# JOINING TOGETHER FOR A BETTER FUTURE 



Comprehensive Annual Financial Report for the Year Ended June 30, 2012

## STANDING STRONG

Proudly serving our participants for 69 years. Since 1943, HMEPS has been dedicated to serving City of Houston employees. We are dedicated to continue this tradition of service.

COMPREHENSIVE ANNUAL FINANCIAL REPORT
FOR THE YEAR ENDED JUNE 30, 2012

PREPARED BY THE PENSION ADMINISTRATION STAFF RHONDA SMITH, EXECUTIVE DIRECTOR

HOUSTON MUNICIPAL EMPLOYEES PENSION SYSTEM
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## BUILDING



Discovery Green Park - Synchronicity of Color - by the Houston Arts Alliance



INTRODUCTION

## November 15, 2012

## Kelly Dowe

Director of Finance
City of Houston, Texas
P.O. Box 1562

Houston, Texas 77251

## Dear Mr. Dowe:

We are pleased to present the Comprehensive Annual Financial Report (CAFR) of the Houston Municipal Employees Pension System (the System), a Component Unit of the City of Houston, Texas (the City) for the fiscal year ended June 30, 2012. The accuracy, fairness of presentation and completeness of this report are the responsibility of the Board of Trustees (the Board) of the System. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of the operations of the System. The System's basic financial statements will be included in the annual financial report of the City.

## Accounting System and Internal Controls

The financial statements have been prepared in accordance with generally accepted accounting principles and presented in accordance with the Governmental Accounting Standards Board (GASB).

The System's independent auditors have audited the financial statements and issued an unqualified opinion as of June 30, 2012 and 2011. The purpose of the audit is to give reasonable assurance to users of those financial statements, the Board, and participants of the System, that the financial statements present fairly, in all material respects, information regarding the System's net assets held in trust for pension benefits and in conformity with accounting principles generally accepted in the United States of America.

A significant responsibility of the Board is to ensure that the System has in place an adequate system of internal controls. A system of internal controls is an entity's plan of organization and all of its coordinated methods and measures adopted to safeguard its assets, ensure the accuracy and reliability of the accounting system and promote adherence to management policies. These controls include strategic design of the entity's business systems, the appropriate segregation of duties and responsibilities, sound practices in the performance of those duties, retaining capable personnel, and the organizational structure itself. We believe the System's internal controls are adequate and are working as designed.

## Financial Information

The Management's Discussion and Analysis (MD\&A) that immediately follows the Independent Auditors' Report provides condensed financial information and activities for the current and prior fiscal years of the System. It provides a narrative introduction, overview, and analysis of the basic financial

## LETTER OF TRANSMITTAL

statements. The MD\&A complements this letter of transmittal and should be read in conjunction with it.

## Plan History and Profile

The System was created in 1943 under Chapter 358, Acts of the 48th Texas Legislature, Regular Session, Article 6243g, Vernon's Annotated Revised Texas Civil Statutes, and was reenacted and continued under HB1573, 77th Texas Legislature, as Article 6243h, Vernon's Annotated Revised Texas Civil Statutes, as amended (the Statute). The System is a multiple-employer, defined benefit pension plan and includes a contributory group (Group A) and two noncontributory groups (Groups B and D). The System provides service retirement, disability retirement and death benefits for eligible participants which covers all municipal employees, except police officers and fire fighters (other than certain police officers in the System as authorized by the Statute), employed full time by the City, elected City officials, and the full-time employees of the System (collectively referred to as "participants"). The System plan net assets are used to pay benefits for eligible participants of Group A, Group B and Group D. The System is administered by an eleven-member Board of Trustees. The Trustees include four elected trustees who are members of the System, two elected trustees who are retirees of the System, a trustee appointed by the elected trustees, the mayor's appointee, the controller's appointee, and two city council appointees.

## Budget

The costs of administering the System, consisting of operating administrative expenses and capitalized items, are paid by the System from current earnings pursuant to an annual fiscal budget adopted by the Board.

## Funding Status

The System's funding objective is to establish contributions which, when combined with present assets and future investment returns, will be sufficient to meet the financial obligations to present and future retirees and beneficiaries.

Annual actuarial valuations measure the progress toward these goals, as well as test the adequacy of the contribution rate. The System's actuary assumes that the System's investments will return 8.5 percent over the long-term. The differences between the assumed and actual investment return are phased in (smoothed) over five years, yielding an actuarial value of assets. The smoothing prevents extreme volatility in employer contribution rates due to short-term fluctuations in the investment markets. The funded ratio, the ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL), is a standard measure of a plan's funded status. In the absence of benefit improvements or reduced funding, a plan's funded ratio should increase over time, until it reaches 100\%. As of July 1, 2011 HMEPS' AVA and AAL were $\$ 2.33$ billion and $\$ 3.79$ billion, respectively, resulting in a funded ratio of $61.4 \%$. This is lower than the funded ratio as of July 1, 2010 which was $62.6 \%$.

A historical perspective of the System's funding levels is presented in the Schedule of Funding Progress in the Required Supplemental Information in the Financial Section of this report.

