.16% | 1.02% | 0.17% | 2.18% | 2.35% | 11.1% | 0.16% |
| Private Debt | 2.5 | -0.1 | 0.7 | 2.4 | 3.1 | 237 | 6.9% | 1.07% | -0.05% | 0.29% | 1.02% | 1.31% | 6.5% | 0.09% |
| Private | 2.5 | -0.1 | 0.7 | 2.4 | 3.1 | 237 | 6.9% | 1.07% | -0.05% | 0.29% | 1.02% | 1.31% | 6.5% | 0.09% |
| Real Assets | 6.6 | 2.9 | 1.2 | 9.5 | 10.7 | 552 | 16.1% | 1.20% | 0.52% | 0.22% | 1.72% | 1.93% | 22.2% | 0.31% |
| Passive | 0.1 | - | - | 0.1 | 0.1 | 67 | 2.0% | 0.15% | 0.00% | 0.00% | 0.15% | 0.15% | 0.2% | 0.00% |
| Active | 1.2 | - | 0.2 | 1.2 | 1.4 | 222 | 6.5% | 0.52% | 0.00% | 0.11% | 0.52% | 0.64% | 2.9% | 0.04% |
| Hedged | 1.6 | 0.4 | 0.3 | 2.0 | 2.3 | 61 | 1.8% | 2.65% | 0.61% | 0.53% | 3.26% | 3.79% | 4.8% | 0.07% |
| Private | 3.7 | 2.5 | 0.6 | 6.2 | 6.8 | 201 | 5.9% | 1.85% | 1.25% | 0.31% | 3.10% | 3.40% | 14.2% | 0.20% |
| Absolute Return | 4.2 | 3.8 | 0.8 | 8.0 | 8.9 | 269 | 7.9% | 1.57% | 1.42% | 0.31% | 2.99% | 3.30% | 18.5% | 0.26% |
| Hedged | 4.2 | 3.8 | 0.8 | 8.0 | 8.9 | 269 | 7.9% | 1.57% | 1.42% | 0.31% | 2.99% | 3.30% | 18.5% | 0.26% |
| GTAA | 2.7 | - | 0.0 | 2.7 | 2.7 | 317 | 9.3% | 0.84% | 0.00% | 0.00% | 0.84% | 0.84% | 5.5% | 0.08% |
| Active | 2.7 | - | 0.0 | 2.7 | 2.7 | 317 | 9.3% | 0.84% | 0.00% | 0.00% | 0.84% | 0.84% | 5.5% | 0.08% |
| Cash | 0.2 | - | - | 0.2 | 0.2 | 199 | 5.8% | 0.12% | 0.00% | 0.00% | 0.12% | 0.12% | 0.5% | 0.01% |
| Passive | 0.2 | - | - | 0.2 | 0.2 | 199 | 5.8% | 0.12% | 0.00% | 0.00% | 0.12% | 0.12% | 0.5% | 0.01% |
| Total Plan | 28.8 | 14.6 | 4.6 | 43.4 | 48.1 | 3,425 | 100.0% | 0.84% | 0.43% | 0.14% | 1.27% | 1.40% | 100.0% | 1.40% |

The table above illustrates that management, incentive, and operating expenses for the pension plan totaled \$48.1 million for 2017 which equated to a total plan fee ratio of 1.40%. The Real Assets and Absolute Return asset classes contributed the most to the total plan fee ratio at 0.31% and 0.26%, respectively. The GTAA and Private Debt asset classes contributed the least to the total plan fee ratio at 0.08% and 0.09%, respectively.

Table 4 - Pension Fees by Management Type

| Fund Type | Management | | | | | Average Balance (\$ mm) | Average Weight | Fee Ratio - Management Fees | Fee Ratio - Incentive Fees | Fee Ratio - Operating Expenses | Fee Ratio - Mgmt and Incent Fees | Fee Ratio - Mgmt, Incent, and Op Exp | % of Total Plan Fee Ratio | Contribution to Total Plan Fee Ratio |
|-------------------|-------------------------|------------------------|----------------------------|----------------------------|----------------------------------|-------------------------|----------------|-----------------------------|----------------------------|--------------------------------|----------------------------------|--------------------------------------|---------------------------|--------------------------------------|
| | Management Fees (\$ mm) | Incentive Fees (\$ mm) | Operating Expenses (\$ mm) | and Incentive Fees (\$ mm) | Mgmt, Incent, and Op Exp (\$ mm) | | | | | | | | | |
| Passive | 0.6 | - | 0.1 | 0.6 | 0.7 | 891 | 26.0% | 0.07% | 0.00% | 0.01% | 0.07% | 0.08% | 1.5% | 0.02% |
| Active | 8.7 | - | 0.4 | 8.7 | 9.1 | 1,284 | 37.5% | 0.68% | 0.00% | 0.03% | 0.68% | 0.71% | 19.0% | 0.27% |
| Hedged | 10.4 | 8.9 | 1.7 | 19.2 | 20.9 | 651 | 19.0% | 1.59% | 1.36% | 0.26% | 2.96% | 3.22% | 43.6% | 0.61% |
| Private | 9.1 | 5.7 | 2.4 | 14.8 | 17.2 | 600 | 17.5% | 1.52% | 0.95% | 0.40% | 2.47% | 2.87% | 35.9% | 0.50% |
| Total Plan | 28.8 | 14.6 | 4.6 | 43.4 | 48.1 | 3,425 | 100.0% | 0.84% | 0.43% | 0.14% | 1.27% | 1.40% | 100.0% | 1.40% |

For the total pension plan, hedged management strategies accounted for 0.61% of the total plan fee ratio and represented about 19% of average plan assets. Private management strategies were the next largest contributor to the total plan fee ratio accounting for 0.50% of the total plan fee ratio and represented 18% of average plan assets. Passive and active management strategies accounted for 0.02% and 0.27% of the total plan fee ratio and represented 26% and 38% of plan assets, respectively.

Table 5 - Pension Other Investment Costs

| Investment Staff Salary and Benefits (\$ mm) | Consultants (\$ mm) | Custodian (\$ mm) | Other Vendors and Travel (\$ mm) | Total Other Costs (\$ mm) | Other Costs Fee Ratio |
|--|---------------------|-------------------|----------------------------------|---------------------------|-----------------------|
| 0.8 | 0.8 | 0.4 | 0.5 | 2.5 | 0.07% |

Other investment costs for the pension plan equated to a total fee ratio of 0.07%. As previously discussed, other costs include salary and benefits compensation for investment staff, cost of consultants, custodian, third party vendors utilized by the investment program, and investment staff travel.

Table 6 - Health Care Fees by Asset Class and Management Type

| Asset Class | Management | | | | | Average Balance (\$ mm) | Average Weight | Fee Ratio - Management Fees | Fee Ratio - Incentive Fees | Fee Ratio - Operating Expenses | Fee Ratio - Mgmt and Incent Fees | Fee Ratio - Mgmt, Incent, and Op Exp | % of Total Plan Fee Ratio | Contribution to Total Plan Fee Ratio |
|---------------------|-------------------------|------------------------|----------------------------|----------------------------|----------------------------------|-------------------------|----------------|-----------------------------|----------------------------|--------------------------------|----------------------------------|--------------------------------------|---------------------------|--------------------------------------|
| | Management Fees (\$ mm) | Incentive Fees (\$ mm) | Operating Expenses (\$ mm) | and Incentive Fees (\$ mm) | Mgmt, Incent, and Op Exp (\$ mm) | | | | | | | | | |
| Global Equity | 0.03 | - | - | 0.03 | 0.03 | 34 | 30.1% | 0.09% | 0.00% | 0.00% | 0.09% | 0.09% | 10.4% | 0.03% |
| Passive | 0.03 | - | - | 0.03 | 0.03 | 34 | 30.1% | 0.09% | 0.00% | 0.00% | 0.09% | 0.09% | 10.4% | 0.03% |
| Global Fixed Income | 0.01 | - | - | 0.01 | 0.01 | 25 | 22.1% | 0.04% | 0.00% | 0.00% | 0.04% | 0.04% | 3.4% | 0.01% |
| Passive | 0.01 | - | - | 0.01 | 0.01 | 25 | 22.1% | 0.04% | 0.00% | 0.00% | 0.04% | 0.04% | 3.4% | 0.01% |
| Real Assets | 0.05 | - | 0.01 | 0.05 | 0.06 | 16 | 14.2% | 0.30% | 0.00% | 0.08% | 0.30% | 0.38% | 20.6% | 0.05% |
| Passive | 0.01 | - | - | 0.01 | 0.01 | 7 | 6.5% | 0.12% | 0.00% | 0.00% | 0.12% | 0.12% | 3.0% | 0.01% |
| Active | 0.04 | - | 0.01 | 0.04 | 0.05 | 9 | 7.7% | 0.45% | 0.00% | 0.15% | 0.45% | 0.60% | 17.6% | 0.05% |
| GTAA | 0.17 | - | 0.00 | 0.17 | 0.17 | 20 | 17.7% | 0.85% | 0.00% | 0.01% | 0.85% | 0.86% | 58.3% | 0.15% |
| Active | 0.17 | - | 0.00 | 0.17 | 0.17 | 20 | 17.7% | 0.85% | 0.00% | 0.01% | 0.85% | 0.86% | 58.3% | 0.15% |
| Cash | 0.02 | - | - | 0.02 | 0.02 | 18 | 15.9% | 0.12% | 0.00% | 0.00% | 0.12% | 0.12% | 7.3% | 0.02% |
| Passive | 0.02 | - | - | 0.02 | 0.02 | 18 | 15.9% | 0.12% | 0.00% | 0.00% | 0.12% | 0.12% | 7.3% | 0.02% |
| Total Plan | 0.28 | - | 0.02 | 0.28 | 0.29 | 112 | 100.0% | 0.25% | 0.00% | 0.01% | 0.25% | 0.26% | 100.0% | 0.26% |

The table above illustrates that management, incentive, and operating expenses for the health care trust totaled \$0.3 million for 2017 which equated to a total plan fee ratio of 0.26%. The GTAA asset class contributed the most to the total plan fee ratio at 0.15%. The Global Fixed Income asset class contributed the least to the total plan fee ratio at 0.01%.

Table 7 - Health Care Fees by Management Type

| Fund Type | Management | | | | | Average Balance (\$ mm) | Average Weight | Fee Ratio - Management Fees | Fee Ratio - Incentive Fees | Fee Ratio - Operating Expenses | Fee Ratio - Mgmt and Incent Fees | Fee Ratio - Mgmt, Incent, and Op Exp | % of Total Plan Fee Ratio | Contribution to Total Plan Fee Ratio |
|-------------------|-------------------------|------------------------|----------------------------|----------------------------|----------------------------------|-------------------------|----------------|-----------------------------|----------------------------|--------------------------------|----------------------------------|--------------------------------------|---------------------------|--------------------------------------|
| | Management Fees (\$ mm) | Incentive Fees (\$ mm) | Operating Expenses (\$ mm) | and Incentive Fees (\$ mm) | Mgmt, Incent, and Op Exp (\$ mm) | | | | | | | | | |
| Passive | 0.07 | - | - | 0.07 | 0.07 | 83 | 74.7% | 0.08% | 0.00% | 0.00% | 0.08% | 0.08% | 24.1% | 0.06% |
| Active | 0.21 | - | 0.02 | 0.21 | 0.22 | 28 | 25.3% | 0.73% | 0.00% | 0.05% | 0.73% | 0.78% | 75.9% | 0.20% |
| Total Plan | 0.28 | - | 0.02 | 0.28 | 0.29 | 112 | 100.0% | 0.25% | 0.00% | 0.01% | 0.25% | 0.26% | 100.0% | 0.26% |

For the total health care trust, active management strategies accounted for 0.20% of the total plan fee ratio and represented 25% of average plan assets. Passive strategies accounted for 0.06% of the total plan fee ratio and represented 75% of plan assets.

Table 8 - Health Care Other Investment Costs

| Investment Staff | | Other Vendors | | Total Other | |
|-----------------------------|---------------------|-------------------|--------------------|---------------|-----------------------|
| Salary and Benefits (\$ mm) | Consultants (\$ mm) | Custodian (\$ mm) | and Travel (\$ mm) | Costs (\$ mm) | Other Costs Fee Ratio |
| 0.03 | 0.02 | 0.04 | 0.01 | 0.09 | 0.08% |

Other investment costs for the health care trust equated to a total fee ratio of 0.08%.

Table 9 - Pension Year-over-Year Comparison by Asset Class and Management Type

| Asset Class | Average Weight | | | Management Fees | | | Incentive Fees | | | Mgmt and Incent Fees | | | Fee Ratio (Mgmt and Incent) | | | Contrib to Total Plan Fee Ratio | | | YoY Attribution | | |
|---------------------|----------------|--------|--------|-----------------|-----------------|-------------------|-----------------|-----------------|-------------------|----------------------|-----------------|-------------------|-----------------------------|-------|--------|---------------------------------|-------|--------|------------------|-----------------------------|-------------------------------|
| | 2016 | 2017 | Change | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 | 2017 | Change | 2016 | 2017 | Change | Due to Weight | Due to Mgmt Fee Ratio | Due to Incent Fee Ratio |
| Global Equity | 29.6% | 29.5% | -0.1% | 5.2 | 5.7 | 0.5 | 0.1 | 2.4 | 2.2 | 5.3 | 8.1 | 2.8 | 0.57% | 0.80% | 0.23% | 0.17% | 0.24% | 0.07% | 0.00% | 0.00% | 0.06% |
| Passive | 14.7% | 12.4% | -2.2% | 0.3 | 0.2 | -0.1 | - | - | - | 0.3 | 0.2 | -0.1 | 0.07% | 0.05% | -0.02% | 0.01% | 0.01% | 0.00% | 0.03% | 0.00% | 0.00% |
| Active | 12.1% | 14.3% | 2.2% | 3.1 | 3.6 | 0.5 | - | - | - | 3.1 | 3.6 | 0.5 | 0.80% | 0.73% | -0.07% | 0.10% | 0.10% | 0.01% | -0.01% | -0.01% | 0.00% |
| Hedged | 2.8% | 2.8% | 0.0% | 1.8 | 1.9 | 0.1 | 0.1 | 2.4 | 2.2 | 1.9 | 4.3 | 2.4 | 2.17% | 4.52% | 2.35% | 0.06% | 0.12% | 0.06% | 0.00% | 0.00% | 0.06% |
| Private Equity | 7.8% | 7.9% | 0.1% | 2.8 | 2.9 | 0.1 | 1.9 | 3.3 | 1.5 | 4.6 | 6.2 | 1.6 | 1.89% | 2.31% | 0.42% | 0.15% | 0.18% | 0.03% | 0.00% | 0.00% | 0.04% |
| Passive | 2.8% | 3.1% | 0.3% | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.0 | 0.0 | 0.03% | 0.03% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Private | 4.9% | 4.7% | -0.2% | 2.7 | 2.9 | 0.1 | 1.9 | 3.3 | 1.5 | 4.6 | 6.2 | 1.6 | 2.95% | 3.83% | 0.88% | 0.15% | 0.18% | 0.03% | 0.00% | 0.00% | 0.04% |
| Global Fixed Income | 17.0% | 16.7% | -0.3% | 4.3 | 4.0 | -0.4 | 4.4 | 2.3 | -2.0 | 8.7 | 6.3 | -2.4 | 1.62% | 1.10% | -0.52% | 0.28% | 0.18% | -0.09% | 0.00% | -0.02% | -0.07% |
| Passive | 0.0% | 2.6% | 2.6% | 0.1 | 0.0 | -0.0 | - | - | - | 0.1 | 0.0 | -0.0 | N/A | 0.05% | N/A | 0.00% | 0.00% | 0.00% | N/A | N/A | N/A |
| Active | 9.5% | 7.4% | -2.0% | 1.5 | 1.3 | -0.2 | - | - | - | 1.5 | 1.3 | -0.2 | 0.50% | 0.51% | 0.01% | 0.05% | 0.04% | -0.01% | 0.01% | 0.00% | 0.00% |
| Hedged | 7.5% | 6.6% | -0.9% | 2.8 | 2.6 | -0.1 | 4.4 | 2.3 | -2.0 | 7.1 | 4.9 | -2.2 | 3.01% | 2.18% | -0.83% | 0.23% | 0.14% | -0.08% | -0.02% | 0.00% | -0.05% |
| Private Debt | 7.5% | 6.9% | -0.5% | 3.1 | 2.5 | -0.6 | -0.4 | -0.1 | 0.3 | 2.7 | 2.4 | -0.3 | 1.16% | 1.02% | -0.13% | 0.09% | 0.07% | -0.02% | 0.00% | -0.02% | 0.01% |
| Private | 7.5% | 6.9% | -0.5% | 3.1 | 2.5 | -0.6 | -0.4 | -0.1 | 0.3 | 2.7 | 2.4 | -0.3 | 1.16% | 1.02% | -0.13% | 0.09% | 0.07% | -0.02% | 0.00% | -0.02% | 0.01% |
| Real Assets | 15.5% | 16.1% | 0.6% | 6.9 | 6.6 | -0.3 | 1.6 | 2.9 | 1.3 | 8.5 | 9.5 | 1.0 | 1.73% | 1.72% | -0.02% | 0.27% | 0.28% | 0.01% | 0.00% | -0.03% | 0.03% |
| Passive | 1.5% | 2.0% | 0.4% | 0.1 | 0.1 | 0.0 | - | - | - | 0.1 | 0.1 | 0.0 | 0.13% | 0.15% | 0.02% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Active | 5.9% | 6.5% | 0.6% | 1.1 | 1.2 | 0.1 | - | - | - | 1.1 | 1.2 | 0.1 | 0.59% | 0.52% | -0.07% | 0.04% | 0.03% | 0.00% | 0.00% | 0.00% | 0.00% |
| Hedged | 2.1% | 1.8% | -0.3% | 1.8 | 1.6 | -0.1 | 1.0 | 0.4 | -0.6 | 2.7 | 2.0 | -0.8 | 4.19% | 3.26% | -0.93% | 0.09% | 0.06% | -0.03% | -0.01% | 0.00% | -0.02% |
| Private | 6.0% | 5.9% | -0.1% | 3.9 | 3.7 | -0.2 | 0.6 | 2.5 | 1.9 | 4.6 | 6.2 | 1.6 | 2.43% | 3.10% | 0.67% | 0.15% | 0.18% | 0.04% | 0.00% | -0.01% | 0.05% |
| Absolute Return | 7.0% | 7.9% | 0.8% | 3.8 | 4.2 | 0.5 | 1.9 | 3.8 | 1.9 | 5.7 | 8.0 | 2.3 | 2.57% | 2.99% | 0.42% | 0.18% | 0.24% | 0.05% | 0.01% | -0.01% | 0.04% |
| Hedged | 7.0% | 7.9% | 0.8% | 3.8 | 4.2 | 0.5 | 1.9 | 3.8 | 1.9 | 5.7 | 8.0 | 2.3 | 2.57% | 2.99% | 0.42% | 0.18% | 0.24% | 0.05% | 0.01% | -0.01% | 0.04% |
| GTAA | 9.3% | 9.3% | 0.0% | 2.4 | 2.7 | 0.2 | - | - | - | 2.4 | 2.7 | 0.2 | 0.82% | 0.84% | 0.01% | 0.08% | 0.08% | 0.00% | 0.00% | 0.00% | 0.00% |
| Active | 9.3% | 9.3% | 0.0% | 2.4 | 2.7 | 0.2 | - | - | - | 2.4 | 2.7 | 0.2 | 0.82% | 0.84% | 0.01% | 0.08% | 0.08% | 0.00% | 0.00% | 0.00% | 0.00% |
| Cash | 6.4% | 5.8% | -0.6% | 0.2 | 0.2 | 0.0 | - | - | - | 0.2 | 0.2 | 0.0 | 0.11% | 0.12% | 0.01% | 0.01% | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| Passive | 6.4% | 5.8% | -0.6% | 0.2 | 0.2 | 0.0 | - | - | - | 0.2 | 0.2 | 0.0 | 0.11% | 0.12% | 0.01% | 0.01% | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| Total Plan | 100.0% | 100.0% | 0.0% | 28.6 | 28.8 | 0.2 | 9.5 | 14.6 | 5.1 | 38.2 | 43.4 | 5.2 | 1.21% | 1.27% | 0.06% | 1.21% | 1.27% | 0.06% | 0.02% | -0.08% | 0.12% |

Table 10 - Pension Year-over-Year Comparison by Management Type

| Type | Average Weight | | | Management Fees | | | Incentive Fees | | | Mgmt and Incent Fees | | | Fee Ratio (Mgmt and Incent) | | | Contrib to Total Plan Fee Ratio | | | YoY Attribution | | |
|------------|----------------|--------|--------|-----------------|-----------------|-------------------|-----------------|-----------------|-------------------|----------------------|-----------------|-------------------|-----------------------------|-------|--------|---------------------------------|-------|--------|------------------|-----------------------------|-------------------------------|
| | 2016 | 2017 | Change | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 | 2017 | Change | 2016 | 2017 | Change | Due to Weight | Due to Mgmt Fee Ratio | Due to Incent Fee Ratio |
| Passive | 25.4% | 26.0% | 0.6% | 0.7 | 0.6 | -0.1 | - | - | - | 0.7 | 0.6 | -0.1 | 0.09% | 0.07% | -0.02% | 0.02% | 0.02% | 0.00% | -0.01% | 0.00% | 0.00% |
| Active | 36.8% | 37.5% | 0.7% | 8.1 | 8.7 | 0.6 | - | - | - | 8.1 | 8.7 | 0.6 | 0.70% | 0.68% | -0.02% | 0.26% | 0.25% | 0.00% | 0.00% | -0.01% | 0.00% |
| Hedged | 19.4% | 19.0% | -0.4% | 10.1 | 10.4 | 0.3 | 7.4 | 8.9 | 1.4 | 17.5 | 19.2 | 1.7 | 2.86% | 2.96% | 0.10% | 0.55% | 0.56% | 0.01% | -0.01% | -0.01% | 0.03% |
| Private | 18.4% | 17.5% | -0.9% | 9.8 | 9.1 | -0.7 | 2.1 | 5.7 | 3.6 | 11.9 | 14.8 | 2.9 | 2.05% | 2.47% | 0.42% | 0.38% | 0.43% | 0.06% | -0.01% | -0.03% | 0.10% |
| Total Plan | 100.0% | 100.0% | 0.0% | 28.6 | 28.8 | 0.2 | 9.5 | 14.6 | 5.1 | 38.2 | 43.4 | 5.2 | 1.21% | 1.27% | 0.06% | 1.21% | 1.27% | 0.06% | -0.02% | -0.05% | 0.13% |

Table 11 - Pension Year-over-Year Comparison of Other Costs

| | Inv Staff Salary and Benefits (\$ mm) | Consultants (\$ mm) | Custodian (\$ mm) | Other Vendors and Travel (\$ mm) | Total Other Costs (\$ mm) | Other Costs Fee Ratio |
|--------|--|------------------------|----------------------|---|---------------------------------|--------------------------|
| 2016 | 0.9 | 0.8 | 0.4 | 0.4 | 2.5 | 0.08% |
| 2017 | 0.8 | 0.8 | 0.4 | 0.5 | 2.5 | 0.07% |
| Change | -0.2 | -0.0 | -0.0 | 0.2 | -0.0 | -0.01% |

Table 12 - Health Care Year-over-Year Comparison by Asset Class and Management Type

| Asset Class | Average Weight | | | Management Fees | | | Incentive Fees | | | Mgmt and Incent Fees | | | Fee Ratio (Mgmt and Incent) | | | Contrib to Total Plan Fee Ratio | | | YoY Attribution | | |
|---------------------|----------------|--------|--------|-----------------|--------------|----------------|----------------|--------------|----------------|----------------------|--------------|----------------|-----------------------------|-------|--------|---------------------------------|-------|--------|-----------------|-----------------------|-------------------------|
| | 2016 | 2017 | Change | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 | 2017 | Change | 2016 | 2017 | Change | Due to Weight | Due to Mgmt Fee Ratio | Due to Incent Fee Ratio |
| Global Equity | 33.7% | 30.1% | -3.6% | 0.04 | 0.03 | -0.01 | - | - | - | 0.04 | 0.03 | -0.01 | 0.13% | 0.09% | -0.04% | 0.04% | 0.03% | -0.02% | 0.01% | -0.01% | 0.00% |
| Passive | 33.7% | 30.1% | -3.6% | 0.04 | 0.03 | -0.01 | - | - | - | 0.04 | 0.03 | -0.01 | 0.13% | 0.09% | -0.04% | 0.04% | 0.03% | -0.02% | 0.01% | -0.01% | 0.00% |
| Global Fixed Income | 18.3% | 22.1% | 3.9% | 0.01 | 0.01 | 0.00 | - | - | - | 0.01 | 0.01 | 0.00 | 0.05% | 0.04% | -0.01% | 0.01% | 0.01% | 0.00% | -0.01% | 0.00% | 0.00% |
| Passive | 18.3% | 22.1% | 3.9% | 0.01 | 0.01 | 0.00 | - | - | - | 0.01 | 0.01 | 0.00 | 0.05% | 0.04% | -0.01% | 0.01% | 0.01% | 0.00% | -0.01% | 0.00% | 0.00% |
| Real Assets | 16.0% | 14.2% | -1.8% | 0.04 | 0.05 | 0.01 | - | - | - | 0.04 | 0.05 | 0.01 | 0.30% | 0.30% | -0.01% | 0.05% | 0.04% | -0.01% | 0.00% | 0.00% | 0.00% |
| Passive | 7.9% | 6.5% | -1.4% | 0.01 | 0.01 | 0.00 | - | - | - | 0.01 | 0.01 | 0.00 | 0.12% | 0.12% | 0.00% | 0.01% | 0.01% | 0.00% | 0.00% | 0.00% | 0.00% |
| Active | 8.1% | 7.7% | -0.4% | 0.03 | 0.04 | 0.01 | - | - | - | 0.03 | 0.04 | 0.01 | 0.49% | 0.45% | -0.03% | 0.04% | 0.03% | 0.00% | 0.00% | 0.00% | 0.00% |
| GTAA | 19.5% | 17.7% | -1.8% | 0.14 | 0.17 | 0.03 | - | - | - | 0.14 | 0.17 | 0.03 | 0.84% | 0.85% | 0.01% | 0.16% | 0.15% | -0.01% | -0.01% | 0.00% | 0.00% |
| Active | 19.5% | 17.7% | -1.8% | 0.14 | 0.17 | 0.03 | - | - | - | 0.14 | 0.17 | 0.03 | 0.84% | 0.85% | 0.01% | 0.16% | 0.15% | -0.01% | -0.01% | 0.00% | 0.00% |
| Cash | 12.6% | 15.9% | 3.3% | 0.01 | 0.02 | 0.01 | - | - | - | 0.01 | 0.02 | 0.01 | 0.11% | 0.12% | 0.01% | 0.01% | 0.02% | 0.01% | -0.01% | 0.00% | 0.00% |
| Passive | 12.6% | 15.9% | 3.3% | 0.01 | 0.02 | 0.01 | - | - | - | 0.01 | 0.02 | 0.01 | 0.11% | 0.12% | 0.01% | 0.01% | 0.02% | 0.01% | -0.01% | 0.00% | 0.00% |
| Total Plan | 100.0% | 100.0% | 0.0% | 0.23 | 0.28 | 0.04 | - | - | - | 0.23 | 0.28 | 0.04 | 0.28% | 0.25% | -0.03% | 0.28% | 0.25% | -0.03% | -0.02% | -0.01% | 0.00% |

