



# HPOPS

FOR TODAY & TOMORROW

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Houston Police Officers' Pension System  
a Component Unit of the City of Houston, Texas  
Financial Statements  
Years Ended June 30, 2016 and 2015

**Houston Police Officers' Pension System**  
a Component Unit of the City of Houston, Texas

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**Financial Statements**  
Years Ended June 30, 2016 and 2015

# Houston Police Officers' Pension System

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## **Independent Auditor's Report**

The Board of Trustees  
Houston Police Officers' Pension System  
Houston, Texas

### ***Report on the Financial Statements***

We have audited the accompanying financial statements of Houston Police Officers' Pension System (the System), a component unit of the city of Houston, Texas, which comprise the statements of fiduciary net position as of June 30, 2016 and 2015, and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditor's Responsibility***

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### ***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the System as of June 30, 2016 and 2015, and the changes in its financial position for the years then ended, in accordance with accounting principles generally accepted in the United States of America.



### ***Emphasis of Matter***

The System has adopted the disclosure requirements of GASB 72, Fair Value Measurement & Application in 2016. The provisions of the additional disclosure requirements are discussed in Note 4 to the financial statements. Our opinion is not modified with respect to this matter.

### ***Other Matters***

#### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that “Management’s Discussion and Analysis” and the “Required Supplementary Information” listed on the Table of Contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to these required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management’s responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### ***Other Information***

Our audits were conducted for the purpose of forming an opinion on the basic financial statements as a whole. The accompanying supplemental schedules of “Investment, Professional and Administrative Expenses” and “Summary of Investments and Professional Services” are presented for the purpose of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of the System’s management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audits of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the basic financial statements as a whole.

Houston, Texas  
October 11, 2016

# Houston Police Officers' Pension System

## Management's Discussion and Analysis Fiscal Year Ended June 30, 2016

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The discussion and analysis of the financial performance of the Houston Police Officers' Pension System (the System), provides an overall review of the System's financial activities for the fiscal years ended June 30, 2016, 2015 and 2014. The intent of this discussion and analysis is to look at the System's financial performance as a whole; readers should review the financial statements, notes to the financial statements, required supplementary information and other schedules, in order to enhance their understanding of the System's financial performance.

### Financial Statements

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These financial statements consist of the Statements of Fiduciary Net Position, Statements of Changes in Fiduciary Net Position, Notes to Financial Statements, Schedules, and other unaudited required supplementary information. The System is a single employer contributory defined benefit pension plan. The System is a component unit of the City of Houston, Texas (the City) only to the extent the System receives contributions equal to a fixed amount or percentage of the pensionable pay of active members in accordance with Article 6243g-4, Vernon's Texas Civil Statutes (the Governing Statute), or contracts pursuant to Section 27 thereof, and as such, its reports are included in the Fiduciary Funds of the City as restricted assets.

### Financial Highlights

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The System presents its financial statements solely on the accounts of the System. The accrual basis of accounting is used by the System, whereby revenues are recognized when they are earned and collection is reasonably assured, and expenses are recognized when the liability has been incurred. Investments are reported at fair value.

A summary of the Statements of Fiduciary Net Position for the System is as follows (\$000's):

As of June 30:	2016	2015	2014
<b>Assets</b>			
Investments at fair value	\$ 4,040,927	\$ 4,277,765	\$ 4,302,873
Invested securities lending collateral	24,211	50,613	41,986
Receivables	41,949	31,264	90,422
Cash	304	352	701
<b>Total Assets</b>	<b>4,107,391</b>	<b>4,359,994</b>	<b>4,435,982</b>
<b>Liabilities</b>			
Due for purchase of investments	894	3,357	44,602
Securities lending collateral	24,211	50,613	41,986
Accrued investment and professional fees	1,172	878	931
Other liabilities	654	623	586
<b>Total Liabilities</b>	<b>26,931</b>	<b>55,471</b>	<b>88,105</b>
<b>Net position restricted for pensions</b>	<b>\$ 4,080,460</b>	<b>\$ 4,304,523</b>	<b>\$ 4,347,877</b>

*See accompanying independent auditor's report.*

# Houston Police Officers' Pension System

## Management's Discussion and Analysis Fiscal Year Ended June 30, 2016

The System's net position decreased by approximately \$(224,063) thousand in fiscal year 2016 over 2015 during a year of considerable uncertainty in the markets. The year started with diminishing concerns about the Greek crisis but increasing concerns about China, which was more than enough to overshadow reasonably strong fundamentals in the U.S. and improving fundamentals in Europe. This put a damper on world markets during the first half of the year, driving returns negative. This continued into the second half of the year as turbulence in China, interest rate increases, a substantial drop in oil and commodities prices, and politics rattled investors and continued a decrease in returns. Markets bounced back in March, as investor confidence returned amid lessening fears, a stronger dollar and strengthening fundamentals in the U.S. However, the year ended with more uncertainty with another economic slowdown in China and the "Brexit" referendum at the end of June, when Britain voted to leave the European Union. The result was unexpected, and markets at first declined sharply in response but recovered most of their losses as investors tried to determine what impact it may have going forward. The System's net position decreased by approximately \$(43,354) thousand in fiscal year 2015 over 2014 during a year marked by volatility. In the first half of the year, markets gained and lost the same ground month after month based on weak international performance that at times was offset by domestic growth only to see that domestic growth dissipate due to a sharp decline in oil prices, wobbly equity markets and intensifying deflationary pressures. This volatility continued during the second half of the year with markets concerned about China and the rising risks of a Greek exit from the Eurozone, causing stocks to drop and ending the year with a further decline in expected corporate earnings. The System experienced a negative investment return of (3.1)% in 2016 as opposed to a positive return of 0.8% in 2015 and a positive return of 17.4% in 2014. These rates of return calculations were prepared using a time-weighted rate of return in accordance with The CFA Institute's Global Investment Performance Standards and, as such, cannot be recalculated from the information provided herein. Changes in receivables are primarily a result of the timing of investment transactions and of the accrual of \$14,284 thousand for City contributions due to the Funded Ratio dropping below 80% (see Note 2 and Note 5).

A summary of the Statements of Changes in Fiduciary Net Position for the System is as follows (\$000's):

Years ended June 30:	2016	2015	2014
<b>Contributions:</b>			
City	\$ 137,392	\$ 113,665	\$ 103,372
Members	39,017	37,719	37,012
<b>Total contributions</b>	<b>176,409</b>	151,384	140,384
Net income (loss) from investing activities	(136,018)	35,249	649,022
Net income from securities lending activities	185	92	131
<b>Total additions</b>	<b>40,576</b>	186,725	789,537
<b>Deductions:</b>			
Benefits paid to members	259,076	225,656	211,690
Refunds to members	978	945	906
Professional and administrative expenses	4,585	3,478	3,439
<b>Total deductions</b>	<b>264,639</b>	230,079	216,035
Net increase/(decrease)	(224,063)	(43,354)	573,502
Net position restricted for pensions			
Beginning of period	4,304,523	4,347,877	3,774,375
End of period	\$ 4,080,460	\$ 4,304,523	\$ 4,347,877

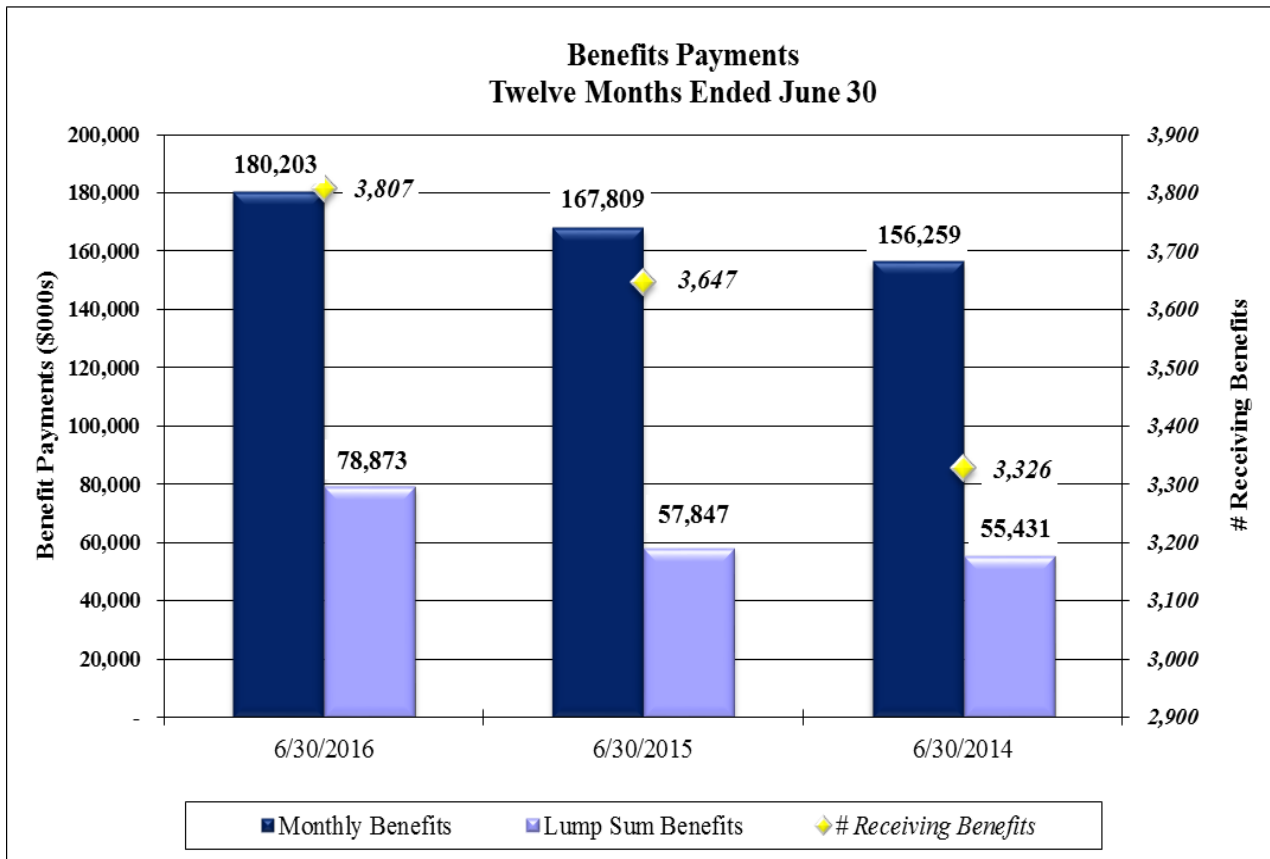
*See accompanying independent auditor's report.*