## Market Environment

Market volatility remained high during fiscal year 2012 as equity markets fell sharply in the quarter ending September 30, 2011. Domestic equity indexes rose significantly over the next two quarters before declining again before the fiscal year end. The U.S. stock market, as represented by the Wilshire 5000 index, finished the fiscal year with a gain of $4.0 \%$.

Unemployment remained high at $8.2 \%$, although this rate was down slightly from the $9 \%$ unemployment rate recorded in June 2011. GDP grew during the fiscal year, but the rate was slower than expected and remained below the historical average growth rate of $3.3 \%$. With banks reluctant to lend, credit markets remained tight. Concerns about high levels of U.S. government debt lingered following the Standard \& Poor's downgrade of U.S. Treasuries in August 2011.

## LETTER OF TRANSMITTAL

There were also concerns that the financial problems in Europe would affect not only European markets, but would spill over into U.S. markets. Initially, the concern was centered on consequences of possible Eurozone bailouts for Greece and Spain. In Spring 2012, opposition to austerity measures figured prominently in national elections in France and Greece. Meanwhile, China's economy slowed in the last few months of the fiscal year. Overall, the broad international equity index, the MSCI All Country ex-U.S. Index, was down 14.2\% for the fiscal year.

In the fixed income markets, investment grade bonds and treasuries performed well, gaining 7.5\% for the fiscal year, as represented by the Barclays Aggregate, as investors continued to seek safety in bonds. However, these positive returns are tempered by the expectation that the current low interest rates will rise. Non-investment grade fixed income provided a similar return as the Merrill Lynch High Yield Master II Index gained 6.5\%.

While the System benefited from its exposure to private markets as private equity was the best performing asset class, returning $11.0 \%$, its strategic asset allocation has a higher allocation to Non-U.S. Equity than many of its peers, and international stocks significantly underperformed domestic stocks in fiscal year 2012. As a result, for the fiscal year ending June 30, 2012, the System's investment portfolio remained relatively flat, returning $-0.1 \%$.

Through the efforts of the Board over the past 10 years, the System's investment portfolio is more broadly diversified than most public pension plans, and consequently, exhibits less volatility, particularly during extreme market environments. Over long periods of time (10 years), the System's investment performance exceeds 95\% of its peers. During the 10-year period ending June 30, 2012, the System's annualized return was $8.52 \%$, with the median comparable fund returning $6.38 \%$.

## Major Current and Future Initiatives

## Member Services

The Benefits Division has increased efforts to provide information relating to pension benefits at seminars in the field and on a one-to-one basis at HMEPS. Activities include:

- Responded to increased demand for the Outreach Program, which reaches hundreds of members with individual and group sessions provided by our benefits counselors and our Certified Financial Planner. This past year, these staff members conducted 113 individual counseling sessions and hosted 73 joint presentations for various City departments as well as new employee orientations. A growing number of participants requested financial counseling based on other participants' recommendations.
- Processed 1,698 members for payroll, including retirements, survivor benefits and lump-sum payments.
- Initiated social media efforts to provide information relating to pension benefits to participants through Facebook and Twitter, two platforms that provide methods of communicating and interacting with participants. The HMEPS Certified Financial Counselor conducted 410 one-on-one counseling sessions with participants during the past fiscal year in addition to numerous group presentations. He also has been involved in monitoring pension related issues nationally and locally, a critical part of fulfilling HMEPS' obligation to keep participants fully informed. This also has enabled HMEPS to effectively respond to misinformation about pensions generally and about HMEPS in particular.
- Due to 2011 layoffs at the City, HMEPS benefit counselors handled an increased number of requests for assistance from participants regarding their pension options.
- Benefits counselors and the financial counselor participated in the 2012 Financial Retirement Employees Educational Summit on October 23 and 24, 2012. This important annual event has been a tremendous success in helping City of Houston employees better plan their financial futures.


## Technology

The mission of HMEPS' Information Systems (IS) Division is to provide user-driven solutions and expert support and maintenance to the Board and Staff so they can effec-

## LETTER OF TRANSMITTAL

tively meet their goals and objectives. The IS Division is responsible for basic functions such as network resource availability, data security, email access, desktop support and project management. The IS Division also supports an in-house participant record-keeping system, provides first-line support for the System's imaging and workflow software, and develops and maintains various web applications for Board, Staff and participant use.

For fiscal year 2012, the IS Division worked to add and improve existing processes within the System's imaging and workflow software used to maintain records and track transactions. Work also continued on updating the inhouse administrative software that stores and uses participant service information, including updates to various benefit calculations and DROP-related participant data.

## Investments

The System's strategic asset allocation policy is designed to manage risk by diversifying among public and private asset classes. The strategic asset allocation policy is scheduled to be reevaluated in calendar year 2013.

During fiscal year 2012, the System completed a search for a Master Limited Partnership investment manager to further diversify the Inflation-Linked Asset Class (ILAC). With the help of the System's alternative investment consultant, Cliffwater LLC, HMEPS invested in four private equity partnerships, two real estate partnerships, two ILAC partnerships and six absolute return funds. This activity will bring the System's portfolio closer to the strategic asset allocation policy targets.