Table 13 - Health Care Year-over-Year Comparison by Management Type

| Type | Average Weight | | | Management Fees | | | Incentive Fees | | | Mgmt and Incent Fees | | | Fee Ratio (Mgmt and Incent) | | | Contrib to Total Plan Fee Ratio | | | YoY Attribution | | |
|------------|----------------|--------|--------|-----------------|--------------|----------------|----------------|--------------|----------------|----------------------|--------------|----------------|-----------------------------|-------|--------|---------------------------------|-------|--------|-----------------|-----------------------|-------------------------|
| | 2016 | 2017 | Change | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 | 2017 | Change | 2016 | 2017 | Change | Due to Weight | Due to Mgmt Fee Ratio | Due to Incent Fee Ratio |
| Passive | 72.4% | 74.7% | 2.2% | 0.06 | 0.07 | 0.01 | - | - | - | 0.06 | 0.07 | 0.01 | 0.11% | 0.08% | -0.02% | 0.08% | 0.06% | -0.01% | 0.00% | -0.02% | 0.00% |
| Active | 27.6% | 25.3% | -2.2% | 0.17 | 0.21 | 0.04 | - | - | - | 0.17 | 0.21 | 0.04 | 0.73% | 0.73% | -0.01% | 0.20% | 0.18% | -0.02% | -0.01% | 0.00% | 0.00% |
| Total Plan | 100.0% | 100.0% | 0.0% | 0.23 | 0.28 | 0.04 | - | - | - | 0.23 | 0.28 | 0.04 | 0.28% | 0.25% | -0.03% | 0.28% | 0.25% | -0.03% | -0.01% | -0.02% | 0.00% |

Table 14 - Health Care Year-over-Year Comparison of Other Costs

| | Inv Staff Salary and Benefits (\$ mm) | | Other Vendors and Travel (\$ mm) | | Total Other Costs (\$ mm) | | Other Costs Fee Ratio |
|--------|---------------------------------------|---------|----------------------------------|---------|---------------------------|---------|-----------------------|
| | (\$ mm) | (\$ mm) | (\$ mm) | (\$ mm) | (\$ mm) | (\$ mm) | Fee Ratio |
| 2016 | 0.03 | 0.02 | 0.04 | 0.01 | 0.10 | 0.11% | |
| 2017 | 0.03 | 0.02 | 0.04 | 0.01 | 0.09 | 0.08% | |
| Change | 0.00 | -0.00 | -0.00 | 0.00 | -0.00 | -0.03% | |

Analysis of Pension Year-over-Year Changes by Asset Class

As presented in Table 9, the pension total plan fee ratio (management and incentive fees only) increased by +6 bps from 1.21% in 2016 to 1.27% in 2017. Operating expenses are excluded from this analysis since 2017 is the first year this expense category has been reported.

The largest drivers of the increase from an asset class perspective were Global Equity (+7 bps contribution), Absolute Return (+5 bps contribution), and Private Equity (+3 bps), partially offset by a decrease in Global Fixed Income (-9 bps).

Asset class weight changes contributed +2 bps to the year-over-year change in total plan fee ratio. The largest asset class weight changes came from a 0.8% increase in Absolute Return weight (+1 bp attribution due to weight) and a 0.6% decrease in Cash (+1 bp).

Changes in management fee ratios contributed -8 bps to the year-over-year change in total plan fee ratio. This was spread across Real Assets (-3 bps), Global Fixed Income (-2 bps), Private Debt (-2 bps), and Absolute Return (-1 bp).

Changes in incentive fee ratios contributed +12 bps to the year-over-year change in total plan fee ratio. Global Equity (+6 bps), Private Equity (+4 bps), Absolute Return (+4 bps), and Real Assets (+3 bps) were the largest contributors, partially offset by a decrease in Global Fixed Income (-7 bps).

A summary of the key drivers in year-over-year changes to pension fee ratios from 2016 to 2017 for each asset class is below along with comparisons of performance net of fees. The pension plan return increased from 6.4% in calendar year 2016 to 12.1% in 2017.

The **Global Equity** fee ratio increased from 0.57% in 2016 to 0.80% in 2017 due to higher incentive fees to hedged long/short equity managers and a lower weighting to passive strategies. The Marketable Alternative Equity composite return increased from 0.6% in 2016 to 11.6% in 2017 leading to higher incentive fees and bringing the fee ratio for hedged Global Equity managers up from 2.17% in 2016 to 4.52% in 2017. Global Equity asset class performance improved from 7.6% in 2016 to 23.5% in 2017.

Private Equity saw an increase from 1.89% in 2016 to 2.31% in 2017 from higher incentive fees. The performance of Private Equity improved on a time-weighted return basis from 8.6% in 2016 to 16.9% in 2017.

Global Fixed Income decreased from 1.62% in 2016 to 1.10% in 2017. The fee ratio for hedged Global Fixed Income strategies decreased from 3.01% in 2016 to 2.18% in 2017. The performance of Global Fixed Income increased from 6.4% in 2016 to 7.3% in 2017.

Private Debt decreased from 1.16% in 2016 to 1.02% in 2017 due to a reduction in management fees. The performance of Private Debt on a time-weighted basis increased from 4.7% in 2016 to 6.4% in 2017.

Real Assets was roughly flat from 1.73% in 2016 to 1.72% in 2017. Lower management fees were offset by higher incentive fees in Real Estate funds. The performance of Real Assets on a time-weighted basis declined from 9.0% in 2016 to 7.6% in 2017, but Real Estate increased from 9.3% in 2016 to 11.3% in 2017.

Absolute Return increased from 2.57% in 2016 to 2.99% in 2017 due to higher incentive fees. The performance of Absolute Return increased from 1.2% in 2016 to 2.5% in 2017.

The **GTAA** and **Cash** asset classes were nearly unchanged year over year.

Analysis of Pension Year-over-Year Changes by Management Type and Other Costs

As shown in the Table 10 contribution to total plan fee ratio change column, the driver of the +6 bps total plan fee ratio increase was private funds (+6 bps change in contribution). The increase can be attributed to higher incentive fee ratios (+10 bps) which were partially offset by lower management fee ratios (-3 bps) and a lower weight (-1 bp).

As displayed in Table 11, **Other Costs** decreased slightly from 0.08% in 2016 to 0.07% in 2017.

Analysis of Health Care Year-over-Year Changes by Asset Class, Management Type and Other Costs

As seen in Tables 12 and 13, the Health Care total plan fee ratio declined from 0.28% in 2016 to 0.25% due to a reduction in management fee ratio for passive funds (-2 bps) and reduction in active fund exposure (-1 bp).

As displayed in Table 14, **Other Costs** decreased from 0.11% to 0.08% in 2017.

Table 15 – California Government Code §7514.7 Disclosure, Private Equity

| Fund Name | Address | Vintage Year | Commitment Amount (\$) | Contributions Since Inception (\$) | Remaining Value (\$) | Distributions for Calendar year 2017 (\$) | 2017 Distributions + Remaining Value of Partnership (\$) | Cash Profit Distributed for Calendar Year 2017 (\$) | Net IRR Since Incept (%) | Investment Multiple Since Incept | Fees and expenses paid directly to GP and related parties 2017 (\$) | Fees and expenses paid from the Fund to GP and related parties 2017 (\$) | | | | | Fees and expenses paid by all portfolio companies 2017 (\$) | Carried Interest Paid 2017 (\$) |
|---|--|--------------|------------------------|------------------------------------|----------------------|---|--|---|--------------------------|----------------------------------|---|--|----------------------|----------|----------------|---------------------------------------|---|---------------------------------|
| | | | | | | | | | | | | Management Fees | Partnership Expenses | Offsets | Other Expenses | Incentive/Carried Interest Allocation | | |
| Pantheon USA Fund VI, L.P. | 600 Montgomery Street, 23rd Floor San Francisco, CA 94111 | 2005 | 40,000,000 | 38,600,000 | 13,361,980 | 5,160,000 | 18,521,980 | 1,839,556 | 7.17% | 1.53 | - | 189,539 | 9,193 | - | - | - | - | - |
| Portfolio Advisors Private Equity Fund III, L.P. | 9 Old Kings Highway South Darien, CT 06820 | 2005 | 25,000,000 | 22,140,607 | 5,588,315 | 1,909,682 | 7,497,997 | 476,851 | 6.76% | 1.51 | - | 19,396 | - | - | 50,191 | - | - | - |
| HarbourVest Partners VII - 2005 Buyout Partnership Fund, L.P. | One Financial Center Boston, MA 02111 | 2005 | 15,000,000 | 14,027,840 | 1,729,888 | 4,046,626 | 5,776,514 | 1,266,143 | 6.53% | 1.57 | - | 56,321 | 8,275 | - | - | 37,096 | - | (26,250) |
| HarbourVest Partners VIII - Buyout Fund, L.P. | One Financial Center Boston, MA 02111 | 2006 | 15,000,000 | 14,325,000 | 6,913,258 | 2,875,035 | 9,788,293 | 1,821,365 | 10.41% | 1.68 | - | 161,929 | 9,991 | - | - | 400,707 | - | 267,664 |
| HarbourVest Partners VIII - Venture Fund, L.P. | One Financial Center Boston, MA 02111 | 2006 | 10,000,000 | 9,800,000 | 6,749,621 | 1,736,507 | 8,486,128 | 1,337,387 | 10.34% | 1.77 | - | 177,672 | 9,221 | - | - | 338,483 | - | - |
| Siguler Guff Distressed Opportunities Fund III, L.P. | 825 Third Avenue, 10th Floor New York, NY 10022 | 2008 | 30,000,000 | 29,100,000 | 6,298,153 | 4,355,447 | 10,653,600 | 611,364 | 8.04% | 1.58 | - | 108,665 | 16,387 | - | - | (23,361) | - | 103,073 |
| TCW/Crescent Mezzanine Partners V, L.P. | 11100 Santa Monica Boulevard, Suite 2000 Los Angeles, CA 90025 | 2008 | 20,000,000 | 13,230,694 | 2,287,718 | 798,932 | 3,086,650 | - | 10.29% | 1.52 | - | 36,260 | 6,246 | - | - | 61,414 | - | - |
| TPG Opportunities Partners II, L.P. | 345 California St., Suite 3300 San Francisco, CA 94104 | 2012 | 15,000,000 | 12,250,794 | 3,964,271 | 1,857,500 | 5,821,771 | - | 16.38% | 1.56 | - | 70,898 | 31,032 | - | - | 49,890 | - | 75,968 |
| Crescent Mezzanine Partners VI, L.P. | 11100 Santa Monica Boulevard, Suite 2000 Los Angeles, CA 90025 | 2013 | 20,000,000 | 18,977,624 | 10,666,635 | 3,906,397 | 14,573,032 | 117,758 | 8.10% | 1.20 | - | 165,291 | 15,334 | (14,681) | - | (37,380) | 14,681 | - |
| Warburg Pincus Private Equity XI, L.P. | 450 Lexington Avenue New York, NY 10017 | 2013 | 20,000,000 | 20,770,000 | 18,366,243 | 6,466,400 | 24,832,643 | 2,392,960 | 13.23% | 1.42 | - | 134,147 | 82,209 | (2,459) | - | 830,049 | 2,459 | 472,750 |
| TPG Opportunities Partners III, L.P. | 345 California St., Suite 3300 San Francisco, CA 94104 | 2013 | 15,000,000 | 8,216,997 | 8,190,432 | 1,096,186 | 9,286,618 | - | 11.04% | 1.22 | - | 224,999 | 54,842 | (4,906) | - | 233,651 | 4,906 | 58,815 |
| Industry Ventures Partnership Holdings III, L.P. | 30 Hotaling Place, 3rd Floor, San Francisco, CA 94111 | 2013 | 15,000,000 | 12,015,611 | 15,041,193 | 201,446 | 15,242,639 | - | 15.11% | 1.36 | - | 131,713 | 150,800 | - | - | 201,023 | - | - |
| 57 Stars Global Opportunity Fund 3, L.P. | 616 H Street, N.W., Suite 450 Washington, D.C. 20001 | 2014 | 30,000,000 | 25,969,042 | 29,047,341 | 699,638 | 29,746,979 | - | 7.26% | 1.18 | - | 185,625 | 178 | - | - | - | - | - |
| CCMP Capital Investors III, L.P. | 277 Park Avenue, 27th Floor New York, NY 10172 | 2014 | 20,000,000 | 17,146,393 | 17,478,435 | 2,323,672 | 19,802,107 | 828,459 | 8.85% | 1.19 | - | 300,000 | 21,674 | (22,462) | - | 52,078 | 19,141 | - |
| Francisco Partners IV, L.P. | One Letterman Drive, Bldg C - Suite 410 San Francisco, CA 94129 | 2015 | 15,000,000 | 12,292,500 | 15,628,162 | - | 15,628,162 | - | 18.09% | 1.27 | - | 225,000 | 258,604 | (4,709) | 87,924 | 833,916 | 4,709 | - |
| Dover Street IX, L.P. | One Financial Center Boston, MA 02111 | 2015 | 30,000,000 | 6,300,000 | 6,805,606 | 1,273,414 | 8,079,020 | 439,964 | 84.89% | 1.35 | - | 146,386 | 51,217 | - | - | 275,765 | - | - |
| SJPF Private Equity Strategic Partnership, L.P. | 325 N. Saint Paul St., Ste. 4900 Dallas, TX 75201 | 2017 | 200,271,506 | 10,121,506 | 10,171,361 | - | 10,171,361 | - | 2.20% | 1.00 | - | 525,097 | 117,214 | - | 165,594 | - | - | - |

Source: Fund managers, Meketa Investment Group

Table 16 – California Government Code §7514.7 Disclosure, Private Debt

| Fund Name | Address | Vintage Year | Commitment Amount (\$) | Contributions Since Inception (\$) | Remaining Value (\$) | Distributions for Calendar year 2017 (\$) | 2017 Distributions + Remaining Value of Partnership (\$) | Cash Profit Distributed for Calendar Year 2017 (\$) | Net IRR Since Incept (%) | Investment Multiple Since Incept | Fees and expenses paid directly to GP and related parties 2017 (\$) | Fees and expenses paid from the Fund to GP and related parties 2017 (\$) | | | | | Fees and expenses paid by all portfolio companies 2017 (\$) | Carried Interest Paid 2017 (\$) |
|---|---|--------------|------------------------|------------------------------------|----------------------|---|--|---|--------------------------|----------------------------------|---|--|----------------------|-----------|----------------|---------------------------------------|---|---------------------------------|
| | | | | | | | | | | | | Management Fees | Partnership Expenses | Offsets | Other Expenses | Incentive/Carried Interest Allocation | | |
| Medley Opportunity Fund II, L.P. | 280 Park Avenue, 6th Floor East New York, NY 10017 | 2010 | 50,000,000 | 55,149,363 | 33,430,285 | 6,454,138 | 39,884,423 | 3,872,483 | 6.62% | 1.29 | - | 482,136 | 153,120 | (160,799) | - | (1,585) | - | - |
| GSO 5J Partners | 345 Park Avenue New York, NY 10154 | 2010 | 50,000,000 | 44,044,333 | 11,814,303 | 397,159 | 12,211,462 | 366,327 | 7.41% | 1.22 | - | 186,690 | 59,079 | - | - | (894,687) | - | - |
| White Oak Direct Lending | 3 Embarcadero Center, 5th Floor San Francisco, CA 94111 | 2010 | 50,000,000 | 85,220,954 | 22,820,262 | 1,022,496 | 23,842,758 | - | 4.20% | 1.10 | 281,449 | - | 28,410 | - | - | - | - | - |
| Marathon European Credit Opportunity Fund SPC | One Bryant Park, 38th Floor New York, NY 10036 | 2011 | 25,000,000 | 25,000,001 | 4,224,366 | 3,400,418 | 7,624,784 | - | 8.05% | 1.21 | - | 32,615 | 45,836 | - | - | 134,924 | - | - |
| Cross Ocean USD ESS Fund I, L.P. | 11 Charles II St. London, SW1Y4QU | 2013 | 90,000,000 | 75,960,008 | 30,329,356 | 18,167,998 | 48,497,354 | - | 8.00% | 1.21 | - | 262,363 | 157,020 | - | - | - | - | - |
| Park Square Capital Credit Opportunities II | 2nd Floor, Stratton House, 5 Stratton St. London W1J8LA | 2013 | 50,000,000 | 44,352,929 | 44,479,342 | 2,797,963 | 47,277,305 | - | 6.27% | 1.14 | - | 733,513 | 93,938 | - | - | (80,545) | - | - |
| Shoreline China Value III, L.P. | 3 Jin Sui Road, Zhujiang New, Suite 1201A Guangzhou, 510623, China | 2014 | 22,500,000 | 22,046,300 | 16,938,702 | 5,944,239 | 22,882,941 | 22,915 | 9.99% | 1.22 | - | 225,832 | - | - | 30,244 | (9,914) | - | - |
| Octagon CLO Debt Fund II (US) | 250 Park Avenue, 15th Floor New York, NY 10017 | 2015 | 25,000,000 | 25,000,000 | - | 28,504,790 | 28,504,790 | - | 11.24% | 1.14 | - | 59,437 | 117,522 | - | - | 201,649 | - | 201,649 |
| Cross Ocean USD ESS Fund II, L.P. | 11 Charles II St. London, SW1Y4QU | 2016 | 75,000,000 | 45,000,000 | 49,374,370 | 1,429,258 | 50,803,628 | - | 17.03% | 1.13 | - | 213,544 | 162,773 | - | - | 521,358 | - | - |
| Arrowmark Co-Investment | 100 Fillmore Street, Suite 325, Denver, CO 80206 | 2017 | 10,000,000 | 10,000,000 | 10,037,067 | - | 10,037,067 | - | 0.37% | 1.00 | - | - | - | - | - | 5,179 | - | - |

Source: Fund managers, Meketa Investment Group

Table 17 – California Government Code §7514.7 Disclosure, Private Real Assets

| Fund Name | Address | Vintage Year | Commitment Amount (\$) | Contributions Since Inception (\$) | Remaining Value (\$) | Distributions for Calendar year 2017 (\$) | 2017 Distributions + Remaining Value of Partnership (\$) | Cash Profit Distributed for Calendar Year 2017 (\$) | Net IRR Since Incept (%) | Investment Multiple Since Incept | Fees and expenses paid directly to GP and related parties 2017 (\$) | Fees and expenses paid from the Fund to GP and related parties 2017 (\$) | | | | | Fees and expenses paid by all portfolio companies 2017 (\$) | Carried Interest Paid 2017 (\$) |
|---|---|--------------|------------------------|------------------------------------|----------------------|---|--|---|--------------------------|----------------------------------|---|--|----------------------|----------|----------------|---------------------------------------|---|---------------------------------|
| | | | | | | | | | | | | Management Fees | Partnership Expenses | Offsets | Other Expenses | Incentive/Carried Interest Allocation | | |
| Brookfield Strategic Real Estate Partners | 250 Vesey Street, 15th Floor New York, NY 10281 | 2012 | 10,000,000 | 11,393,448 | 10,183,000 | 6,123,041 | 16,306,041 | - | 21.84% | 1.76 | - | 108,000 | 5,600 | - | - | 1,040,898 | - | - |
| Orion European Real Estate Fund IV, C.V. | 6th Floor, 2 Cavendish Square London W1G0PU | 2013 | 8,360,027 | 5,895,539 | 3,106,239 | 1,059,815 | 4,166,054 | 452,274 | 6.74% | 1.15 | - | 55,806 | - | - | - | 77,561 | - | - |
| Realty Associates Fund X, L.P., The | 28th State Street Boston, MA 02109 | 2013 | 10,000,000 | 10,000,000 | 6,983,201 | 2,749,561 | 9,732,762 | 817,834 | 12.61% | 1.46 | - | 179,388 | 8,417 | - | - | 179,496 | - | - |
| Och-Ziff Real Estate Fund III | 9 West 57th Street, 39th Floor New York, NY 10019 | 2013 | 20,000,000 | 9,271,024 | 8,804,904 | 3,636,721 | 12,441,625 | 1,019,849 | 24.78% | 1.38 | 300,000 | - | 35,583 | - | - | 301,489 | - | - |
| European Property Investors Special Opportunities 3, L.P. | Berkeley Square House (8th Floor) Berkeley Square, London W1J6DB, UK | 2013 | 8,807,339 | 8,370,729 | 6,919,917 | 2,470,705 | 9,390,622 | 881,355 | 14.41% | 1.36 | - | 105,141 | 106,822 | - | - | 222,432 | - | - |
| Blackstone Real Estate Debt Strategies II | 345 Park Avenue New York, NY 10154 | 2013 | 12,500,000 | 12,750,627 | 3,624,722 | 3,937,264 | 7,561,986 | 185,945 | 9.98% | 1.16 | - | 69,571 | 16,619 | - | - | 70,293 | - | - |
| KSL Capital Partners IV, L.P. | 100 St. Paul St, Suite 800 Denver, CO 80206 | 2015 | 20,000,000 | 8,763,861 | 7,350,569 | 1,120,459 | 8,471,028 | - | 5.87% | 1.04 | - | 350,000 | 31,433 | (11,191) | - | - | - | - |
| European Property Investors Special Opportunities 4, L.P. | Berkeley Square House (8th Floor) Berkeley Square, London W1J6DB, UK | 2015 | 19,822,116 | 9,354,091 | 9,601,044 | 244,836 | 9,845,879 | - | 12.50% | 1.11 | - | 254,250 | 22,641 | - | - | - | - | - |
| Brookfield Strategic Real Estate Partners II | 250 Vesey Street, 15th Floor New York, NY 10281 | 2015 | 20,000,000 | 12,293,015 | 13,255,238 | 461,969 | 13,717,207 | - | 12.05% | 1.14 | - | 295,150 | 28,675 | (7,532) | - | 432,982 | 26,073 | - |
| Global Infrastructure Partners III, L.P. | 1345 Avenue of the Americas, 30th Floor, New York, NY 10105 | 2016 | 20,000,000 | 5,620,439 | 4,498,392 | 299,198 | 4,797,590 | 299,198 | -9.81% | 0.92 | - | 348,804 | 25,502 | - | - | - | - | 9,595 |
| DRA Growth and Income Fund IX, LLC | 220 East 42nd Street, 27th Floor New York, NY 10017 | 2016 | 20,000,000 | 7,195,348 | 7,079,966 | 852,277 | 7,932,243 | 389,446 | 20.43% | 1.10 | - | 128,342 | 21,488 | - | - | - | - | - |
| Brookfield Infrastructure Fund III, L.P. | 250 Vesey Street, 15th Floor New York, NY 10281 | 2016 | 20,000,000 | 7,251,026 | 6,978,673 | 453,587 | 7,432,260 | 10,159 | 13.46% | 1.12 | - | 259,494 | 15,583 | - | - | 190,489 | 3,638 | - |
| GEM Realty Fund VI, L.P. | 900 North Michigan Avenue #1450, Chicago, IL 60611 | 2017 | 15,000,000 | 750,000 | 434,425 | - | 434,425 | - | N/A | 0.58 | - | 169,313 | 28,857 | - | 32,446 | - | 10,640 | - |

