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FOR TODAY & TOMORROW

Houston Police Officers' Pension System
a Component Unit of the City of Houston, Texas
Financial Statements
As of and for the Years Ended June 30, 2022 and 2021

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Houston Police Officers' Pension System

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Independent Auditor’s Report

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

Opinion

We have audited the financial statements of Houston Police Officers’ Pension System (the “System”), a component unit of the city of Houston, Texas, as of and for the years ended June 30, 2022 and 2021, and the related notes to the financial statements, which collectively comprise the System’s basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the financial position of the System as of June 30, 2022 and 2021, 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.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (“GAAS”). Our responsibilities under those standards are further described in the *Auditor’s Responsibilities for the Audit of the Financial Statements* section of our report. We are required to be independent of the System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the System’s ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.



Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Other Matters

Adoption of New Accounting Principle

As discussed in Note 3 to the financial statements, the System adopted the provisions of Governmental Accounting Standards Board Statement Number 87, *Leases*. Our opinion is not modified with respect to this matter.



Required Supplementary Information

Accounting principles generally accepted in the United States of America require that management's discussion and analysis and the schedules of changes in the system's net pension liability and related ratios, employer contributions, and investment returns be presented to supplement the basic financial statements. Such information is the responsibility of management and, 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 the 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 audit 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 Supplementary Information

Our audit was conducted for the purpose of forming opinions on financial statements that collectively comprise the System's basic financial statements. The schedule of investment, professional and administrative expenses and summary of investments and professional services are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of 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 audit 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 schedule of investment, professional and administrative expenses and summary of investments and professional services are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

BDO USA, LLP

October 21, 2022

Houston Police Officers' Pension System

Management's Discussion and Analysis (Unaudited)

Fiscal Year Ended June 30, 2022

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, 2022, 2021 and 2020. 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

These financial statements consist of the Statements of Fiduciary Net Position, Statements of Changes in Fiduciary Net Position, Notes to Financial Statements, Supplemental 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

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:	2022	2021	2020
Assets			
Cash	\$ 441	\$ 24	\$ 482
Investments at fair value	6,839,635	7,117,836	5,546,961
Invested securities lending collateral	237,338	125,217	34,741
Receivables	21,394	23,292	33,252
Land	5,322	5,322	-
Building	-	60	-
Right-to-use lease asset	438	740	1,013
Total Assets	7,104,568	7,272,491	5,616,449
Liabilities			
Due for purchase of investments	3,132	7,943	6,809
Securities lending collateral	237,338	125,217	34,741
Accrued investment and professional fees	1,348	1,008	1,148
Lease liability	438	740	1,013
Other liabilities	324	332	262
Total Liabilities	242,580	135,240	43,973
Net position restricted for pensions	\$ 6,861,988	\$ 7,137,251	\$ 5,572,476

The System's year over year net position decreased by approximately \$(275,263) thousand in fiscal year 2022 after an increase of approximately \$1,564,775 thousand in fiscal year 2021 over 2020. Markets continued to rally in the first half of fiscal year 2022 driven by strong consumer spending and better than expected corporate earnings. Mid-way through the year, consumer sentiment began to shift on news of rising inflation pressures and geo-political risks around Russia and Ukraine, in addition to continued tensions with China. The second half of fiscal year saw the Fed's most aggressive rate hikes since 1994 in an effort to battle the highest inflation the country had seen in forty years. By the end of the fiscal year, the Fed had increased interest rates by 150 basis points and equity markets had retracted by over twenty percent on recession fears.

Houston Police Officers' Pension System

Management's Discussion and Analysis (Unaudited)

Fiscal Year Ended June 30, 2022

Fiscal year 2021 began on an optimistic note, with strong economic growth due to ongoing stimulus and abating government lockdowns due to COVID-19 concerns. Sentiment was bolstered by the approval of the \$1.9 trillion American Rescue Plan Act, a relatively positive macroeconomic backdrop and progress with the vaccine roll-out. More of the world economies gradually reopened during the final two months, and markets responded positively. However, along with the continuation of the global economic rebound, we saw supply chain constraints and inflationary pressures. Pressure on supply chains increased as the spread of COVID -19 disrupted transport and manufacturing, especially in countries where the vaccination roll-out is lagging behind.

The System experienced a negative time-weighted investment return of (1.4)% in 2022, following positive returns of 32.2% in 2021 and 1.1% in 2020. 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.

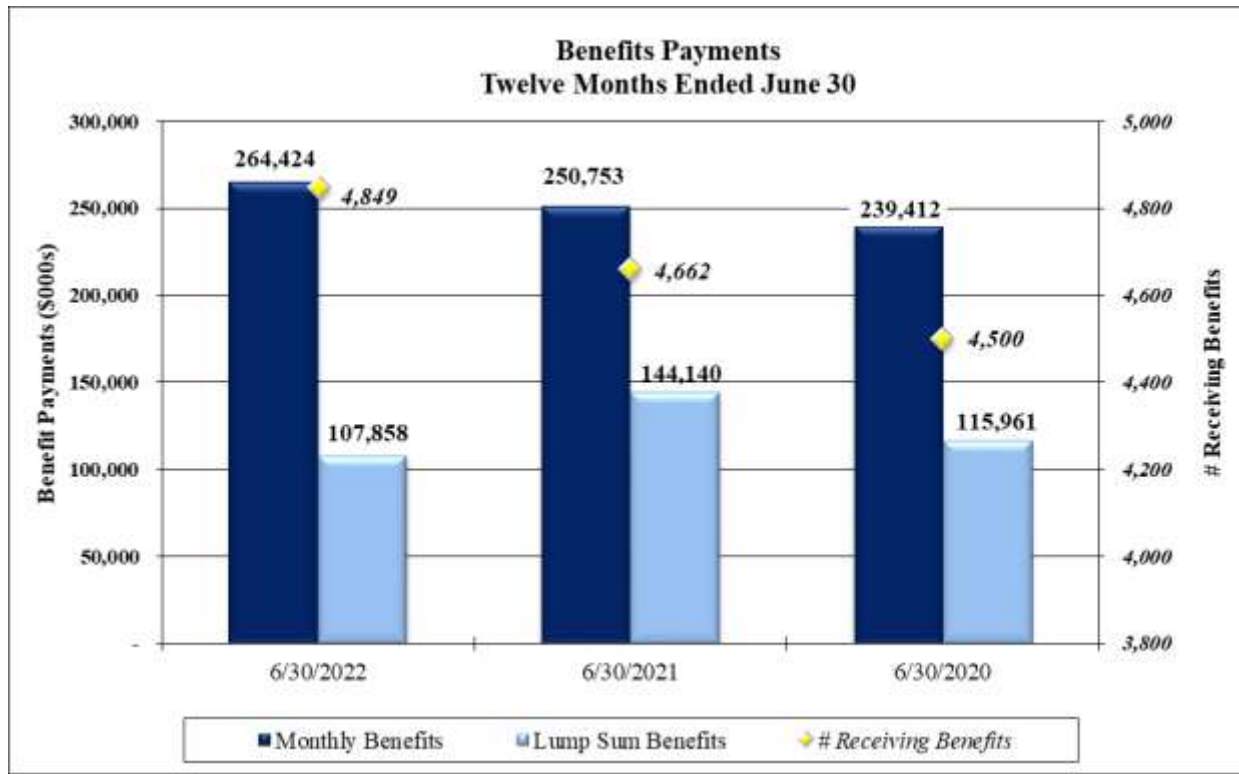
A summary of the Statements of Changes in Fiduciary Net Position for the System is as follows (\$000's):

Years ended June 30:	2022	2021	2020
Additions:			
Contributions:			
City	\$ 152,375	\$ 151,094	\$ 149,078
Members	50,028	49,749	49,062
Total contributions	202,403	200,843	198,140
Net income (loss) from investing activities	(98,888)	1,764,836	61,007
Net income from securities lending activities	351	146	186
Total additions	103,866	1,965,825	259,333
Deductions:			
Benefits paid to members	372,282	394,893	355,373
Refunds to members	2,645	2,433	2,209
Professional and administrative expenses	3,900	3,451	3,922
Lease amortization expense	302	273	-
Total deductions	379,129	401,050	361,504
Net increase (decrease)	(275,263)	1,564,775	(102,171)
Net position restricted for pensions			
Beginning of period	7,137,251	5,572,476	5,674,647
End of period	\$ 6,861,988	\$ 7,137,251	\$ 5,572,476

The Governing Statute as amended on July 1, 2017, required contribution payments for fiscal year 2022 equal to 31.92% of payroll, resulting in contributions of \$152,375 thousand and required contribution payments for fiscal year 2021 equal to 31.84% of payroll, resulting in contributions of \$151,094 thousand, which accounts for the increase in City contributions for the year ended June 30, 2022. For fiscal year 2020, required contribution payments were equal to 31.82% of payroll, resulting in contributions of \$149,078 thousand. As discussed in Note 2 to the financial statements, the contributions were paid in their entirety from the City budget in fiscal years 2022, 2021, and 2020.