The System's investment portfolio closed its 2012 fiscal year at $\$ 2.05$ billion, down from $\$ 2.19$ billion at the beginning of the year. The total investment return for the fiscal year was -0.1 \%. The System's investment performance was -0 . $1 \%, 11.1 \%$ and $2.9 \%$ for the past one-, threeand five-year periods. Although the System lagged behind the policy benchmark for fiscal year 2012, it outperformed the policy benchmark for the five and ten-year periods. Relative to its peer group (TUCS Public Fund Universe), the fund continues to post attractive investment returns over the long term. For the period ended June 30, 2012, the Fund ranks in the top quartile over the
trailing five year period and is in the top decile over the trailing ten-year period. The best performing asset classes for fiscal year 2012 were Private Equity (+11.0\%) and Fixed Income (+6.3\%). The benefits of a well-diversified asset allocation are evidenced by the System's ability to perform very competitively over the two-year period where different asset classes drove overall returns.

In the upcoming fiscal year, the System, with the assistance of emerging manager consultant Gray \& Co., will identify and invest in quality partnerships in the emerging manager area. Meanwhile, HMEPS will continue to work with consultants Wilshire Associates and Cliffwater LLC to identify attractive public and private market investments consistent with the strategic asset allocation.

## System Milestones

The Board and staff significantly reduced the System's expenses by relocating its offices to a new location as well as creating new efficiencies to the operation and by prudently managing the budgeted expenses. HMEPS' office relocation provided a substantial reduction in operational costs and allowed the System to become more accessible to a greater number of participants. These savings are renewable into the future and will reduce the budget by $\$ 1$ million over the next five years. The move and new efficiencies will not sacrifice service or performance, but rather, will increase access for our members as well as enhance productivity through the use of higher level technology.

Throughout the relocation, benefit counselors were able to provide effective and efficient service for participants at all levels. In addition, the Operations Division provided significant assistance in the relocation of the System's office, including coordinating the move and maintaining connectivity to web services and voice communications, both of which are vital to HMEPS' operations.

## Board Governance

The City Controller appointed Ramon Manning to the System's Board as the Controller Appointee.

## LETTER OF TRANSMITTAL

## Meet and Confer Agreement

Effective July 1, 2011, the Amended and Restated Meet and Confer Agreement (Agreement) between the City and the System went into effect. The Agreement provides for structured contributions from the City to provide the City budgetary flexibility while strengthening the System, enhancements to Board operations to promote best practices, and increased options for eligible participants that are cost neutral to the System.

Under the Agreement, the City's annual contribution to the System is the greater of the previous fiscal year's rate plus 2 percent of covered payroll or the previous fiscal year's contribution amount plus $\$ 10$ million. This provision will stay in place until the actuarially determined contribution rate is met, at which time that rate becomes the effective contribution rate. For fiscal year 2013, the City's contribution is the greater of $21.36 \%$ of covered payroll or \$108.5 million.

## Certificate of Achievement

The Government Finance Officers Association (GFOA) of the United States and Canada awarded a Certificate of Achievement for Excellence in Financial Reporting to the Houston Municipal Employees Pension System for its comprehensive annual financial report for the year ended June 30, 2011. This was the 18th consecutive year that the System has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

## Acknowledgement

This CAFR was prepared through the combined efforts of the System staff and was subject to the scrutiny of the Board. It is intended to provide information to its user that may be a basis for a general understanding of the System. This CAFR is being forwarded to the City of Houston, the Texas State Pension Review Board, the GFOA, and other interested parties who may from time to time request it.

## In Closing...

A core purpose of the System is to help provide for the financial security of its participants when they are eligible to receive benefits. Municipal public sector employees are vital to providing and maintaining important city services for Houston residents and quality employees are attracted to and retained by the public sector in part by the security and benefits offered by a sound pension system. The System is proud to serve the dedicated municipal employees and retirees who have made tremendous contributions to Houston and its citizens.

Sincerely,


Sherry Hose
Chairman


Rhonda Smith
Executive Director

ORGANIZATIONAL OVERVIEW* (AS OF JUNE 30, 2012)
 Chairman

Roy W. Sanchez Vice Chairman
Lonnie Vara
Secretary

## Terrence Ardis

Elected Trustee
David L. Long

Elected Trustee
Lenard Polk

Elected Trustee
 Appointed Trustee

Richard Badger Council Appointee


Justo P. Gonzalez
Council Appointee

Craig T. Mason Mayoral Appointee


Ramon Manning Controller Appointee


Rhonda Smith Executive Director

## Administrative Organization

Audit Committee
Budget and Oversight Committee
Disability Committee
External Affairs Committee Investment Committee
Personnel and Procedures Committee
Executive Director
General Counsel
Chief Investment Officer
Investment Managers' Services
Market Research
Performance Measurement
Member Services
Benefit Administration Services
Communications
Financial Counseling
Member Services

## Operations

Accounting
Financial Reporting
Records
Technology Support

* Information pertaining to investment-related professionals is located on Page 9.