Source: Fund managers, Meketa Investment Group

Table 18 – California Government Code §7514.7 Disclosure, Hedge Funds

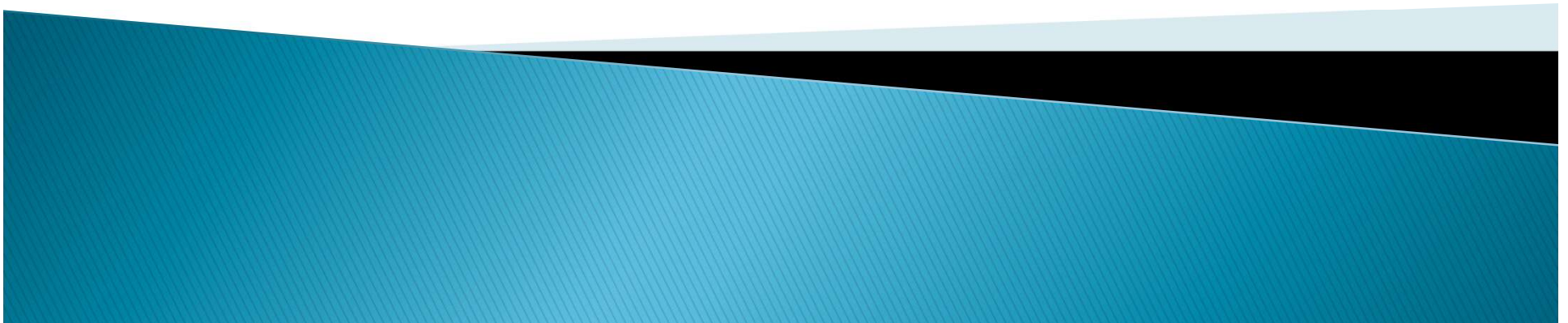
| Fund Name | Address | Vintage Year | Commitment Amount (\$) | Contributions Since Inception (\$) | Remaining Value (\$) | Distributions for Calendar year 2017 (\$) | 2017 Distributions + Remaining Value of Partnership (\$) | Cash Profit Distributed for Calendar Year 2017 (\$) | Net IRR Since Incept (%) | Investment Multiple Since Incept | Fees and expenses paid directly to GP and related parties 2017 (\$) | Fees and expenses paid from the Fund to GP and related parties 2017 (\$) | | | | | Fees and expenses paid by all portfolio companies 2017 (\$) | Carried Interest Paid 2017 (\$) |
|--|--|--------------|------------------------|------------------------------------|----------------------|---|--|---|--------------------------|----------------------------------|---|--|----------------------|---------|----------------|---------------------------------------|---|---------------------------------|
| | | | | | | | | | | | | Management Fees | Partnership Expenses | Offsets | Other Expenses | Incentive/Carried Interest Allocation | | |
| Arrowgrass International Fund Ltd | 1330 Avenue of the Americas, 32nd Floor | N/A | N/A | 20,000,000 | - | 25,194,006 | 25,194,006 | N/A | 5.41% | 1.26 | - | 120,168 | 8,203 | - | - | 100,188 | - | 100,188 |
| Beach Point Total Ret Fund II | 1620 26th St Suite 6000N Santa Monica, CA 90404 | N/A | N/A | 75,000,000 | 67,452,862 | - | 67,452,862 | N/A | 3.71% | 1.17 | - | 884,643 | 130,993 | - | - | 890,457 | - | 890,457 |
| BlueTrend Fund Limited | 650 Fifth Ave New York, NY 10019 | N/A | N/A | 20,000,000 | - | 16,101,764 | 16,101,764 | N/A | -7.02% | 0.81 | - | 126,610 | 13,148 | - | - | - | - | - |
| Brevan Howard Fund Ltd | 590 Madison Ave., 9th Floor New York, NY 10022 | N/A | N/A | 20,747,465 | 8,243,218 | 12,036,179 | 20,279,397 | N/A | -1.36% | 0.98 | - | 272,063 | 86,519 | - | - | - | - | - |
| Claren Road Credit Master Fund Ltd | 51 Astor Place, 12th Floor New York, NY 10003 | N/A | N/A | 30,000,000 | 127,983 | 3,370,909 | 3,498,892 | N/A | -10.84% | 0.79 | - | - | 14,922 | - | - | - | - | - |
| Davidson Kempner Institutional Partners, L.P. | 520 Madison Avenue, 30th Floor New York, NY 10022 | N/A | N/A | 20,000,000 | 25,926,827 | - | 25,926,827 | N/A | 5.52% | 1.30 | - | 381,507 | 17,741 | - | - | 395,224 | - | 395,224 |
| DE Shaw Composite International Fund | 1166 Avenue of the Americas, 9th Floor | N/A | N/A | 27,000,000 | 40,932,537 | 1,000,496 | 41,933,033 | N/A | 11.95% | 1.55 | - | 1,007,705 | 46,718 | - | - | 1,345,542 | - | 1,345,542 |
| Dymon Asia Macro | 1 Temasek Avenue #11-01 Millenia Tower, | N/A | N/A | 25,000,000 | 25,971,676 | - | 25,971,676 | N/A | 1.86% | 1.04 | - | 397,553 | 32,294 | - | - | - | - | - |
| Horizon Portfolio I Limited | 16 New Burlington Place, London, W1S 2HX, United Kingdom | N/A | N/A | 25,000,000 | 28,718,046 | - | 28,718,046 | N/A | 4.51% | 1.15 | - | 552,656 | 50,622 | - | - | 376,606 | - | 376,606 |
| Hudson Bay Cap Structure Arbitrage Enhanced Fund | 777 Third Ave. 30th Floor, New York, NY 10017 | N/A | N/A | 30,000,000 | 30,424,416 | - | 30,424,416 | N/A | 4.29% | 1.01 | - | 150,915 | 48,437 | - | - | 249,517 | - | 249,517 |
| Iguazu Partners LP Fund | 2 Embarcadero Center # 1645 San Francisco, CA 94111 | N/A | N/A | 50,000,000 | 64,406,750 | - | 64,406,750 | N/A | 6.83% | 1.29 | - | 649,654 | 89,275 | - | - | 583,181 | - | 583,181 |
| Kepos Alpha Fund | 620 8th Ave., 44th Floor, New York, NY 10018 | N/A | N/A | 19,000,000 | 10,490,673 | 4,874,131 | 15,364,804 | N/A | -7.41% | 0.81 | - | 284,327 | 36,709 | - | - | - | - | - |
| Keynes Leveraged Quantitative Strategies Fund | 9th Floor Orion House, 5 Upper St Martin's | N/A | N/A | 20,000,000 | 9,398,457 | 10,000,000 | 19,398,457 | N/A | -1.65% | 0.97 | - | 121,744 | 43,527 | - | - | - | - | - |
| Man AHL Evolution Frontier | 100 St. Paul Street, Suite 800, Denver, CO 80206 | N/A | N/A | 13,000,000 | 15,303,172 | - | 15,303,172 | N/A | 13.31% | 1.18 | - | 278,688 | 31,045 | - | - | 524,547 | - | 524,547 |
| MKP Opportunity | 600 Lexington Avenue New York, NY 10022 | N/A | N/A | 10,000,000 | - | 10,031,288 | 10,031,288 | N/A | 0.19% | 1.00 | - | 63,031 | 5,000 | - | - | - | - | - |
| MW Eureka Fund Ltd | 350 Park Avenue, 18th Floor New York, NY 10022 | N/A | N/A | 37,500,000 | 42,721,237 | - | 42,721,237 | N/A | 7.87% | 1.14 | - | 486,479 | 17,055 | - | - | 677,006 | - | 545,534 |
| Pharo Macro Fund, Ltd | 1370 Avenue of the Americas, 26th Floor | N/A | N/A | 30,000,000 | 31,231,571 | 4,388,017 | 35,619,588 | N/A | 12.75% | 1.19 | - | 693,264 | 28,626 | - | - | 1,294,157 | - | 1,294,157 |
| Pine River Fund Ltd | 580 California Street, San Francisco, CA 94104 | N/A | N/A | 20,000,000 | 6,218,397 | 16,520,018 | 22,738,415 | N/A | 2.73% | 1.14 | - | 219,244 | 139,662 | - | - | - | - | - |
| Pine River Volatility Arbitrage Fund | 580 California Street, San Francisco, CA 94104 | N/A | N/A | 25,000,000 | 24,646,000 | - | 24,646,000 | N/A | -2.11% | 0.99 | - | 102,228 | 112,221 | - | - | - | - | - |
| Pinnacle Natural Resources Fund | 712 Fifth Avenue, 29th Floor New York, NY 10019 | N/A | N/A | 65,000,000 | 61,414,015 | - | 61,414,015 | N/A | -2.49% | 0.94 | - | 1,615,317 | 323,063 | - | - | 371,828 | - | 371,828 |
| Sandler Plus Fund | 711 5th Ave #15, New York, NY 10022 | N/A | N/A | 15,000,000 | 20,590,807 | - | 20,590,807 | N/A | 8.50% | 1.37 | - | 400,120 | 56,064 | - | - | 683,248 | - | 683,248 |
| Senator Global Opportunity Offshore Fund Ltd | 510 Madison Ave # 28, New York, NY 10022 | N/A | N/A | 19,300,000 | 25,063,867 | - | 25,063,867 | N/A | 7.86% | 1.30 | - | 465,792 | 26,603 | - | - | 626,165 | - | 307,343 |
| Symphony Long Short Credit LP | 555 California St #2975 San Francisco, CA 94104 | N/A | N/A | 75,000,000 | 70,730,966 | - | 70,730,966 | N/A | 3.71% | 1.14 | - | 703,242 | 136,232 | - | - | 451,179 | - | 451,179 |
| Systematica Alternative Markets Master Fund | 650 Fifth Ave New York, NY 10019 | N/A | N/A | 2,000,000 | 2,185,499 | - | 2,185,499 | N/A | 42.73% | 1.09 | - | 14,164 | 1,304 | - | - | 46,375 | - | 46,375 |
| Systematica Trend Following Fund | 650 Fifth Ave New York, NY 10019 | N/A | N/A | 20,000,000 | 20,910,515 | - | 20,910,515 | N/A | 11.21% | 1.05 | - | 48,988 | 94,846 | - | - | - | - | - |
| Tempo Volatility Fund | 1 Greenwich Plaza, Greenwich, CT 06830 | N/A | N/A | 20,000,000 | 21,123,071 | - | 21,123,071 | N/A | 4.98% | 1.06 | - | 308,250 | 113,654 | - | - | 210,609 | - | 210,609 |

Source: Fund managers, Albourne, State Street, ORS

ATTACHMENT D

**FEDERATED CITY EMPLOYEES'
RETIREMENT SYSTEM
FISCAL YEAR 2019-2020
BUDGET PROPOSAL**

March 21, 2019



2019–2020 Budget at a Glance

- ▶ Development of the budget
- ▶ Administrative expense breakdown
- ▶ Sources of funds
- ▶ Uses of funds
- ▶ Proposed administrative budget
- ▶ Personnel services analysis
- ▶ Non–personnel/equipment analysis
- ▶ Professional services analysis
- ▶ Medical services analysis
- ▶ Analysis and comparisons to other CA plans

Development of the Federated City Employees' Retirement System's FY19–20 Proposed Budget

The Proposed Budget is broken down into the following categories:

▶ Sources of Funds

- **City contributions** – Estimated based on the contribution rates and total covered payroll shown in the actuarial reports for June 30, 2018
- **Participant contributions** – Estimated based on the contribution rates and total covered payroll shown in the actuarial reports for June 30, 2018
- **Investment income** – Calculated using the assumed rate of return based on reserve plus City and employee contributions and other activities throughout the year

▶ Uses of Funds

- **Benefits and health insurance** – pension payments, health insurance subsidy, return of contributions and death benefits. Amounts were calculated based on the average increase for the past 5 years or actuarial valuation
- **Administrative expense** – this represents the operating expenses for the Office of Retirement Services. The detail is shown in the following slide.



Administrative Expense Budget FY19–20

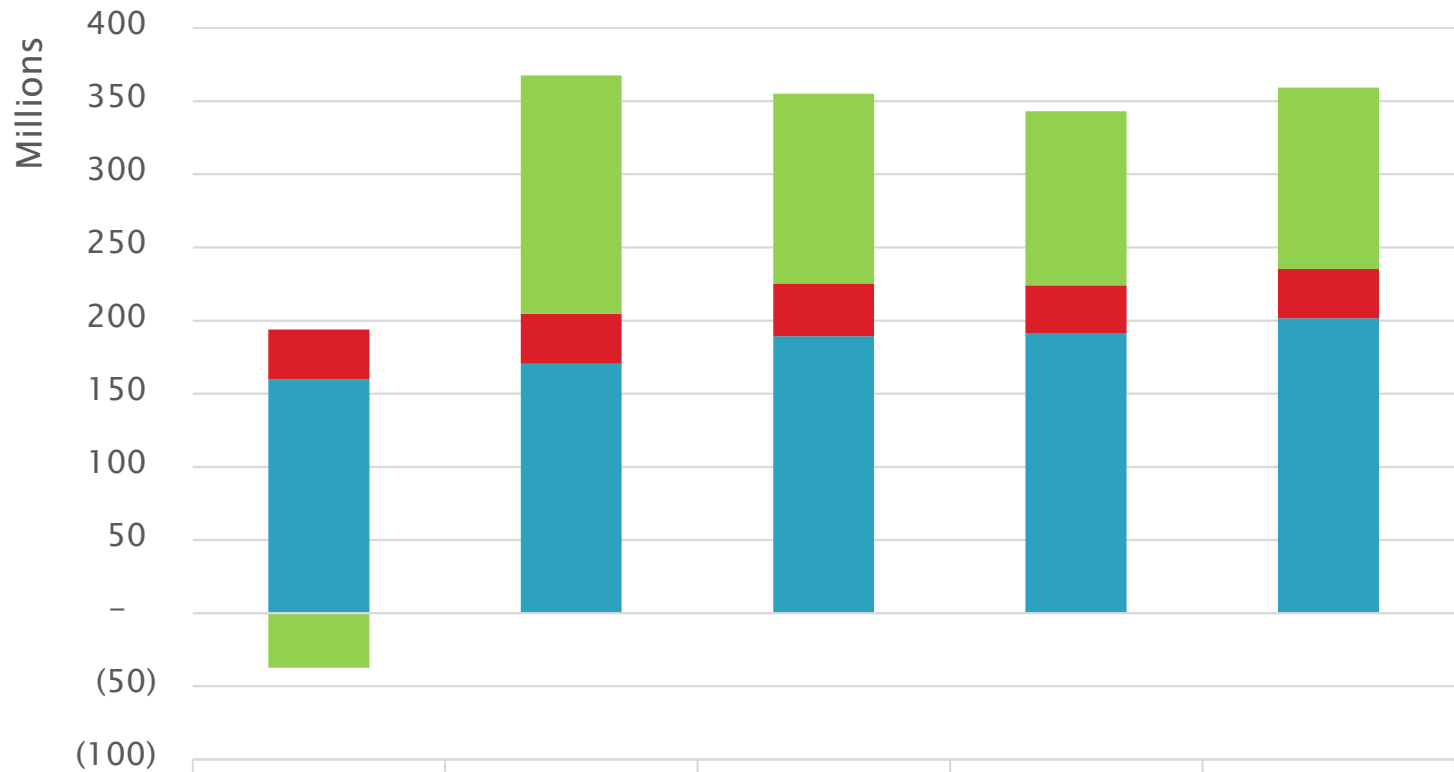
The Administrative Expense Budget portion is categorized into the following line items:

- ▶ **Personnel services** – 50% of the Office of Retirement Services direct staff labor costs including salary and benefits based on the City’s Budget Office labor reports, except for Investments staff which is split based on market value (40% Fed and 60% PF).
- ▶ **Non–personnel/equipment** – administrative overhead cost such as rent, supplies, equipment, etc., excluding professional services.
- ▶ **Professional services** – non–investment professional services including actuarial, legal, IT and other professional consulting services.
- ▶ **Medical services*** – this represents an estimate for a contracted medical advisor and other independent medical examiners.

The Administrative Budget does **NOT** include investment professional services, consultants and investment manager fees and capitalized costs.

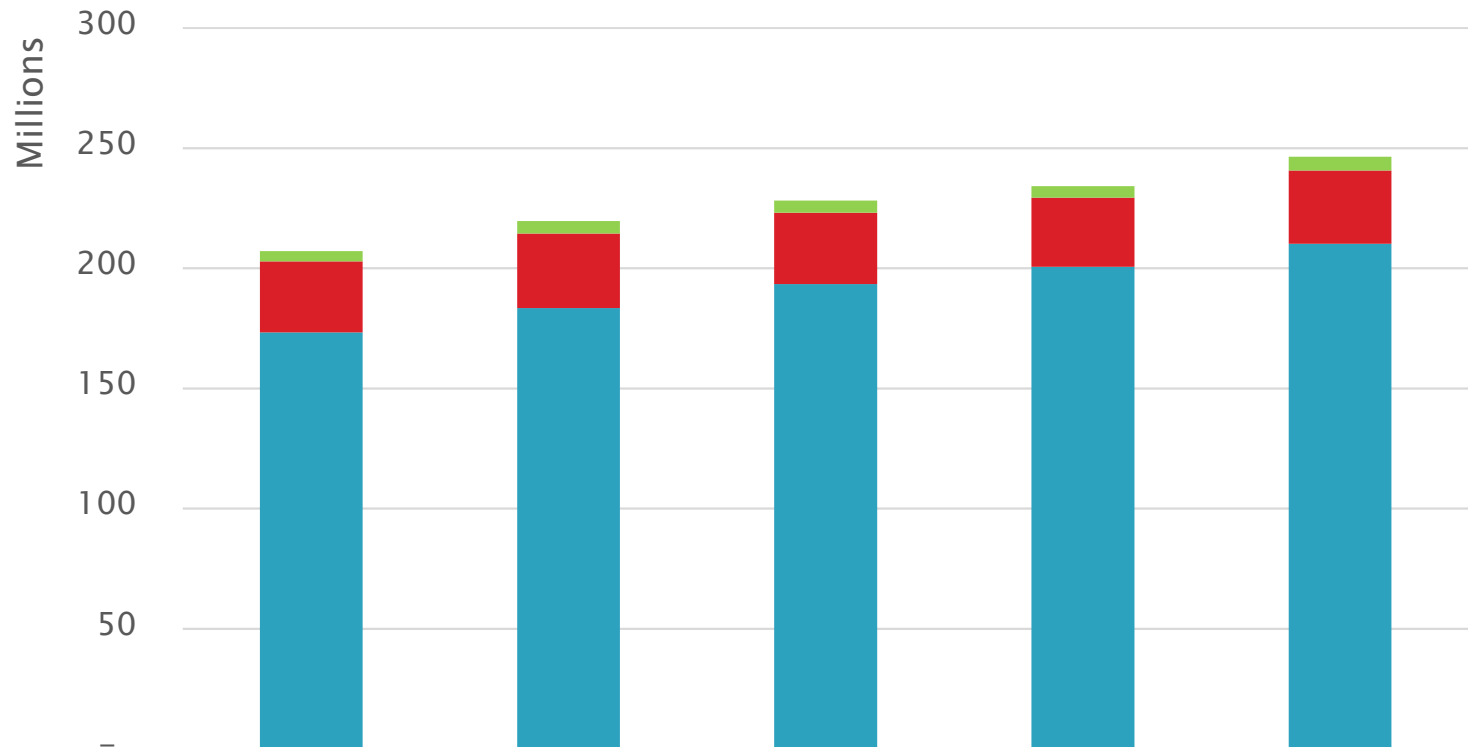
* This was a medical director and staff prior to the FY16–17 budget.

Sources of Funds



| | FY 15-16 (Actual) | FY 16-17 (Actual) | FY 17-18 (Actual) | FY 18-19 (Forecast) | FY 19-20 (Proposed) |
|---------------------------|----------------------|----------------------|----------------------|------------------------|------------------------|
| Investment Income | (37,457,000) | 163,051,000 | 129,829,000 | 119,031,408 | 124,070,431 |
| Participant Contributions | 33,801,000 | 34,054,000 | 36,046,000 | 33,008,931 | 33,708,600 |
| City Contributions | 159,921,000 | 170,388,000 | 189,167,000 | 190,903,719 | 201,348,000 |

Uses of Funds



| | FY 15-16 (Actual) | FY 16-17 (Actual) | FY 17-18 (Actual) | FY 18-19 (Forecast) | FY 19-20 (Proposed) |
|------------------------|----------------------|----------------------|----------------------|------------------------|------------------------|
| Administrative Expense | 4,177,000 | 5,161,000 | 4,993,000 | 4,825,383 | 5,796,000 |
| Health Insurance | 29,577,000 | 31,007,000 | 29,724,000 | 28,774,328 | 30,431,277 |
| Pension Benefits | 173,318,000 | 183,430,000 | 193,400,000 | 200,517,324 | 210,176,903 |

Federated Proposed Administrative Budget for FY 2019–2020

The following is a comparison of previous fiscal year actual figures, current year adopted budget and forecast, and proposed next year budget:

| Expenses | 2017– 2018 Actual (A) | 2018– 2019 Adopted (B) | 2018– 2019 Forecast (C) | 2019–2020 Proposed ⁽¹⁾ (D) | % Increase (Decrease) (B to D) | % Increase (Decrease) (C to D) |
|------------------------------|--------------------------------|---------------------------------|----------------------------------|---|--------------------------------------|--------------------------------------|
| Personnel Services | \$2,899,282 | \$3,340,000 | \$2,923,342 | \$3,489,000 | 4.46% | 19.35% |
| Non-Personnel / Equipment | 1,208,473 | 1,312,000 | 1,127,461 | 1,408,000 | 7.32% | 24.88% |
| Professional Services | 765,950 | 939,000 | 665,548 | 762,000 | (18.85%) | 14.49% |
| Medical Services | 119,295 | 208,000 | 109,032 | 137,000 | (34.13%) | 25.65% |
| Total | \$4,993,000 | \$5,799,000 | \$4,825,383 | \$5,796,000 | (0.05%) | 20.11% |

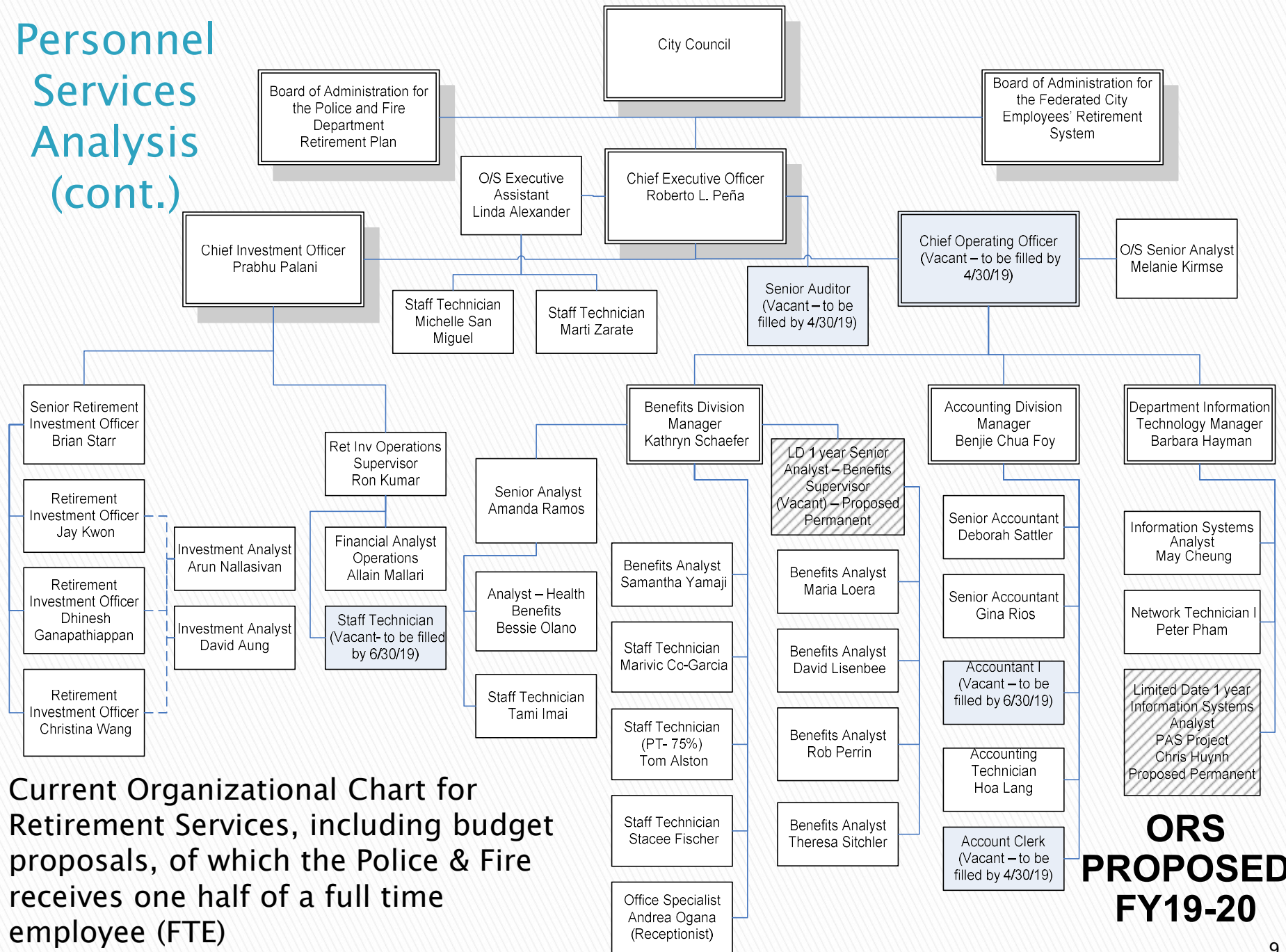
⁽¹⁾ – *Detail for changes provided in the following slides*

Personnel Services Analysis

| Expenses | 2017-2018 Actual (1) | 2018-2019 Adopted (2) | 2018-2019 Forecast (3) | 2019-2020 Proposed (4) | % Increase (Decrease) (2 to 4) | % Increase (Decrease) (3 to 4) |
|--|----------------------|-----------------------|------------------------|------------------------|--------------------------------|--------------------------------|
| Personnel Services | \$2,899,282 | \$3,340,000 | \$2,923,342 | \$3,489,000 | 4.46% | 19.35% |
| Authorized positions for both plans | 39.75 | 39.75 | 39.75 | 39.75 | 0 | 0 |
| Full time employee (FTE) allocated to Plan | 19.875 | 19.875 | 19.875 | 19.875 | 0 | 0 |
| Actual filled FTEs for both plans | 33.75 | | 38.75 | | | |
| FTEs allocated to Plan | 16.875 | | 19.375 | | | |

- ▶ Personnel Services increased from last year's budget due to:
 - Planning on having ORS fully staffed, budgeting two return to work retirees and increased benefit rates
- ▶ Proposals for FY19-20 included in budget
 - Request is to make the limited-date Information Systems Analyst and Benefits Senior Analyst that expires 6/30/19 permanent

Personnel Services Analysis (cont.)