“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, 2022, 2021, and 2020.

Houston Police Officers' Pension System
Management's Discussion and Analysis (Unaudited)
Fiscal Year Ended June 30, 2022



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 2022 decreased from 2021 by approximately \$(22,611) thousand or (5.7)% compared to an increase of approximately \$39,520 thousand or 11.1% between 2020 and 2021. The decrease in 2022 is due to a \$(36,282) thousand decrease in lump sum benefits and a \$13,671 thousand increase in monthly benefits compared to a \$28,179 thousand increase in lump sum benefits and an \$11,341 thousand increase in monthly benefits in 2021. Average monthly benefit payments were \$22,035 thousand and \$20,896 thousand per month for 2022 and 2021 respectively. The increase of \$1,139 thousand or 5.5% in 2022 was slightly greater than the increase of \$945 thousand or 4.7% in 2021 while the number of members and survivors who are receiving benefits increased by 187 in 2022 and 162 in 2021.

There was an increase of \$449 thousand in professional and administrative expenses during 2022 as compared to 2021. This increase is mainly due to expenses for the terminated building project, the System had an actuarial experience study performed, and other expenses that returned to pre-COVID-19 levels. There was a decrease of \$253 thousand in professional and administrative expenses during 2021 as compared to 2020. This decrease is mainly due to one-time expenses relating to a Fraud Risk Assessment of the System and investment in technology that occurred in 2020 while other expenses, especially relating to travel, were less due to the impact of COVID-19.

Houston Police Officers' Pension System
Management's Discussion and Analysis (Unaudited)
Fiscal Year Ended June 30, 2022

System Highlights

The System's funded ratio pursuant to its most recent actuarial valuation dated July 1, 2022 was 87.5% representing an unfunded actuarial accrued liability of \$921,867 thousand. The System's funded ratio as of July 1, 2021 was 85.4% representing an unfunded actuarial accrued liability of \$1,038,643 thousand.

Contacting the System's Management

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>	2022	2021
Assets		
Cash	\$ 441	\$ 24
Investments, at fair value (Note 3 and Note 4)		
Short term investments	809,816	1,007,642
Fixed income investments	933,212	1,048,217
Equity investments	2,285,609	2,667,020
Alternative investments	2,809,366	2,394,957
Foreign currency contracts	1,632	-
Total Investments	6,839,635	7,117,836
Invested securities lending collateral (Note 4)	237,338	125,217
Receivables		
City (Note 2)	8,208	7,797
Members	2,693	2,564
Investments	9,550	7,629
Due from sale of investments	906	5,226
Other receivables	37	76
Total Receivables	21,394	23,292
Land (Note 5)	5,322	5,322
Building	-	60
Right-to-use lease asset (net) (Note 5)	438	740
Total Assets	\$ 7,104,568	\$ 7,272,491
Liabilities		
Payables		
Due for purchase of investments	3,132	7,943
Securities lending collateral (Note 4)	237,338	125,217
Accrued investment and professional fees	1,348	1,008
Lease liability (Note 8)	438	740
Other liabilities	324	332
Total Liabilities	242,580	135,240
Net position restricted for pensions	\$ 6,861,988	\$ 7,137,251

See accompanying notes to financial statements.

Houston Police Officers' Pension System
Statements of Changes in Fiduciary Net Position (\$000's)

<i>Years ended June 30,</i>	2022	2021
Additions		
Contributions (Note 2 and Note 6)		
City	\$ 152,375	\$ 151,094
Members	50,028	49,749
Total contributions	202,403	200,843
Investment income		
Net (depreciation) appreciation in fair value of investments	(154,960)	1,712,466
Interest:		
Short-term investments	2,980	1,725
Fixed income investments	26,875	22,952
Total interest income	29,855	24,677
Dividends	43,663	34,722
Other income	-	26
Total investment (loss) income	(81,442)	1,771,891
Less: investment expense	(17,446)	(7,055)
Net investment (loss) income	(98,888)	1,764,836
Securities lending activities (Note 4)		
Securities lending income	468	195
Securities lending expense	(117)	(49)
Net securities lending income	351	146
Total additions	103,866	1,965,825
Deductions		
Benefits paid to members	372,282	394,893
Refunds to members (Note 1)	2,645	2,433
Professional and administrative expenses	3,900	3,451
Lease amortization expense	302	273
Total deductions	379,129	401,050
Net (decrease) increase in net position	(275,263)	1,564,775
Net position restricted for pensions		
Beginning of period	7,137,251	5,572,476
End of period	\$ 6,861,988	\$ 7,137,251

See accompanying notes to financial statements.

Houston Police Officers' Pension System

Notes to Financial Statements

1. Plan Description and Contribution Information

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 or the Employer) 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 System, including the direction of investment and oversight of the System'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 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 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,	2022	2021
Retirees and beneficiaries:		
Currently receiving benefits	4,849	4,662
Not yet receiving benefits	54	40
Active members:		
Fully vested	1,466	1,590
Nonvested:		
Hired or rehired before October 9, 2004	161	290
Hired or rehired after October 9, 2004	3,535	3,364
Total members	10,065	9,946

The following sections describe the benefit structure in effect for the plan year ending June 30, 2022. 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 made further changes to the System's benefits structure. Additional changes to the benefit structure and City payment schedule became effective July 1, 2017 due to passage of Senate Bill 2190 by the 85th Legislature of Texas, Regular Session. 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 satisfying the Rule of 70 (age plus service equals 70). If a member separates with more than 10 years of service but has yet to satisfy the Rule of 70, the member may apply for a Delayed Retirement payable when age and service total 70.

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.

Houston Police Officers' Pension System

Notes to Financial Statements

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. Clothing allowance, motorcycle allowance and mentor pay earned after June 30, 2017 is also excluded.

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. 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 received prior to July 1, 2017. 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 contributed 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. Effective July 1, 2017, member contributions are no longer credited to the DROP account.

Annual Adjustments – Pension benefits for eligible members and survivors are adjusted each year at a rate equal to the most recent five fiscal years' smoothed return minus 500 basis points, subject to minimum and maximum increases of 0.0% and 4.0%, respectively. Eligible members are retired members and eligible survivors age 55 and older as of April 1 of the applicable year, a member or survivor who received benefits before June 8, 1995, or a survivor of an active member who died in the line of duty.

Disability Benefits – Duty connected disability benefits are equal to the greater of 55% of pensionable pay or the accrued service pension. 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. Disabled members who qualify for a Catastrophic Disability, as defined, receive a disability benefit equal to 100% of pensionable pay.

Members determined to be eligible for a non-duty connected disability benefit are entitled to a benefit equal to the greater of 27.5% of pensionable pay or the accrued service pension. 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 the accrued service pension.

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 who terminate with at least 10 years of credited pension service but have not met the requirements for an immediate service retirement, have the option for a Delayed Retirement benefit in lieu of a refund.

Delayed Retirement – A member with at least 10 but less than 20 years of credited pension service at termination of employment with the Houston Police Department (HPD) has the option of either a refund of member contributions, without interest, or a Delayed Retirement benefit. The Delayed Retirement 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 benefit payable when the sum of his or her age and service total 70 (Rule of 70) calculated at 2.25% of pensionable pay for each year of credited pension service.

Supplemental Monthly Benefit (13th 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.

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.

Houston Police Officers' Pension System

Notes to Financial Statements

Post Retirement Option Plan – The Post Retirement Option Plan (PROP) allows retired members and survivors to have all or a portion of their DROP lump sum credited to a notional account maintained by the System which accumulates interest and can be disbursed under certain options as designated by the System. 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

Contributions – All members are required to contribute 10.50% of pensionable pay. Contributions are made on a pre-tax basis pursuant to Governing Statutes.