The Government Finance Officers Association (GFOA) of the United States and Canada awarded a "Certificate of Achievement for Excellence in Financial Reporting" to Houston Municipal Employees Pension System for its comprehensive annual financial report for the fiscal year ended June 30, 2011. The Certificate of Achievement is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government financial reports. In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report, the contents of which conform to program standards. Such a CAFR must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. The Houston Municipal Employees Pension System has received a Certificate of Achievement for the last 18 consecutive years (fiscal years ended June 30, 1994 through 2011). We believe our current report continues to conform to the Certificate of Achievement program requirements, and we are submitting it to the GFOA for consideration.


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    Consultants (Fiscal Year 2012)
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## Actuary

Gabriel, Roeder, Smith \& Company

## Auditor

MFR, P.C.

## Board Medical Advisor

Charles Schuhmacher, M.D.

## Communication Services

LT Communications

## Technology Services

Pension Benefits Information

## Governmental Representation

HillCo Partners, Inc.
Locke, Lord, Bissell \& Liddell, L.L.P.

## Investment Consultants

Cliffwater, L.L.C.
Gray \& Co.
Wilshire Associates, Inc.

## Investment Performance Analysis

Cliffwater, L.L.C.
State Street Bank and Trust Co. Wilshire Associates, Inc.

## Legal Counsel

Baker Botts, L.L.P.
Jackson Walker, L.L.P.
Locke, Lord, Bissell \& Lidell, L.L.P.

## Master Custodian/Trustee

State Street Bank and Trust Co.

## Investment Managers (Fiscal Year 2012)

## Absolute Return

Anchorage Capital Group L.L.C.
Angelo, Gordon \& Co.
Brigade Capital Management
Claren Road Asset Management, L.L.C. Davidson Kempner Capital Management, L.L.C. Gracie Asset Management Highland Capital Management Mason Capital Managment Paulson \& Co.
Och-Ziff Capital Management Group
Samlyn Capital, L.L.C.
Wexford Capital L.P.
York Capital Management L.P.

## Fixed Income

BlackRock, Inc.
DDJ Capital Management, L.L.C.
Loomis, Sayles \& Co.
Pugh Capital Management
Smith Graham \& Co.
Whippoorwill Associates, Inc.

## Inflation-Linked

BlackRock, Inc.
EnerVest, Ltd.
Global Forest Partners, L.P.
NGP Energy Capital
Oaktree Capital Management
Paulson \& Co.
Quantum Energy Partners
Riverstone Holdings

The Carlyle Group
Tortoise Capital Advisors
Non-U.S. Equity
Baring International
BlackRock, Inc.
EARNEST Partners
OFI Institutional Management
Thomas White International

## Private Equity

Adams Street Partners
Brera Capital Partners, L.L.C.
Brockway Moran \& Partners, Inc.
Centerbridge Partners
GTCR Management L.C.
Goldman, Sachs \& Co.
HarbourVest Partners, L.L.C.
Hellman \& Friedman, L.L.C.
J.W. Childs Associates, L.P.

JMI Equity
Lexington Partners, Inc.
Matlin Patterson Global Advisors
New Enterprise Associates
Oaktree Capital Management
Pegasus Investors, L.P.
Pharos Capital Partners, L.L.C.
Platinum Equity Capital Partners
Summit Partners
Sun Capital Partners, Inc.
The Carlyle Group
The Jordan Company, L.P.
Truebridge Capital Partners

Valor Equity Partners
Vista Equity Partners
Walden International

## US Equity

BlackRock, Inc.
DePrince, Race \& Zollo, Inc.
EARNEST Partners, L.L.C.
INTECH Investment Management, L.L.C.

Neumeier Poma Investment Counsel,
L.L.C.

OakBrook Investments, L.L.C.
PanAgora Asset Management, Inc.
Piedmont Investment Advisors, L.L.C.
Profit Investment Management
State Street Global Advisors
T. Rowe Price Associates, Inc.

## Real Estate

Aetos Capital
Angelo, Gordon \& Co.
CB Richard Ellis Investors
Crow Holdings
Fortress Investment Group, L.L.C.
Goldman, Sachs \& Co.
Grove International Partners
Lone Star U.S. Acquisitions, L.L.C.
Morgan Stanley Asset Management, Inc.
Olympus Real Estate Corp.
RREEF America L.L.C.
State Street Global Advisors
Starwood Capital Group Global LP



## An Overview

The Audited Financial Statements and the accompanying Independent Auditors' Report included in this CAFR were approved by the System's Board of Trustees (the Board) in its meeting of September 27, 2012. The audit of the System's financial statements was conducted in accordance with generally accepted auditing standards (GAAS). The Independent Auditors' Report is based on that audit, and it is intended to give reasonable assurance to users of the System's financial statements that those financial statements are free of material misstatement when taken as a whole and that they present fairly the financial position and results of operations of the System at the times and for the periods reported. The audit gives reasonable assurance to the Board and participants of the System that the System's assets are adequately safeguarded and that its financial transactions are properly authorized and recorded.