**ORS
PROPOSED
FY19-20**

Current Organizational Chart for Retirement Services, including budget proposals, of which the Police & Fire receives one half of a full time employee (FTE)

Non-Personnel/Equipment Analysis

| Expenses | 2017-2018 Actual (1) | 2018-2019 Adopted (2) | 2018-2019 Forecast (3) | 2019-2020 Proposed (4) | % Increase (Decrease) (2 to 4) | % Increase (Decrease) (3 to 4) |
|-------------------------|----------------------|-----------------------|------------------------|------------------------|--------------------------------|--------------------------------|
| Non-personnel/Equipment | \$1,208,473 | \$1,312,000 | \$1,127,461 | \$1,408,000 | 7.32% | 24.88% |

- ▶ Non-Personnel/Equipment increased from prior year budget by \$96,000 mainly to an increase in the investment analytics and research budget
 - Investment analytics and research budget is comprised of investment-related expenses for cost-analysis, Bloomberg terminals and risk advisory services
 - Increase due to additional services added
 - Rest of increase due to CPI increases in various categories



Non-Personnel/Equipment Analysis (cont.)

Below is a list of major non-personnel/equip. categories and budget amounts

| Minor Budget Category | 2019-2020 Budget Basis | FY19-20 Proposed Budget Amount |
|--|---|--------------------------------|
| Investment analytics and research | Investments data processing Abel/Noser, Barra LLC, BCA Research, Bloomberg, Dynamo, eVestments and Klarifyfx. Also includes risk advisory services and State Street services for performance analysis, compliance and attribution analytics | \$569,000 |
| Rent | Rent for Office of Retirement Services (ORS) based on lease amount, as well as CAM and amortization of construction costs for consolidation | 210,000 |
| Insurance | Fiduciary and commercial liability Insurance | 193,000 |
| LRS - annual maintenance fee | Pension administration system annual maintenance fee based on contract amount | 110,000 |
| IT hardware / software | Includes proposed website overhaul, new scanner and server and yearly PC replacements | 97,000 |
| Postage and printing | Postage, shipping and printing costs for open enrollment, Choices mailings and other communication | 90,000 |
| Training/Travel | Board and staff travel including conferences, roundtables, due diligence, etc. | 65,000 |
| Other non-personnel and equipment | Includes lease, mileage, communication, dues and subscriptions, equipment/furniture, training, supplies, etc. | 74,000 |
| NON-PERSONNEL / EQUIPMENT TOTAL | | \$1,408,000 |

Professional Services Analysis

| Expenses | 2017-2018 Actual (1) | 2018-2019 Adopted (2) | 2018-2019 Forecast (3) | 2019-2020 Proposed (4) | % Increase (Decrease) (2 to 4) | % Increase (Decrease) (3 to 4) |
|-----------------------|----------------------------|-----------------------------|------------------------------|------------------------------|--------------------------------------|--------------------------------------|
| Professional Services | \$765,950 | \$939,000 | \$665,548 | \$762,000 | (18.85%) | 14.49% |

- ▶ Professional Services decreased from last year's budget due to netting of the following changes:
 - Decrease in legal by \$87,000 to be in line with previous years
 - Significant decrease in temp services by \$125,000 due to completion of pensionable pay project and implementation of PAS in current year
 - Addition of \$25,000 for a communications consultant
 - Other minor realignment and reduction in other categories to be in line with previous years

- ▶ Other considerations
 - Cost associated with the new pension administration system are NOT included in the budget as those costs are being capitalized.

- ▶ The following slide is a list major professional services categories, budget basis and budget amounts.

Professional Services – Other Analysis (cont.)

Below is a list of major professional services categories and budget amounts

| Minor budget category | 2019–20 Budget Basis | FY19–20 Budget Amount |
|------------------------------------|---|-----------------------|
| Legal | Legal services provided by Reed Smith, Saltzman and Johnson and Ice Miller LLP – note this budget line excludes investment legal. | \$295,000 |
| Actuary | Annual valuation for Pension & OPEB, possible Measure F costs, calculation for 415 matters as well as PAS consultation | 217,000 |
| Other Professional Services | Includes retiree search agency, governance services, communications consultant, contingency amount, etc. | 89,500 |
| Audit | Annual Financial audit agreement amount plus other services | 80,000 |
| Temp Agencies | Temporary staffing to fill vacant positions and to assist IT with PAS implementation | 44,000 |
| Pension Admin System (PensionGold) | Ad hoc web changes billed per hour; BCP Monthly charge; Ad hoc change request enhancements, Web Hosting Fee Monthly charge | 36,500 |
| | PROFESSIONAL SERVICES OTHER BUDGET TOTAL | \$762,000 |

Medical Services Analysis

| Expenses | 2017-2018 Actual (1) | 2018-2019 Adopted (2) | 2018-2019 Forecast (3) | 2019-2020 Proposed (4) | % Increase (Decrease) (2 to 4) | % Increase (Decrease) (3 to 4) |
|------------------|----------------------|-----------------------|------------------------|------------------------|--------------------------------|--------------------------------|
| Medical Services | \$119,295 | \$208,000 | \$109,032 | \$137,000 | (34.13%) | 25.65% |

- ▶ **Medical services decreased compared to prior year:**
 - Better handle on how many cases are handled per month
 - To be in line with prior year expenses

- ▶ **Other considerations:**
 - No longer having a City employee providing medical services
 - Outside advisor is more expensive
 - Based on estimate of having 2 cases per month for the medical advisor and 17 cases annually for the other independent medical examiners

- ▶ **Below is a summary of medical services provided:**
 - Obtain medical information from disability applicants, attorneys and workers' compensation
 - Review all medical reports received
 - Refer to independent medical examiners
 - Summarize relevant medical information and prepare medical report regarding causation, disability, and medical support of injury
 - Attend monthly Disability Committee hearings

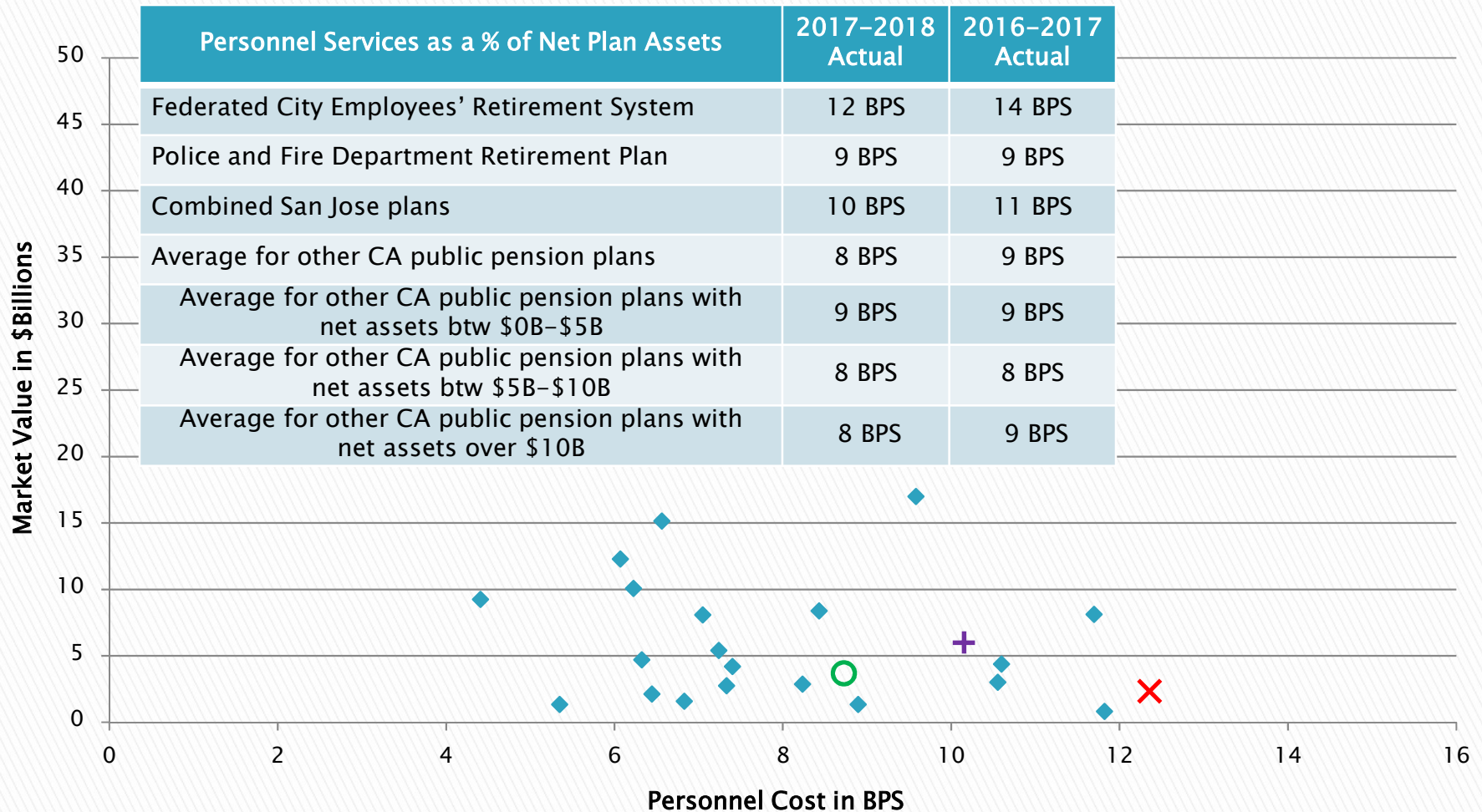
Personnel Services Analysis – in BPS (cont.)

Personnel Expense in BPS of Market Value of Assets – Actual as of 6/30/18 or most recent financial statement ⁽¹⁾

“X” below represents the Federated System, \$2,899,282

“O” below represents the Police and Fire Plan, \$3,193,583

“+” below represents the combined San Jose plans, \$6,092,865



¹ Retirement Services gathered and compiled most recent financial information from 23 public pension plans' CAFRs

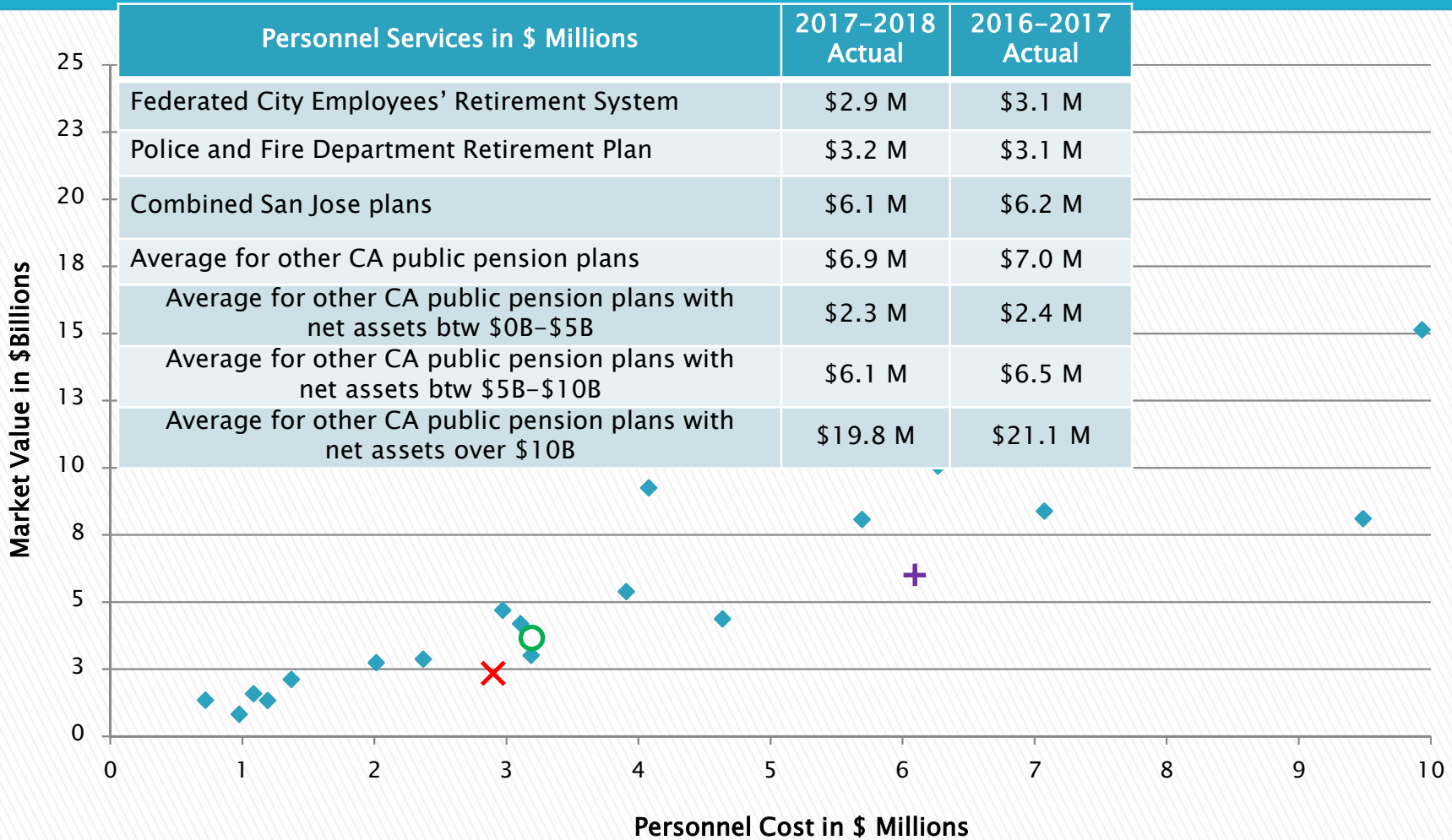
Personnel Services Analysis – in \$ (cont.)

Personnel Expense in \$ Millions – Actual as of 6/30/18 or most recent financial statement ⁽¹⁾

“X” below represents the Federated System, \$2,899,282

“O” below represents the Police and Fire Plan, \$3,193,583

“+” below represents the combined San Jose plans, \$6,092,865



¹ Retirement Services gathered and compiled most recent financial information from 23 public pension plans' CAFRs

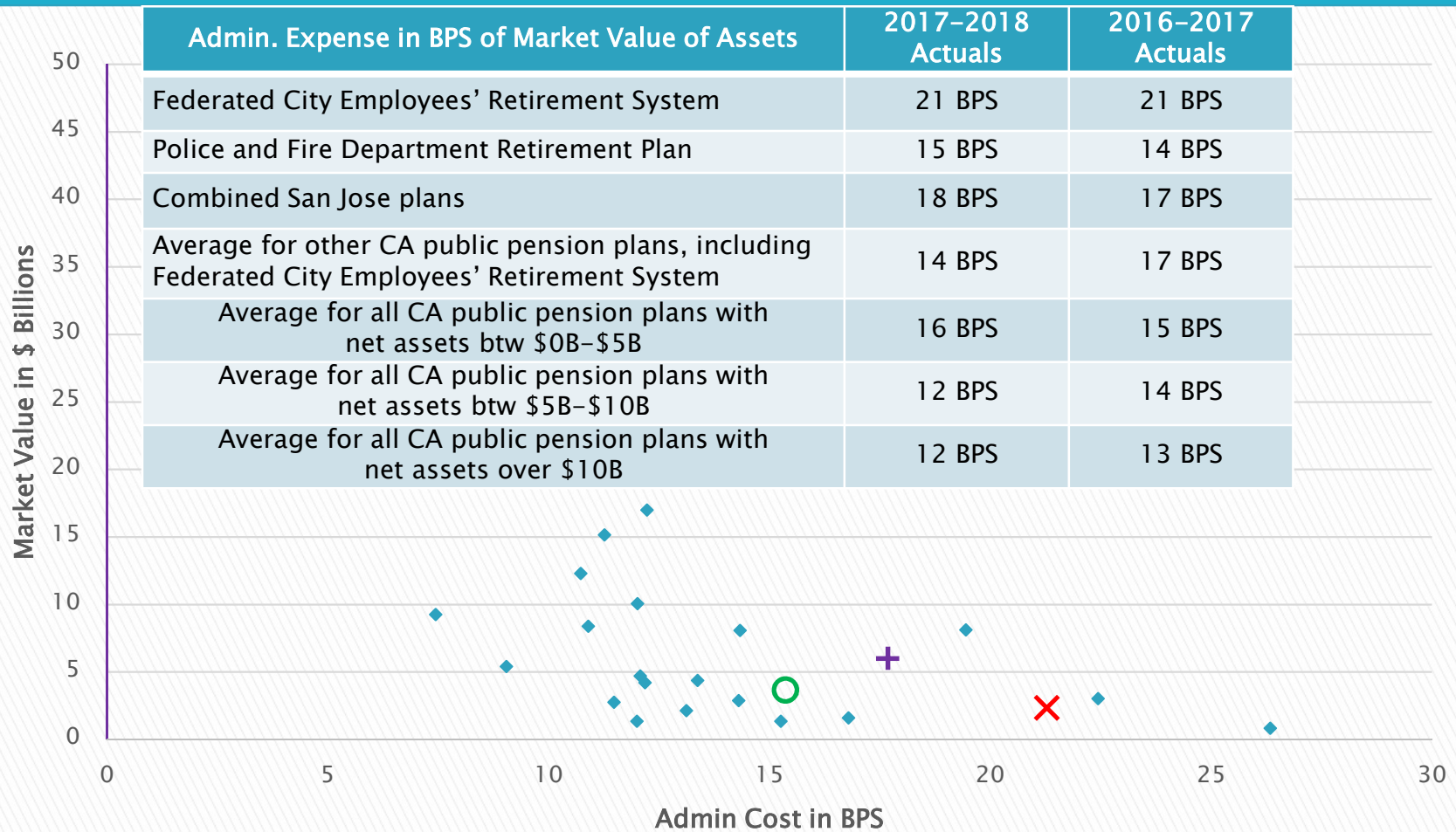
Administrative Cost Comparison – in BPS

Administrative Expense in BPS of Market Value of Assets – Actual as of 6/30/18 or most recent financial statement ⁽¹⁾

“X” below represents the Federated System , \$4,993,000

“O” below represents the Police and Fire Plan, \$5,623,000

“+” below represents the combined San Jose plans, \$10,616,000



¹ Retirement Services gathered and compiled most recent financial information from 23 public pension plans' CAFRs

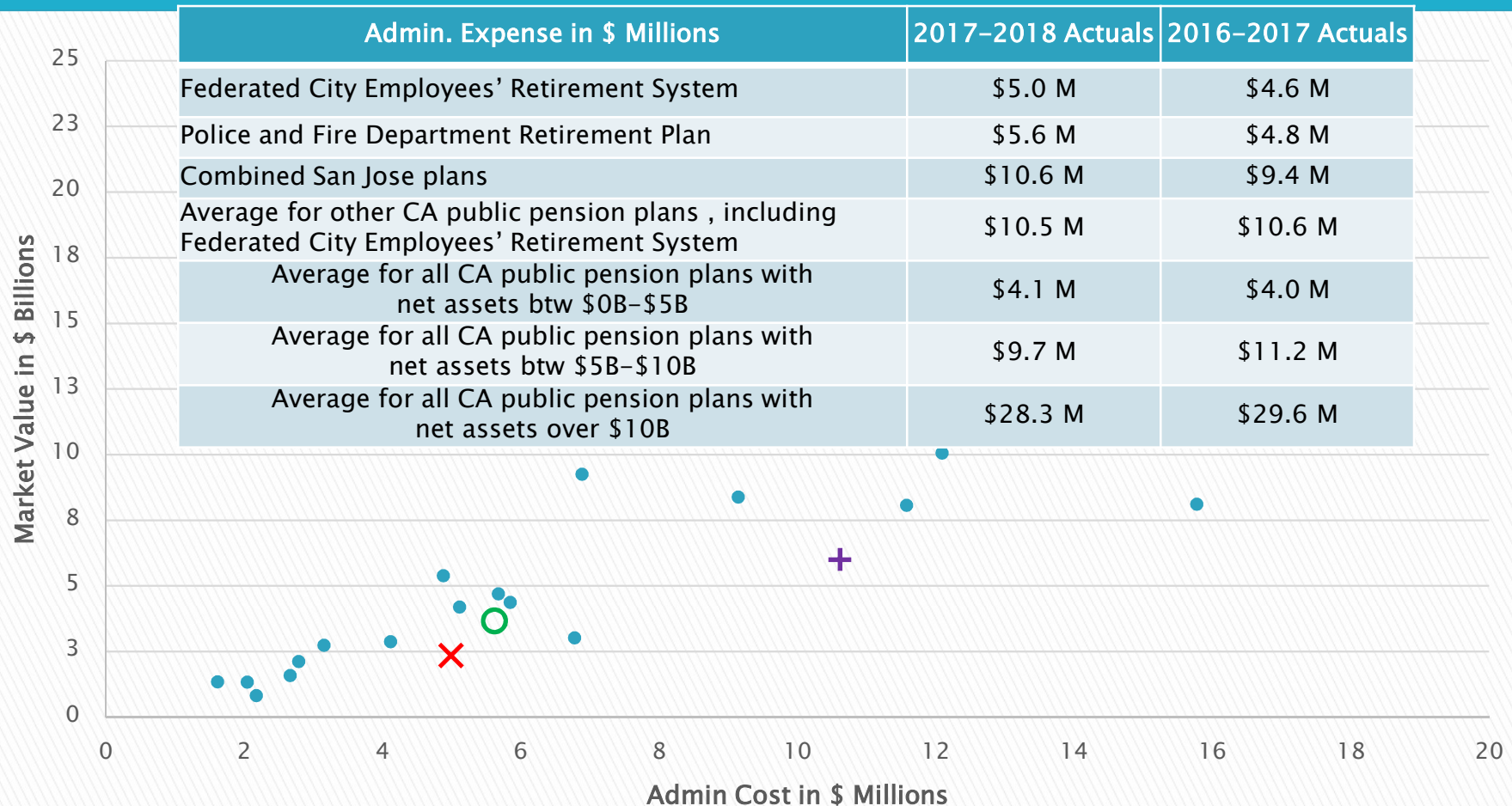
Administrative Cost Comparison – in \$

Administrative Expense in BPS of Market Value of Assets – Actual as of 6/30/18 or most recent financial statement ⁽¹⁾

“X” below represents the Federated System , \$4,993,000

“O” below represents the Police and Fire Plan, \$5,623,000

“+” below represents the combined San Jose plans, \$10,616,000



¹ Retirement Services gathered and compiled most recent financial information from 23 public pension plans public information



Memorandum

**TO: Board of Administration for the
Federated Retirement System**

FROM: Benjie Chua Foy

**SUBJECT: Consideration of Proposed Budget
for Fiscal Year 2019-2020**

DATE: March 13, 2019

Approved

Date

RECOMMENDATION

Discussion and action on the proposed budget for fiscal year 2019-2020.

BACKGROUND

The Board approves the contribution rates recommended by the actuary which is made by the City. The Board also approves the administrative expense budget for reporting on the Source and Use Statements submitted for inclusion in the City's operating budget. The amounts approved by the Board are the total category amounts and not the individual line items. If the individual line item goes over budget, no approval is required from the Board, if the total category amount remains under budget. This proposed budget is provided to the Board for discussion and approval, and if necessary, a revised and final budget will be prepared for approval at the next meeting. Highlights of the proposed budget are as follows:

ANALYSIS

SOURCES OF FUNDS

CITY CONTRIBUTIONS

The City contribution for the retirement and health benefit plan for the coming fiscal year is estimated to be \$201,348,000.