Under the Governing Statute, the employer contribution rate is determined actuarially, based on a Risk Sharing Valuation Study (RSVS). The Governing Statute required a Final Risk Sharing Valuation Study (RSVS) as of June 30, 2016, which was completed September 25, 2017. This initial RSVS established a corridor midpoint for the employer contribution rate. While inside the RSVS Corridor, the actual employer contribution rate will be the greater of the estimated employer contribution rate and the corridor midpoint. For fiscal year 2022, the estimated employer contribution rate was 29.22%, which is less than the corridor midpoint of 31.92%, thus the employer contribution rate was 31.92%. For fiscal year 2021, the estimated employer contribution rate was 29.61%, which is less than the corridor midpoint of 31.84%, thus the employer contribution rate was 31.84%. The Governing Statute provides for various adjustments to actuarial methods, actuarial assumptions, and to benefits based upon where the annual estimated employer contribution is in relation to various points on the corridor.

City contributions in the Statements of Changes in Fiduciary Net Position may be greater than the statutorily required 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 Governing Statute and based on the July 1, 2022 actuarial valuation, the City contribution rates and the Actuarial Determined Contributions (ADC) are as shown in the table below for the ten years ending June 30, 2032.

(\$000's)

Years Ended June 30,	Compensation	Employer Contribution Rate *	Actuarially Determined Contribution (ADC)
2023	\$ 476,665	31.92 %	\$ 152,151
2024	491,460	32.03	157,415
2025	508,258	32.07	162,998
2026	526,001	32.10	168,846
2027	544,152	32.12	174,782
2028	562,471	32.13	180,722
2029	581,271	32.13	186,762
2030	601,486	32.13	193,257
2031	622,745	27.14	169,013
2032	644,573	27.14	174,937

* The corridor midpoint is used for years 2024 – 2032.

Houston Police Officers' Pension System

Notes to Financial Statements

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 – Accounting principles generally accepted in the United States of America require System management to evaluate tax positions taken by the System and recognize a tax liability if the plan has taken an uncertain position that more likely than not would not be sustained upon examination. As of June 30, 2022 and 2021, no such tax liabilities have been recognized by System management. 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. The plan is subject to audit by taxing jurisdictions; however, there are currently no audits for any tax periods in progress.

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.

Reclassification – Amounts previously reported as short term investment funds as of June 30, 2021 have been reclassified as fixed income commingled funds in the amount of \$71,167 thousand. This reclassification had no effect on net position restricted for pensions.

Adoption of New Accounting Standard – The System has adopted GASB Statement 87, *Leases*, (GASB 87). The primary objective of this statement is to increase the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. Under this statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. The effective date of this standard was initially for reporting periods beginning after December 15, 2019. GASB Statement No. 95 postponed the effective date to fiscal years beginning after June 15, 2021. In accordance with implementation of GASB Statement 87 (GASB 87), *Leases*, amounts previously reported as professional and administrative expenses as of June 30, 2021, have been reclassified as lease amortization expense in the amount of \$273 thousand. This reclassification had no effect on net position restricted for pensions.

Houston Police Officers' Pension System

Notes to Financial Statements

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 the Board. 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 System’s assets with acceptable target levels of leverage, and loss of capital, liquidity 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 margin, collateral, and liquidity purposes. The following was the Board’s adopted asset allocation policy as of June 30, 2022:

<u>Asset Class</u>	<u>Target Allocation</u>
Domestic equity	33.65 %
International equity	18.10
Fixed income	11.70
Credit	9.80
Alternative investments:	
Private equity	20.00
Real estate	10.00
Hedge funds	6.50
Cash	(9.75)
<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 Statement 72, *Fair Value Measurement and Application* (GASB 72), 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.

Houston Police Officers' Pension System

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In such cases, an investment's level within the fair value hierarchy is based on the lowest level of input that 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 tables summarize the valuation of the System's investments in accordance with the above mentioned fair value hierarchy levels as of June 30, 2022 and 2021.

Investments Measured at Fair Value

(\$000's)

June 30, 2022	Total	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
Short term investments				
Short term investment funds	\$ 809,816	\$ -	\$ 809,816	\$ -
Fixed income				
Corporate bonds	111,186	-	111,186	-
High yield funds	178,887	-	178,887	-
Total fixed income	290,073	-	290,073	-
Equity securities				
Domestic equities	205,296	82,594	122,702	-
Alternative investments				
Private equity				
Leveraged buyouts	835,395	-	-	835,395
Energy	155,338	-	-	155,338
Special situations	156,298	-	-	156,298
Private equity secondaries	128,464	-	-	128,464
Venture capital	7,929	-	-	7,929
Other alternatives				
Real estate	729,841	-	-	729,841
Private Credit	427,998	-	-	427,998
Total alternative investments	2,441,263	-	-	2,441,263
Foreign currency contracts	1,632	1,632	-	-
Total investments by fair value level	\$ 3,748,080	\$ 84,226	\$ 1,222,591	\$ 2,441,263
Investments measured at the net asset value (NAV)				
Domestic equities commingled funds	\$ 1,684,763			
International equities commingled funds	395,550			
Global macro hedge funds	149,343			
Multi-strategy hedge funds	182,392			
Fixed income commingled funds	643,139			
Long/short credit hedge funds	4,072			
Long/short equity hedge funds	32,296			
Total investments measured at the NAV	3,091,555			
Total investments measured at fair value	\$ 6,839,635			

Houston Police Officers' Pension System

Notes to Financial Statements

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

June 30, 2021	Fair Value Measurements Using			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
Short term investments				
Short term investment funds	\$ 1,007,642	\$ -	\$ 1,007,642	\$ -
Fixed income				
Corporate bonds	79,548	-	79,548	-
High yield funds	302,068	-	302,068	-
Total fixed income	381,616	-	381,616	-
Equity securities				
Domestic equities	137,243	18	137,225	-
Alternative investments				
Private equity				
Leveraged buyouts	728,478	-	2,573	725,905
Energy	129,797	-	-	129,797
Special situations	161,880	-	-	161,880
Private equity secondaries	106,570	-	-	106,570
Venture capital	14,961	-	-	14,961
Other alternatives				
Real estate	564,338	-	(590)	564,928
Private Credit	381,541	-	-	381,541
Total alternative investments	2,087,565	-	1,983	2,085,582
Total investments by fair value level	\$ 3,614,066	\$ 18	\$ 1,528,466	\$ 2,085,582
Investments measured at the net asset value (NAV)				
Domestic equities commingled funds	\$ 1,981,011			
International equities commingled funds	548,766			
Global macro hedge funds	105,365			
Multi-strategy hedge funds	161,126			
Fixed income commingled funds	666,601			
Long/short credit hedge funds	3,937			
Long/short equity hedge funds	36,964			
Total investments measured at the NAV	3,503,770			
Total investments measured at fair value	\$ 7,117,836			

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, ETF's, and units of commingled fixed income funds consisting of US government and US government agency securities, and US corporate bonds.

Equity investments consist of ETF's and units in both US and non-US commingled equity funds.

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

Houston Police Officers' Pension System

Notes to Financial Statements

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 the System's investment in limited partnerships at the dollar value provided by the general partners as of June 30 of each fiscal year as opposed to a March 31 valuation date as is commonly used by many investors due to the time-lag in receiving such information from 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.

The System's custodian values commingled funds at the net asset value provided by the commingled fund's custodian or administrator, as is applicable. 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 each commingled fund.

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The valuation method for investments measured at the net asset value (NAV) per share (or its equivalent) is presented on the following tables as of June 30, 2022 and 2021.