# Houston Police Officers' Pension System

## Management's Discussion and Analysis Fiscal Year Ended June 30, 2016

The June 30, 2011 Agreement with the City requires contribution payments for fiscal year 2016 equal to a \$123,000 thousand fixed payment. For fiscal year 2015, the City was contractually required to contribute a \$113,000 thousand fixed payment. For fiscal year 2014, the City was contractually required to contribute a \$103,000 thousand fixed payment. These contractual provisions account for the increase in City contributions for the years ended June 30, 2016; June 30, 2015; and June 30, 2014. As discussed in Note 2, the contributions were paid in their entirety from the City budget in 2016, 2015, and 2014.

“Benefits paid to members” consist of both lump sum payments and monthly payments of retirement, disability, and survivor benefits. The System’s benefit payment structure provides that members and survivors have the option to receive distributions from their lump sum accounts either on or after the date they begin receiving monthly benefit payments. Due to this ad hoc nature of lump sum distributions the summary results in the accompanying Statements of Changes in Fiduciary net position will not show any distinct trends in the “Benefits paid to members” category. The chart below compares the components of benefits paid to members for the years ended June 30, 2016, 2015, and 2014.



For each year, the annual cost of living adjustment (COLA) along with the increase in the number of benefit recipients accounts for the majority of the increase in benefit payments. Total benefits paid in 2016 increased from 2015 by approximately \$33,420 thousand or 14.8% compared to an increase of approximately \$13,966 thousand or 6.6% between 2014 and 2015. The increase in 2016 is due to a \$12,394 thousand increase in monthly benefits and a \$21,026 thousand increase in lump sum benefits compared to an \$11,550 thousand increase in monthly benefits and a \$2,416 thousand increase in lump sum benefits in 2015. Average monthly benefit payments were \$15,017



# Houston Police Officers' Pension System

## Management's Discussion and Analysis Fiscal Year Ended June 30, 2016

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thousand and \$13,984 thousand per month for 2016 and 2015 respectively. The increase of \$1,033 thousand or 7.4% in 2016 was greater than the increase of \$963 thousand or 7.4% in 2015 while the number of members and survivors who are receiving benefits increased by 160 in 2016 and 321 in 2015.

There was an increase of \$1,107 thousand in professional and administrative expenses during 2016 as compared to 2015. This increase is due mainly to an increase of \$679 thousand for improvements to the System's enterprise software system, the expenditure of \$195 thousand for actuarial services and an increase of \$43 thousand for legal services discussed further in Note 7. The upgrade project for the System's enterprise software system and website was completed by the end of the year, allowing members to conduct most pension business through a secure web portal and provide streamlined communication between members and System staff. The increase of \$39 thousand in professional and administrative expenses during 2015 as compared to 2014 was mainly due to an increase for the start-up of the software and website project and to replace old office equipment and a decrease for trustee election related expenses.

### **System Highlights**

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The System's funded ratio pursuant to its most recent actuarial valuation dated July 1, 2015 was 79.7% representing an unfunded actuarial accrued liability of \$1,155,510 thousand. The System's funded ratio as of July 1, 2014 was 81.0% representing an unfunded actuarial accrued liability of \$1,021,056 thousand. The System's Agreement with the City provides that once the Funded Ratio reaches 80%, this becomes the new floor and if it should ever decline below such 80% level, in the fiscal year next following such determination, the City shall pay such additional amounts to the System as shall be necessary to increase the Funded Ratio to 80%. Therefore, the City will be required in fiscal year 2017 to make such a payment as discussed in Note 2 and Note 5.

The System anticipates changes to the System's Governing Statute by the Texas Legislature in the upcoming 85th legislature regular session that may affect the benefit structure and contributions by the City and members.

### **Contacting the System's Management**

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This financial report is designed to provide members and other users with a general overview of the System's finances and to show the System's accountability for the funding it receives. If you have questions about this report, you may contact the System's Executive Director at 602 Sawyer, Suite 300, Houston, TX 77007 or by phone at 713-869-8734.

# Houston Police Officers' Pension System

## Statements of Fiduciary Net Position (\$000's)

<i>June 30,</i>	<b>2016</b>	<b>2015</b>
<b>Assets</b>		
<b>Investments, at fair value</b> (Note 3 and Note 4)		
Short term investments	\$ 650,902	\$ 915,270
Fixed income investments	166,655	225,728
Equity securities	1,303,740	817,127
Alternative investments	1,919,630	2,319,640
<b>Total Investments</b>	<b>4,040,927</b>	<b>4,277,765</b>
<b>Invested securities lending collateral</b> (Note 4)	<b>24,211</b>	<b>50,613</b>
<b>Receivables</b>		
City (Note 2 and Note 5)	14,284	25,500
Members	1,396	1,169
Investments	2,613	2,873
Due from sale of investments	23,643	1,713
Other receivables	13	9
<b>Total Receivables</b>	<b>41,949</b>	<b>31,264</b>
<b>Cash</b>	<b>304</b>	<b>352</b>
<b>Total Assets</b>	<b>\$ 4,107,391</b>	<b>\$ 4,359,994</b>
<b>Liabilities</b>		
<b>Payables</b>		
Due for purchase of investments	894	3,357
Securities lending collateral (Note 4)	24,211	50,613
Accrued investment and professional fees	1,172	878
Other liabilities	654	623
<b>Total Liabilities (Note 9)</b>	<b>26,931</b>	<b>55,471</b>
<b>Net position restricted for pensions</b>	<b>\$ 4,080,460</b>	<b>\$ 4,304,523</b>

*See accompanying independent auditor's report and notes to financial statements.*

# Houston Police Officers' Pension System

## Statements of Changes in Fiduciary Net Position (\$'000's)

Years ended June 30,	2016	2015
<b>Contributions</b> (Note 2 and Note 5)		
City	\$ 137,392	\$ 113,665
Members	39,017	37,719
<b>Total contributions</b>	<b>176,409</b>	<b>151,384</b>
<b>Investment income</b>		
Net appreciation (depreciation) in fair value of investments	(152,667)	21,504
Interest:		
Short-term investments	2,218	993
Fixed income investments	10,104	15,163
<b>Total interest income</b>	<b>12,322</b>	<b>16,156</b>
Dividends	18,714	20,714
<b>Total investment income (loss)</b>	<b>(121,631)</b>	<b>58,374</b>
Less: investment expense	(14,387)	(23,125)
<b>Net income (loss) from investing activities</b>	<b>(136,018)</b>	<b>35,249</b>
<b>Securities lending activities</b> (Note 4)		
Securities lending income	250	123
Securities lending expense	(65)	(31)
<b>Net income from securities lending activities</b>	<b>185</b>	<b>92</b>
<b>Total additions</b>	<b>40,576</b>	<b>186,725</b>
<b>Deductions</b>		
Benefits paid to members	259,076	225,656
Refunds to members (Note 1)	978	945
Professional and administrative expenses	4,585	3,478
<b>Total deductions</b>	<b>264,639</b>	<b>230,079</b>
Net decrease in net position	(224,063)	(43,354)
<b>Net position restricted for pensions</b>		
Beginning of period	4,304,523	4,347,877
End of period	\$ 4,080,460	\$ 4,304,523

*See accompanying independent auditor's report and notes to financial statements.*

# Houston Police Officers' Pension

## System Notes to Financial Statements

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### 1. Plan Description and Contribution Information

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*General* – The Houston Police Officers’ Pension System (the System) was created in 1947 by an act of the Fiftieth Legislature of the State of Texas, and is governed by Article 6243g-4, Vernon’s Texas Civil Statutes (the Governing Statute) and contracts pursuant to Section 27 thereof. The System is a single employer contributory defined benefit pension plan covering police officers employed full time by the City of Houston (the City) that provides for service, disability and death benefits for eligible members and their beneficiaries. The System is a local governmental plan and, therefore, is not subject to the Employee Retirement Income Security Act of 1974 (ERISA). The System is a component unit of the City only to the extent the System receives contributions equal to an amount or percentage of pay of active members in accordance with the Governing Statute.