The financial statements provide a comprehensive overview of the financial position of the System as of June 30, 2012 and June 30, 2011 and the results of its operation for the years then ended. The financial statements are presented in conformity with accounting and reporting standards of the Governmental Accounting Standards Board (GASB).
The System is responsible for the accuracy of its financial statements and the completeness and fairness of their presentation. The auditors are responsible for issuing an opinion on those financial statements when taken as a whole.

The financial statements consist of Statements of Plan Net Assets, Statements of Changes in Plan Net Assets, Notes to the Basic Financial Statements, and Supplemental Schedules.

## Statements of Plan Net Assets

The Statements of Plan Net Assets present the financial position of the System as of the end of the fiscal years reported. They are statements of the System's assets, liabilities, and net assets held in trust for pension benefits. An asset is anything having commercial economic or
exchange value. Assets include cash, receivables (interest and dividends earned by the investments of the System and employee member and employer contributions), investment, collateral on securities lending arrangements, and furniture, fixtures and equipment. System liabilities include money reserves for participants who are entitled to benefits and obligations for professional services the System has used, but for which payment has not been made.

## Statements of Changes In Plan Net Assets

The Statements of Changes in Plan Net Assets include additions to the System's assets and deductions from them and the increase or decrease in plan net assets. Additions consist of contributions, investment income, and other income. Deductions are benefit payments, fees for professional services and costs of administering the programs of the System. The net of additions and deductions represents the change, for the years presented, in net assets held in trust for pension benefits.

## Notes to Basic Financial Statements

Notes to the Basic Financial Statements contain disclosures required by generally accepted accounting principles and GASB reporting standards. Required disclosures include a summary description of the pension plan, significant accounting policies, information about the System's funding status and progress toward achieving its funding objectives, information about the System's investments and investing activities, and information about the System's commitments.

## Supplemental Information

Supplemental Schedules provide information required by the GASB which include the supplementary 10 -year trend information. These charts show the progress toward reaching the goal of being totally funded, as well as sources of revenues and types of expenses of the System during the fiscal year.
Other supplementary information provides additional information for analysis.

## INDEPENDENT AUDITORS' REPORT

## Board of Trustees <br> Houston Municipal Employees Pension System:

We have audited the accompanying statements of plan net assets of the Houston Municipal Employees Pension System (the System) as of June 30, 2012 and 2011, and the related statements of changes in plan net assets for the years then ended. These basic financial statements and the schedules referred to below are the responsibility of the System's management. Our responsibility is to express an opinion on these basic financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the basic financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing 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 over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the basic financial statements and assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall basic financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the basic financial statements referred to above present fairly, in all material respects, information regarding the Plan's net assets available for benefits as of June 30, 2012, and changes therein for the year then ended and its financial status as of June 30, 2011, and the changes therein for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis (MD\&A) and the required supplemental information (schedules 1,2 and 3 ) be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplemental 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.
Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The other supplemental information (schedules 4,5 and 6 ) is presented for purposes of additional analysis and is not a required part of the System's 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. This information has been subjected to the auditing procedures applied in our audits of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or the basic financial statements themselves and other additional procedures in accordance with auditing standards generally accepted in the United States of America and in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

September 27, 2012

## MANAGEMENT'S DISCUSSION AND ANALYSIS (Unaudited)

The Board of Trustees (the Board) of the Houston Municipal Employees Pension System (the System) is pleased to provide this overview and analysis of the financial performance and activities of the System for the fiscal years ended June 30, 2012 and 2011. We encourage the readers to consider the information presented here in conjunction with the basic financial statements.

## OVERVIEW OF THE FINANCIAL STATEMENTS

The discussion and analysis is intended to serve as an introduction to the System's financial statements. The financial section consists of (1) System's Basic Financial Statements, (2) Notes to Basic Financial Statements, and (3) Supplemental Information.

## System's Basic Financial Statements

There are two basic financial statements presented herewith. The Statements of Plan Net Assets as of June 30, 2012 and 2011 indicate the net assets available to pay future payments and give a snapshot at a particular point in time. The Statements of Changes in Plan Net Assets for the fiscal years ended June 30, 2012 and 2011 provide a view of the fiscal year's additions to and deductions from the System.

## Notes to Basic Financial Statements

The notes are an integral part of the basic financial statements and provide additional background information that is essential for a complete understanding of the data provided in the System's financial statements. The notes to the basic financial statements can be found on pages 22 to 39 of this report.

## Supplemental Information

The required supplemental information consists of:
Schedule 1 - Schedule of Funding Progress - this pro-
vides historical trend information that contributes to the understanding of the changes in the funded status of the System over time. These are calculations made by the System's actuary and they provide actuarial information that contributes to the understanding of the changes in the actuarial funding of and the funded status of the System over a number of years. It should be noted though that actuarial information is based upon assumptions about future events, and therefore, the figures presented are estimates.

Schedule 2 - Schedule of Employer Contributions - this provides historical trend information of required annual employer contributions as determined actuarially and the contributions actually made in relation to this requirement over time.