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

<u>June 30, 2022</u>	<u>Total</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency (If Currently Eligible)</u>	<u>Redemption Notice Period</u>
Domestic equities commingled funds ⁽¹⁾	\$ 1,684,763	\$ -	Daily	1 day
International equities commingled funds ⁽¹⁾	395,550	-	Daily	3 days
Global macro hedge funds ⁽²⁾	149,343	-	Monthly	5 days
Multi-strategy hedge funds ⁽³⁾	182,392	-	Various up to three years	60-90 days
Fixed income commingled funds ⁽⁴⁾	643,139	-	Daily	2 days
Long/short credit hedge funds ⁽⁵⁾	4,072	-	Various up to three years	60-90 days
Long/short equity hedge funds ⁽⁶⁾	32,296	-	Annually	60-90 days
Total investments measured at the NAV	<u>\$ 3,091,555</u>	<u>\$ -</u>		

1. *Equities Commingled Funds* – This type invests in five funds, three that are invested in domestic equities and two that are invested in international equities. 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 have daily liquidity with a one to three day notice period.
2. *Global Macro Hedge Funds* - This type invests in two 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. These funds have monthly liquidity with a five day notice period.
3. *Multi-Strategy Hedge Funds* - This type invests in four 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. One fund has quarterly liquidity over four quarters. Three other funds are in various stages of liquidation, estimated at up to two years.
4. *Fixed Income Commingled Funds* – This type invests in four domestic bond funds. The fair value of the investment in this type has been determined using the NAV per share (or its equivalent) of the investments. These funds have daily liquidity with a two day notice period.
5. *Long / Short Credit Hedge Funds* - This type includes investments in two 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. These funds are in various stages of liquidation, estimated at up to three years.
6. *Long / Short Equity Hedge Funds* - This type includes an investment in one hedge fund that invests 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. This fund has annual liquidity.

Houston Police Officers' Pension System

Notes to Financial Statements

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

<u>June 30, 2021</u>	<u>Total</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency (If Currently Eligible)</u>	<u>Redemption Notice Period</u>
Domestic equities commingled funds (1)	\$ 1,981,011	\$ -	Daily	1 day
International equities commingled funds (1)	548,766	-	Daily	3 days
Global macro hedge funds (2)	105,365	-	Monthly	5 days
Multi-strategy hedge funds (3)	161,126	-	Various up to three years	60-90 days
Fixed income commingled funds (4)	666,601	-	Daily	2 days
Long/short credit hedge funds (5)	3,937	-	Various up to three years	60-90 days
Long/short equity hedge funds (6)	36,964	-	Annually	60-90 days
Total investments measured at the NAV	<u>\$ 3,503,770</u>	<u>\$ -</u>		

1. *Equities Commingled Funds* – This type invests in six funds, four that are invested in domestic equities and two that are invested in international equities. 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 have daily liquidity with a one to three day notice period.
2. *Global Macro Hedge Funds* - This type invests in two 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. These funds have monthly liquidity.
3. *Multi-Strategy Hedge Funds* - This type invests in four 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. One fund has quarterly liquidity over four quarters. Three other funds are in various stages of liquidation, estimated at up to two years.
4. *Fixed Income Commingled Funds* – This type invests in four domestic bond funds. The fair value of the investment in this type has been determined using the NAV per share (or its equivalent) of the investments. These funds have daily liquidity.
5. *Long / Short Credit Hedge Funds* - This type includes investments in two 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. These funds are in various stages of liquidation, estimated at up to three years.
6. *Long / Short Equity Hedge Funds* - This type includes an investment in one hedge fund that invests 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. This fund has annual liquidity.

Concentrations – As of both June 30, 2022 and 2021, the System did not have any single investment in any one organization which represented greater than 5% of plan net position.

Rate of return – For the year ended June 30, 2022, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was (1.4)%. For the year ended June 30, 2021, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 32.3%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Houston Police Officers' Pension System

Notes to Financial Statements

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's policy regarding custodial credit risk requires counterparty exposures of each investment manager and strategy, as well as the overall counterparty exposure of the Fund, will be actively managed and monitored by investment managers and staff. The System considers only demand deposits as cash. As of June 30, 2022 and 2021, the System had a balance of \$441 thousand and \$24 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, 2022, \$191 thousand of the System's bank balance of \$441 thousand was exposed to custodial credit risk. At June 30, 2022, 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, 2022 and 2021, the System's fixed income assets that are not U.S. government guaranteed represented 86.4% and 96.5%, respectively, 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 as of June 30, 2022 and 2021.

Average Credit Quality and Exposure Levels of Non-U.S. Government Guaranteed Securities (\$000's)

Fixed Income Security Type	Fair Value June 30, 2022	Percent of Total	Weighted Average Credit Quality
Corporate Bonds	\$ 258,660	17.2 %	B
Corporate Convertible Bonds	31,413	2.1	B
Mutual Bond Funds	406,109	27.0	Not Rated
Short Term Investment Funds	809,816	53.7	Not Rated
Total	\$ 1,505,998	100.0	

Fixed Income Security Type	Fair Value June 30, 2021	Percent of Total	Weighted Average Credit Quality
Corporate Bonds	\$ 252,011	12.7 %	B
Corporate Convertible Bonds	129,605	6.5	BB
Mutual Bond Funds	595,434	30.0	Not Rated
Short Term Investment Funds	1,007,642	50.8	Not Rated
Total	\$ 1,984,692	100.0 %	

Houston Police Officers' Pension System

Notes to Financial Statements

Ratings Dispersion Detail

(\$000's)

Credit Rating Level	Corporate Bonds	Corporate Convertible Bonds	Mutual Bond Funds	Short Term Investment Funds
June 30, 2022				
BBB	\$ 8,900	\$ -	\$ -	\$ -
BB	127,602	322	-	-
B	95,479	311	-	-
CCC	23,478	747	-	-
Not rated	3,201	30,033	406,109	809,816
Total	\$ 258,660	\$ 31,413	\$ 406,109	\$ 809,816

Credit Rating Level	Corporate Bonds	Corporate Convertible Bonds	Mutual Bond Funds	Short Term Investment Funds
June 30, 2021				
A	\$ -	\$ 3,279	\$ -	\$ -
BBB	8,777	5,630	-	-
BB	128,973	2,873	-	-
B	81,569	2,228	-	-
CCC	25,046	3,181	-	-
Not rated	7,646	112,414	595,434	1,007,642
Total	\$ 252,011	\$ 129,605	\$ 595,434	\$ 1,007,642

The System's investment policy allows investment managers full discretion in adopting investment strategies to deal with these risks. Specific guidelines governing risks and concentrations and portfolio quality are established in contracts with each manager and are monitored by System staff.

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 does not provide for specific limits on investment in any one single security, as this is governed by contracts with individual managers. As of June 30, 2022 and 2021, the System did not have any single investment in any one organization which represented greater than 5% of plan net position.
- *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's investment policy delegates the management of interest rate risk to the individual investment managers in accordance with each manager's designated strategy. 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.

Houston Police Officers' Pension System

Notes to Financial Statements

The reporting of modified duration as of June 30, 2022 and 2021, found in the tables below and on the following page quantify the interest rate risk of the System's fixed income and short term investments. Interest rate risks associated with derivative instruments are found in the derivatives disclosures of these notes.

Modified Duration by Security Type

(\$000's)

Security Type	Fair Value	Percent of	Weighted Average
June 30, 2022	(\$000's)	Total	Modified Duration (years)
U.S. Treasuries	\$ 237,030	13.6 %	2.4
Corporate Bonds	258,660	14.8	3.6
Corporate Convertible Bonds	31,413	1.8	3.8
Mutual Bond Funds	406,109	23.3	5.0
Short Term Investment Funds	809,816	46.5	0.1
Total	\$ 1,743,028	100.0 %	

Security Type	Fair Value	Percent of	Weighted Average
June 30, 2021	(\$000's)	Total	Modified Duration (years)
U.S. Treasuries	\$ 71,167	3.5 %	2.6
Corporate Bonds	252,011	12.3	4.6
Corporate Convertible Bonds	129,605	6.3	4.9
Mutual Bond Funds	595,434	29.0	6.1
Short Term Investment Funds	1,007,642	48.9	0.1
Total	\$ 2,055,859	100.0 %	

Houston Police Officers' Pension System

Notes to Financial Statements

Modified Duration Analysis by Security Type

(\$000's)

U.S. Treasuries	Fair Value June 30, 2022	Average Modified Duration	Contribution to Modified Duration
Less than 1 year	\$ 41,954	2.5	0.4
1 to 5 years maturities	195,076	2.5	2.0
Total	\$ 237,030		2.4
Corporate Bonds			
Less than 1 year	\$ 9,674	0.6	0.0
1 to 5 years maturities	175,946	2.9	2.0
5 to 10 years maturities	66,612	5.4	1.4
Greater than 10 years maturities	6,428	8.8	0.2
Total	\$ 258,660		3.6
Corporate Convertible Bonds			
Less than 1 year	\$ 1,091	0.8	0.0
1 to 5 years maturities	25,469	3.5	2.8
5 to 10 years maturities	4,582	5.4	0.8
Greater than 10 years maturities	271	26.2	0.2
Total	\$ 31,413		3.8
Mutual Bond Funds			
Less than 1 year	\$ 8,544	5.0	0.1
1 to 5 years maturities	164,907	5.0	2.0
5 to 10 years maturities	170,291	5.0	2.1
Greater than 10 years maturities	62,367	5.0	0.8
Total	\$ 406,109		5.0
Short Term Investment Funds			
Less than 1 year	\$ 763,627	0.1	0.1
1 to 5 years maturities	46,189	0.1	0.0
Total	\$ 809,816		0.1