The System’s Board of Trustees in accordance with the Governing Statute is responsible for the general administration, management, and operation of the pension system, including the direction of investment and oversight of the fund’s assets. The System’s Board of Trustees is composed of seven members as follows: (1) the administrative head of the City or the administrative head’s authorized representative; (2) three employees of the police department having membership in the pension system, elected by the active, inactive, and retired members of the pension system; (3) two retired members who are receiving pensions from the system and are not officers or employees of the City, elected by the active, inactive, and retired members of the pension system; and (4) the treasurer of the City or the person discharging the duties of the City treasurer.

At June 30, the System’s membership consisted of the following:

June 30,	2016	2015
<i>Retirees and beneficiaries:</i>		
Currently receiving benefits	3,807	3,647
Not yet receiving benefits	22	22
<i>Active members:</i>		
Fully vested	2,065	2,007
<i>Nonvested:</i>		
Hired or rehired before October 9, 2004	919	1,168
Hired or rehired after October 9, 2004	2,307	2,087
<b>Total members</b>	<b>9,120</b>	<b>8,931</b>

The following sections describe the benefit structure in effect at June 30, 2016 and 2015. On September 29, 2004, the System and the City entered into an agreement (the October 9, 2004 Agreement) that altered the benefit structure of the System. On June 30, 2011, the System and the City entered into an agreement (the June 30, 2011 Agreement) that altered the City payment schedule and extended the contract term which began on October 9, 2004, through June 30, 2023 and thereafter renews for one-year terms through June 30, 2040 unless either party terminates the agreement. The benefits described below include those for members hired or rehired on or before October 9, 2004 as well as benefits for members hired or rehired subsequent to October 9, 2004.

*Eligibility* – Members become eligible to receive a service pension upon retirement with 20 years of service. Members also have the option to select a Delayed Retirement, which allows for vesting after 10 years of service with a pension benefit payable at age 60. Members hired or rehired subsequent to October 9, 2004 are eligible to receive a service pension upon attaining age 55 and 10 years of service.

*Benefits* – Retirement benefits are equal to 2.75% of the member’s pensionable pay for each of the member’s first 20 years of service plus 2.00% of pensionable pay for each year in excess of 20 years with no maximum percentage. Members hired or rehired subsequent to October 9, 2004 accrue benefits equal to 2.25% of the member’s pensionable pay for each of the member’s first 20 years of service plus 2.00% of the member’s pensionable pay for each year in excess of 20 years subject to a maximum of 80%. Retired members and surviving spouses are entitled to receive an additional \$150 per month in order to defray group medical insurance costs.

*Pensionable Pay* - Eligible members of the System will have their retirement or DROP benefit (see below) calculated on pensionable pay, which is referred to as Final Average Pay, and is defined as the average of all pay types received by a member over the three years prior to retirement or entrance into DROP exclusive of all categories of overtime.

# Houston Police Officers' Pension

## System Notes to Financial Statements

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*Deferred Retirement Option Plan* – The Deferred Retirement Option Plan (DROP) provides for an optional method of accruing pension benefits. Generally, members with at least 20 years of service are eligible to participate in the DROP. Members hired or rehired subsequent to October 9, 2004 are not eligible to participate in DROP or Back-DROP. Upon termination of employment participating members receive their pension benefit in the form of an annuity and a lump sum benefit. The annuity is the member's pension benefit at the time of enrollment in the DROP plus any subsequent cost of living adjustments. The lump sum benefit is the accumulated balance in the member's notional DROP account which is equal to an amount calculated as if the member's annuity, employee contributions and an interest component had been deposited in a separate account in the member's name during the member's participation in DROP. Prior to October 9, 2004, 100% of a member's contributions were credited to his or her notional DROP account. Subsequent to that date, an eligible member contributes 9.00% of pensionable pay with 8.75% of pensionable pay credited to his or her notional DROP account and the additional 0.25% credited to the System's general fund.

A Back-DROP benefit is also available for all eligible participants. The Back-DROP option allows a DROP member to recalculate his or her DROP notional account by selecting a different entrance date than that originally selected by the member upon entrance into DROP. The Back-DROP entry date cannot be prior to the later of October 21, 1995 or the date the member attained 20 years of credited pension service.

*Cost of Living Adjustments* – Pension benefits and the monthly DROP benefits are adjusted each year equal to 80% of the increase in the Consumer Price Index for all Urban Consumers for the preceding year subject to minimum and maximum increases of 2.4 % and 8.0%, respectively.

*Disability Benefits* – Duty connected disability benefits are equal to the greater of 55% of pensionable pay or the accrued service pension. Disabled members who qualify for a Catastrophic Disability, as defined, receive a disability benefit equal to 100% of pensionable pay. Members hired or rehired subsequent to October 9, 2004 are eligible for a duty connected disability benefit equal to the greater of 45% of the member's pensionable pay or the accrued service pension.

Members determined to be eligible for a non duty-connected disability benefit are entitled to a benefit of either 27.5% of pensionable pay, if the member has 10 or fewer credited years of service, or 2.75% per year for credited service in excess of 10 years. Members hired or rehired subsequent to October 9, 2004 are eligible for a non-duty connected disability benefit equal to the greater of 22.5% of the member's pensionable pay or 2.25% per year for credited service equal to or in excess of 10 years up to 20 years and 2.00% per year for credited service equal to or in excess of 20 years.

*Death Benefits* – Death benefits are available to a surviving spouse, dependent children or a dependent parent in the event of the death of a member either after disability or service retirement, or prior to retirement.

*Refunds of Member Contributions* – A member with less than 20 years of credited pension service may elect to obtain a refund of member contributions upon termination of service with the Houston Police Department (HPD). This refund does not include interest. Members with at least 10 but less than 20 years of credited pension service, who terminate service with the HPD, have the option of a Delayed Retirement benefit. Members hired or rehired subsequent to October 9, 2004 are eligible for a refund of contributions until they attain age 55 and 10 years of service.

*Delayed Retirement* – A member with at least 10 but less than 20 years of credited pension service at termination of employment with the HPD has the option of either a refund of member contributions, without interest, or a Delayed Retirement benefit. The Delayed benefit is payable at age 60 and is calculated at 2.75% of pensionable pay for each year of credited pension service. Members hired or rehired subsequent to October 9, 2004 with more than 10 years of service are eligible for a Delayed Retirement payable at age 55 calculated at 2.25% of pensionable pay for each year of credited pension service.

*Supplemental Monthly Benefit* (13<sup>th</sup> check) – In years in which certain investment performance and actuarial funding requirements are met, the System issues a supplemental monthly benefit payment to retired members and a supplemental credit to DROP participants' accounts in an amount equal to their normal monthly benefit. This benefit is not available for any year in which the System's funded ratio is less than 120%. Members hired or rehired subsequent to October 9, 2004 are not eligible for this benefit.

# Houston Police Officers' Pension

## System Notes to Financial Statements

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*Lump Sum Benefit* – Members retiring with a service or disability benefit receive a one-time \$5,000 lump sum benefit. Members hired or rehired subsequent to October 9, 2004 are not eligible for this benefit.

*Reciprocal Retirement Program* – Members who have not attained the necessary years of service for retirement are eligible to participate in the System's Reciprocal Retirement Program if they also have pension service with other City departments. This program allows members with the necessary cumulative years of service to combine their service credit with other City retirement systems and receive a proportionate retirement benefit from the System.

*Post Retirement Option Plan* – The Post Retirement Option Plan (PROP) allows retired members to have all or a portion of their monthly retirement and DROP lump sum credited to a notional account maintained by the System which accumulates interest and can be disbursed to the member under certain options as designated by the System. Surviving spouses can transfer a DROP or PROP balance to a PROP account of their own but are not eligible to credit all or a portion of their survivor benefit to a PROP account. Members hired or rehired subsequent to October 9, 2004 are not eligible for this benefit.

*Partial Lump Sum Option Plan* – The Partial Lump Sum Option Plan (PLOP) provides for an optional lump sum payment of a portion of a member's retirement benefit. A lump sum payment of not more than 20% of the actuarial value of the member's accrued pension at retirement shall be made available to persons who become active members of the System subsequent to October 9, 2004. The benefit shall be actuarially neutral. Thus, the value of the pension the member receives shall be reduced actuarially to reflect the lump sum payment.

### **2. Contributions and Reserves**

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*Contributions* – Members hired prior to October 9, 2004 are required to contribute 9.00% of pay and members hired or rehired subsequent to October 9, 2004 contribute 10.25% of pay. Contributions are made on a pre-tax basis pursuant to Governing Statutes.

In the October 9, 2004 Agreement, it was agreed that in lieu of contributions to the System made pursuant to actuarial valuations, the City will make cash payments to the System in accordance with a payment schedule as provided for in such Agreement. In the June 30, 2011 Agreement, it was agreed that for fiscal year 2016 the amount to be contributed was a \$123,000 thousand fixed payment. For fiscal year 2015, the amount to be contributed was a \$113,000 thousand fixed payment, and for fiscal year 2014 the amount to be contributed was a \$103,000 thousand fixed payment. For fiscal year 2017, it requires a \$133,000 thousand fixed payment.