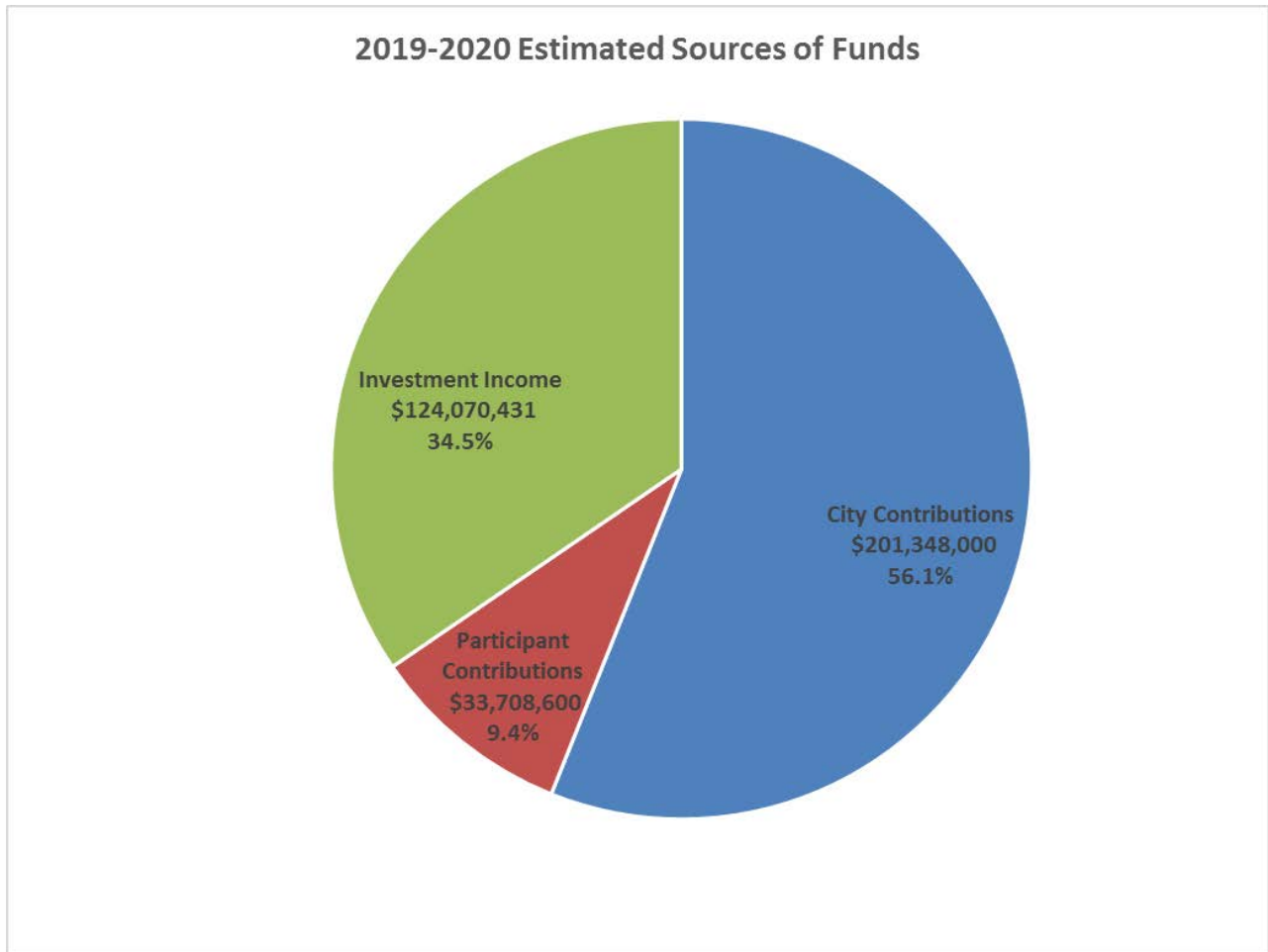
The actual contribution amount is based on the City contribution rates recommended by the actuary and adopted by the Board, applied as a factor against the City's total covered payroll. The FY20 contribution amounts assume the Board's adoption in April/May inclusive of the changes from Measure F, as shown in the June 30, 2018 actuarial reports for pension and healthcare, using the middle of the year amounts and no prefunding.

PARTICIPANT CONTRIBUTIONS

Total member contributions are estimated at \$33,708,600, a 4.8% decrease from the 2018-2019 adopted amount but a 2.1% increase from the 2018-2019 forecast amount. Member contributions are calculated based on the contribution rate for each tier. Tier 1 contribution rates for pension increased from 6.81% to 7.06% while their covered payroll decreased from \$158.8 million to \$149.3 million. Tier 2 contribution rates for pension and covered payroll increased from 8.28% to 8.33% and from \$137.9 million to \$159.4 million, respectively. Healthcare contribution rates remain at 7.5% per the Municipal Code for Tier 1 and some Tier 2 members, while the City's contribution is a flat dollar amount of approximately \$22 million.

INVESTMENT INCOME

Investment earnings are calculated based on the actuarial assumed rate of return of 6.75%. The beginning fund balance, along with the City’s contributions and member contributions offset with the expenditures are expected to earn less than the full rate since these amounts will occur throughout the year.



USES OF FUNDS

PENSION BENEFITS AND HEALTH INSURANCE

The pension benefits budget increased to \$210,176,903, an increase of \$1,175,783, or 0.56% from the FY18-19 adopted amount of \$209,001,120, but a \$9,659,579 or 4.82% increase from the FY18-19 forecasted amount. Pension benefits include service pensions, disability and survivorship pensions, death benefits and refunds of contributions.

The health insurance budget increased to \$30,431,277, a decrease of \$2,569,386, or 7.79% from the FY18-19 adopted amount of \$33,000,663. Health insurance includes health and dental insurance subsidies, as well as Medicare reimbursements.

VEBA withdrawals represent the funds taken out of the healthcare plan by Tier 1 and eligible Tier 2 members who opted out of the healthcare plan. Last fiscal year will have the largest amount as it was the first year of the opt-in to the VEBA and will continue through calendar year 2022 for rehired employees with healthcare contributions.

ADMINISTRATIVE EXPENSE BUDGET

The proposed administrative expenses budget of \$6,059,000 is a net increase of 4.5% or \$260,000 from the prior year proposed budget of \$5,799,000.

PERSONNEL SERVICES

The budget for personnel services was increased to \$3,489,000, an increase of \$149,000, or 4.5% over the prior year adopted budget of \$3,340,000. The main reason for the increase is due to the increased benefit rates, as well as adding two return to work retirees in the budget. The Budget Office's labor distribution report drives the personnel budget, which covers all the staff in Retirement Services. The salaries and benefits of all staff, except for investment staff, is split 50/50 between the System and the Police and Fire Department Retirement Plan (Plan). The investment staff is split 40/60 between the System and the Plan, which is based on asset size. The number of positions in Retirement Services remained at 39.75. However, two of the positions are limited-date positions which expire on June 30, 2019. The proposed personnel changes for FY19-20 were requested to convert the limited-date positions to permanent positions, and after discussions with the Mayor's Office, we understand there is support of approving the two limited-date positions.

NON-PERSONNEL / EQUIPMENT

The budget for non-personnel / equipment was increased to \$1,408,000, an increase of \$96,000, or 7.3% over the prior year adopted budget of \$1,312,000. This category includes data processing costs for investments, rent, insurance, information technology hardware/software, pension administration annual maintenance fee, postage and printing, training, travel, and other office expenses. This increase was mainly due to an increase of \$84,000 in the investment analytics and research budget for added services. The rest of the increase is due to CPI increases in various categories.

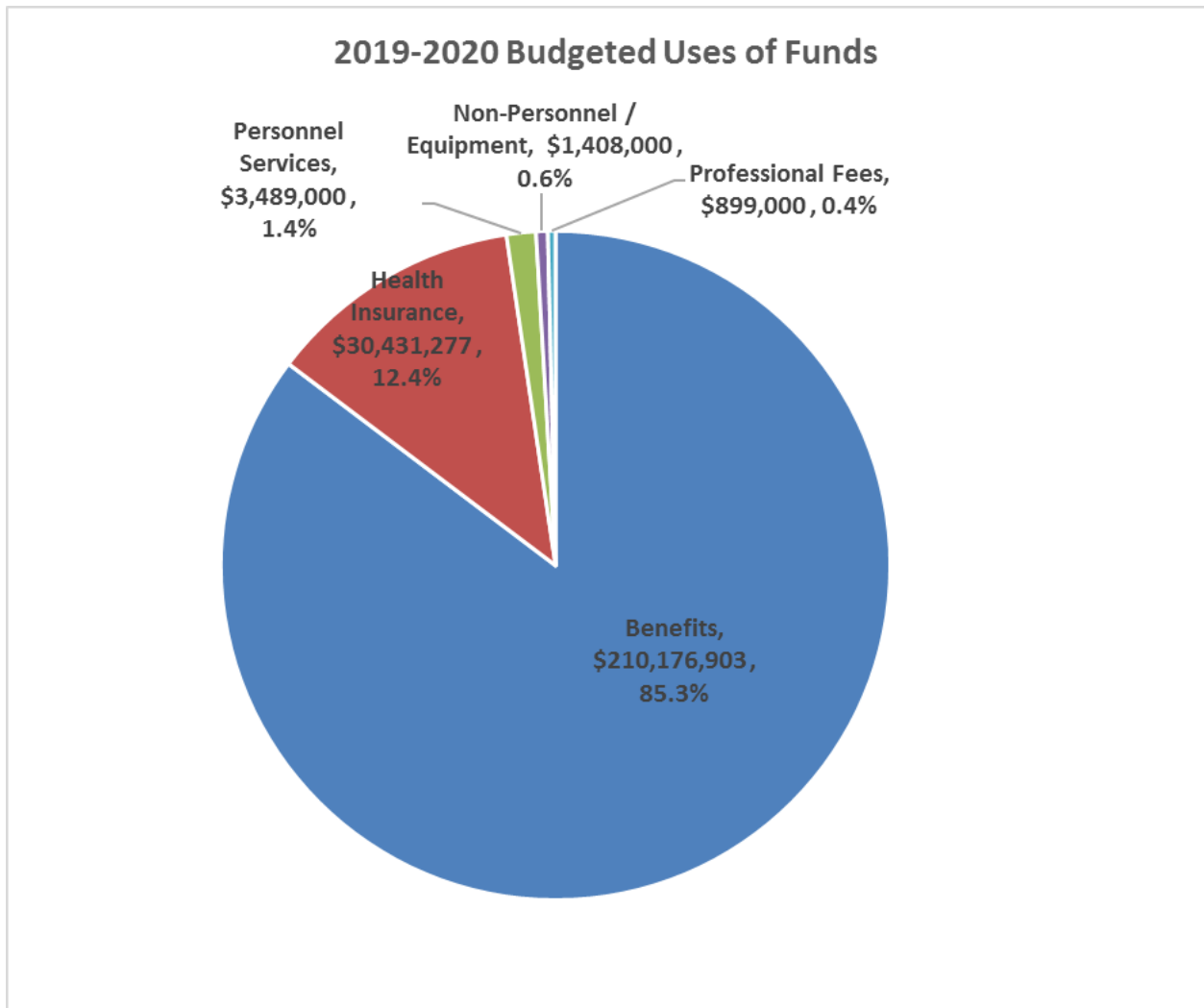
PROFESSIONAL SERVICES

The budget for professional services was reduced to \$762,000, a decrease of \$177,000, or 18.9% from the prior year adopted budget of \$939,000. Funding is required to continue the professional services necessary to meet core business needs in the area of actuarial services, financial audit services, legal services, and temporary staffing services. Decreases in budgetary amounts for core professional services resulted from reducing the budgetary amounts to be in line with prior year trends which were offset by planned projects for FY19-20. These include the following:

- \$125,000 decrease in temporary staffing services budget due to the completion of the pensionable earnings correction project and the implementation of the new pension administration system
- \$87,000 reduction in legal services budget based on contractual services and projected retention services
- \$25,000 addition for a communications consultant
- \$10,00 addition in other categories for CPI adjustment.

MEDICAL SERVICES

The budget for medical services decreased to \$137,000, a decrease of \$71,000, or 34.1% over the prior year adopted budget of \$208,000. This category is for expenses related to the processing of disability applicants, which include costs for a medical advisor and medical services from independent medical examiners (IME). The main reason for the decrease is due to a better handle on how many cases are processed on a monthly basis, as well as to be in line with previous expenses.



Attachment: Proposed Budget for Fiscal Year 2019-2020

PROPOSED BUDGET

FISCAL YEAR 2019-2020

FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM

March 21, 2019

FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM

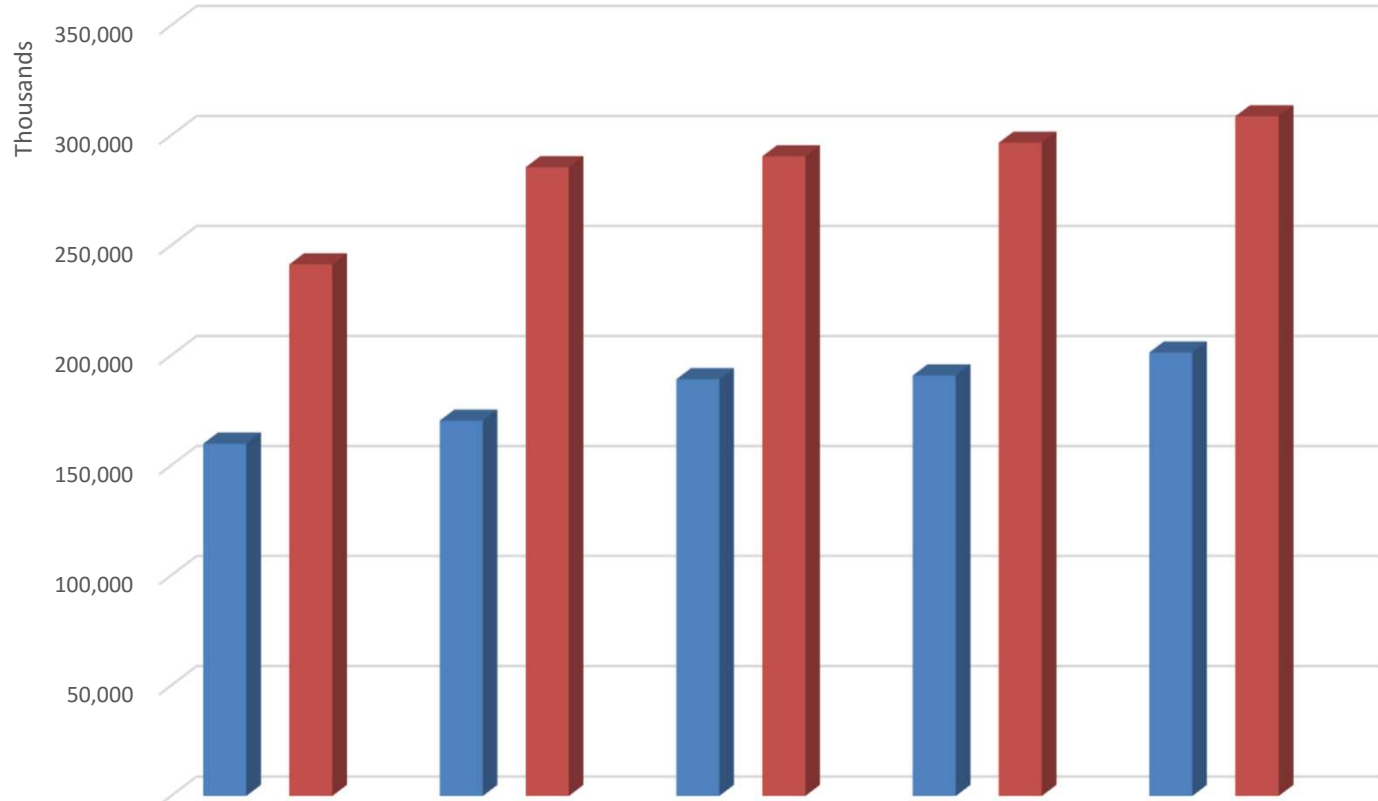
Proposed Budget for Fiscal Year 2019-2020

| | (A) 2017-2018 Actual | (B) 2018-2019 Modified | (C) 2018-2019 Forecast | (D) 2019-2020 Proposed | (A) to (B) Increase (Decrease) | (B) - (C) Increase (Decrease) | (C) - (D) Increase (Decrease) |
|------------------------------|---|---|---|---|---|--|--|
| SOURCE OF FUNDS | | | | | | | |
| Beginning Fund Balance | | | | | | | |
| Claims Reserve | 2,233,162,000 | 2,346,590,000 | 2,346,590,000 | 2,455,398,123 | 113,428,000 | 0 | 108,808,123 |
| Total Beginning Fund Balance | 2,233,162,000 | 2,346,590,000 | 2,346,590,000 | 2,455,398,123 | 113,428,000 | 0 | 108,808,123 |
| Transfers | | | | | | | |
| COLAs | 27,304 | 26,950 | 25,588 | 25,704 | (354) | (1,362) | 116 |
| City Contributions | 189,167,000 | 191,966,120 | 190,903,719 | 201,348,000 | 2,799,120 | (1,062,401) | 10,444,281 |
| Total Transfers | 189,194,304 | 191,993,070 | 190,929,307 | 201,373,704 | 2,798,766 | (1,063,763) | 10,444,397 |
| Revenue | | | | | | | |
| Participant Contributions | 36,046,000 | 35,412,648 | 33,008,931 | 33,708,600 | (633,352) | (2,403,717) | 699,669 |
| Investment Income | 129,829,000 | 116,362,590 | 119,031,408 | 124,070,431 | (13,466,410) | 2,668,818 | 5,039,023 |
| Total Revenue | 165,875,000 | 151,775,238 | 152,040,339 | 157,779,031 | (14,099,762) | 265,101 | 5,738,692 |
| TOTAL SOURCE OF FUNDS | <u>2,588,231,304</u> | <u>2,690,358,308</u> | <u>2,689,559,646</u> | <u>2,814,550,858</u> | <u>102,127,004</u> | <u>(798,662)</u> | <u>124,991,212</u> |
| USE OF FUNDS | | | | | | | |
| Expenditures | | | | | | | |
| COLAs | 27,304 | 26,950 | 25,588 | 25,704 | (354) | (1,362) | 116 |
| Benefits | 193,400,000 | 209,001,120 | 200,517,324 | 210,176,903 | 15,601,120 | (8,483,796) | 9,659,579 |
| Health Insurance | 29,724,000 | 33,000,663 | 28,774,328 | 30,431,277 | 3,276,663 | (4,226,335) | 1,656,949 |
| VEBA Transfers | 13,497,000 | 0 | 18,900 | 0 | (13,497,000) | 18,900 | (18,900) |
| Personnel Services | 2,899,282 | 3,340,000 | 2,923,342 | 3,489,000 | 440,718 | (416,658) | 565,658 |
| Non-Personal/Equipment | 1,208,473 | 1,312,000 | 1,127,461 | 1,408,000 | 103,527 | (184,539) | 280,539 |
| Professional Fees | 885,245 | 1,147,000 | 774,580 | 899,000 | 261,755 | (372,420) | 124,420 |
| Total Expenditures | 241,641,304 | 247,827,733 | 234,161,523 | 246,429,884 | 6,186,429 | (13,666,210) | 12,268,361 |
| Ending Fund Balance | | | | | | | |
| Claims Reserve | 2,346,590,000 | 2,442,530,575 | 2,455,398,123 | 2,568,120,974 | 95,940,575 | 12,867,548 | 112,722,851 |
| Total Ending Fund Balance | 2,346,590,000 | 2,442,530,575 | 2,455,398,123 | 2,568,120,974 | 95,940,575 | 12,867,548 | 112,722,851 |
| TOTAL USE OF FUNDS | <u>2,588,231,304</u> | <u>2,690,358,308</u> | <u>2,689,559,646</u> | <u>2,814,550,858</u> | <u>102,127,004</u> | <u>(798,662)</u> | <u>124,991,212</u> |

Amount not included in budget since no cash outlay:

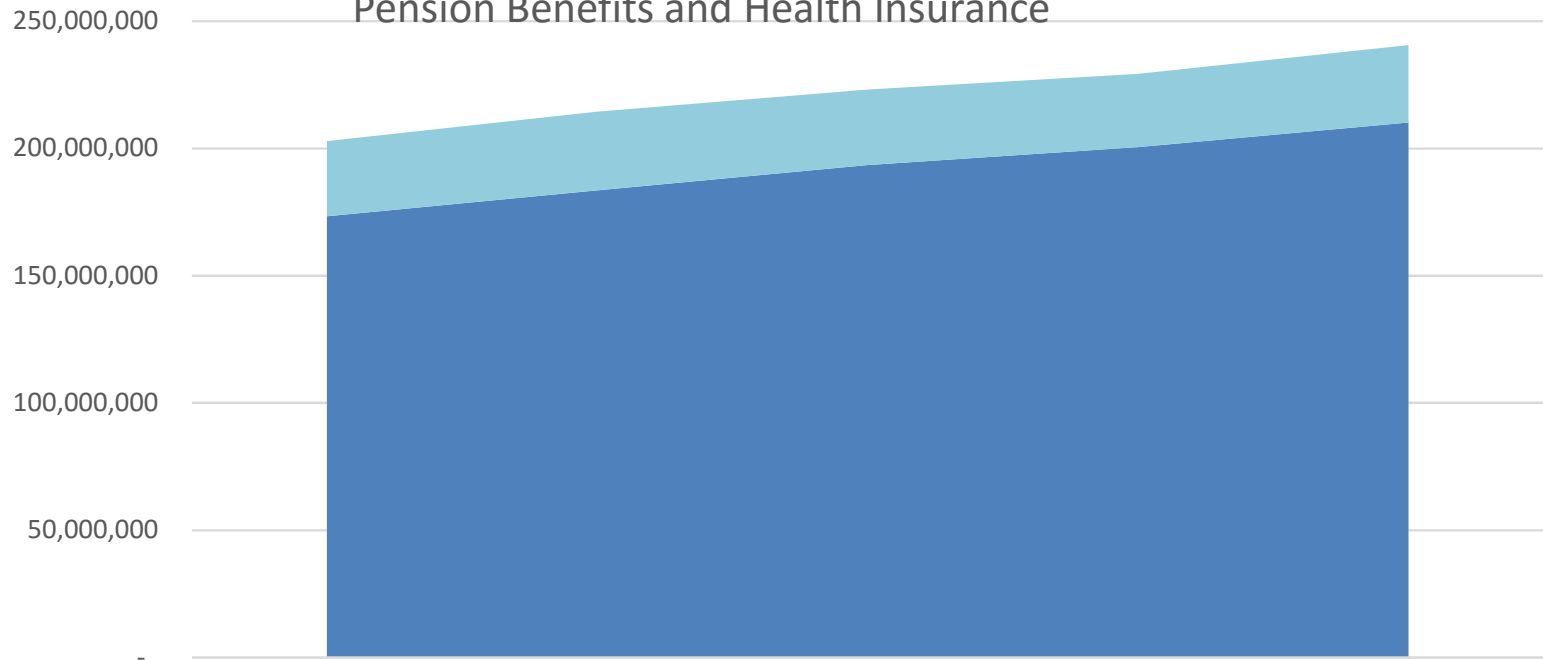
Amortization estimate for PG3 (to be placed in service February 2019 = 5 months for FY18-19; PG3 to be amortized over 10 years) \$ 162,503 \$ 390,007

Total City Contributions & Covered Payroll



| | FY 15-16 | FY 16-17 | FY 17-18 | FY 18-19 (Forecast) | FY 19-20 (Proposed) |
|--|-------------|-------------|-------------|------------------------|------------------------|
| ■ Total City Contributions | 159,921,000 | 170,388,000 | 189,167,000 | 190,903,719 | 201,348,000 |
| Total City Contribution % Change | 12.9% | 6.5% | 11.0% | 0.9% | 5.5% |
| ■ Total Covered Payroll | 241,365,429 | 285,595,469 | 290,504,000 | 296,678,000 | 308,700,000 |
| Total Covered Payroll % Change | 4.8% | 18.3% | 1.7% | 2.1% | 4.1% |

Federated City Employees' Retirement System Pension Benefits and Health Insurance



(50,000,000)

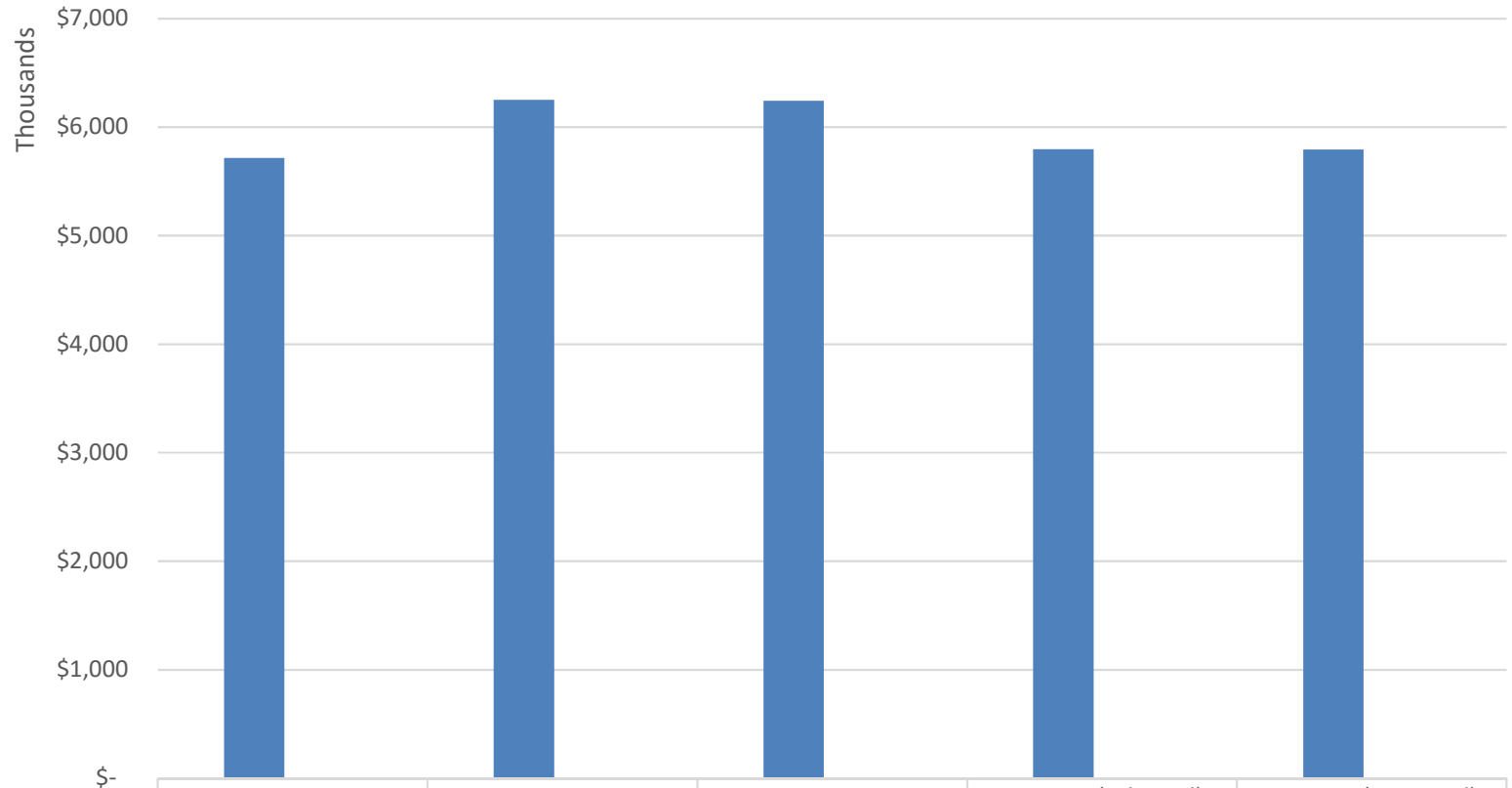
| | FY 2016 - Actual | FY 2017 - Actual | FY 2018 - Actual | FY 2019 - Forecast | FY 2020 - Proposed |
|---------------------------|------------------|------------------|------------------|--------------------|--------------------|
| Total Benefits | 202,895,000 | 214,437,000 | 223,124,000 | 229,291,652 | 240,608,180 |
| Health Insurance % Change | 0.5% | 4.8% | -4.1% | -3.2% | 5.8% |
| Health Insurance | 29,577,000 | 31,007,000 | 29,724,000 | 28,774,328 | 30,431,277 |
| Pension Benefits % Change | 5.3% | 5.8% | 5.4% | 3.7% | 4.8% |
| Pension Benefits | 173,318,000 | 183,430,000 | 193,400,000 | 200,517,324 | 210,176,903 |

FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM

Administrative Expenses: FY 2019-2020

| | (A) 2017-2018 Actual | (B) 2018-2019 Adopted | (C) 2018-2019 Forecast | (D) 2019-2020 Proposed | (A) to (B) Increase (Decrease) | (B) - (C) Increase (Decrease) | (C) - (D) Increase (Decrease) |
|---|----------------------------|-----------------------------|------------------------------|------------------------------|--------------------------------------|-------------------------------------|-------------------------------------|
| PERSONNEL SERVICES | | | | | | | |
| Salaries and employee benefits | 2,899,282 | 3,340,000 | 2,923,342 | 3,489,000 | 440,718 | (416,658) | 565,658 |
| Total Personnel Services | 2,899,282 | 3,340,000 | 2,923,342 | 3,489,000 | 440,718 | (416,658) | 565,658 |
| NON-PERSONNEL / EQUIPMENT | | | | | | | |
| Investment analytics and research | 556,873 | 485,000 | 523,633 | 569,000 | (71,873) | 38,633 | 45,367 |
| Insurance | 185,491 | 195,000 | 186,759 | 193,000 | 9,509 | (8,241) | 6,241 |
| IT hardware / software | 44,789 | 90,000 | 62,901 | 97,000 | 45,211 | (27,099) | 34,099 |
| LRS - annual maintenance fee | 106,829 | 110,000 | 44,510 | 110,000 | 3,171 | (65,490) | 65,490 |
| Postage and printing | 52,344 | 90,000 | 48,668 | 90,000 | 37,656 | (41,332) | 41,332 |
| Rent | 196,107 | 200,000 | 198,446 | 210,000 | 3,893 | (1,554) | 11,554 |
| Training and travel | 20,649 | 70,000 | 27,487 | 65,000 | 49,351 | (42,513) | 37,513 |
| Office supplies and board meeting expense | 16,377 | 30,000 | 20,067 | 30,000 | 13,623 | (9,933) | 9,933 |
| Other non-personnel / equipment | 29,014 | 42,000 | 14,990 | 44,000 | 12,986 | (27,010) | 29,010 |
| Total Non-personnel / Equipment | 1,208,473 | 1,312,000 | 1,127,461 | 1,408,000 | 103,527 | (184,539) | 280,539 |
| PROFESSIONAL SERVICES | | | | | | | |
| Actuary | 174,400 | 209,000 | 185,700 | 217,000 | 34,600 | (23,300) | 31,300 |
| External auditor | 62,232 | 70,000 | 77,588 | 80,000 | 7,768 | 7,588 | 2,412 |
| Legal | 271,979 | 382,000 | 188,286 | 295,000 | 110,021 | (193,714) | 106,714 |
| Pension administration system | 39,561 | 35,500 | 41,007 | 36,500 | (4,061) | 5,507 | (4,507) |
| Temporary staffing agencies | 166,889 | 169,000 | 157,061 | 44,000 | 2,111 | (11,939) | (113,061) |
| Other professional services | 50,889 | 73,500 | 15,906 | 89,500 | 22,611 | (57,594) | 73,594 |
| Total Professional Services | 765,950 | 939,000 | 665,548 | 762,000 | 173,050 | (273,452) | 96,452 |
| MEDICAL SERVICES | | | | | | | |
| Independent medical examiners | 62,650 | 137,000 | 43,900 | 66,000 | 74,350 | (93,100) | 22,100 |
| Medical consultant | 56,645 | 71,000 | 65,132 | 71,000 | 14,355 | (5,868) | 5,868 |
| Total Medical Services | 119,295 | 208,000 | 109,032 | 137,000 | 88,705 | (98,968) | 27,968 |
| TOTAL ADMINISTRATIVE EXPENSES | 4,993,000 | 5,799,000 | 4,825,383 | 5,796,000 | 806,000 | (973,617) | 970,617 |

Administrative Expense Budget FY 2015-2016 to FY 2018-2019



| | FY 15-16 | FY 16-17 | FY 17-18 | FY 17-18 (Adopted) | FY 18-19 (Proposed) |
|---------------------|-------------|-------------|-------------|--------------------|---------------------|
| ■ Admin Exp Budget* | \$5,716,203 | \$6,251,200 | \$6,244,800 | \$5,799,000 | \$5,796,000 |
| % Change | 2.1% | 9.4% | -0.1% | -7.1% | -0.1% |

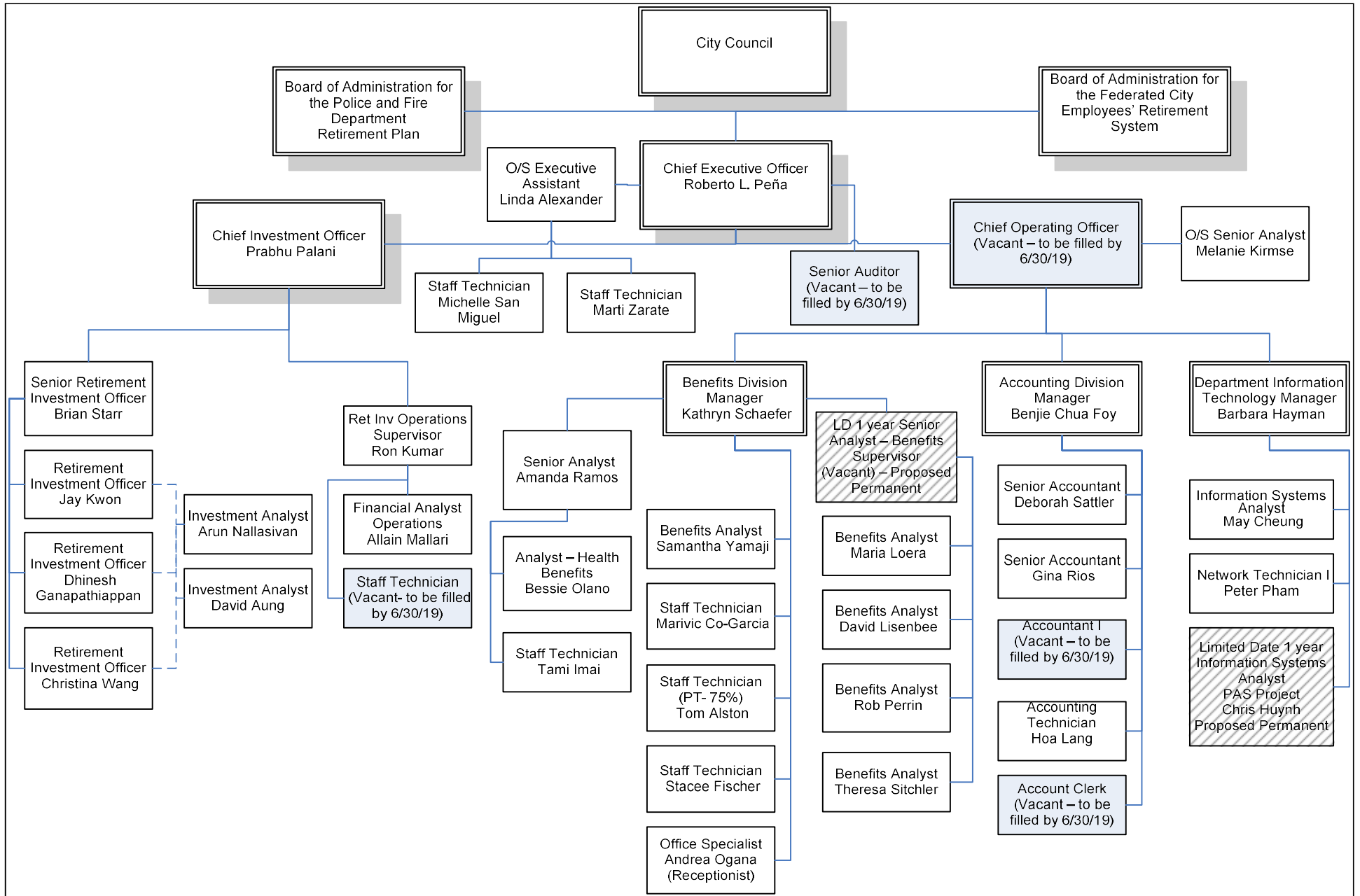
* Amount includes budget for operations only.

OFFICE OF RETIREMENT SERVICES

Departmental Position Detail

| Position | 2017-2018 Adopted (1) | 2018-2019 Adopted (2) | 2018-2019 Forecast (3) | 2019-2020 Proposed (4) | Increase / (Decrease) (2 to 4) | Increase / (Decrease) (3 to 4) | Explanation |
|---|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|---|---|--|
| Account Clerk II | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Accountant I | 0.00 | 0.00 | 1.00 | 1.00 | 1.00 | - | Reclassification from Senior Account Clerk |
| Accounting Technician | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Analyst I/II | 6.00 | 6.00 | 6.00 | 6.00 | - | - | |
| Assistant Director and Chief Investment Officer | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Department Information Technology Manager | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Deputy Director | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Director of Retirement Services | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Division Manager | 2.00 | 2.00 | 2.00 | 2.00 | - | - | |
| Executive Assistant | 0.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Financial Analyst | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Investments Operations Officer | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Information Systems Analyst | 2.00 | 2.00 | 2.00 | 2.00 | - | - | 1 is a limited-date position that is being requested to be permanent |
| Network Technician I/II/III | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Office Specialist II | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Retirement Investment Analyst I/II | 2.00 | 2.00 | 2.00 | 2.00 | - | - | |
| Retirement Investment Officer | 3.00 | 3.00 | 3.00 | 3.00 | - | - | |
| Senior Account Clerk | 1.00 | 1.00 | 0.00 | 0.00 | (1.00) | - | Reclassification to Accountant I |
| Senior Accountant | 2.00 | 2.00 | 2.00 | 2.00 | - | - | |
| Senior Analyst | 2.00 | 2.00 | 2.00 | 2.00 | - | - | 1 is a limited-date position that is being requested to be permanent |
| Senior Auditor | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Senior Retirement Investment Officer | 1.00 | 1.00 | 1.00 | 1.00 | - | - | |
| Staff Technician | 7.00 | 6.00 | 6.00 | 6.00 | - | - | |
| Staff Technician PT | 0.75 | 0.75 | 0.75 | 0.75 | - | - | |
| Total Positions | 39.75 | 39.75 | 39.75 | 39.75 | 0.00 | 0.00 | |

**OFFICE OF RETIREMENT SERVICES
PROPOSED ORGANIZATIONAL CHART
FY 18-19**





Federated Annual Fee Report - 2017

Executive Summary

This report marks the third anniversary of our annual Fee Report for the Federated City Employees' Retirement System ("Federated", "Plan"). The goal of the report is to provide transparency and insight into the fees and expenses paid to investment managers along with the costs of operating the investment program. Pension plan fee data is generally underreported by peers, and typically represents only the portion of fees that are observable. This excludes often sizable embedded fees (such as incentive fees) that are deducted from account values of certain fund structures.

It is important to note that fees are a function of asset allocation and portfolio construction, which are byproducts of the Board's objectives, investment beliefs, and risk tolerance. Each year, the Board typically reviews the asset allocation considering updated capital market assumptions and the expected returns and volatility of the portfolio associated with those assumptions. The asset allocations in effect for the period covered by this report, as illustrated in tables 1 and 2, are an expression of the Board's Investment Policy Statement that "Investments shall be diversified with the intent to minimize the risk of large investment losses".

Asset allocation is typically one of the largest determinants of investment management fees at the portfolio level. Asset allocations that introduce alternative asset classes (Private Equity, Private Debt, Real Estate, Hedge Funds, etc.) will have higher levels of investment manager fees, because these asset classes or strategies have higher fee structures than traditional asset classes. In addition, asset class structuring can have a significant impact on fees. The use of active management versus passive management, as well as alternative strategies within traditional asset classes, will increase fees. When evaluating investment managers, staff places a significant emphasis on fees by negotiating for lower fees and analyzing that expected value or return is worth the expected cost.

This year, the report introduces a new category of fees that was not previously captured (fund operating expenses) along with a disclosure in accordance with California Government Code §7514.7 (the result of Assembly Bill 2833), which requires annual reporting of fees paid by California public investment funds as a result of investing in alternative investment vehicles.

For calendar year 2017, management and incentive fees for the pension plan totaled \$24.2 million with a fee ratio of 1.15% as compared to \$21.3 million and 1.07% for 2016 and \$22.2 million and 1.10% for 2015. Fund operating expenses were \$2.4 million in 2017 for a fee ratio of 0.11%. The health care trust management and incentive fees totaled \$0.7 million with a fee ratio of 0.32%, compared to \$0.6 million with a fee ratio of 0.36% in 2016 and \$0.3 million with a fee ratio of 0.24% in 2015. Other investment-related costs (staff, consultants, custodian bank, investment legal, etc.) for the pension plan in 2017 were \$1.9 million with a fee ratio of 0.09% as compared to \$1.6 million and 0.08% in 2016 and 2015. Other investment-related costs for the health care trust totaled \$0.2 million with a fee ratio of 0.10% as compared to \$0.2 million and 0.12% for 2016 and \$0.1 million and 0.12% for 2015.

Table 1 - Pension Average Asset Allocation for 2017

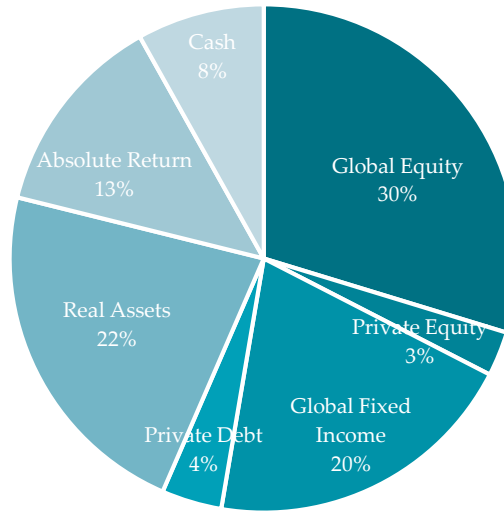
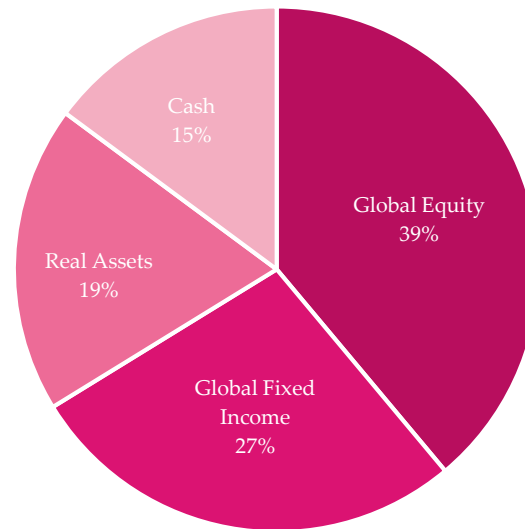


Table 2 - Health Care Trust Average Asset Allocation for 2017



Introduction

The fees in this report represent management fees, incentive fees, fund operating expenses, and other investment-related costs that were incurred during the calendar year. These amounts may include fees that were accrued for the year, but not paid out.

Management fees are fees charged by fund managers to invest and manage assets. Incentive fees are performance-based fees for exceeding a hurdle return and are only applicable to certain fund structures. It is important to note that incentive fees are a form of shared economics that are only paid if the manager has produced positive returns or exceeded a predetermined hurdle rate. In some situations, incentive fees can be negative, reflecting the complexity of fee agreements. Operating expenses include overhead related to managing a fund that are indirectly borne by investors, which may include professional, administration, research, tax, legal, custodial and audit expenses for a fund. Trading expenses such as broker commissions are excluded from this report. Other costs include salary and benefits compensation for investment staff (including a 50% allocation for the CEO), cost of consultants (general, absolute return, risk), custodian, other third party vendors utilized by the investment program, and investment staff travel.

Though best efforts have been made to capture all material fees and expenses, this report may not include all indirect expenses and charges that may be paid to managers' affiliates, consultants, or entities for services rendered to the managers, the funds or portfolio entities held by certain funds. Future iterations of this report will continue to grow in sophistication, benefiting from industry-wide initiatives to gain additional transparency, such as the increasing adoption of the Institutional Limited Partners Association ("ILPA") fee reporting template.

Data Sources

Staff compiled this fee report using the best available information for each fund manager in order to develop a comprehensive view of fees. Fee amounts were reviewed for reasonableness and reconciled to fee schedules. Fees for all managers active at any point during the year are included in this report, including those that were initially funded or terminated mid-year.

Fees for mutual funds, short term investment funds (Cash), and certain public markets commingled funds that deduct fees directly from the funds were calculated by multiplying each funds' fee ratio by the funds' average monthly balance for the year. The average balances were sourced from the Plan custodian bank, State Street.

Absolute Return management and incentive fees were provided by managers with independent re-calculations and reconciliations completed by Plan consultant Albourne. Operating expenses were calculated by Albourne using audited financial statements for each fund. Fees for Private funds were gathered by asking managers to complete the ILPA fee reporting template. The ILPA template is intended to standardize and codify the presentation of fees, expenses, and carried interest information by fund managers to Limited Partners. The remaining manager fees were obtained by having the fund managers fill out a fee template designed by staff.

Within the Other Costs section, consultants, custodian, and other vendor costs were sourced from fee invoices from the vendors. Investment staff salary and benefits were allocated to each of the four San Jose plans by pro-rating the total costs by the average balance of each plan. Similarly, legal costs incurred by Federated were allocated between the pension plan and health care trust by pro-rating the total costs by the average monthly balance of each plan.

Changes from 2016 Report

This years report includes a new category of manager fees that was not previously reported – operating expenses. As previously mentioned, operating expenses generally represent overhead related to managing a fund, which may include professional, administration, research, tax, legal, custodial and audit expenses for a fund.

The year-over-year attribution is more detailed and now breaks out yearly changes from three categories – weight changes, management fee ratio changes, and incentive fee ratio changes. The 2016 report attribution did not distinguish between management fee and incentive fee ratio changes.

Finally, the plan Overlay base fee has now been moved to the Other Vendors category with asset-based fees captured in their respective asset classes.

Total Portfolio Fee Summaries

The tables in this report present fees by asset class and management type. Fees by management type are presented by segregating investments into four “fund type” categories: passive, active, hedged, and private. Passive strategies are intended to generate a return that emulates an index. Active strategies include investment managers that attempt to outperform an index on a long only basis. Hedged strategies generally seek to achieve an absolute return (“alpha”) regardless of market direction (“beta”) by employing

various strategies including long and short positions. Private strategies utilize a diverse set of approaches to invest in illiquid assets, such as equity of privately held companies or real estate.

Year-over-Year Comparisons

The year-over-year comparison tables in this report present a time series of changes in average weights, fees, fee ratios, contribution to total plan fee ratios, and a year-over-year attribution. The year-over-year attribution uses the Brinson-Fachler methodology to decompose the change in contribution to total plan fee ratio into 1) impact due to weight changes, 2) impact due to management fee ratio changes, and 3) impact due to incentive fee ratio changes

California Government Code §7514.7 (AB 2833)

Assembly Bill 2833 (“AB 2833”) was approved on September 14, 2016 adding Section 7514.7 to California Government Code. The addition to the Code requires California public investment funds to make annual disclosures of fees for alternative investment vehicles at a public meeting.

Tables 15-18 of this report are intended to comply with the law.

Note: Some values on the report may not sum due to rounding.

Table 3 - Pension Fees by Asset Class and Management Type

| Asset Class | Management | | | | | Average Balance (\$ mm) | Average Weight | Fee Ratio - Management Fees | Fee Ratio - Incentive Fees | Fee Ratio - Operating Expenses | Fee Ratio - Mgmt and Incent Fees | Fee Ratio - | | |
|---------------------|-------------------------|------------------------|----------------------------|----------------------------|----------------------------------|-------------------------|----------------|-----------------------------|----------------------------|--------------------------------|----------------------------------|--------------------------|--|--------------|
| | Management Fees (\$ mm) | Incentive Fees (\$ mm) | Operating Expenses (\$ mm) | and Incentive Fees (\$ mm) | Mgmt, Incent, and Op Exp (\$ mm) | | | | | | | Mgmt, Incent, and Op Exp | % of Total Contribution Plan Fee Ratio | |
| Global Equity | 4.1 | 2.3 | 0.2 | 6.4 | 6.6 | 625 | 29.7% | 0.66% | 0.37% | 0.03% | 1.03% | 1.06% | 24.9% | 0.31% |
| Passive | 0.1 | - | 0.0 | 0.1 | 0.1 | 220 | 10.5% | 0.05% | 0.00% | 0.02% | 0.05% | 0.07% | 0.6% | 0.01% |
| Active | 2.2 | - | 0.0 | 2.2 | 2.2 | 312 | 14.9% | 0.70% | 0.00% | 0.01% | 0.70% | 0.71% | 8.3% | 0.10% |
| Hedged | 1.8 | 2.3 | 0.1 | 4.1 | 4.3 | 92 | 4.4% | 1.98% | 2.48% | 0.16% | 4.46% | 4.62% | 16.0% | 0.20% |
| Private Equity | 1.6 | 1.1 | 0.5 | 2.7 | 3.2 | 60 | 2.8% | 2.75% | 1.81% | 0.79% | 4.56% | 5.35% | 12.0% | 0.15% |
| Private | 1.6 | 1.1 | 0.5 | 2.7 | 3.2 | 60 | 2.8% | 2.75% | 1.81% | 0.79% | 4.56% | 5.35% | 12.0% | 0.15% |
| Global Fixed Income | 1.3 | 0.6 | 0.1 | 1.9 | 2.0 | 423 | 20.1% | 0.30% | 0.14% | 0.02% | 0.44% | 0.46% | 7.4% | 0.09% |
| Passive | 0.1 | - | 0.0 | 0.1 | 0.1 | 263 | 12.5% | 0.05% | 0.00% | 0.00% | 0.05% | 0.05% | 0.5% | 0.01% |
| Active | 0.6 | - | 0.0 | 0.6 | 0.6 | 119 | 5.6% | 0.49% | 0.00% | 0.03% | 0.49% | 0.53% | 2.3% | 0.03% |
| Hedged | 0.6 | 0.6 | 0.1 | 1.2 | 1.2 | 41 | 2.0% | 1.40% | 1.45% | 0.13% | 2.84% | 2.97% | 4.6% | 0.06% |
| Private Debt | 1.0 | -0.8 | 0.1 | 0.2 | 0.4 | 81 | 3.8% | 1.26% | -0.98% | 0.17% | 0.28% | 0.45% | 1.3% | 0.02% |
| Private | 1.0 | -0.8 | 0.1 | 0.2 | 0.4 | 81 | 3.8% | 1.26% | -0.98% | 0.17% | 0.28% | 0.45% | 1.3% | 0.02% |
| Real Assets | 3.7 | 1.0 | 0.6 | 4.7 | 5.2 | 470 | 22.4% | 0.78% | 0.21% | 0.12% | 0.99% | 1.12% | 19.7% | 0.25% |
| Passive | 0.2 | - | - | 0.2 | 0.2 | 217 | 10.3% | 0.07% | 0.00% | 0.00% | 0.07% | 0.07% | 0.6% | 0.01% |
| Active | 0.4 | - | 0.1 | 0.4 | 0.5 | 95 | 4.5% | 0.39% | 0.00% | 0.10% | 0.39% | 0.49% | 1.7% | 0.02% |
| Hedged | 1.0 | 0.2 | 0.2 | 1.2 | 1.4 | 36 | 1.7% | 2.65% | 0.61% | 0.53% | 3.26% | 3.79% | 5.2% | 0.07% |
| Private | 2.2 | 0.8 | 0.3 | 3.0 | 3.3 | 122 | 5.8% | 1.80% | 0.62% | 0.24% | 2.43% | 2.67% | 12.2% | 0.15% |
| Absolute Return | 4.3 | 3.9 | 0.9 | 8.2 | 9.0 | 274 | 13.0% | 1.56% | 1.42% | 0.31% | 2.98% | 3.29% | 33.9% | 0.43% |
| Hedged | 4.3 | 3.9 | 0.9 | 8.2 | 9.0 | 274 | 13.0% | 1.56% | 1.42% | 0.31% | 2.98% | 3.29% | 33.9% | 0.43% |
| Cash | 0.2 | - | - | 0.2 | 0.2 | 171 | 8.1% | 0.12% | 0.00% | 0.00% | 0.12% | 0.12% | 0.7% | 0.01% |
| Passive | 0.2 | - | - | 0.2 | 0.2 | 171 | 8.1% | 0.12% | 0.00% | 0.00% | 0.12% | 0.12% | 0.7% | 0.01% |
| Total Plan | 16.2 | 8.0 | 2.4 | 24.2 | 26.6 | 2,102 | 100.0% | 0.77% | 0.38% | 0.11% | 1.15% | 1.26% | 100.0% | 1.26% |

The table above illustrates that management, incentive, and operating expenses for the pension plan totaled \$26.6 million for 2017 which equated to a total plan fee ratio of 1.26%. The Absolute Return and Global Equity asset classes contributed the most to the total plan fee ratio at 0.43% and 0.31%, respectively. The Private Debt and Global Fixed Income asset classes contributed the least to the total plan fee ratio at 0.02% and 0.09%, respectively.