Houston Police Officers' Pension System

Notes to Financial Statements

Modified Duration Analysis by Security Type

(\$000's)

U.S. Treasuries	Fair Value June 30, 2021	Average Modified Duration	Contribution to Modified Duration
Less than 1 year	\$ 10,903	2.7	0.4
1 to 5 years maturities	60,264	2.7	2.2
Total	\$ 71,167		2.6
Corporate Bonds			
Less than 1 year	\$ 5,267	0.6	0.0
1 to 5 years maturities	131,034	3.2	1.6
5 to 10 years maturities	100,779	5.7	2.3
Greater than 10 years maturities	14,931	11.2	0.7
Total	\$ 252,011		4.6
Corporate Convertible Bonds			
Less than 1 year	\$ 3,484	0.7	0.0
1 to 5 years maturities	90,444	3.8	2.6
5 to 10 years maturities	30,629	6.3	1.5
Greater than 10 years maturities	5,048	21.8	0.8
Total	\$ 129,605		4.9
Mutual Bond Funds			
Less than 1 year	\$ 13,604	6.1	0.1
1 to 5 years maturities	274,862	6.1	2.8
5 to 10 years maturities	227,893	6.1	2.4
Greater than 10 years maturities	79,075	6.1	0.8
Total	\$ 595,434		6.1
Short Term Investment Funds			
Less than 1 year	\$ 991,108	0.1	0.1
1 to 5 years maturities	16,534	0.1	0.0
Total	\$ 1,007,642		0.1

- Foreign Currency Risk** – Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. The System's investment policy states currency exposure of each investment manager and strategy, as well as the overall currency exposure of the System, will be based upon an active decision making process as opposed to accepting currency exposure as a default position of such manager or strategy. Fifty percent of the Euro, Yen, Pound and Yuan exposure in the System's developed non-US public equity allocation will be the target hedge ratio while Staff has the authority to tactically adjust this hedge with a 25% floor and a 75% ceiling. 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 Statement of Net Position 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

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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, 2022 and 2021, are shown in the tables below and on the following page.

Foreign Currency Exposure by Asset Class (\$000's)

June 30, 2022

Currency	Short Term Investments	Fixed Income	Equities	Alternative Investments	Foreign Currency Contracts	Total
Canadian dollar	\$ 30,664	\$ -	\$ 106,036	\$ -	\$ -	\$ 136,700
Euro	(86,931)	-	194,644	752	-	108,465
Japanese yen	(62,105)	-	140,117	-	-	78,012
Swiss franc	-	-	66,098	-	-	66,098
Australian dollar	-	-	49,475	7,740	-	57,215
British pound sterling	(43,916)	-	100,492	-	-	56,576
Chilean peso	-	-	47,486	-	-	47,486
HK offshore Chinese Yuan Renminbi	-	-	-	-	(31,068)	(31,068)
Swedish krona	-	-	21,245	-	-	21,245
Hong Kong dollar	-	-	21,003	-	-	21,003
South Korean won	-	-	19,452	-	-	19,452
Danish krone	-	-	17,372	-	-	17,372
Hungarian forint	-	-	17,037	-	-	17,037
South African rand	-	-	15,218	-	-	15,218
Singapore dollar	-	-	9,183	-	-	9,183
Norwegian krone	-	-	5,285	-	-	5,285
New Israeli shekel	-	-	4,798	-	-	4,798
Saudi riyal	-	-	4,752	-	-	4,752
Malaysian ringgit	-	-	2,844	-	-	2,844
New Taiwan dollar	-	-	2,547	-	-	2,547
Indian rupee	-	-	2,445	-	-	2,445
Kuwaiti dinar	-	-	1,960	-	-	1,960
Turkish lira	-	-	1,696	-	-	1,696
Polish zloty	-	-	1,386	-	-	1,386
New Zealand dollar	-	-	1,137	-	-	1,137
Indonesian rupiah	-	-	1,102	-	-	1,102
Peruvian nuevo sol	-	-	962	-	-	962
Philippine peso	-	-	808	-	-	808
Brazilian real	-	-	684	-	-	684
Thai baht	-	-	376	-	-	376
Egyptian pound	-	-	339	-	-	339
Mexican peso	-	-	294	-	-	294
Colombian peso	-	-	219	-	-	219
Chinese yuan renminbi	-	-	214	-	-	214
Czech koruna	-	-	88	-	-	88
Total	\$ (162,288)	\$ -	\$ 858,794	\$ 8,492	\$ (31,068)	\$ 673,930

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Foreign Currency Exposure by Asset Class (\$000's) June 30, 2021

Currency	Short Term		Equities	Alternative Investments	Total
	Investments	Fixed Income			
Canadian dollar	\$ 57,775	\$ -	\$ 99,400	\$ -	\$ 157,175
Chinese yuan renminbi	-	-	146,055	-	146,055
Euro	(152,020)	-	278,175	2,756	128,911
Japanese yen	(107,521)	-	202,478	-	94,957
Australian dollar	-	-	62,838	6,855	69,693
Swiss franc	-	-	65,191	-	65,191
Thai baht	-	-	60,596	-	60,596
New Taiwan dollar	-	-	42,344	-	42,344
Hong Kong dollar	-	-	35,038	-	35,038
Kuwaiti dinar	-	-	34,709	-	34,709
Swedish krona	-	-	28,363	-	28,363
Indonesian rupiah	-	-	27,892	-	27,892
South Korean won	-	-	25,657	-	25,657
Brazilian real	-	-	22,653	-	22,653
Danish krone	-	-	22,616	-	22,616
Singapore dollar	-	-	18,178	-	18,178
Indian rupee	-	-	17,587	-	17,587
New Zealand dollar	-	-	16,056	-	16,056
Saudi riyal	-	-	14,511	-	14,511
British pound sterling	(66,523)	-	79,949	-	13,426
Hungarian forint	-	-	10,510	-	10,510
Turkish lira	-	-	6,967	-	6,967
Pakistan rupee	-	-	6,709	-	6,709
Mexican peso	-	-	5,326	-	5,326
New Israeli shekel	-	-	5,236	-	5,236
Norwegian krone	-	-	4,179	-	4,179
South African rand	-	-	3,638	-	3,638
Russian ruble	-	-	2,746	-	2,746
Polish zloty	-	-	2,663	-	2,663
Qatari riyal	-	-	2,459	-	2,459
Malaysian ringgit	-	-	2,166	-	2,166
Chilean peso	-	-	1,894	-	1,894
United Arab Emirates dirham	-	-	1,015	-	1,015
Philippine peso	-	-	788	-	788
Colombian peso	-	-	633	-	633
Argentine austral	-	-	540	-	540
Czech koruna	-	-	446	-	446
Egyptian pound	-	-	280	-	280
Peruvian nuevo sol	-	-	80	-	80
Total	\$ (268,289)	\$ -	\$ 1,358,560	\$ 9,611	\$ 1,099,882

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

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collateral. The System holds an undivided share of the collateral provided by the borrowers of the securities. At June 30, 2022 the weighted-average maturity of the collateral pool was 31 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, 2022 and 2021, was \$237,338 thousand and \$125,217 thousand, respectively. The System also had non-cash collateral at June 30, 2022 and 2021, of \$10,282 thousand and \$8,095 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, 2022 and 2021, was \$241,244 thousand and \$130,019 thousand, respectively. At June 30, 2022, the System had no credit risk exposure to borrowers because the amounts the System owes the borrowers, \$247,620 thousand, exceeds the amounts the borrowers owe the System, \$241,244 thousand.

Derivatives – The System's investment managers may invest in derivatives if permitted by the manager's contract with 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. These investment derivatives are primarily classified in Level 1 of the fair value hierarchy as futures contracts are price base on market quotes.