The June 30, 2011 Agreement with the City provided that for fiscal year 2014 the amount to be contributed would be a \$93,000 thousand fixed payment, with any shortfall in the fixed payment not to exceed \$8,500 thousand, and for fiscal year 2013, an \$83,000 thousand fixed payment, with any shortfall in the fixed payment not to exceed \$17,000 thousand. Therefore, the System showed a contribution receivable of \$25,500 thousand at the end of fiscal year 2015, which the City paid on July 1, 2016.

For all subsequent fiscal years, and until the funded ratio reaches 100%, City payments shall increase each fiscal year by \$10,000 thousand until said 100% funding is reached. Once the System reaches a 100% funded ratio, the City will pay the actuarially required rate, but not less than 16.00% of payroll. In addition, once the Funded Ratio reaches 80%, this becomes the new floor and if it should ever decline below such 80% level, in the fiscal year next following such determination, the City shall pay such additional amounts to the System as shall be necessary to increase the Funded Ratio to 80%. The Funded Ratio was determined to be 79.7% in the July 1, 2015 actuarial valuation. Therefore, the City is required to pay an additional amount of \$14,284 thousand in fiscal year 2017. At the System's current asset level, a 5% decline in the funded ratio below the floor would require the City to pay approximately \$285,307 thousand.

City contributions in the Statements of Changes in Fiduciary Net Position may be greater than the contractually agreed amounts, as members are allowed to contribute accumulated sick and vacation pay to the System upon retirement and such contributions are classified as City contributions.

Pursuant to the terms of the June 30, 2011 Agreement and based on the July 1, 2015 actuarial valuation, the City contribution rates and the Actuarial Determined Contributions (ADC) are as shown in the table on the following page for the current year and the ten years ending June 30, 2025.

# Houston Police Officers' Pension

## System Notes to Financial Statements

(\$000's)

Years Ended June 30,	Actuarial Determined Contribution (ADC)	Cash Payments Required by Agreements	Cash Payments as a Percentage of ADC	Actuarial Determined Contribution as a Percentage of Pay
2016	\$ 160,828	\$ 123,000	76.5	39.6
2017	162,715	147,284	90.5	39.7
2018	163,809	143,000	87.3	39.4
2019	165,208	153,000	92.6	39.0
2020	166,025	163,000	98.2	38.5
2021	166,176	173,000	104.1	37.8
2022	165,344	183,000	110.7	36.9
2023	163,649	193,000	117.9	35.8
2024	161,343	203,000	125.8	34.5
2025	158,296	213,000	134.6	33.2

The System anticipates changes to the System's Governing Statute by the Texas Legislature in the upcoming 85th legislature regular session that may affect the benefit structure and contributions by the City and members.

### 3. Summary of Significant Accounting Policies

*Basis of Presentation* – As defined by generally accepted accounting principles established by the Governmental Accounting Standards Board (GASB), the accompanying financial statements include solely the accounts of the System, which include all programs, activities and functions relating to the accumulation and investment of the assets and related income necessary to provide the service, disability and death benefits required under the terms of the Governing Statutes and amendments thereto.

*Basis of Accounting* - Basis of accounting is the method by which revenues and expenses are recognized in the accounts and are reported in the financial statements. The accrual basis of accounting is used for the System. Under the accrual basis of accounting, revenues are recognized when they are earned and collection is reasonably assured, and expenses are recognized when the liability is incurred. Member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due and the employer has made a legally required commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the Governing Statute. Dividend income is recorded on the ex-dividend date. Income from other investments is recorded when earned. Gains and losses on sales of securities are recognized on the trade date. The cost of investments sold is determined using the average cost method.

*Administrative Costs* – All administrative costs of the System are paid from the System's assets.

*Federal Income Tax* – A favorable determination that the System is qualified and exempt from Federal income taxes was received on September 24, 2014. The System's Board of Trustees believes that the System is designed and continues to operate in compliance with the applicable requirements of the Internal Revenue Code.

*Use of Estimates* – The preparation of the System's financial statements, in conformity with accounting principles generally accepted in the United States of America, requires management to make significant estimates and assumptions that affect the reported amounts and net plan assets at the date of the financial statements and the actuarial information included in the footnotes to the financial statements as of the benefit information date, the changes in the System's net position during the reporting period and, when applicable, disclosures of the contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

### 4. Investments

*Investment Policy* – The System's policy in regard to the allocation of invested assets is established and may be amended by the System's Board of Trustees by a majority vote of its members. It is the policy of the System's Board of Trustees to pursue an investment strategy with a view toward the long term that maximizes the return on the

# Houston Police Officers' Pension

## System Notes to Financial Statements

System's assets with acceptable target levels of leverage, loss of capital, and volatility risk through the prudent diversification of the portfolio across a broad selection of distinct asset classes. The System's investment policy discourages the use of cash equivalents, except for liquidity purposes. The following was the Board's adopted asset allocation policy as of June 30, 2016:

<u>Asset Class</u>	<u>Target Allocation</u>
Domestic equity	28.50 %
International equity	21.75
Fixed income	-
Credit	12.00
Alternative investments:	
Private equity	17.50
Real estate	10.00
Risk parity	4.50
Opportunistic	5.00
Hedge funds	10.75
Cash	(10.00)
<u>Total</u>	<u>100.00 %</u>

*Investment Valuation* - Statutes of the State of Texas authorize the System to invest surplus funds in a manner provided by the Government Code, Title 8, Subtitle A, Subchapter C. These statutes stipulate that the governing body of the System is responsible for the management and administration of the funds of the System and shall determine the procedure it finds most efficient and beneficial for the management of the reserve fund of the System. The governing body may directly manage the investments of the System or may choose and contract for professional investment management services. Investments are reported at fair value in accordance with GASB 72, Fair Value Measurement and Application, which defines fair value, establishes a framework for measuring fair value, and establishes disclosures about fair value measurements.

GASB 72 establishes a hierarchal disclosure framework which prioritizes and ranks the level of market price observability used in measuring investments at fair value. Market price observability is impacted by a number of factors, including the type of investment and the specific characteristics of the investment. Fair value represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Investments with readily available actively quoted prices or for which fair value can be measured from actively quoted prices generally will have a higher degree of market price observability and lesser degree of judgment used in measuring fair value.

Investments measured and reported at fair value are classified and disclosed in one of the following categories:

Level 1 – Investments traded in an active market with available quoted prices for identical assets as of the reporting date.

Level 2 – Investments not traded on an active market but for which observable market inputs are available for an asset, either directly or indirectly, as of the reporting date.

Level 3 – Investments not traded in an active market and for which no significant observable market inputs are available as of the reporting date.

The System has established a framework to consistently measure the fair value of the System's assets and liabilities in accordance with applicable accounting, legal, and regulatory guidance. This framework has been provided by establishing valuation policy and procedures that will provide reasonable assurance that assets and liabilities are carried at fair value. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, an investment's level within the fair value hierarchy is based on the lowest level of input that



# Houston Police Officers' Pension

## System Notes to Financial Statements

is significant to the fair value measurement. The System's assessment of the significance of a particular input to the fair value measurement requires judgment and considers factors specific to the investment.

The following table summarizes the valuation of the System's investments in accordance with the above mentioned fair value hierarchy levels as of June 30, 2016.

**Investments Measured at Fair Value**  
(\$000's)

	Fair Value Measurements Using			
	6/30/2016	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investments by fair value level</b>				
Short term investments				
US Treasury bills	\$ 63,217	\$ 63,217	\$ -	\$ -
Short term investment funds	587,685	-	587,685	-
Total short term investments	650,902	63,217	587,685	-
Fixed income				
Corporate bonds	113,471	-	113,471	-
High yield funds	53,184	-	53,184	-
Total fixed income	166,655	-	166,655	-
Equity securities				
Domestic equities	824,102	7,287	816,815	-
International equities	479,638	-	479,638	-
Total equity securities	1,303,740	7,287	1,296,453	-
Alternative investments				
Private equity				
Leveraged buyouts	229,708	-	-	229,708
Energy	90,906	-	-	90,906
Special situations	85,218	-	-	85,218
Private equity secondaries	45,099	-	-	45,099
Venture capital	36,157	-	-	36,157
Other alternatives				
Real estate	243,717	-	-	243,717
Credit	133,531	-	-	133,531
Hedge funds - long/short credit	19,491	-	19,491	-
Hedge funds - long/short Equity	18,197	-	18,197	-
Total alternative investments	902,024	-	37,688	864,336
Total investments by fair value level	3,023,321	\$ 70,504	\$ 2,088,481	\$ 864,336
<b>Investments measured at the net asset value (NAV)</b>				
Portable alpha hedge funds	448,393			
Global macro hedge funds	246,024			
Multi-strategy hedge funds	182,656			
Long/short equity hedge funds	55,395			
Long/short credit hedge funds	85,138			
Total investments measured at the NAV	1,017,606			
Total investments measured at fair value	\$ 4,040,927			

Short-term investments include funds held in short-term investment funds of the System's custodian and asset managers.

Fixed income investments include US corporate bonds, foreign securities such as dollar denominated and non-dollar denominated issues of private corporations, plus units of commingled fixed income funds of US government securities.

# Houston Police Officers' Pension

## System Notes to Financial Statements

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Equity securities consist of individual shares of equity securities plus units of commingled stock funds of both US and foreign entities.