Schedule 3 - Schedule of Funding Progress for OPEB this provides historical trend information that contributes to the understanding of the changes in the funded status of the other postemployment benefits (OPEB) over time. These are calculations made by the System's actuary and they provide actuarial information that contributes to the understanding of the changes in the actuarial funding of and the funded status of the OPEB over a number of years. It should be noted though that actuarial information is based upon assumptions about future events, and therefore, the figures presented are estimates.

The other supplemental information consists of:
Schedule 4 - Investment Summary - this lists the System's investments by type presented both at cost and fair market value.

Schedule 5 - Investment Services, Professional Services, and Administration Expenses - this provides more information for purposes of more detailed analysis.

Schedule 6 - Summary of Costs of Investment and Professional Services - this provides more information for purposes of more detailed analysis.

## COMPARATIVE FINANCIAL STATEMENTS

Below is a condensed and comparative summary of major classes of Plan Net Assets at fair value.
(In thousands of dollars)

| Assets |  | $\begin{gathered} \text { June 30, } \\ \underline{2012} \end{gathered}$ | $\begin{gathered} \text { June 30, } \\ \underline{2011} \end{gathered}$ | June 30, 2010 |
| :---: | :---: | :---: | :---: | :---: |
| Cash and equivalents | \$ | 1,647 | 1,065 | 1,599 |
| Investments |  | 2,048,112 | 2,192,678 | 1,824,933 |
| Receivables on asset sales |  | 9,935 | 7,487 | 7,574 |
| Other receivables |  | 6,718 | 27,480 | 8,500 |
| Collateral on securities lending |  | 261,194 | 116,401 | 151,091 |
| Furniture, fixtures and equipment, net |  | 325 | 307 | 352 |
| Total assets |  | 2,327,931 | 2,345,418 | 1,994,049 |
| Liabilities |  |  |  |  |
| Payable on asset purchases |  | 36,997 | 72,632 | 5,693 |
| Accrued liabilities |  | 5,505 | 26,944 | 8,773 |
| Collateral on securities lending |  | 261,194 | 116,401 | 151,091 |
| Total liabilities |  | 303,696 | 215,977 | 165,557 |
| Plan net assets | \$ | 2,024,235 | 2,129,441 | 1,828,492 |

Below is a condensed and comparative summary of Statements of Changes in Plan Net Assets available for pension benefits. (In thousands of dollars)

| Additions |  | Fiscal <br> Year <br> 2012 | Fiscal <br> Year <br> 2011 | Fiscal Year 2010 |
| :---: | :---: | :---: | :---: | :---: |
| Contributions | \$ | 115,635 | 106,611 | 101,788 |
| Investment and interest income (loss), net |  | $(11,964)$ | 391,095 | 195,433 |
| Other income |  | 654 | 1,185 | 557 |
| Total additions |  | 104,325 | 498,891 | 297,778 |


| Deductions |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Benefits paid |  | 200,014 | 189,199 | 191,048 |
| Contribution refunds |  | 2,205 | 1,620 | 1,285 |
| Administration expenses and professional fees |  | 7,312 | 7,123 | 7,095 |
| Total deductions |  | 209,531 | 197,942 | 199,428 |
| Net (decrease) increase in plan net assets |  | $(105,206)$ | 300,949 | 98,350 |
| Plan net assets, beginning of year |  | 2,129,441 | 1,828,492 | 1,730,142 |
| Plan net assets, ending of year | \$ | 2,024,235 | 2,129,441 | 1,828,492 |

FINANCIAL HIGHLIGHTS (In Thousands of Dollars, Unless Otherwise Noted)

- The System received $\$ 18,473$ and $\$ 19,326$ during fiscal years 2012 and 2011, respectively, in employee contributions from about 7,129 and 7,831 Group A active participants, respectively. For fiscal years 2012 and 2011, the contributions represent $5 \%$ of the employee's qualifying base salary. Total employee contributions decreased by $\$ 853$ or $4.4 \%$ in fiscal year 2012 compared to fiscal year 2011.
- The City of Houston's (the City) contributions during fiscal years 2012 and 2011 represent the budgeted contributions. During fiscal years 2012 and 2011, the System received cash contributions from the City of $\$ 97,162$ and $\$ 87,285$ (net of contributions to the replacement benefit plan of $\$ 1,338$ and $\$ 1,215$ for fiscal years 2012 and 2011, respectively).
- The net investment and interest (loss) income of the System was $\$(11,964)$ during fiscal year 2012 compared to $\$ 391,095$ during fiscal year 2011, which is a decrease of $\$ 403,059$. This decrease was primarily driven by unrealized net gain (loss) on investments which was $\$(107,831)$ during fiscal year 2012 compared to $\$ 227,109$ during fiscal year 2011, a decrease of $\$ 334,940$. The investment and interest (loss) income of the System consists of:
- Earnings from limited partnerships and real estate trusts decreased from $\$ 17,398$ to $\$ 14,448$. It is the System's policy to adjust the carrying value of limited partnerships and real estate trusts during their holding
period based on the general partner's direction. The total investment (loss) gains associated with these holdings consist of realized gains and unrealized appreciation/(depreciation).
- Benefit payments increased to $\$ 200,014$ during fiscal year 2012 compared to \$189,199 during fiscal year 2011. Normal retirement pension benefits amounted to \$181,556 (a 6.8\% increase from fiscal year 2011), which accounted for $90.8 \%$ of the total benefit payments for fiscal year 2012. There were 9,325 participants that received benefits for fiscal year 2012 compared to 9,051 participants in 2011. These numbers represent a $3.0 \%$ increase in fiscal year 2012 and a 1.4\% increase for the fiscal year 2011.
- Distributions to DROP (Deferred Retirement Option Plan) participants amounted to $\$ 18,432$ or $9.2 \%$ of the total benefit payments during fiscal year 2012 compared to $10.1 \%$ of the total during fiscal year 2011. The amount of DROP distributions decreased by $3 \%$ in fiscal year 2012. The number of DROP participants receiving distributions as of June 30 decreased to 151 in 2012 compared to 232 in 2011 or a $35 \%$ decrease.
- Benefit payments exceeded total employee plus employer contributions by $\$ 84,379$ during fiscal year 2012 and by $\$ 82,588$ during fiscal year 2011.