The fair value balance of posted margin, collateral and notional amounts of derivative instruments outstanding at June 30, 2022 and 2021, classified by type, and the changes in fair value of such derivative instruments for the years then ended is shown in the tables below. The Change in Fair Value figures are reported as a component of net appreciation (depreciation) in the Statements of Changes in Fiduciary Net Position.

Derivative Investments by Type (\$000's)

	Year ending	As of June 30, 2022			
	June 30, 2022	Posted	Collateral Held at	Collateral Held at	Notional
	Changes in Fair Value	Margin	Custodian Bank	Broker	Value
Equity Futures	\$ (251,904)	\$ 32,932	\$ 549,747	\$ -	\$ 599,657
Currency Futures	40,839	(216)	110,350	-	(160,947)
Currency Forwards	(1,843)	-	-	-	(31,068)
Commodity Futures	(3,349)	(1,699)	34,876	3,474	36,444
Equity Options	64,604	-	89,604	-	1,000,000

	Year ending	As of June 30, 2021			
	June 30, 2021	Posted	Collateral Held at	Collateral Held at	Notional
	Changes in Fair Value	Margin	Custodian Bank	Broker	Value
Equity Futures	\$ 368,793	\$ 82,417	\$ 782,721	\$ -	\$ 1,364,025
Currency Futures	(2,047)	1,150	67,708	-	(270,275)
Fixed Income Futures	(1,837)	(72)	10,422	-	40,122

Futures and options are used to obtain long and short market exposure, leverage portfolio positions and to take advantage of mis-pricing opportunities. When a position is taken in a futures contract, margin is posted and the contract is subject to daily mark-to-market adjustments. 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 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.

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- *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 and instead 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.
- *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 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, 2022 and 2021, is shown in the tables below and on the following page.

Foreign Currency Exposure for Derivatives (\$000's) June 30, 2022

Currency	Equity Derivatives	Currency Derivatives	Total
Canadian dollar	\$ 30,291	\$ 32,012	\$ 62,303
Chilean peso	47,486	-	47,486
Swiss franc	29,403	-	29,403
Australian dollar	22,009	-	22,009
South Korean won	19,452	-	19,452
Hungarian forint	17,037	-	17,037
South African rand	15,218	-	15,218
Swedish krona	9,451	-	9,451
Hong Kong dollar	9,343	-	9,343
Danish krone	7,728	-	7,728
Saudi riyal	4,752	-	4,752
Singapore dollar	4,085	-	4,085
Malaysian ringgit	2,844	-	2,844
New Taiwan dollar	2,547	-	2,547
Indian rupee	2,445	-	2,445
Norwegian krone	2,351	-	2,351
New Israeli shekel	2,135	-	2,135
Kuwaiti dinar	1,960	-	1,960
Turkish lira	1,696	-	1,696
Polish zloty	1,386	-	1,386
Indonesian rupiah	1,102	-	1,102
Peruvian nuevo sol	962	-	962
Philippine peso	808	-	808
British pound sterling	44,704	(43,916)	788
Brazilian real	684	-	684
New Zealand dollar	506	-	506
Thai baht	376	-	376
Egyptian pound	339	-	339
Mexican peso	294	-	294
Euro	86,708	(86,939)	(231)
Japanese yen	62,330	(62,105)	225
Colombian peso	219	-	219
Chinese yuan renminbi	214	-	214
Czech koruna	88	-	88
Total	\$ 432,953	\$ (160,948)	\$ 272,005

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Foreign Currency Exposure for Derivatives (\$000's)

June 30, 2021

Currency	Equity Derivatives	Currency Derivatives	Total
Canadian dollar	\$ 60,800	\$ 55,789	\$ 116,589
Chinese yuan renminbi	88,298	-	88,298
Swiss franc	52,454	-	52,454
Australian dollar	38,484	-	38,484
Thai baht	36,631	-	36,631
Kuwaiti dinar	34,709	-	34,709
Euro	178,742	(152,020)	26,722
Indonesian rupiah	25,994	-	25,994
Swedish krona	20,072	-	20,072
Hong Kong dollar	17,395	-	17,395
Japanese yen	124,016	(107,521)	16,495
Danish krone	13,863	-	13,863
Brazilian real	13,691	-	13,691
Singapore dollar	13,250	-	13,250
British pound sterling	78,747	(66,523)	12,224
Hungarian forint	10,125	-	10,125
New Taiwan dollar	9,188	-	9,188
Saudi riyal	8,770	-	8,770
Pakistan rupee	4,574	-	4,574
Turkish lira	4,207	-	4,207
Norwegian krone	3,372	-	3,372
Mexican peso	3,225	-	3,225
New Israeli shekel	3,211	-	3,211
South Korean won	2,954	-	2,954
Qatari riyal	1,828	-	1,828
Russian ruble	1,660	-	1,660
Polish zloty	1,610	-	1,610
New Zealand dollar	1,338	-	1,338
Malaysian ringgit	1,310	-	1,310
Chilean peso	1,148	-	1,148
United Arab Emirates dirham	614	-	614
Indian rupee	580	-	580
Philippine peso	475	-	475
Colombian peso	381	-	381
Argentine austral	326	-	326
Czech koruna	270	-	270
Egyptian pound	171	-	171
Peruvian nuevo sol	47	-	47
Total	\$ 858,530	\$ (270,275)	\$ 588,255

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Alternative Investments – As of June 30, 2022 and 2021, 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, 2022	June 30, 2021
<i>Private Equity</i>		
Leveraged Buyouts	\$ 835,395	\$ 728,478
Energy	155,338	129,797
Special Situations	156,298	161,880
Private Equity Secondaries	128,464	106,570
Venture Capital	7,929	14,961
<i>Other Alternatives</i>		
Real Estate	729,841	564,338
Private Credit	427,998	381,541
<i>Hedge Funds</i>		
Global macro hedge funds	149,343	105,365
Multi-strategy hedge funds	182,392	161,126
Long/short credit hedge funds	4,072	3,937
Long/short equity hedge funds	32,296	36,964
	<u>\$ 2,809,366</u>	<u>\$ 2,394,957</u>

Supplemental Information on investment and professional expenses included in Summary of Investment and Professional Services on page 40 herein does not include the investment management fees and performance fees embedded in the structure of the private equity 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 Statements of Changes in Fiduciary Net Position.

5. Capital Assets

Land – In December of 2020, the System purchased land in Houston, Texas for \$5,322 thousand.

Building – In April of 2021, the System began the process of designing a single-tenant office building for use in its operations. The costs associated with the construction of the building were capitalized and classified as building in the Statements of Fiduciary Net Position. In November of 2021, the project was terminated and the previously capitalized costs were expensed in the current fiscal year.

Lease – The System has a lease for the office it occupies through October 31, 2023 with an on-going right to terminate the lease from and after November 1, 2022 upon at least six months prior written irrevocable notice to the landlord. As a result of implementing GASB 87, the System has recorded a right-to-use lease asset. The right-to-use lease asset is initially measured at an amount equal to the initial measurement of the related lease liability. The right-to-use lease asset is amortized on a straight-line basis over the life of the related lease, as detailed in the following chart (\$000's).

	June 30, 2022	June 30, 2021
Right-to-use lease asset - initial	\$ 740	\$ 1,013
Accumulated amortization expense	302	273
<u>Right-to-use lease asset</u>	<u>\$ 438</u>	<u>\$ 740</u>

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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. Effective July 1, 2017, 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 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 July 1, 2017, the member's contributions were also credited to this notional DROP account.

Prior to July 1, 2017, employee contributions were also credited to the member's notional DROP account. For the period from October 9, 2004 through June 30, 2017, an eligible member contributed 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. Prior to October 9, 2004, 100% of a member's contributions were credited to his or her notional DROP account. The following tables page show the change in DROP accounts during the years ended June 30, 2022 and 2021.

DROP Activity

	DROP Accounts (\$000's)		DROP Participants
Year ended June 30, 2022			
Balance at June 30, 2021	\$ 778,780	Participants at June 30, 2021	1,571
Accumulations	136,476	Entrants	77
Transfers to PROP	(179,156)	Withdrawals	(244)
Distributions	(30,924)	Participants at June 30, 2022	<u>1,404</u>
Balance at June 30, 2022	<u>\$ 705,176</u>		
Year ended June 30, 2021			
Balance at June 30, 2020	\$ 824,325	Participants at June 30, 2020	1,673
Accumulations	126,324	Entrants	95
Transfers to PROP	(120,406)	Withdrawals	(197)
Distributions	(51,463)	Participants at June 30, 2021	<u>1,571</u>
Balance at June 30, 2021	<u>\$ 778,780</u>		

The Post Retirement Option Plan (PROP) prior to July 1, 2017, allowed retired members to have all or a portion of their monthly benefit 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. Effective July 1, 2017, retired members can no longer credit a portion of their monthly benefit to the PROP account. Surviving spouses can transfer a DROP or PROP balance to a PROP account of their own and are also 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 tables on the following page show the change in PROP accounts during the years ended June 30, 2022 and 2021.