Alternative investments consist of investments in hedge funds, real estate, and private equity. These investments are in various investment vehicles including limited partnerships and commingled funds.

The System's custodian bank provides security valuations for equity and fixed income securities utilizing vendor supplied pricing. Based upon the procedures described below, equity securities and short term investments that are valued based on quoted prices in active markets are generally classified as Level 1 while fixed income securities are generally considered to be Level 2 or Level 3 investments. Vendor supplied pricing data for equity securities is based upon the daily closing price from the primary exchange of each security while vendor supplied pricing data for fixed income securities is based upon a combination of market maker quotes, recent trade activity, and observed cash flows. To minimize the potential for inaccurate valuations, multiple price types are obtained from multiple providers and whenever possible prices are put through tolerance checks with exceptions researched and resolved on a same day basis as part of the pricing process. An integral part of the custodian's pricing process is to allow portfolio managers and interested third parties to challenge custodian provided prices which provides additional validation to the custodian's pricing. The evaluation process is handled by the custodian's internal pricing system, which automatically validates substantially all of the System's securities, leaving only exceptions and missing prices for human intervention. The rules this system applies are multi-dimensional and can be applied at a number of different levels, ranging from general to security specific in nature. Consistent with the System's valuation policy, the System's staff maintains and documents an understanding of the custodian's and underlying manager's valuation process and has implemented a program to review and evaluate the reconciliation process and the fair value estimates provided by the custodian and the investment manager.

The System's custodian values commingled funds at the net asset value provided by the commingled fund's custodian or administrator, as is applicable. Based upon the procedures described below, the unit value for these commingled funds is considered to be a Level 2 price unless such commingled fund is traded in an active market with available quoted prices, in which case it is considered to be a Level 1 price. The unit values of commingled funds are calculated by the custodian or administrator by dividing the commingled fund's net asset value on the calculation date by the number of units of the commingled fund that are outstanding on the calculation date. The commingled fund's net asset value is calculated by the commingled fund's custodian or administrator by using Level 1, Level 2 or Level 3 prices, as appropriate, to value each security and/or other asset held by the commingled fund on the calculation date, pursuant to the commingled fund's valuation policy. In short, the net asset value of the commingled fund is calculated based on a compilation of primarily observable market information. The number of units of a commingled fund that are outstanding on the calculation date is derived from observable purchase and redemption activity in the commingled fund. Consistent with the System's valuation policy, the System's staff maintains and documents an understanding of the underlying fund's valuation process and has implemented a program to review and evaluate the fair value estimates provided by the commingled fund.

The System's custodian values the System's investment in limited partnerships at the dollar value provided by the general partners. Based upon the procedures described below, these limited partnerships are generally considered to be Level 3 assets. The fair value of securities held by limited partnerships has been estimated by the general partners in the absence of readily ascertainable fair values. The general partners utilize valuation methods which rely on significant assumptions and inputs of the portfolio company's most recent financial information such as EBITDA and debt and the equity structure of the portfolio company. Valuations may be derived by reference to observable valuation measures for comparable companies and may be adjusted for differences between the investment and the referenced comparables. General partners also utilize relevant information such as discounted cash flow analysis, pending recent transactions and potential initial public offering values in the determination of fair value. Consistent with the System's valuation policy, the System's staff maintains and documents an understanding of the general partner's valuation process and has implemented a program to review and evaluate the fair value estimates provided by each partnership.

# Houston Police Officers' Pension

## System Notes to Financial Statements

The valuation method for investments measured at the net asset value (NAV) per share (or its equivalent) is presented on the following table.

### Investments Measured at the NAV (\$000's)

	<u>Fair Value</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency (If Currently Eligible)</u>	<u>Redemption Notice Period</u>
Portable alpha hedge funds <sup>(1)</sup>	\$ 448,393		Quarterly/Semi-Annually	60-90 days
Global macro hedge funds <sup>(2)</sup>	246,024		Monthly/Quarterly	60-90 days
Multi-strategy hedge funds <sup>(3)</sup>	182,656	\$ 11,029	Various up to two years	60-90 days
Long/short equity hedge funds <sup>(4)</sup>	55,395		Quarterly	60-90 days
Long/short credit hedge funds <sup>(5)</sup>	<u>85,138</u>		Quarterly/Annually	60-90 days
Total investments measured at the NAV	<u>\$ 1,017,606</u>			

1. *Portable Alpha Funds* - This type invests in three funds that are invested in both risk parity strategies and global macro hedge fund strategies. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the investments. These strategies generally have quarterly or semi-annual liquidity.
2. *Global Macro Hedge Funds* - This type invests in four hedge funds that take long and short positions in global equity, credit, interest rate, and currency markets. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the investments. Three of these funds have monthly liquidity and one fund has quarterly liquidity. The fund with quarterly liquidity is in the process of liquidation.
3. *Multi-Strategy Hedge Funds* - This type invests in ten hedge funds that pursue multiple strategies to diversify risks and reduce volatility. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the investments. Three of these funds have quarterly liquidity, one fund has semi-annual liquidity, one fund has annual liquidity, and one fund has liquidity every two years. All but one of these funds is in the process of liquidation.
4. *Long / Short Equity Hedge Funds* - This type includes investments in three hedge funds that invest both long and short primarily in U.S. common stocks. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the investments. These funds generally have quarterly liquidity. Three of these funds are in the process of liquidation.
5. *Long / Short Credit Hedge Funds* - This type includes investments in five hedge funds that invest both long and short primarily in U.S. credit instruments. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the investments. Two of these strategies have quarterly liquidity and two funds have annual liquidity. Two of these funds are in the process of liquidation.

# Houston Police Officers' Pension

## System Notes to Financial Statements

*Concentrations* –The table below summarizes as of June 30, 2016, the investments the System had in any one organization which represented greater than 5% of plan net assets.

**Investments Greater Than 5% of Plan Net Assets**  
(\$000's)

<u>Investment Manager</u>	<u>Investment</u>	<u>Fair Value Amount</u>	<u>Pension Net Assets</u>
BlackRock Institutional Trust Company, NA	BLACKROCK ACWI EX-US SUPERFUND A	\$ 479,638	11.8%
Parametric	VANGUARD INDEX FUNDS S&P 500 ETF SHSNEW	437,548	10.7%
BlackRock Institutional Trust Company, NA	BLACKROCK EQUITY INDEX FD	379,099	9.3%
The Northern Trust Company	NTGI COLLECTIVE GOVERNMENT SHORT TERM INVESTMENT FUND	374,176	9.2%

*Rate of return* – For the year ended June 30, 2016, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was (3.2)%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

*Investment Risk* – The System's investments have been categorized to address deposit and investment risks related to custodial credit risk, credit risk, concentration of credit risk, interest rate risk, and foreign currency risk.

- *Custodial Credit Risk for Deposits and Investments* – Custodial credit risk for investments is the risk that in the event of a failure of the counterparty, the System will not be able to recover the value of the investment or collateral in possession of the counterparty. The System does not have an investment policy regarding custodial credit risk. The System considers only demand deposits as cash. As of June 30, 2016 and June 30, 2015, the System had a balance of \$304 thousand and \$352 thousand, respectively, on deposit at a financial institution. The Federal Depository Insurance Corporation (FDIC) covered cash on deposit up to \$250 thousand at this financial institution. Therefore, as of June 30, 2016, \$54 thousand of the System's bank balance of \$304 thousand was exposed to custodial credit risk. At June 30, 2016, the System did not have any other investments with other financial institutions subject to custodial credit risk.
- *Credit Risk* – Credit risk is the risk that the counterparty will not fulfill its obligations. As of June 30, 2016, the System's fixed income assets that are not U.S. government guaranteed represented 100% of the System's fixed income plus short term investments portfolio. The tables below and on the following page summarize the System's fixed income portfolio and short term investment exposure levels and credit qualities.

**Average Credit Quality and Exposure Levels of  
Non-U.S. Government Guaranteed Securities  
June 30, 2016**

<u>Fixed Income Security Type</u>	<u>Fair Value (\$000's)</u>	<u>Percent of Total</u>	<u>Weighted Average Credit Quality</u>
Corporate Bonds	\$ 113,471	13.9	B
Mutual Bond Funds	53,184	6.5	B
Short Term Investment Funds	650,902	79.6	Not Rated
<b>Total</b>	<b>\$ 817,557</b>	<b>100.0</b>	

# Houston Police Officers' Pension

## System Notes to Financial Statements

### Ratings Dispersion Detail June 30, 2016 (\$000's)

Credit Rating Level	Corporate Bonds	Mutual Bond Funds	Short Term Investment Funds
BBB	\$ 2,722	\$ -	\$ -
BB	45,556	-	-
B	52,608	53,290	-
CCC	10,762	-	-
NR	1,823	(106)	650,902
<b>Total</b>	<b>\$ 113,471</b>	<b>\$ 53,184</b>	<b>\$ 650,902</b>

The System's investment policy allows investment managers full discretion in adopting investment strategies to deal with these risks. Unless otherwise provided in the individual investment manager agreement, the average quality rating of each individual fixed income portfolio on a weighted value basis shall be A-rated or higher, and no issue should have a rating below investment grade (Baa or higher). Certain managers, such as high yield managers, may be exempted from these requirements as provided for in their contracts.