Table 4 - Pension Fees by Management Type

| Fund Type | Management | | | | | Average Balance (\$ mm) | Average Weight | Fee Ratio - Management Fees | Fee Ratio - Incentive Fees | Fee Ratio - Operating Expenses | Fee Ratio - Mgmt and Incent Fees | Fee Ratio - Mgmt, Incent, and Op Exp | % of Total Plan Fee Ratio | Contribution to Total Plan Fee Ratio |
|-------------------|-------------------------|------------------------|----------------------------|----------------------------|----------------------------------|-------------------------|----------------|-----------------------------|----------------------------|--------------------------------|----------------------------------|--------------------------------------|---------------------------|--------------------------------------|
| | Management Fees (\$ mm) | Incentive Fees (\$ mm) | Operating Expenses (\$ mm) | and Incentive Fees (\$ mm) | Mgmt, Incent, and Op Exp (\$ mm) | | | | | | | | | |
| Passive | 0.6 | - | 0.0 | 0.6 | 0.6 | 871 | 41.4% | 0.07% | 0.00% | 0.00% | 0.07% | 0.07% | 2.4% | 0.03% |
| Active | 3.1 | - | 0.2 | 3.1 | 3.3 | 525 | 25.0% | 0.59% | 0.00% | 0.03% | 0.59% | 0.63% | 12.4% | 0.16% |
| Hedged | 7.6 | 7.0 | 1.2 | 14.6 | 15.9 | 443 | 21.1% | 1.72% | 1.57% | 0.28% | 3.30% | 3.58% | 59.7% | 0.75% |
| Private | 4.9 | 1.0 | 0.9 | 5.9 | 6.8 | 262 | 12.5% | 1.85% | 0.40% | 0.34% | 2.25% | 2.60% | 25.6% | 0.32% |
| Total Plan | 16.2 | 8.0 | 2.4 | 24.2 | 26.6 | 2,102 | 100.0% | 100.0% | 0.38% | 0.11% | 1.15% | 1.26% | 100.0% | 1.26% |

For the total pension plan, hedged management strategies accounted for 0.75% of the total plan fee ratio and represented about 21% of average plan assets. Private management strategies were the next largest contributor to the total plan fee ratio accounting for 0.32% of the total plan fee ratio and represented 13% of average plan assets. Passive and active management strategies accounted for 0.03% and 0.16% of the total plan fee ratio and represented 41% and 25% of plan assets, respectively.

Table 5 - Pension Other Investment Costs

| Investment Staff | Other Vendors | | | Total Other | Other Costs |
|-----------------------------|---------------------|-------------------|--------------------|---------------|-------------|
| Salary and Benefits (\$ mm) | Consultants (\$ mm) | Custodian (\$ mm) | and Travel (\$ mm) | Costs (\$ mm) | Fee Ratio |
| 0.5 | 0.6 | 0.3 | 0.4 | 1.9 | 0.09% |

Other investment costs for the pension plan equated to a total fee ratio of 0.09%. As previously discussed, other costs include salary and benefits compensation for investment staff, cost of consultants, custodian, third party vendors utilized by the investment program, and investment staff travel.

Table 6 - Health Care Fees by Asset Class and Management Type

| Asset Class | Management | | | | | | | Average Weight | Fee Ratio - Management Fees | Fee Ratio - Incentive Fees | Fee Ratio - Operating Expenses | Fee Ratio - Mgmt and Incent Fees | Fee Ratio - Mgmt, Incent, and Op Exp | % of Total Plan Fee Ratio | Contribution to Total Plan Fee Ratio |
|---------------------|-------------------------|------------------------|----------------------------|----------------------------|----------------------------------|-------------------------|---------------|----------------|-----------------------------|----------------------------|--------------------------------|----------------------------------|--------------------------------------|---------------------------|--------------------------------------|
| | Management Fees (\$ mm) | Incentive Fees (\$ mm) | Operating Expenses (\$ mm) | and Incentive Fees (\$ mm) | Mgmt, Incent, and Op Exp (\$ mm) | Average Balance (\$ mm) | | | | | | | | | |
| Global Equity | 0.42 | - | 0.01 | 0.42 | 0.42 | 89 | 38.9% | 0.47% | 0.00% | 0.01% | 0.47% | 0.48% | 54.0% | 0.19% | |
| Passive | 0.03 | - | 0.01 | 0.03 | 0.03 | 51 | 22.5% | 0.05% | 0.00% | 0.01% | 0.05% | 0.06% | 4.1% | 0.01% | |
| Active | 0.39 | - | - | 0.39 | 0.39 | 37 | 16.5% | 1.04% | 0.00% | 0.00% | 1.04% | 1.04% | 49.9% | 0.17% | |
| Global Fixed Income | 0.02 | - | 0.00 | 0.02 | 0.02 | 62 | 27.3% | 0.03% | 0.00% | 0.01% | 0.03% | 0.04% | 3.0% | 0.01% | |
| Passive | 0.02 | - | 0.00 | 0.02 | 0.02 | 62 | 27.3% | 0.03% | 0.00% | 0.01% | 0.03% | 0.04% | 3.0% | 0.01% | |
| Real Assets | 0.24 | 0.02 | 0.04 | 0.26 | 0.29 | 43 | 18.9% | 0.56% | 0.04% | 0.09% | 0.60% | 0.69% | 37.8% | 0.13% | |
| Passive | 0.01 | - | - | 0.01 | 0.01 | 20 | 8.8% | 0.07% | 0.00% | 0.00% | 0.07% | 0.07% | 1.8% | 0.01% | |
| Active | 0.04 | - | 0.01 | 0.04 | 0.05 | 9 | 4.1% | 0.39% | 0.00% | 0.10% | 0.39% | 0.49% | 5.9% | 0.02% | |
| Hedged | 0.07 | 0.02 | 0.01 | 0.09 | 0.10 | 3 | 1.2% | 2.65% | 0.61% | 0.53% | 3.26% | 3.79% | 13.2% | 0.05% | |
| Private | 0.12 | - | 0.01 | 0.12 | 0.13 | 11 | 4.8% | 1.07% | 0.00% | 0.13% | 1.07% | 1.20% | 16.9% | 0.06% | |
| Cash | 0.04 | - | - | 0.04 | 0.04 | 34 | 14.9% | 0.12% | 0.00% | 0.00% | 0.12% | 0.12% | 5.2% | 0.02% | |
| Passive | 0.04 | - | - | 0.04 | 0.04 | 34 | 14.9% | 0.12% | 0.00% | 0.00% | 0.12% | 0.12% | 5.2% | 0.02% | |
| Total Plan | 0.72 | 0.02 | 0.05 | 0.73 | 0.78 | 228 | 100.0% | 0.31% | 0.01% | 0.02% | 0.32% | 0.34% | 100.0% | 0.34% | |

The table above illustrates that management, incentive, and operating expenses for the health care trust totaled \$0.8 million for 2017 which equated to a total plan fee ratio of 0.34%. The Global Equity asset class contributed the most to the total plan fee ratio at 0.19%. The Global Fixed Income asset class contributed the least to the total plan fee ratio at 0.01%.

Table 7 - Health Care Fees by Management Type

| Fund Type | Management | | | | | | | Average Weight | Fee Ratio - Management Fees | Fee Ratio - Incentive Fees | Fee Ratio - Operating Expenses | Fee Ratio - Mgmt and Incent Fees | Fee Ratio - Mgmt, Incent, and Op Exp | % of Total Plan Fee Ratio | Contribution to Total Plan Fee Ratio |
|-------------------|-------------------------|------------------------|----------------------------|----------------------------|----------------------------------|-------------------------|---------------|----------------|-----------------------------|----------------------------|--------------------------------|----------------------------------|--------------------------------------|---------------------------|--------------------------------------|
| | Management Fees (\$ mm) | Incentive Fees (\$ mm) | Operating Expenses (\$ mm) | and Incentive Fees (\$ mm) | Mgmt, Incent, and Op Exp (\$ mm) | Average Balance (\$ mm) | | | | | | | | | |
| Passive | 0.10 | - | 0.01 | 0.10 | 0.11 | 167 | 73.4% | 0.06% | 0.00% | 0.01% | 0.06% | 0.07% | 14.2% | 0.05% | |
| Active | 0.43 | - | 0.01 | 0.43 | 0.44 | 47 | 20.6% | 0.91% | 0.00% | 0.02% | 0.91% | 0.93% | 55.8% | 0.19% | |
| Hedged | 0.07 | 0.02 | 0.01 | 0.09 | 0.10 | 3 | 1.2% | 2.65% | 0.61% | 0.53% | 3.26% | 3.79% | 13.2% | 0.05% | |
| Private | 0.12 | - | 0.01 | 0.12 | 0.13 | 11 | 4.8% | 1.07% | 0.00% | 0.13% | 1.07% | 1.20% | 16.9% | 0.06% | |
| Total Plan | 0.72 | 0.02 | 0.05 | 0.73 | 0.78 | 228 | 100.0% | 0.31% | 0.01% | 0.02% | 0.32% | 0.34% | 100.0% | 0.34% | |

For the total health care trust, active management strategies accounted for 0.19% of the total plan fee ratio and represented 21% of average plan assets. Passive strategies accounted for 0.05% of the total plan fee ratio and represented 73% of plan assets.

Table 8 - Health Care Other Investment Costs

| Investment Staff Salary and Benefits (\$ mm) | Consultants (\$ mm) | Custodian (\$ mm) | Other Vendors and Travel (\$ mm) | Total Other Costs (\$ mm) | Other Costs Fee Ratio |
|---|--------------------------------|------------------------------|---|--|----------------------------------|
| 0.1 | 0.0 | 0.1 | 0.0 | 0.2 | 0.10% |

Other investment costs for the health care trust equated to a total fee ratio of 0.10%.

Table 9 - Pension Year-over-Year Comparison by Asset Class and Management Type

| Asset Class | Average Weight | | | Management Fees | | | Incentive Fees | | | Mgmt and Incent Fees | | | Fee Ratio (Mgmt and Incent) | | | Contrib to Total Plan Fee Ratio | | | YoY Attribution | | |
|---------------------|----------------|---------------|-------------|-----------------|-----------------|-------------------|-----------------|-----------------|-------------------|----------------------|-----------------|-------------------|-----------------------------|--------------|--------------|---------------------------------|--------------|--------------|------------------|-----------------------------|-------------------------------|
| | 2016 | 2017 | Change | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 | 2017 | Change | 2016 | 2017 | Change | Due to Weight | Due to Mgmt Fee Ratio | Due to Incent Fee Ratio |
| Global Equity | 30.3% | 29.7% | -0.6% | 4.3 | 4.1 | -0.2 | 0.2 | 2.3 | 2.1 | 4.5 | 6.4 | 1.9 | 0.74% | 1.03% | 0.28% | 0.23% | 0.30% | 0.08% | 0.00% | -0.02% | 0.10% |
| Passive | 12.9% | 10.5% | -2.4% | 0.3 | 0.1 | -0.1 | - | - | - | 0.3 | 0.1 | -0.1 | 0.10% | 0.05% | -0.05% | 0.01% | 0.01% | -0.01% | 0.02% | 0.00% | 0.00% |
| Active | 11.6% | 14.9% | 3.3% | 1.7 | 2.2 | 0.4 | - | - | - | 1.7 | 2.2 | 0.4 | 0.75% | 0.70% | -0.05% | 0.09% | 0.10% | 0.02% | -0.01% | -0.01% | 0.00% |
| Hedged | 5.8% | 4.4% | -1.4% | 2.3 | 1.8 | -0.5 | 0.2 | 2.3 | 2.1 | 2.5 | 4.1 | 1.6 | 2.15% | 4.46% | 2.31% | 0.13% | 0.20% | 0.07% | -0.02% | 0.00% | 0.10% |
| Private Equity | 3.6% | 2.8% | -0.8% | 1.4 | 1.6 | 0.2 | 0.5 | 1.1 | 0.6 | 1.9 | 2.7 | 0.8 | 2.60% | 4.56% | 1.96% | 0.09% | 0.13% | 0.03% | -0.01% | 0.02% | 0.03% |
| Private | 3.6% | 2.8% | -0.8% | 1.4 | 1.6 | 0.2 | 0.5 | 1.1 | 0.6 | 1.9 | 2.7 | 0.8 | 2.60% | 4.56% | 1.96% | 0.09% | 0.13% | 0.03% | -0.01% | 0.02% | 0.03% |
| Global Fixed Income | 18.4% | 20.1% | 1.8% | 1.3 | 1.3 | -0.1 | 0.6 | 0.6 | -0.0 | 1.9 | 1.9 | -0.1 | 0.53% | 0.44% | -0.09% | 0.10% | 0.09% | -0.01% | -0.01% | -0.01% | 0.00% |
| Passive | 10.7% | 12.5% | 1.8% | 0.2 | 0.1 | -0.0 | - | - | - | 0.2 | 0.1 | -0.0 | 0.07% | 0.05% | -0.03% | 0.01% | 0.01% | 0.00% | -0.02% | 0.00% | 0.00% |
| Active | 5.4% | 5.6% | 0.3% | 0.5 | 0.6 | 0.1 | - | - | - | 0.5 | 0.6 | 0.1 | 0.50% | 0.49% | -0.01% | 0.03% | 0.03% | 0.00% | 0.00% | 0.00% | 0.00% |
| Hedged | 2.3% | 2.0% | -0.3% | 0.7 | 0.6 | -0.1 | 0.6 | 0.6 | -0.0 | 1.3 | 1.2 | -0.1 | 2.81% | 2.84% | 0.03% | 0.06% | 0.06% | -0.01% | -0.01% | 0.00% | 0.00% |
| Private Debt | 4.9% | 3.8% | -1.1% | 1.2 | 1.0 | -0.2 | -0.2 | -0.8 | -0.6 | 1.1 | 0.2 | -0.9 | 1.12% | 0.28% | -0.84% | 0.05% | 0.01% | -0.04% | 0.00% | 0.00% | -0.03% |
| Private | 4.9% | 3.8% | -1.1% | 1.2 | 1.0 | -0.2 | -0.2 | -0.8 | -0.6 | 1.1 | 0.2 | -0.9 | 1.12% | 0.28% | -0.84% | 0.05% | 0.01% | -0.04% | 0.00% | 0.00% | -0.03% |
| Real Assets | 23.3% | 22.4% | -1.0% | 3.6 | 3.7 | 0.1 | 1.7 | 1.0 | -0.7 | 5.3 | 4.7 | -0.6 | 1.14% | 0.99% | -0.15% | 0.27% | 0.22% | -0.04% | 0.00% | 0.00% | -0.04% |
| Passive | 11.1% | 10.3% | -0.8% | 0.2 | 0.2 | -0.0 | - | - | - | 0.2 | 0.2 | -0.0 | 0.08% | 0.07% | -0.01% | 0.01% | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| Active | 4.0% | 4.5% | 0.5% | 0.3 | 0.4 | 0.1 | - | - | - | 0.3 | 0.4 | 0.1 | 0.39% | 0.39% | 0.00% | 0.02% | 0.02% | 0.00% | 0.00% | 0.00% | 0.00% |
| Hedged | 2.0% | 1.7% | -0.2% | 1.0 | 1.0 | -0.1 | 0.6 | 0.2 | -0.4 | 1.6 | 1.2 | -0.5 | 4.18% | 3.26% | -0.92% | 0.08% | 0.06% | -0.03% | -0.01% | 0.00% | -0.02% |
| Private | 6.3% | 5.8% | -0.5% | 2.0 | 2.2 | 0.2 | 1.1 | 0.8 | -0.4 | 3.2 | 3.0 | -0.2 | 2.55% | 2.43% | -0.12% | 0.16% | 0.14% | -0.02% | -0.01% | 0.01% | -0.02% |
| Absolute Return | 12.6% | 13.0% | 0.4% | 4.3 | 4.3 | -0.0 | 2.1 | 3.9 | 1.8 | 6.4 | 8.2 | 1.7 | 2.56% | 2.98% | 0.42% | 0.32% | 0.39% | 0.06% | 0.01% | -0.02% | 0.08% |
| Hedged | 12.6% | 13.0% | 0.4% | 4.3 | 4.3 | -0.0 | 2.1 | 3.9 | 1.8 | 6.4 | 8.2 | 1.7 | 2.56% | 2.98% | 0.42% | 0.32% | 0.39% | 0.06% | 0.01% | -0.02% | 0.08% |
| Cash | 6.8% | 8.1% | 1.3% | 0.1 | 0.2 | 0.0 | - | - | - | 0.1 | 0.2 | 0.0 | 0.11% | 0.12% | 0.01% | 0.01% | 0.01% | 0.00% | -0.01% | 0.00% | 0.00% |
| Passive | 6.8% | 8.1% | 1.3% | 0.1 | 0.2 | 0.0 | - | - | - | 0.1 | 0.2 | 0.0 | 0.11% | 0.12% | 0.01% | 0.01% | 0.01% | 0.00% | -0.01% | 0.00% | 0.00% |
| Total Plan | 100.0% | 100.0% | 0.0% | 16.3 | 16.2 | -0.1 | 4.9 | 8.0 | 3.1 | 21.2 | 24.2 | 3.0 | 1.07% | 1.15% | 0.08% | 1.07% | 1.15% | 0.08% | -0.03% | -0.02% | 0.14% |

Table 10 - Pension Year-over-Year Comparison by Management Type

| Type | Average Weight | | | Management Fees | | | Incentive Fees | | | Mgmt and Incent Fees | | | Fee Ratio (Mgmt and Incent) | | | Contrib to Total Plan Fee Ratio | | | YoY Attribution | | |
|-------------------|----------------|---------------|-------------|-----------------|-----------------|-------------------|-----------------|-----------------|-------------------|----------------------|-----------------|-------------------|-----------------------------|--------------|--------------|---------------------------------|--------------|--------------|------------------|-----------------------------|-------------------------------|
| | 2016 | 2017 | Change | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 | 2017 | Change | 2016 | 2017 | Change | Due to Weight | Due to Mgmt Fee Ratio | Due to Incent Fee Ratio |
| Passive | 41.6% | 41.4% | -0.1% | 0.7 | 0.6 | -0.1 | - | - | - | 0.7 | 0.6 | -0.1 | 0.09% | 0.07% | -0.02% | 0.04% | 0.03% | -0.01% | 0.00% | -0.01% | 0.00% |
| Active | 20.9% | 25.0% | 4.1% | 2.6 | 3.1 | 0.6 | - | - | - | 2.6 | 3.1 | 0.6 | 0.62% | 0.59% | -0.02% | 0.13% | 0.15% | 0.02% | -0.02% | -0.01% | 0.00% |
| Hedged | 22.7% | 21.1% | -1.6% | 8.3 | 7.6 | -0.7 | 3.5 | 7.0 | 3.5 | 11.8 | 14.6 | 2.8 | 2.62% | 3.30% | 0.68% | 0.59% | 0.70% | 0.10% | -0.02% | -0.03% | 0.17% |
| Private | 14.8% | 12.5% | -2.3% | 4.7 | 4.9 | 0.2 | 1.4 | 1.0 | -0.4 | 6.1 | 5.9 | -0.2 | 2.09% | 2.25% | 0.16% | 0.31% | 0.28% | -0.03% | -0.02% | 0.03% | -0.01% |
| Total Plan | 100.0% | 100.0% | 0.0% | 16.3 | 16.2 | -0.1 | 4.9 | 8.0 | 3.1 | 21.2 | 24.2 | 3.0 | 1.07% | 1.15% | 0.08% | 1.07% | 1.15% | 0.08% | -0.07% | -0.01% | 0.16% |

Table 11 - Pension Year-over-Year Comparison of Other Costs

| | Inv Staff Salary and Benefits (\$ mm) | Consultants (\$ mm) | Custodian (\$ mm) | Other Vendors and Travel (\$ mm) | Total Other Costs (\$ mm) | Other Costs Fee Ratio |
|--------|--|------------------------|----------------------|---|---------------------------------|--------------------------|
| 2016 | 0.60 | 0.43 | 0.36 | 0.17 | 1.57 | 0.08% |
| 2017 | 0.49 | 0.64 | 0.29 | 0.44 | 1.86 | 0.09% |
| Change | -0.11 | 0.21 | -0.07 | 0.26 | 0.29 | 0.01% |

Table 12 - Health Care Year-over-Year Comparison by Asset Class and Management Type

| Asset Class | Average Weight | | | Management Fees | | | Incentive Fees | | | Mgmt and Incent Fees | | | Fee Ratio (Mgmt and Incent) | | | Contrib to Total Plan Fee Ratio | | | YoY Attribution | | |
|---------------------|----------------|--------|--------|-----------------|--------------|----------------|----------------|--------------|----------------|----------------------|--------------|----------------|-----------------------------|-------|--------|---------------------------------|-------|--------|-----------------|-----------------------|-------------------------|
| | 2016 | 2017 | Change | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 | 2017 | Change | 2016 | 2017 | Change | Due to Weight | Due to Mgmt Fee Ratio | Due to Incent Fee Ratio |
| Global Equity | 40.5% | 38.9% | -1.6% | 0.31 | 0.42 | 0.11 | - | - | - | 0.31 | 0.42 | 0.11 | 0.45% | 0.47% | 0.01% | 0.18% | 0.18% | 0.00% | 0.00% | 0.01% | 0.00% |
| Passive | 24.5% | 22.5% | -2.1% | 0.02 | 0.03 | 0.00 | - | - | - | 0.02 | 0.03 | 0.00 | 0.05% | 0.05% | 0.00% | 0.01% | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| Active | 16.0% | 16.5% | 0.5% | 0.29 | 0.39 | 0.10 | - | - | - | 0.29 | 0.39 | 0.10 | 1.07% | 1.04% | -0.03% | 0.17% | 0.17% | 0.00% | 0.00% | -0.01% | 0.00% |
| Global Fixed Income | 28.2% | 27.3% | -0.9% | 0.02 | 0.02 | 0.00 | - | - | - | 0.02 | 0.02 | 0.00 | 0.04% | 0.03% | -0.01% | 0.01% | 0.01% | 0.00% | 0.00% | 0.00% | 0.00% |
| Passive | 28.2% | 27.3% | -0.9% | 0.02 | 0.02 | 0.00 | - | - | - | 0.02 | 0.02 | 0.00 | 0.04% | 0.03% | -0.01% | 0.01% | 0.01% | 0.00% | 0.00% | 0.00% | 0.00% |
| Real Assets | 20.1% | 18.9% | -1.2% | 0.21 | 0.24 | 0.03 | 0.04 | 0.02 | -0.03 | 0.25 | 0.26 | 0.01 | 0.74% | 0.60% | -0.15% | 0.15% | 0.11% | -0.04% | 0.00% | -0.01% | -0.02% |
| Passive | 9.0% | 8.8% | -0.3% | 0.01 | 0.01 | 0.00 | - | - | - | 0.01 | 0.01 | 0.00 | 0.08% | 0.07% | 0.00% | 0.01% | 0.01% | 0.00% | 0.00% | 0.00% | 0.00% |
| Active | 4.3% | 4.1% | -0.2% | 0.03 | 0.04 | 0.01 | - | - | - | 0.03 | 0.04 | 0.01 | 0.40% | 0.39% | -0.01% | 0.02% | 0.02% | 0.00% | 0.00% | 0.00% | 0.00% |
| Hedged | 1.7% | 1.2% | -0.5% | 0.08 | 0.07 | -0.01 | 0.04 | 0.02 | -0.03 | 0.12 | 0.09 | -0.03 | 4.14% | 3.26% | -0.88% | 0.07% | 0.04% | -0.03% | -0.02% | 0.00% | -0.01% |
| Private | 5.1% | 4.8% | -0.3% | 0.09 | 0.12 | 0.03 | 0.00 | - | -0.00 | 0.09 | 0.12 | 0.03 | 1.05% | 1.07% | 0.02% | 0.05% | 0.05% | 0.00% | 0.00% | 0.00% | 0.00% |
| Cash | 11.1% | 14.9% | 3.7% | 0.02 | 0.04 | 0.02 | - | - | - | 0.02 | 0.04 | 0.02 | 0.11% | 0.12% | 0.01% | 0.01% | 0.02% | 0.01% | -0.01% | 0.00% | 0.00% |
| Passive | 11.1% | 14.9% | 3.7% | 0.02 | 0.04 | 0.02 | - | - | - | 0.02 | 0.04 | 0.02 | 0.11% | 0.12% | 0.01% | 0.01% | 0.02% | 0.01% | -0.01% | 0.00% | 0.00% |
| Total Plan | 100.0% | 100.0% | 0.0% | 0.55 | 0.72 | 0.16 | 0.04 | 0.02 | -0.03 | 0.60 | 0.73 | 0.13 | 0.36% | 0.32% | -0.03% | 0.36% | 0.32% | -0.03% | -0.01% | 0.00% | -0.02% |