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PROP Activity

Year ended June 30, 2022	PROP Accounts (\$000's)		PROP Participants
Balance at June 30, 2021	\$ 1,213,558	Participants at June 30, 2021	2,054
Accumulations	59,662	Entrants	181
Transfers from DROP	179,156	Withdrawals	(27)
Distributions	(75,174)	Participants at June 30, 2022	2,208
Balance at June 30, 2022	<u>\$ 1,377,202</u>		

Year ended June 30, 2021	PROP Accounts (\$000's)		PROP Participants
Balance at June 30, 2020	\$ 1,155,794	Participants at June 30, 2020	1,975
Accumulations	28,552	Entrants	108
Transfers from DROP	120,406	Withdrawals	(29)
Distributions	(91,194)	Participants at June 30, 2021	2,054
Balance at June 30, 2021	<u>\$ 1,213,558</u>		

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, 2022 and 2021 were as follows (\$000's):

	<u>6/30/2022</u>	<u>6/30/2021</u>
Total pension liability	\$ 7,585,734	\$ 7,343,837
Plan fiduciary net position	<u>6,861,988</u>	<u>7,137,251</u>
System's net pension liability	<u>\$ 723,746</u>	<u>\$ 206,586</u>
Plan fiduciary net position as a percentage of the total pension liability	90.46%	97.19%

Actuarial assumptions – The total pension liability was determined by an actuarial valuation as of July 1, 2022 and July 1, 2021, using the following actuarial assumptions, applied to all periods included in the measurement:

	<u>July 1, 2022</u>	<u>July 1, 2021</u>
Inflation	2.30%	2.30%
Salary Increases	0.00% to 20.00% , plus a 3.25% inflation and productivity component	0.00% to 20.00% , plus a 2.75% inflation and productivity component
Investment Rate of Return	7.00%, net of pension plan investment expense, including inflation	7.00%, net of pension plan investment expense, including inflation
Mortality	Healthy retirees - The Gender-distinct Pub-2010 Public Safety Healthy Mortality Tables for males and females. The rates are projected on a fully generational basis by the ultimate values of scale MP-20 to account for future mortality improvements.	Healthy retirees - The Gender-distinct RP-2014 Healthy Annuitant Mortality Tables with Blue Collar Adjustment for Males and no collar adjustment for Females. The rates are projected from the 2006 central rates to 2018 using scale MP-2017, and thereafter on a fully generational basis by the ultimate

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Disabled males and females - The Gender-Distinct Pub-2010 Public Safety Disabled Retiree Mortality Tables are used without adjustment. The rates are projected on a fully generational basis by the ultimate values of scale MP-20 to account for future mortality improvements.

Active members - The Gender-Distinct Pub-2010 Below-Median Income Public Safety Mortality Tables are used without adjustment. The rates are projected on a fully generational basis by the ultimate values of scale MP-20 to account for future mortality improvements..

values of scale MP-2014 to account for future mortality improvements.

Disabled members - The gender-distinct RP-2014 Disabled Retiree Mortality Tables are used without adjustment. The rates are projected on a fully generational basis by the ultimate values of scale MP-2014 to account for future mortality improvements.

Active members - The Gender-distinct RP-2014 Employee Mortality Tables with Blue Collar Adjustment. The rates are projected on a fully generational basis by the ultimate values of scale MP-2014 to account for future mortality improvements..

The long-term expected rate of return on the System's investments was determined using historical and forecasted return, volatility and Sharpe ratios in combination with 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, 2021 (see the discussion of the pension plan's investment policy) are summarized in the following table:

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return</u>
Domestic equity	3.90 %
International equity	5.10
Fixed income	(1.10)
Credit	3.40
Alternative investments:	
Private equity	7.40
Real estate	4.90
Hedge funds	3.20
Cash	(0.80)

Discount rate – A single discount rate of 7.00% was used to measure the total pension liability for the June 30, 2022 measurement date. This single discount rate was based on the expected rate of return on pension plan investments of 7.00% and the current municipal bond rate was not applicable. 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 the rate determined actuarially in the annual RSVS study. 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 7.00% was applied to all periods of projected benefit payments to determine the total pension liability. For the June 30, 2021 measurement date, the single discount rate used was 7.00%.

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Sensitivity of the net pension liability to changes in the discount rate – The following table presents the net pension liability as of July 1, 2022, calculated using the discount rate of 7.00%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

(\$000's)	1% Decrease	Current	1% Increase
	6.00%	Discount Rate 7.00%	8.00%
Net pension liability (asset)	\$ 1,512,300	\$ 723,746	\$ 76,295

8. Commitments and Contingencies

As described in Note 1, there are 3,696 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, 2022 and 2021, aggregate contributions from these members of the System were \$233,493 thousand and \$210,267 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, 2022 and 2021, the total accumulated lump sum benefit due to DROP members was \$705,176 thousand and \$778,780 thousand, respectively.

At June 30, 2022 and 2021, the total accumulated lump sum benefit due to PROP participants was \$1,377,202 thousand and \$1,213,558 thousand, respectively.

The System has outstanding investment commitments to various limited partnerships totaling \$1,482,267 thousand and \$1,161,854 thousand, as of June 30, 2022 and 2021, respectively. These outstanding commitment amounts include amounts that will come due for investments that were made on behalf of the limited partnerships prior to the Statement of Net Position dates.

The System has a lease for the office it occupies through October 31, 2023. The System has the on-going right to terminate the lease from and after November 1, 2022 upon at least six months prior written irrevocable notice to the landlord.

	June 30, 2022	June 30, 2021
Beginning lease liability	\$ 740	\$ 1,013
Additions	-	-
Deletions	302	273
Ending lease liability	\$ 438	\$ 740

The projected principal and interest payments on the outstanding lease commitment is as detailed in the following chart (\$000's).

Year Ending June 30	Principal Payments	Interest Payments	Total
2023	\$ 325	\$ 12	\$ 337
2024	113	1	114
	\$ 438	\$ 13	\$ 451

9. Subsequent Events

The System has evaluated subsequent events through October 21, 2022, the date the financial statements were available for issuance. The System has determined that no subsequent events require disclosure in these financial statements.

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

Schedule of Changes in the System's Net Pension Liability and Related Ratios
(\$000's)