Credit risk for derivative instruments held by the System results from counterparty risk, which is essentially that the counterparty will be unable to fulfill its obligations, which are then assumed by the System. Information regarding the System's credit risk related to derivatives is found under the derivatives disclosures.

Policies regarding credit risk pertaining to credit risk associated with the System's securities lending program are found under the securities lending disclosures.

- *Concentration of Credit Risk* – Concentration of credit risk is the risk of loss attributable to the magnitude of the System's investment in a single issue. The System's investment policy for each specific portfolio limits investments in any one single domestic equity issue to 15% of each portfolio at market value and for any one single international equity issue to 5% of the System's investments. For fixed income investments, the System's policy limits, by each specific portfolio, investment in any one single fixed income security to 10% of each portfolio at market value. As of June 30, 2016, the System did not have any single investment in any one organization which represented greater than 5% of plan net assets.
- *Interest Rate Risk* – Interest rate risk is the risk that changes in interest rates will adversely affect the fair values of the System's financial instruments. This risk is managed within the portfolio using the modified duration methodology. It is widely used in the management of fixed income portfolios and estimates the sensitivity of a bond's price to interest rate changes. The System does not have an investment policy specifically regarding interest rate risk. Investment managers have full discretion in adopting investment strategies to deal with these risks, and all of the System's fixed income portfolios are managed in accordance with guidelines that are specific as to the degree of interest rate risk taken. The reporting of modified duration found in the tables on the following page quantifies the interest rate risk of the System's fixed income investments. Interest rate risks associated with derivative instruments are found in the derivatives disclosures of these notes.

**Houston Police Officers' Pension**  
**System Notes to Financial Statements**

**Modified Duration by Security Type**  
**June 30, 2016**

Security Type	Fair Value (\$000's)	Percent of Total	Weighted Average Modified Duration (years)
Corporate Bonds	\$ 113,471	13.9	5.3
Mutual Bond Funds	53,184	6.5	4.4
Short Term Investment Funds	650,902	79.6	0.0
<b>Total</b>	<b>\$ 817,557</b>	<b>100.0 %</b>	<b>1.0</b>

**Modified Duration Analysis by Security Type**  
**June 30, 2016**

Security Type	Fair Value (\$000's)	Average Modified Duration	Contribution to Modified Duration
<b>Corporate Bonds</b>			
Less than 1 year	\$ 11	0.0	0.0
1 to 5 years maturities	28,691	3.0	0.7
5 to 10 years maturities	83,756	6.2	4.5
Greater than 10 years maturities	1,013	7.4	0.1
<b>Total</b>	<b>\$ 113,471</b>		<b>5.3</b>
<b>Mutual Bond Funds</b>			
5 to 10 years maturities	\$ 53,184	4.4	4.4
<b>Short Term Investment Funds</b>			
Less than 1 year	\$ 612,216	0.0	0.0
1 to 5 years maturities	38,686	0.0	0.0
<b>Total</b>	<b>\$ 650,902</b>		<b>0.0</b>

# Houston Police Officers' Pension

## System Notes to Financial Statements

- Foreign Currency Risk** – Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. The books and records of the System are maintained in US dollars. Foreign currencies and non-US dollar denominated investments are translated into US dollars at the bid prices of such currencies against US dollars at each balance sheet date. Realized and unrealized gains and losses on investments which result from changes in foreign currency exchange rates have been included in the net appreciation in fair value of investments. Net realized foreign currency gains and losses resulting from changes in exchange rates include foreign currency gains and losses between trade date and settlement date of investment securities transactions, foreign currency transactions and the difference between the amounts of interest and dividends recorded on the books of the System and the amount actually received. International and global managers have the permission to use currency forward and futures contracts to hedge currency against the U.S. dollar. Currency forwards and futures used for the purpose of hedging currency shall be subject to the following guidelines: 1) net forward and futures sales of any currency may not exceed total market value of the assets denominated in that currency. This limitation does not apply to global fixed income managers and currency overlay managers if provided for in their contracts, 2) foreign currency exchange contracts with a maturity exceeding 12 months are not permitted, 3) currency options may be entered into in lieu of or in conjunction with forwards sales of currencies with the same limitations as currency forwards and futures. Cross hedging, the selling of one foreign currency for another foreign currency, which may or may not be the base currency of the portfolio, is permitted. The System's exposure to foreign currency risk in U.S. dollars as of June 30, 2016, is shown in the table below.

### Foreign Currency Exposure by Asset Class (\$000's) June 30, 2016

Currency	Short Term Investments	Equities	Alternative Investments	Total
Euro	\$ (111,492)	\$ 223,074	\$ 11,661	\$ 123,243
Japanese yen	(82,024)	170,602	-	88,578
British pound sterling	(72,852)	150,957	-	78,105
Swiss franc	-	68,659	-	68,659
Australian dollar	-	51,267	10,525	61,792
Canadian dollar	1,438	32,909	-	34,347
Chinese yuan renminbi	-	26,076	-	26,076
Hong Kong dollar	-	24,203	-	24,203
Swedish krona	-	21,833	-	21,833
South Korean won	-	15,476	-	15,476
New Taiwan dollar	-	13,823	-	13,823
Danish krone	-	12,376	-	12,376
Singapore dollar	-	10,669	-	10,669
South African rand	-	8,628	-	8,628
Indian rupee	-	8,387	-	8,387
Brazilian real	-	8,244	-	8,244
Other (less than \$5 million)	-	35,547	-	35,546
<b>Total</b>	<b>\$ (264,930)</b>	<b>\$ 882,730</b>	<b>\$ 22,186</b>	<b>\$ 639,985</b>

**Securities Lending Program** – The System's Board of Trustees' policies permit the System to lend securities (domestic and international equities and fixed income) to securities firms on a temporary basis through its custodian bank. The System receives fees for all loans and retains the right to all interest and dividend payments while the securities are on loan. Cash, letters of credit or various government securities having market values equal to or exceeding 102% and 105% of the value of the loaned securities for domestic and international securities, respectively, collateralize all security loan agreements. Whenever the market value of the securities on loan changes, the borrower must adjust the collateral accordingly. The System's bank pools all collateral received from securities lending transactions and invests any cash collateral. The System holds an undivided share of the collateral provided by the borrowers of the securities.

# Houston Police Officers' Pension

## System Notes to Financial Statements

At June 30, 2016 the weighted-average maturity of the collateral pool was 30 days. The relationship between the maturities of the collateral pool and the System's loans has not been determined. Cash collateral invested in the custodian bank collateral pool at June 30, 2016 and 2015, was \$24,211 thousand and \$50,613 thousand, respectively. The System also had non-cash collateral at June 30, 2016 and 2015, of \$884 thousand and \$4,392 thousand respectively, consisting of treasury securities and letters of credit. The System cannot sell or pledge the collateral unless the borrower fails to return the securities borrowed.

The market value of securities on loan at June 30, 2016 and 2015 was \$24,737 thousand and \$53,846 thousand, respectively. At June 30, 2016, the System had no credit risk exposure to borrowers because the amounts the System owes the borrowers, \$25,095 thousand, exceeds the amounts the borrowers owe the System, \$24,737 thousand.

*Derivatives* – The System's investment managers may invest in derivatives if permitted by the guidelines established by the System's Board of Trustees. The System's staff monitors guidelines and compliance. From time to time the System's investment managers will invest in equity, fixed income and short term futures contracts along with foreign currency forward contracts. No derivatives are purchased with borrowed funds.

The fair value balance of posted margin and collateral and notional amounts of derivative instruments outstanding at June 30, 2016, classified by type, and the changes in fair value of such derivative instruments for the year then ended is shown in the table below. The Change in Fair Value figures are reported as a component of net appreciation (depreciation) in the Statement of Changes in Fiduciary Net Position.

(\$000's)	Year ending June 30, 2016	As of June 30, 2016		
	Changes in Fair Value	Posted Margin	Collateral Held at Custodian Bank	Notional Value
Equity Futures	\$ (78,661)	\$ 61,726	\$ 439,520	\$ 831,091
Currency Futures	(3,071)	10,096	22,689	268,153
Options	8,874	-	38,546	209,597

Futures are used to obtain market exposure and to take advantage of mis-pricing opportunities. When a position is taken in a futures contract, a margin is posted and the contract is subject to daily mark-to-market adjustments. For options, no margin is posted. Instead, options are purchased at a premium, which is either forfeited or recouped, depending on the gain or loss on the contract. Foreign currency contracts are used to hedge against the currency risk in the System's investments in foreign equity and fixed income securities. To liquidate the contract prior to expiration an offsetting position in the same contract must be taken. These derivatives are used to enhance yields and provide incremental income.

These derivative instruments are subject to the following risks:

- *Custodial Credit Risk* – Custodial credit risk for derivative instruments is the risk that, in the event of the failure of the counterparty to a transaction, the System will not be able to recover the value of the derivative instruments or collateral securities that are in the possession of an outside party. Consistent with the System's investment policy, the System's derivative instruments were held by the counterparty that was acting as the System's agent.
- *Credit Risk* – Credit risk is the risk that the counterparty will not fulfill its obligations. The System does not have an investment policy specifically regarding credit risk for derivative instruments. The System's investment policy allows investment managers full discretion in adopting investment strategies to deal with this risk. The System's investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures.
- *Interest Rate Risk* – Interest rate risk is the risk that changes in interest rates will adversely affect the fair values of the System's derivative instruments.