|  |  | Fiscal <br> Year <br> 2012 | Fiscal <br> Year <br> 2011 | Dollar <br> Change |
| :---: | :---: | :---: | :---: | :---: |
| Interest | \$ | 18,306 | 14,720 | 3,586 |
| Dividends |  | 20,446 | 16,769 | 3,677 |
| Earnings from limited partnerships and real estate trusts |  | 14,448 | 17,398 | $(2,950)$ |
| Realized gain on investments |  | 49,516 | 121,039 | $(71,523)$ |
| Change in unrealized (loss) gain on investments |  | $(107,831)$ | 227,109 | $(334,940)$ |
| Net proceeds from lending securities |  | 638 | 436 | 202 |
| Less cost of investment services |  | $(7,487)$ | $(6,376)$ | $(1,111)$ |
| Net investment and interest (loss) income | \$ | $(11,964)$ | 391,095 | $(403,059)$ |

## MANAGEMENT'S DISCUSSION AND ANALYSIS

FINANCIAL HIGHLIGHTS (In Thousands of Dollars, Unless Otherwise Noted) Cont.

- Costs of administering the benefit programs of the System, including professional fees, increased to \$7,312 for fiscal year 2012 from \$7,123 for fiscal year 2011, up $2.7 \%$ compared to a $.4 \%$ increase in 2011.
- Net assets were $\$ 2,024,235$, a decrease of $\$ 105,206$ during fiscal year 2012 compared to an increase of \$300,949 in 2011.

The System capitalizes expenditures for furniture, fixtures and equipment in accordance with Governmental Accounting Standards Board Statement No. 34, Basic Financial Statements - and Management's Discussion and Analysis - for State and Local Governments, as amended. Furniture, fixtures and equipment, net of accumulated depreciation, as of fiscal year end 2012 and 2011 is \$325 and \$307, respectively.

Fiscal year 2012 saw a high degree of volatility in the equity markets as uncertainty over the European debt crisis persisted. International equities (MSCI ACWI ex-US) ended the year with a loss of $-14.20 \%$. Domestic equities (Wilshire 5000) fared better with a gain of $3.96 \%$.

High yield bonds as represented by the Merill Lynch High Yield II Total Return index performed well, returning 6.5\%. High quality investment grade bonds also provided a positive return as the Barclays Aggregate Bond index increased by 7.5\%. Real Estate also performed well, as the NCREIF Property Index yielded $12 \%$ in fiscal year 2012.

The System's investment portfolio closed its 2012 fiscal year at $\$ 2.05$ billion, down from $\$ 2.19$ billion at the beginning of the year. The total investment return for the fiscal year was $-0.1 \%$. The System's performance, including the total fund, each asset class and their corresponding benchmark(s), for fiscal year 2012 and the trailing threeand five-year periods are listed on the following page.

The System's investment performance was -0.1\%, 11.1\% and $2.9 \%$ for the past one-, three- and five-year periods. Two factors drove the System's flat return for fiscal year 2012. The System's strategic asset allocation has a higher allocation of Non-U.S. Equity than many of its peers, and international stocks significantly underperformed domestic stocks in fiscal year 2012. The System also has a meaningful exposure to energy investments, which contributed to a negative return. Although the System lagged behind the policy benchmark for fiscal year 2012, it outperformed the policy benchmark for the five and ten-year periods. Relative to its peer group (TUCS Public Fund Universe), the fund continues to post attractive investment returns over the long term. For the period ended June 30, 2012, the Fund ranks in the top quartile over the trailing five year period and is in the top decile over the trailing ten-year period. The best performing asset classes for fiscal year 2012 were Private Equity (+11.0\%) and Fixed Income (+6.3\%). Domestic Equity (+33.8) and Inflation Linked (+39.7) were the top two performing asset classes for fiscal year 2011. The benefits of a well-diversified asset allocation are evidenced by the System's ability to perform very competitively over the two-year period where different asset classes drove overall returns. For the past three-year period, Domestic Equity was the System's best performing asset class, providing a $17.5 \%$ return. Private Equity was the best performing asset class over the trailing fiveyear period, returning 7.1\%. The System's target allocation of $18 \%$ to Private Equity helped enable the System to perform well in an environment where a more traditional asset allocation (60\% / 40\% mix of S\&P 500 Index / Barclays Aggregate Bond Index) would have returned $12.6 \%, 2.8 \%$ and $5.5 \%$ over the trailing three-, five- and ten-year periods.