Table 13 - Health Care Year-over-Year Comparison by Management Type

| Type | Average Weight | | | Management Fees | | | Incentive Fees | | | Mgmt and Incent Fees | | | Fee Ratio | | | Contrib to Total Plan Fee Ratio | | | YoY Attribution | | |
|------------|----------------|--------|--------|-----------------|--------------|----------------|----------------|--------------|----------------|----------------------|--------------|----------------|-----------|-------|--------|---------------------------------|-------|--------|-----------------|-----------------------|-------------------------|
| | 2016 | 2017 | Change | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 (\$ mm) | 2017 (\$ mm) | Change (\$ mm) | 2016 | 2017 | Change | 2016 | 2017 | Change | Due to Weight | Due to Mgmt Fee Ratio | Due to Incent Fee Ratio |
| Passive | 72.9% | 73.4% | 0.5% | 0.07 | 0.10 | 0.03 | - | - | - | 0.07 | 0.10 | 0.03 | 0.06% | 0.06% | 0.00% | 0.04% | 0.04% | 0.00% | 0.00% | 0.00% | 0.00% |
| Active | 20.3% | 20.6% | 0.3% | 0.32 | 0.43 | 0.11 | - | - | - | 0.32 | 0.43 | 0.11 | 0.93% | 0.91% | -0.02% | 0.19% | 0.19% | 0.00% | 0.00% | 0.00% | 0.00% |
| Hedged | 1.7% | 1.2% | -0.5% | 0.08 | 0.07 | -0.01 | 0.04 | 0.02 | -0.03 | 0.12 | 0.09 | -0.03 | 4.14% | 3.26% | -0.88% | 0.07% | 0.04% | -0.03% | -0.02% | 0.00% | -0.01% |
| Private | 5.1% | 4.8% | -0.3% | 0.09 | 0.12 | 0.03 | 0.00 | - | -0.00 | 0.09 | 0.12 | 0.03 | 1.05% | 1.07% | 0.02% | 0.05% | 0.05% | 0.00% | 0.00% | 0.00% | 0.00% |
| Total Plan | 100.0% | 100.0% | 0.0% | 0.55 | 0.72 | 0.16 | 0.04 | 0.02 | -0.03 | 0.60 | 0.73 | 0.13 | 0.36% | 0.32% | -0.03% | 0.36% | 0.32% | -0.03% | -0.02% | 0.00% | -0.01% |

Table 14 - Health Care Year-over-Year Comparison of Other Costs

| | Inv Staff | Other | | | | |
|--------|-----------------------------|---------------------|-------------------|--------------------|---------------------------|-----------------------|
| | Salary and Benefits (\$ mm) | Consultants (\$ mm) | Custodian (\$ mm) | and Travel (\$ mm) | Total Other Costs (\$ mm) | Other Costs Fee Ratio |
| 2016 | 0.05 | 0.03 | 0.12 | 0.01 | 0.21 | 0.12% |
| 2017 | 0.05 | 0.04 | 0.10 | 0.03 | 0.23 | 0.10% |
| Change | 0.00 | 0.02 | -0.01 | 0.02 | 0.02 | -0.02% |

Analysis of Pension Year-over-Year Changes by Asset Class

As presented in Table 9, the pension total plan fee ratio (management and incentive fees only) increased by +8 bps from 1.07% in 2016 to 1.15% in 2017. Operating expenses are excluded from this analysis since 2017 is the first year this expense category has been reported.

The largest drivers of the increase from an asset class perspective were Global Equity (+8 bps contribution), Absolute Return (+6 bps contribution), and Private Equity (+3 bps), partially offset by a decrease in Private Debt (-4 bps) and Real Assets (-4 bps).

Asset class weight changes contributed -3 bps to the year-over-year change in total plan fee ratio. Private Equity, Global Fixed Income, and Cash each contributed -1 bp.

Changes in management fee ratios contributed -2 bps to the year-over-year change in total plan fee ratio. The largest reductions were in Global Equity (-2 bps) and Absolute Return (-2 bps) which were partially offset by an increase in Private Equity (+2 bps).

Changes in incentive fee ratios contributed +14 bps to the year-over-year change in total plan fee ratio. Global Equity (+10 bps), Absolute Return (+8 bps), and Private Equity (+3 bps) were the largest contributors, partially offset by a decrease in Real Assets (-4 bps) and Private Debt (-3 bps).

A summary of the key drivers in year-over-year changes to pension fee ratios from 2016 to 2017 for each asset class is below along with comparisons of performance net of fees. The pension plan return increased from 6.3% in calendar year 2016 to 10.6% in 2017.

The **Global Equity** fee ratio increased from 0.74% in 2016 to 1.03% in 2017 due to higher incentive fees to hedged long/short equity managers. The Marketable Alternative Equity composite return increased from 0.7% in 2016 to 12.0% in 2017 leading to higher incentive fees and bringing the fee ratio for hedged Global Equity managers up from 2.15% in 2016 to 4.46% in 2017. Global Equity asset class performance improved from 6.1% in 2016 to 21.7% in 2017.

Private Equity saw an increase from 2.60% in 2016 to 4.56% in 2017 from higher incentive fees and management fees. The performance of Private Equity improved on a time-weighted return basis from 5.3% in 2016 to 15.3% in 2017.

Global Fixed Income decreased from 0.53% in 2016 to 0.44% in 2017. The performance of Global Fixed Income increased from 2.8% in 2016 to 5.1% in 2017.

Private Debt decreased from 1.12% in 2016 to 0.28% in 2017 due to a reduction in incentive fees. The performance of Private Debt on a time-weighted basis declined from 1.4% in 2016 to -6.2% in 2017.

Real Assets was decreased from 1.14% in 2016 to 0.99% in 2017. Incentive fees declined for both hedged and private funds. The performance of Real Assets on a time-weighted basis declined from 13.9% in 2016 to 12.2% in 2017.

Absolute Return increased from 2.56% in 2016 to 2.98% in 2017 due to higher incentive fees. The performance of Absolute Return increased from 1.5% in 2016 to 2.8% in 2017.

Cash was nearly unchanged year over year.

Analysis of Pension Year-over-Year Changes by Management Type and Other Costs

As shown in the Table 10 contribution to total plan fee ratio change column, the largest driver of the +8 bps total plan fee ratio increase was hedge funds (+10 bps change in contribution). The hedge fund increase can be attributed to higher incentive fee ratios (+17 bps) which were partially offset by lower management fee ratios (-3 bps) and a lower weight (-2 bps).

As displayed in Table 11, **Other Costs** increased slightly from 0.08% in 2016 to 0.09% in 2017.

Analysis of Health Care Year-over-Year Changes by Asset Class, Management Type and Other Costs

As seen in Tables 12 and 13, the Health Care total plan fee ratio declined from 0.36% in 2016 to 0.32% in 2017 due to a reduction in weighting toward hedge funds (-2 bps) and reduction in incentive fee ratios for hedge funds (-1 bp).

As displayed in Table 14, **Other Costs** decreased from 0.12% to 0.10% in 2017.

Table 15 – California Government Code §7514.7 Disclosure, Private Equity

| Fund Name | Address | Vintage Year | Commitment Amount (\$) | Contributions Since Inception (\$) | Remaining Value (\$) | Distributions for Calendar year 2017 (\$) | 2017 Distributions + Remaining Value of Partnership (\$) | Cash Profit Distributed for Calendar Year 2017 (\$) | Net IRR Since Incept (%) | Investment Multiple Since Incept | Fees and expenses paid directly to GP and related parties 2017 (\$) | Fees and expenses paid from the Fund to GP and related parties 2017 (\$) | | | | | Fees and expenses paid by all portfolio companies 2017 (\$) | Carried Interest Paid 2017 (\$) |
|--|---|--------------|------------------------|------------------------------------|----------------------|---|--|---|--------------------------|----------------------------------|---|--|----------------------|---------|----------------|---------------------------------------|---|---------------------------------|
| | | | | | | | | | | | | Management Fees | Partnership Expenses | Offsets | Other Expenses | Incentive/Carried Interest Allocation | | |
| Pathway Private Equity Fund VIII | 2211 Michelson Drive, Ninth Floor Irvine, CA 92612 | 2004 | 40,000,000 | 39,713,457 | 5,051,203 | 3,831,575 | 8,882,778 | 2,240,018 | 6.90% | 1.48 | - | 130,384 | 97,499 | - | - | 305,282 | - | 488,266 |
| Pantheon Global Secondary Fund III B | 600 Montgomery Street, 23rd Floor San Francisco, CA 94111 | 2006 | 40,000,000 | 37,840,000 | 5,540,830 | 3,680,000 | 9,220,830 | - | 1.89% | 1.11 | - | 259,744 | 15,374 | - | - | - | - | - |
| Pantheon USA Fund VII | 600 Montgomery Street, 23rd Floor San Francisco, CA 94111 | 2006 | 40,000,000 | 36,960,000 | 23,780,070 | 7,480,002 | 31,260,072 | 3,996,413 | 10.18% | 1.71 | - | 270,000 | 10,527 | - | - | 40,051 | - | - |
| Great Hill Equity Partners IV | One Liberty Square Boston, Massachusetts 02109 | 2008 | 5,000,000 | 4,966,250 | 3,640,060 | 1,293,682 | 4,933,742 | 715,207 | 21.57% | 2.01 | - | 64,637 | 34,799 | - | - | 473,786 | - | 568,701 |
| Partners Group Secondary 2008 | 1660 17th Street, Suite 201 Denver, CO 80202 | 2008 | 10,443,016 | 9,200,259 | 1,764,255 | 1,293,581 | 3,057,836 | 113,500 | 9.59% | 1.52 | - | 77,573 | 415 | - | - | 27,647 | - | - |
| Partners Group Secondary 2011, L.P. | 1660 17th Street, Suite 201 Denver, CO 80202 | 2011 | 20,000,000 | 12,680,419 | 11,664,941 | 2,745,624 | 14,410,565 | 680,586 | 20.36% | 1.72 | - | 250,000 | 5,917 | - | - | 230,874 | - | - |
| SJFED Private Equity Strategic Partnership, L.P. | 325 N. Saint Paul St., Ste. 4900 Dallas, TX 75201 | 2017 | 225,305,373 | 11,392,873 | 11,458,986 | - | 11,458,986 | - | 2.70% | 1.00 | - | 590,715 | 121,766 | - | 186,293 | - | - | - |

Source: Fund managers, Meketa Investment Group

Table 16 – California Government Code §7514.7 Disclosure, Private Debt

| Fund Name | Address | Vintage Year | Commitment Amount (\$) | Contributions Since Inception (\$) | Remaining Value (\$) | Distributions for Calendar year 2017 (\$) | 2017 Distributions + Remaining Value of Partnership (\$) | Cash Profit Distributed for Calendar Year 2017 (\$) | Net IRR Since Incept (%) | Investment Multiple Since Incept | Fees and expenses paid directly to GP and related parties 2017 (\$) | Fees and expenses paid from the Fund to GP and related parties 2017 (\$) | | | | | Fees and expenses paid by all portfolio companies 2017 (\$) | Carried Interest Paid 2017 (\$) |
|-----------------------------------|---|--------------|------------------------|------------------------------------|----------------------|---|--|---|--------------------------|----------------------------------|---|--|----------------------|-----------|----------------|---------------------------------------|---|---------------------------------|
| | | | | | | | | | | | | Management Fees | Partnership Expenses | Offsets | Other Expenses | Incentive/Carried Interest Allocation | | |
| GSO SJ Partners | 345 Park Avenue New York, NY 10154 | 2010 | 50,000,000 | 42,508,660 | 11,814,303 | 295,026 | 12,109,329 | 264,194 | 7.43% | 1.23 | - | 186,690 | 59,079 | - | - | (894,687) | - | - |
| Medley Opportunity Fund II, L.P. | 280 Park Avenue, 6th Floor East New York, NY 10017 | 2010 | 50,000,000 | 51,718,681 | 33,430,285 | 6,454,138 | 39,884,423 | 3,872,483 | 6.23% | 1.30 | - | 482,136 | 153,120 | (160,799) | - | (1,585) | - | - |
| White Oak Direct Lending | 3 Embarcadero Center, 5th Floor San Francisco, CA 94111 | 2010 | 50,000,000 | 88,171,628 | 22,820,256 | 1,022,496 | 23,842,752 | - | 4.24% | 1.10 | 281,449 | - | 28,410 | - | - | - | - | - |
| Cross Ocean USD ESS Fund II, L.P. | 11 Charles II St. London, SW1Y4QU | 2016 | 15,000,000 | 9,007,402 | 9,874,875 | 285,851 | 10,160,726 | - | 16.65% | 1.13 | - | 61,475 | 56,593 | - | - | 104,272 | - | - |

Source: Fund managers, Meketa Investment Group

Table 17 – California Government Code §7514.7 Disclosure, Private Real Assets

| Fund Name | Address | Vintage Year | Commitment Amount (\$) | Contributions Since Inception (\$) | Remaining Value (\$) | Distributions for Calendar year 2017 (\$) | 2017 Distributions + Remaining Value of Partnership (\$) | Cash Profit Distributed for Calendar Year 2017 (\$) | Net IRR Since Incept (%) | Investment Multiple Since Incept | Fees and expenses paid directly to GP and related parties 2017 (\$) | Fees and expenses paid from the Fund to GP and related parties 2017 (\$) | | | | | Fees and expenses paid by all portfolio companies 2017 (\$) | Carried Interest Paid 2017 (\$) |
|---|---|--------------|------------------------|------------------------------------|----------------------|---|--|---|--------------------------|----------------------------------|---|--|----------------------|---------|----------------|---------------------------------------|---|---------------------------------|
| | | | | | | | | | | | | Management Fees | Partnership Expenses | Offsets | Other Expenses | Incentive/Carried Interest Allocation | | |
| DRA Growth and Income Fund V | 220 East 42nd Street, 27th Floor New York, NY 10017 | 2005 | 20,000,000 | 30,475,996 | 150,142 | 1,621,508 | 1,771,650 | 751,970 | 5.25% | 1.32 | - | - | 6,522 | - | - | - | - | - |
| DRA Growth and Income Fund VI | 220 East 42nd Street, 27th Floor New York, NY 10017 | 2007 | 9,709,422 | 10,556,217 | 1,587,324 | 1,446,446 | 3,033,770 | 1,215,992 | 10.88% | 1.67 | - | 37,333 | 3,039 | - | - | (1,106) | - | 234,934 |
| Fidelity Real Estate Growth Fund III, L.P. | One Federal Street, 26th Floor Boston, MA 02110 | 2007 | 17,850,728 | 17,850,728 | - | 1,438,421 | 1,438,421 | - | 7.34% | 1.33 | - | 10,864 | 2,535 | - | 459 | - | - | - |
| DRA Growth and Income Fund VII, LLC | 220 East 42nd Street, 27th Floor New York, NY 10017 | 2011 | 15,000,000 | 15,714,494 | 10,036,478 | 8,871,392 | 18,907,870 | 3,819,935 | 19.53% | 1.86 | - | 204,828 | 40,408 | - | - | 475,034 | - | - |
| DRA Growth and Income Fund VIII, LLC | 220 East 42nd Street, 27th Floor New York, NY 10017 | 2014 | 15,000,000 | 17,060,326 | 13,659,044 | 2,935,494 | 16,594,538 | 1,100,795 | 13.00% | 1.22 | - | 300,632 | 37,715 | - | - | 284,876 | - | - |
| European Property Investors Special Opportunities 4, L.P. | Berkeley Square House (8th Floor) Berkeley Square, London W1J6DB, UK | 2015 | 14,306,285 | 6,841,327 | 6,934,090 | 265,852 | 7,199,942 | - | 12.57% | 1.10 | - | 183,625 | 16,351 | - | - | - | - | - |
| DRA Growth and Income Fund IX, LLC | 220 East 42nd Street, 27th Floor New York, NY 10017 | 2016 | 20,000,000 | 7,195,348 | 7,079,966 | 852,277 | 7,932,243 | 389,446 | 20.43% | 1.10 | - | 128,342 | 21,488 | - | - | - | - | - |
| Global Infrastructure Partners III, L.P. | 1345 Avenue of the Americas, 30th Floor, New York, NY 10105 | 2016 | 25,000,000 | 7,314,270 | 5,622,992 | 358,587 | 5,981,579 | 316,767 | -14.27% | 0.88 | - | 436,007 | 31,873 | - | - | - | - | 11,992 |
| GEM Realty Fund VI, L.P. | 900 North Michigan Avenue #1450, Chicago, IL 60611 | 2017 | 10,000,000 | 500,000 | 289,617 | - | 289,617 | - | N/A | 0.58 | - | 112,875 | 19,238 | - | 21,631 | - | 7,093 | - |

Source: Fund managers, Meketa Investment Group

Table 18 – California Government Code §7514.7 Disclosure, Hedge Funds

| Fund Name | Address | Vintage Year | Commitment Amount (\$) | Contributions Since Inception (\$) | Remaining Value (\$) | Distributions for Calendar year 2017 (\$) | 2017 Distributions + Remaining Value of Partnership (\$) | Cash Profit Distributed for Calendar Year 2017 (\$) | Net IRR Since Incept (%) | Investment Multiple Since Incept | Fees and expenses paid directly to GP and related parties 2017 (\$) | Fees and expenses paid from the Fund to GP and related parties 2017 (\$) | | | | | Fees and expenses paid by all portfolio companies 2017 (\$) | Carried Interest Paid 2017 (\$) |
|--|--|--------------|------------------------|------------------------------------|----------------------|---|--|---|--------------------------|----------------------------------|---|--|----------------------|---------|----------------|---------------------------------------|---|---------------------------------|
| | | | | | | | | | | | | Management Fees | Partnership Expenses | Offsets | Other Expenses | Incentive/Carried Interest Allocation | | |
| Arrowgrass International Fund Ltd | 1330 Avenue of the Americas, 32nd Floor New York, NY 10019 | N/A | N/A | 30,000,000 | - | 19,311,405 | 19,311,405 | N/A | 5.86% | 1.24 | - | 111,767 | 7,295 | - | - | 92,779 | - | 92,779 |
| BlueTrend Fund Limited | 650 Fifth Ave New York, NY 10019 | N/A | N/A | 20,000,000 | - | 16,334,905 | 16,334,905 | N/A | -4.65% | 0.82 | - | 129,047 | 13,350 | - | - | - | - | - |
| Brevan Howard Fund Ltd | 590 Madison Ave., 9th Floor New York, NY 10022 | N/A | N/A | 31,121,198 | 5,534,963 | 20,054,269 | 25,589,232 | N/A | -1.20% | 0.82 | - | 265,180 | 87,057 | - | - | - | - | - |
| Claren Road Credit Master Fund Ltd | 51 Astor Place, 12th Floor New York, NY 10003 | N/A | N/A | 50,000,000 | 213,520 | 5,623,853 | 5,837,374 | N/A | -10.48% | 0.79 | - | - | 24,895 | - | - | - | - | - |
| Davidson Kempner Institutional Partners, L.P. | 520 Madison Avenue, 30th Floor New York, NY 10022 | N/A | N/A | 30,000,000 | 38,890,241 | - | 38,890,241 | N/A | 5.52% | 1.30 | - | 572,261 | 26,611 | - | - | 592,836 | - | 592,836 |
| DE Shaw Composite International Fund | 1166 Avenue of the Americas, 9th Floor New York, NY 10036 | N/A | N/A | 30,000,000 | 41,257,998 | 2,000,993 | 43,258,991 | N/A | 12.17% | 1.44 | - | 1,033,294 | 48,646 | - | - | 1,389,606 | - | 1,389,606 |
| Dymon Asia Macro | 1 Temasek Avenue #11-01 Millenia Tower, Singapore 039192 | N/A | N/A | 25,000,000 | 25,888,599 | - | 25,888,599 | N/A | 1.69% | 1.04 | - | 396,282 | 32,191 | - | - | - | - | - |
| Horizon Portfolio I Limited | 16 New Burlington Place, London, W1S 2HX, United Kingdom | N/A | N/A | 27,500,000 | 17,603,890 | 15,000,000 | 32,603,890 | N/A | 5.01% | 1.19 | - | 412,357 | 39,379 | - | - | 261,791 | - | 261,791 |
| Hudson Bay Cap Structure Arbitrage Enhanced Fund | 777 Third Ave. 30th Floor, New York, NY 10017 | N/A | N/A | 30,000,000 | 30,424,416 | - | 30,424,416 | N/A | 4.76% | 1.01 | - | 150,915 | 48,437 | - | - | 249,517 | - | 249,517 |
| Kepos Alpha Fund | 620 8th Ave., 4th Floor, New York, NY 10018 | N/A | N/A | 18,000,000 | 15,179,819 | - | 15,179,819 | N/A | -3.84% | 0.84 | - | 285,806 | 37,156 | - | - | - | - | - |
| Keynes Leveraged Quantitative Strategies Fund | 9th Floor Orion House, 5 Upper St Martin's Lane London WC2H 9EA | N/A | N/A | 20,000,000 | 19,793,600 | - | 19,793,600 | N/A | -0.54% | 0.99 | - | 141,129 | 49,809 | - | - | - | - | - |
| Man AHL Evolution Frontier | 100 St. Paul Street, Suite 800, Denver, CO 80206 | N/A | N/A | 13,000,000 | 15,303,172 | - | 15,303,172 | N/A | 13.31% | 1.18 | - | 278,688 | 31,045 | - | - | 524,547 | - | 524,547 |
| MKP Opportunity | 600 Lexington Avenue New York, NY 10022 | N/A | N/A | 10,000,000 | - | 9,951,702 | 9,951,702 | N/A | -0.27% | 1.00 | - | 62,531 | 4,961 | - | - | - | - | - |
| MW Eureka Fund Ltd | 350 Park Avenue, 18th Floor New York, NY 10022 | N/A | N/A | 25,000,000 | 21,662,441 | 10,000,000 | 31,662,441 | N/A | 8.78% | 1.27 | - | 371,567 | 12,260 | - | - | 502,032 | - | 455,560 |
| Pharo Macro Fund, Ltd | 1370 Avenue of the Americas, 26th Floor New York, NY 10019 | N/A | N/A | 30,000,000 | 31,231,571 | 4,388,017 | 35,619,588 | N/A | 12.75% | 1.19 | - | 693,264 | 28,734 | - | - | 1,294,157 | - | 1,294,157 |
| Pine River Fund Ltd | 580 California Street, San Francisco, CA 94104 | N/A | N/A | 30,000,000 | 6,540,230 | 17,375,009 | 23,915,239 | N/A | 2.79% | 1.13 | - | 230,591 | 223,069 | - | - | - | - | - |
| Pine River Volatility Arbitrage Fund | 580 California Street, San Francisco, CA 94104 | N/A | N/A | 25,000,000 | 24,646,000 | - | 24,646,000 | N/A | -2.11% | 0.99 | - | 102,228 | 112,221 | - | - | - | - | - |
| Pinnacle Natural Resources Fund (Federated Pension investment) | 712 Fifth Avenue, 29th Floor New York, NY 10019 | N/A | N/A | 40,000,000 | 36,495,040 | - | 36,495,040 | N/A | -4.67% | 0.91 | - | 959,896 | 191,979 | - | - | 220,957 | - | 220,957 |
| Pinnacle Natural Resources Fund (Federated Health Care investment) | 712 Fifth Avenue, 29th Floor New York, NY 10019 | N/A | N/A | 3,000,000 | 2,737,128 | - | 2,737,128 | N/A | -4.67% | 0.91 | - | 71,992 | 14,398 | - | - | 16,572 | - | 16,572 |
| Sandler Plus Fund | 711 5th Ave #15, New York, NY 10022 | N/A | N/A | 20,000,000 | 18,261,975 | 10,000,000 | 28,261,975 | N/A | 8.28% | 1.41 | - | 404,668 | 58,420 | - | - | 716,332 | - | 716,332 |
| Senator Global Opportunity Offshore Fund Ltd | 510 Madison Ave # 28, New York, NY 10022 | N/A | N/A | 31,200,000 | 25,767,983 | 15,000,000 | 40,767,983 | N/A | 7.61% | 1.31 | - | 644,718 | 36,105 | - | - | 806,901 | - | 488,979 |
| Systematica Alternative Markets Master Fund | 650 Fifth Ave New York, NY 10019 | N/A | N/A | 5,000,000 | 5,463,748 | - | 5,463,748 | N/A | 42.73% | 1.09 | - | 35,411 | 3,261 | - | - | 115,937 | - | 115,937 |
| Systematica Trend Following Fund | 650 Fifth Ave New York, NY 10019 | N/A | N/A | 20,000,000 | 20,910,515 | - | 20,910,515 | N/A | 11.21% | 1.05 | - | 48,988 | 94,846 | - | - | - | - | - |
| Tempo Volatility Fund | 1 Greenwich Plaza, Greenwich, CT 06830 | N/A | N/A | 20,000,000 | 21,123,071 | - | 21,123,071 | N/A | 4.98% | 1.06 | - | 308,250 | 113,654 | - | - | 210,609 | - | 210,609 |

Source: Fund managers, Albourne, State Street, ORS