# Houston Police Officers' Pension

## System Notes to Financial Statements

- *Foreign Currency Risk* – Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of derivative instruments. The System's exposure to foreign currency risk derives from its positions in foreign currency denominated international equity and fixed income investments as outlined in the following schedule. The System has a currency hedging program in place that hedges fifty percent of the exposure to the Euro, Pound, and Yen exposure in these investment programs. This hedging program is disclosed elsewhere in this footnote. The System's derivative instruments exposure to foreign currency risk in U.S. dollars as of June 30, 2016, is shown in the table below.

Currency	(\$000's)		
	Equity Derivatives	Currency Derivatives	Total
Swiss franc	\$ 37,065	\$ -	\$ 37,065
Australian dollar	27,676	-	27,676
Hong Kong dollar	13,066	-	13,066
Swedish krona	11,787	-	11,787
Japanese yen	92,099	(82,024)	10,075
Euro	120,601	(111,492)	9,109
British pound sterling	81,494	(72,864)	8,630
Danish krone	6,681	-	6,681
Singapore dollar	5,759	-	5,759
Other (less than \$5 million)	10,209	1,774	11,983
<b>Total</b>	<b>\$ 406,437</b>	<b>\$ (264,606)</b>	<b>141,831</b>

*Alternative Investments* – As of June 30, 2016 and 2015, the System was invested in various partnerships, separate accounts and commingled funds across various types of alternative investments as detailed in the table below.

Investment Type	Fair Value (\$000's)	
	June 30, 2016	June 30, 2015
<i>Private Equity</i>		
Leveraged Buyouts	\$ 229,708	\$ 185,294
Energy	90,906	77,522
Special Situations	85,218	82,867
Private Equity Secondaries	45,099	25,457
Venture Capital	36,157	52,573
<i>Other Alternatives</i>		
Real Estate	243,717	125,932
Credit	133,531	124,939
<i>Hedge Funds</i>		
Portable alpha hedge funds	448,393	901,023
Global macro hedge funds	246,024	333,237
Multi-strategy hedge funds	182,656	179,142
Long/short credit hedge funds	104,629	144,644
Long/short equity hedge funds	73,592	87,010
<b>Total</b>	<b>\$ 1,919,630</b>	<b>\$ 2,319,640</b>

Supplemental Information on investment and professional expenses included in Schedule II on page 32 herein does not include the investment management fees and performance fees embedded in the structure of the private equity

# Houston Police Officers' Pension

## System Notes to Financial Statements

and other limited partnership investments listed above. Rather, these fees are a component of the Net appreciation in fair value of investments in the accompanying Statement of Changes in Fiduciary Net Position.

### 5. Contributions Receivable

The June 30, 2011 Agreement with the City provided that once the Funded Ratio of the System reaches 80%, this becomes the new floor and if it should ever decline below such 80% level, in the fiscal year next following such determination, the City shall pay such additional amounts to the System as shall be necessary to increase the Funded Ratio to 80%. The Funded Ratio was determined to be 79.7% in the July 1, 2015 actuarial valuation. The contribution receivable of \$14,284 thousand for fiscal year 2016 is the amount necessary to increase the Funded Ratio to 80% and will be paid bi-weekly by the City in fiscal year 2017.

The June 30, 2011 Agreement with the City provided for a shortfall in the fiscal year 2012 and 2013 contribution fixed payment of \$17,000 thousand and \$8,500 thousand respectively for the total contribution receivable of \$25,500 thousand reported in fiscal year 2015, which the City paid on July 1, 2016.

### 6. Deferred Retirement Option Program (DROP) Balances

The Deferred Retirement Option Plan (DROP) is an optional method of accruing pension benefits under the System's benefit structure. Members with at least 20 years of service and who were hired prior to October 9, 2004, are eligible to participate in the DROP. The lump sum benefit is the accumulated balance in the member's notional DROP account which is equal to an amount calculated as if the member's annuity, employee contributions and an interest component had been deposited in a separate account in the member's name during the member's participation in DROP. Prior to October 9, 2004, 100% of a member's contributions were credited to his or her notional DROP account. Subsequent to that date, an eligible member contributes 9.00% of pensionable pay with 8.75% of pensionable pay credited to his or her notional DROP account and the additional 0.25% credited to the System's general fund. The following table shows the change in DROP accounts during the year ended June 30, 2016.

#### **DROP Activity**

**Year ended June 30, 2016**

	DROP Accounts (\$000's)		DROP Participants
Balance at June 30, 2015	\$ 921,438	Participants at June 30, 2015	1,991
Accumulations	51,316	Entrants	253
Distributions	(15,431)	Withdrawals	(186)
Balance at June 30, 2016	\$ 957,323	Participants at June 30, 2016	2,058

The Post Retirement Option Plan (PROP) allows retired members to have all or a portion of their monthly retirement and DROP lump sum credited to a notional account maintained by the System which accumulates interest and can be disbursed to the member under certain options as designated by the System. Surviving spouses can transfer a DROP or PROP balance to a PROP account of their own but are not eligible to credit all or a portion of their survivor benefit to a PROP account. Members hired or rehired subsequent to October 9, 2004 are not eligible for this benefit. The table on the following page shows the change in PROP accounts during the year ended June 30, 2016.

# Houston Police Officers' Pension

## System Notes to Financial Statements

### PROP Activity

Year ended June 30, 2016

	PROP Accounts (\$000's)		PROP Participants
Balance at June 30, 2015	\$ 742,309	Participants at June 30, 2015	1,422
Accumulations	190,703	Entrants	158
Distributions	(61,580)	Withdrawals	(11)
Balance at June 30, 2016	\$ 871,432	Participants at June 30, 2016	1,569

### 7. Net Pension Liability

The net pension liability is measured as the total pension liability, less the amount of the pension plan's fiduciary net position. The components of the net pension liability at June 30, 2016 were as follows (\$000's):

Total pension liability	\$	6,621,290
Plan fiduciary net position		4,080,460
System's net pension liability	\$	2,540,830
 Plan fiduciary net position as a percentage of the total pension liability		61.63%

*Actuarial assumptions* – The total pension liability was determined by an actuarial valuation as of July 1, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Salary Increases	0.00% to 12.00% , plus a 2.00% inflation and productivity component
Investment Rate of Return	8.00%, net of pension plan investment expense, including inflation
Mortality	<p>Healthy retirees - The Gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment are used with male rates multiplied by 109% and female rates multiplied by 103%. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements.</p> <p>Disabled males and females – The gender-distinct RP2000 Disabled Retiree Mortality Tables are used without adjustment. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements.</p> <p>Active members - The Gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment are used with male rates multiplied by 54% and female rates multiplied by 51%. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements. An additive factor of .0003 is applied to all active mortality rates.</p>

The actuarial assumptions used in the July 1, 2016 valuation were last updated in the July 1, 2014 valuation pursuant to an experience study of the five-year period ending June 30, 2013.

# Houston Police Officers' Pension

## System Notes to Financial Statements

The long-term expected rate of return on the System's investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2016 (see the discussion of the pension plan's investment policy) are summarized in the table on the following page:

Asset Class	Long-Term Expected Real Rate of Return
Domestic equity	2.90 %
International equity	3.30
Fixed income	-
Credit	4.70
Alternative investments:	
Private equity	6.30
Real estate	4.80
Risk parity	7.60
Hedge funds	6.30
Cash	(2.25)

*Discount rate* – A single discount rate of 8.00% was used to measure the total pension liability for the June 30, 2016 measurement date. This single discount rate was based on the expected rate of return on pension plan investments of 8.00% and the current municipal bond rate of 2.85%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates specified in the 2011 Meet & Confer Agreement. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, a single discount rate of 8.00% was applied to all periods of projected benefit payments to determine the total pension liability. For the June 30, 2015 measurement date, the single discount rate used was 7.08%. The increase in the single discount rate resulted in an decrease in the total pension liability of approximately \$676 million.

*Sensitivity of the net pension liability to changes in the discount rate* – The following table presents the net pension liability, calculated using the discount rate of 8.00%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7.00%) or 1-percentage-point higher (9.00%) than the current rate:

(\$000's)	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Net pension liability	\$ 3,282,145	\$ 2,540,830	\$ 1,934,220

### 8. Litigation

In May 2015, HPOPS, along with hundreds of other entities, was named as a defendant in a bankruptcy adversary proceeding, Official Committee of Unsecured Creditors of Motors Liquidation Co. f/k/a/ General Motors Corp. v. JPMorgan Chase Bank, N.A., 09-00504 (Bankr. S.D.N.Y. 2009). In this litigation, the Unsecured Creditors' Committee for the General Motors (GM) bankruptcy is attempting to claw back funds used to pay off a piece of GM term debt that HPOPS held in 2009. HPOPS plans to move to dismiss the complaint and may also bring a cross-claim against JP Morgan Chase Bank N.A.—the entity that actually received the debt payoff funds at issue—to substitute for HPOPS as the proper party or to reimburse HPOPS's legal fees. Both filings would be due November 16, 2015. A total of \$587,248 is potentially at stake,

# Houston Police Officers' Pension

## System Notes to Financial Statements

but if a clawback were ordered, JP Morgan admits that it would be obligated to reimburse HPOPS for all but \$15,948 of that amount.