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability									
Service Cost	\$ 74,350	\$ 73,040	\$ 70,080	\$ 66,750	\$ 63,632	\$ 60,930	\$ 66,098	\$ 56,062	\$ 52,844
Interest	503,548	484,527	474,376	462,692	445,113	433,598	488,223	473,065	466,649
Benefit Changes ⁽¹⁾	-	-	-	-	-	(1,006,000)	-	-	-
Difference between Expected and Actual Experience	46,309	99,635	(23,461)	(16,454)	69,534	80,023	10,390	26,706	(41,034)
Assumption Changes	(7,383)	-	-	-	21,399	778,710	(676,151)	664,974	162,849
Benefit Payments	(372,282)	(394,893)	(355,373)	(335,600)	(361,033)	(458,733)	(259,076)	(225,656)	(211,690)
Refunds	(2,645)	(2,433)	(2,209)	(2,278)	(1,329)	(1,696)	(978)	(945)	(906)
Net Change in Total Pension Liability	241,897	259,876	163,413	175,110	237,316	(113,168)	(371,494)	994,206	428,712
Total Pension Liability - Beginning	7,343,837	7,083,961	6,920,548	6,745,438	6,508,122	6,621,290	6,992,784	5,998,578	5,569,866
Total Pension Liability - Ending (a)	<u>\$ 7,585,734</u>	<u>\$ 7,343,837</u>	<u>\$ 7,083,961</u>	<u>\$ 6,920,548</u>	<u>\$ 6,745,438</u>	<u>\$ 6,508,122</u>	<u>\$ 6,621,290</u>	<u>\$ 6,992,784</u>	<u>\$ 5,998,578</u>
Plan Fiduciary Net Position									
Employer Contributions	\$ 152,375	\$ 151,094	\$ 149,078	\$ 142,429	\$ 887,143	\$ 133,805	\$ 137,392	\$ 113,665	\$ 103,372
Employee Contributions	50,028	49,749	49,062	46,896	45,254	40,104	39,017	37,719	37,012
Pension Plan Net Investment Income	(98,537)	1,764,927	61,193	340,166	463,080	667,476	(135,833)	35,341	649,153
Benefit Payments	(372,282)	(394,893)	(355,373)	(335,600)	(361,033)	(458,733)	(259,076)	(225,656)	(211,690)
Refunds	(2,645)	(2,433)	(2,209)	(2,278)	(1,329)	(1,696)	(978)	(945)	(906)
Pension Plan Administrative Expense	(4,202)	(3,669)	(3,922)	(3,580)	(3,679)	(4,238)	(4,585)	(3,478)	(3,439)
Net Change in Plan Fiduciary Net Position	(275,263)	1,564,775	(102,171)	188,033	1,029,436	376,718	(224,063)	(43,354)	573,502
Plan Fiduciary Net Position - Beginning	7,137,251	5,572,476	5,674,647	5,486,614	4,457,178	4,080,460	4,304,523	4,347,877	3,774,375
Plan Fiduciary Net Position - Ending (b)	<u>\$ 6,861,988</u>	<u>\$ 7,137,251</u>	<u>\$ 5,572,476</u>	<u>\$ 5,674,647</u>	<u>\$ 5,486,614</u>	<u>\$ 4,457,178</u>	<u>\$ 4,080,460</u>	<u>\$ 4,304,523</u>	<u>\$ 4,347,877</u>
Net Pension Liability - Ending (a) - (b)	\$ 723,746	\$ 206,586	\$ 1,511,485	\$ 1,245,901	\$ 1,258,824	\$ 2,050,944	\$ 2,540,830	\$ 2,688,261	\$ 1,650,701
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	90.46%	97.19%	78.66%	82.00%	81.34%	68.49%	61.63%	61.56%	72.48%
Covered Payroll	\$ 476,453	\$ 473,801	\$ 464,301	\$ 444,871	\$ 412,786	\$ 424,300	\$ 407,058	\$ 395,360	\$ 388,756
Net Pension Liability as a Percentage of Covered Payroll	151.90%	43.60%	325.54%	280.06%	304.96%	483.37%	624.19%	679.95%	424.61%

(1) The benefit changes in fiscal year 2017 are detailed in the "Final Risk Sharing Valuation Study as of June 30, 2016" dated September 25, 2017, as a result of the amendment of the Governing Statute on July 1, 2017, which included changes to normal retirement eligibility, normal retirement benefit, and post-retirement Cost of Living Adjustments (COLA).

(2) This schedule is intended to present information for 10 years. GASB Statement 67 established the requirement for this schedule and went into effect for fiscal year ending June 30, 2014. The statement allows that if retroactive information is not presented for the full 10 years, required supplementary information should be presented for as many years for which information measured in conformity with the requirements of this Statement is available in the transition year and until 10 years of such information is available.

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
2017	167,980	133,805	34,175	424,300	31.54
2018	131,142	887,143	(756,001)	412,786	214.92
2019	141,202	142,429	(1,227)	444,871	32.02
2020	146,626	149,078	(2,452)	464,301	32.11
2021	140,292	151,094	(10,802)	473,801	31.89
2022	139,220	152,375	(13,155)	476,453	31.98

This schedule is intended to present information for 10 years. GASB Statement 67 established the requirement for this schedule and went into effect for fiscal year ending June 30, 2014. The statement allows that if retroactive information is not presented for the full 10 years, required supplementary information should be presented for as many years for which information measured in conformity with the requirements of this Statement is available in the transition year and until 10 years of such information is available.

Notes to Schedule

Valuation Date: The actuarially determined contribution for fiscal year ending June 30, 2022 was developed in the July 1, 2020 valuation.

Actuarially determined contribution rates, payable by the City, are determined in accordance with the 2016 Risk Sharing Valuation Study (RSVS) and become effective in the fiscal year beginning one year after the valuation date. Previously, actual contributions were based on the terms of the 2011 Meet and Confer Agreement. For more information regarding the actuarially determined contribution, refer to the July 1, 2022 HPOPS Valuation Report.

A new set of assumptions were adopted in the July 1, 2018 actuarial valuation and are first reflected in the contribution rate determined for the fiscal year ending 2020.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Ultimate Entry Age Normal
Amortization Method	Level Percentage of Payroll, 30 year closed laddered bases
Remaining Amortization Period	25 years as of July 1, 2022
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	2.30%
Salary Increases	0.00% to 20.00% , plus a 2.75% inflation and productivity component
Investment Rate of Return	7.00%
Retirement Age	Experience-based table of rates based on age and years of service. The assumption was last updated in the July 1, 2018 valuation pursuant to an experience study of the five-year period ending June 30, 2017.
Mortality	<p>Healthy retirees - The Gender-distinct RP-2014 Combined Healthy Annuitant Mortality Tables with Blue Collar Adjustment for males and no collar adjustment for females. The base rates were developed using the 2006 central rates, projected forward to 2018 using the MP-2017 projection scale. The rates are projected on a fully generational basis by ultimate values of scale MP-2014 to account for future mortality improvements.</p> <p>Disabled members – The gender-distinct RP-2014 Disabled Retiree Mortality Tables are used without adjustment. The rates are projected on a fully generational basis by the ultimate values of scale MP-2014 to account for future mortality improvements.</p> <p>Active members - The Gender-distinct RP-2014 Employee Mortality Tables with Blue Collar Adjustment are used without adjustment. The rates are projected on a fully generational basis by the ultimate values of scale MP to account for future mortality improvements.</p>

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

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)%
2017	16.8 %
2018	9.8 %
2019	6.3 %
2020	1.1 %
2021	32.3 %
2022	(1.4)%

This schedule is intended to present information for 10 years. GASB Statement 67 established the requirement for this schedule and went into effect for fiscal year ending June 30, 2014. The statement allows that if retroactive information is not presented for the full 10 years, required supplementary information should be presented for as many years for which information measured in conformity with the requirements of this Statement is available in the transition year and until 10 years of such information is available.

Houston Police Officers' Pension System
Investment, Professional and Administrative Expenses (\$000's)

<i>Year ended June 30,</i>	2022	2021
Investment services:		
Custodial services	\$ 261	\$ 224
Money management services	15,515	5,206
Consulting services	837	837
Department operating expense	833	788
Total investment services	17,446	7,055
Professional services:		
Actuarial services	178	96
Auditing services	103	102
Election audit services	24	13
Legal services	40	21
Lobbyist services	384	379
Total professional services	729	611
Administrative expenses:		
Information technology	297	334
Education	38	12
Fiduciary insurance	115	111
Office rent	259	241
Other office costs	2,462	2,142
Total administrative expenses	3,171	2,840
	\$ 21,346	\$ 10,506

Houston Police Officers' Pension System
Summary of Investment and Professional Services (\$000's)

Investment Manager or Professional Service Provider	Official System Position	Year Ended June 30, 2022	Year Ended June 30, 2021	Nature of Services
Franklin Park Associates, LLC	Consultant	\$ 400	\$ 400	Consulting
Mercer	Consultant	437	437	Consulting
The Northern Trust Company	Custodian	261	224	Custodian
BlackRock Institutional Trust	Money Manager	373	382	Money Management
Blackstone Alternative Solutions LLC	Money Manager	10	11	Money Management
Bridgewater Associates, Inc.	Money Manager	11,298	1,909	Money Management
The Northern Trust Company	Money Manager	1,653	1,003	Money Management
Parametric	Money Manager	902	692	Money Management
Shenkman Capital Management, Inc.	Money Manager	1,279	1,209	Money Management
Gabriel Roeder Smith & Co.	Actuary	178	96	Actuarial
BDO USA, LLP	Auditors	103	102	Auditing
IceMiller LLP	Attorneys	34	17	Legal Service
HillCo Partners, LLC	Attorneys	170	157	Lobbyists
Locke Lord LLP	Attorneys	210	210	Lobbyists
Election Services Company	Consultant	24	13	Election Auditing
Other	Other	10	16	Other
Total investment and professional services		\$ 17,342	\$ 6,878	