### 9. Commitments and Contingencies

As described in Note 1, there are 3,226 non-vested active members of the System who are entitled to refunds of their accumulated contributions, without interest, upon termination of employment with the City prior to being eligible for pension benefits. At June 30, 2016 and 2015, aggregate contributions from these members of the System were approximately \$153,090 thousand and \$157,937 thousand, respectively. The portion of these contributions that might be refunded to members who terminate prior to pension eligibility has not been determined.

At June 30, 2016 and 2015, the total accumulated lump sum benefit due to DROP members was approximately \$957,323 thousand and \$921,438 thousand, respectively.

At June 30, 2016 and 2015, the total accumulated lump sum benefit due to PROP participants was \$871,432 thousand and \$742,309 thousand, respectively.

The System has outstanding investment commitments to various limited partnerships totaling \$956,416 thousand and \$788,938 thousand, as of June 30, 2016 and 2015, respectively.

The System has a lease for the office it occupies through October 31, 2020. The monthly base rental and outstanding lease commitment is as detailed in the following chart (\$000's).

Period	Monthly Base Rent	Fiscal Year	Total Rent
May 2015 - April 2016	\$ 20	2017	\$ 246
May 2016 - April 2017	20	2018	253
May 2017 - April 2018	21	2019	259
May 2018 - April 2019	22	2020	265
May 2019 - April 2020	22	2021	90
May 2020 - October 2020	23	Beyond 2021	-
			<u>\$ 1,113</u>

# Houston Police Officers' Pension System

## Required Supplementary Information (Unaudited)

### Schedule of Changes in the Net Pension Liability and Related Ratios For Last Three Fiscal Years (\$000's)

Fiscal year ending June 30,	2016	2015	2014
<b>Total Pension Liability</b>			
Service Cost	\$ 66,098	\$ 56,062	\$ 52,844
Interest	488,223	473,065	466,649
Benefit Changes	-	-	-
Difference between Expected and Actual Experience	10,390	26,706	(41,034)
Assumption Changes	(676,151)	664,974	162,849
Benefit Payments	(259,076)	(225,656)	(211,690)
Refunds	(978)	(945)	(906)
<b>Net Change in Total Pension Liability</b>	<b>(371,494)</b>	<b>994,206</b>	<b>428,712</b>
<b>Total Pension Liability - Beginning</b>	<b>6,992,784</b>	<b>5,998,578</b>	<b>5,569,866</b>
<b>Total Pension Liability - Ending (a)</b>	<b>\$6,621,290</b>	<b>\$6,992,784</b>	<b>\$5,998,578</b>
<b>Plan Fiduciary Net Position</b>			
Employer Contributions	\$ 137,392	\$ 113,665	\$ 103,372
Employee Contributions	39,017	37,719	37,012
Pension Plan Net Investment Income	(135,833)	35,341	649,153
Benefit Payments	(259,076)	(225,656)	(211,690)
Refunds	(978)	(945)	(906)
Pension Plan Administrative Expense	(4,585)	(3,478)	(3,439)
Other	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>(224,063)</b>	<b>(43,354)</b>	<b>573,502</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>4,304,523</b>	<b>4,347,877</b>	<b>3,774,375</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$4,080,460</b>	<b>\$4,304,523</b>	<b>\$4,347,877</b>
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>\$2,540,830</b>	<b>\$2,688,261</b>	<b>\$1,650,701</b>
<b>Plan Fiduciary Net Position as a Percentage of</b>			
<b>Total Pension Liability</b>	61.63%	61.56%	72.48%
<b>Covered Employee Payroll</b>	\$ 407,058	\$ 395,360	\$ 388,756
<b>Net Pension Liability as a Percentage of Covered</b>			
<b>Employee Payroll</b>	624.19%	679.95%	424.61%

# Houston Police Officers' Pension System

## Required Supplementary Information (Unaudited)

### Schedule of Employer Contributions (\$000's)

Measurement Year Ending June 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2014	\$ 139,991	\$ 103,372	\$ 36,619	\$ 388,756	26.59 %
2015	150,949	113,665	37,284	395,360	28.75
2016	161,154	137,392	23,762	407,058	33.75

#### Notes to Schedule

Valuation Date: July 1, 2016

Actuarially determined contribution rates are determined in accordance with the Meet and Confer Agreement of 2011. Under the terms of the 2011 Meet and Confer Agreement, the FY 2017 contribution is already set at \$133 million preceded by a City contribution of \$123 million for FY 2016. The FY 2016 contribution includes an additional appropriation of \$14,284 million from the City in relation to the 80% trigger. A \$148.576 million appropriation is due from the City for FY2017 based on the July 1, 2016 valuation. For more information regarding the actuarially determined Contribution, refer to the July 1, 2016 HPOPS Valuation Report.

#### Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level Percentage of Payroll, Open
Remaining Amortization Period	30 years
Asset Valuation Method	The actuarial value of assets is equal to the market value of assets less a five-year phase in of the excess (shortfall) between expected investment return and actual income.
Inflation	2.75%
Salary Increases	0.00% to 12.00% , plus a 2.00% inflation and productivity component
Investment Rate of Return	8.00%
Retirement Age	Experience-based table of rates based on age and years of service. The assumption was last updated in the July 1, 2014 valuation pursuant to an experience study of the five-year period ending June 30, 2013.
Mortality	<p>Healthy retirees - The Gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment are used with male rates multiplied by 109% and female rates multiplied by 103%. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements.</p> <p>Disabled males and females – The gender-distinct RP2000 Disabled Retiree Mortality Tables are used without adjustment. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements.</p> <p>Active members - The Gender-distinct RP2000 Combined Healthy Mortality Tables with Blue Collar Adjustment are used with male rates multiplied by 54% and female rates multiplied by 51%. The rates are projected on a fully generational basis by scale BB to account for future mortality improvements. An additive factor of .0003 is applied to all active mortality rates.</p>

**Houston Police Officers' Pension System**  
**Required Supplementary Information (Unaudited)**

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**Schedule of Investment Returns**

<u>Fiscal Year Ended June 30,</u>	<u>Annual Money-weighted Rate of Return, net of Investment Expense</u>
2014	17.4 %
2015	0.8 %
2016	(3.2)%



# Houston Police Officers' Pension System

## Schedule I - Investment, Professional and Administrative Expenses (\$000's)

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<i>Year ended June 30,</i>	2016	2015
Investment services:		
Custodial services	\$ 233	\$ 223
Money management services	12,651	21,394
Consulting services	1,009	1,000
Department Operating Expense	494	508
<b>Total investment services</b>	<b>14,387</b>	<b>23,125</b>
Professional services:		
Actuarial services	293	98
Auditing services	94	104
Election audit services	20	5
Legal services	105	61
Lobbyist services	384	376
<b>Total professional services</b>	<b>896</b>	<b>644</b>
Administrative expenses:		
Information technology	1,077	390
Education	22	34
Fiduciary insurance	92	88
Office rent	208	187
Other office costs	2,290	2,135
<b>Total administrative expenses</b>	<b>3,689</b>	<b>2,834</b>
	\$ 18,972	\$ 26,603

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*See accompanying independent auditor's report.*

# Houston Police Officers' Pension System

## Schedule II - Summary of Investment and Professional Services (\$000's)

<i>Twelve Months Ended June 30, 2016</i>	Official System Position	Expense	Nature of Services
Franklin Park Associates, LLC	Consultant	\$ 400	Consulting
Mercer Investment Consulting, LLC	Consultant	609	Consulting
The Northern Trust Company	Custodian	233	Custodian
AQR Capital Management LLC	Money Manager	4,004	Money Management
BlackRock Institutional Trust Company, NA	Money Manager	544	Money Management
Blackstone Alternative Solutions LLC	Money Manager	165	Money Management
Brevan Howard Capital Management LP	Money Manager	1,119	Money Management
Bridgewater Associates, Inc.	Money Manager	4,104	Money Management
Dimensional Fund Advisors	Money Manager	30 *	Money Management
First Quadrant LP	Money Manager	55	Money Management
The Northern Trust Company	Money Manager	924	Money Management
PanAgora Asset Management, Inc.	Money Manager	19	Money Management
Parametric	Money Manager	1,199	Money Management
Shenkman Capital Management, Inc.	Money Manager	488	Money Management
Gabriel Roeder Smith & Co.	Actuary	223	Actuarial
Rudd & Wisdom, Inc.	Actuary	70	Actuarial
BDO USA, LLP	Auditors	94	Auditing
Gibbs & Bruns LLP	Attorneys	15	Legal Service
IceMiller LLP	Attorneys	9	Legal Service
Kasowitz, Benson, Torres & Friedman LLP	Attorneys	1	Legal Service
Klausner, Kaufman, Jensen & Levinson	Attorneys	2	Legal Service
Strasburger & Price, LLP	Attorneys	76	Legal Service
HillCo Partners, LLC	Attorneys	157	Lobbyists
Locke Lord LLP	Attorneys	226	Lobbyists
Bickley Prescott & Co.	Consultant	20	Election Auditing
Other	Other	3	Other
<b>Total investment and professional services</b>		<b>\$ 14,789</b>	

*See accompanying independent auditor's report.*

\* The System invests in a mutual fund managed by Dimensional Fund Advisors. This figure represents estimated annual fees incurred by the System based upon the System's average monthly balance.