Throughout fiscal year 2012, the System maintained its existing target asset allocation mix of $20 \%$ U.S. Equities, 20\% Non-U.S. Equities, 20\% Fixed Income, 18\% Private Equity, 12\% Real Estate, 5\% Absolute Return and 5\% Inflation Linked Asset Class. However, the System

## PERFORMANCE OF INVESTMENT CLASSES

| Periods Ended June 30, 2012 | Investment Return |  |  |
| :---: | :---: | :---: | :---: |
|  | FY 2012 | 3-Years | 5-Years |
| System's Total Portfolio | -0.1\% | 11.1\% | 2.9\% |
| Policy Benchmark | 3.2\% | 12.8\% | 2.4\% |
| Median Public Fund (Wilshire Public Fund Universe) | 1.3\% | 11.8\% | 1.9\% |
| U.S. Equities | 3.4\% | 17.5\% | -0.4\% |
| Dow Jones Wilshire 5000 Index | 4.0\% | 16.7\% | 0.4\% |
| Non-U.S. Equities | -12.9\% | 6.4\% | -5.0\% |
| MSCI All World ex U.S. Index | -14.2\% | 7.4\% | -4.2\% |
| Fixed Income | 6.3\% | 10.8\% | 6.8\% |
| Barclay Aggregate Index | 7.5\% | 6.9\% | 6.8\% |
| Merrill Lynch High Yield Master II Index | 6.5\% | 16.2\% | 8.2\% |
| Real Estate ${ }^{1}$ | 3.8\% | 1.4\% | -6.0\% |
| NCREIF Property Index | 12.0\% | 8.8\% | 2.5\% |
| Private Equity ${ }^{2}$ | 11.0\% | 16.7\% | 7.1\% |
| S\&P 500 Index + 3.0\% | 8.4\% | 19.4\% | 3.2\% |
| Absolute Return ${ }^{3}$ | -0.9\% | 11.7\% | $\mathrm{n} / \mathrm{a}$ |
| LIBOR + 4\% | 4.5\% | 5.0\% | n/a |
| Inflation Linked Asset Class ${ }^{4}$ | -22.0\% | 9.8\% | $\mathrm{n} / \mathrm{a}$ |
| CPI + 4\% | 5.7\% | 6.7\% | n/a |
| Cash | 0.3\% | n/a | n/a |
| Citigroup 3 Month T-Bill Index | 0.1\% | 0.1\% | 1.0\% |

[^0]
## SYSTEM'S ACTUAL ASSET ALLOCATION



FIGURE 1
ended fiscal year 2012 with an underweight to Real Estate and Private Equity, and an overweight to NonU.S. and U.S. Equity.

## Securities Lending Program

The System's securities lending program obtains additional income by lending securities to broker-dealers and banks. During the years ended June 30, 2012 and 2011, the System's custodian lent the System's securities and received cash, securities issued or guaranteed by the United States government, and irrevocable bank letters of credit as collateral. The Board and the borrowers maintained the right to terminate all securities lending transactions on demand. The cash collateral received on each loan was invested in a collective investment pool.

The System's securities lending program utilization level (on-loan balance as a percentage of lendable assets) is limited to 33.5\%.

## Limited Partnership Commitment

The System's investments in limited partnerships are included in the tables appearing in note 7 . In connection with those investments, the System has remaining commitments as of June 30, 2012 and 2011 of approximately \$309 million and \$213 million, respectively, pursuant to terms of the respective limited partnerships.

## Other Comments

On June 29, 2011, the City of Houston (City) approved the Amended and Restated Meet and Confer Agreement (Agreement). The Agreement provides for structured contributions from the City to provide the City budgetary flexibility while strengthening the System, enhancements to Board operations to promote best practices, and increased options for eligible participants that are cost neutral to the System. The Agreement has an effective date of July 1, 2011.

Under the Agreement, the City contributed $\$ 98.5$ million to the System in fiscal year 2012. For each of the succeeding fiscal years, the City will contribute either the previous fiscal year's rate plus 2 percent of payroll or the previous fiscal year's contribution amount plus $\$ 10$ million, whichever is greater. This provision will stay in place until the actuarially determined contribution rate is met, at which time that rate becomes the effective contribution rate.

The Agreement also contains provisions to simplify last payment rules with respect to deceased benefit recipients, authorizes reinstatement of Group D service under the work-a-year, gain-a-year rules that are applicable to Group B members, and implements an option for eligible unmarried Group A and Group B members who terminate service on or after June 30, 2011 to select a joint and survivor (J\&S) annuity option in lieu of a normal benefit.

The optional annuity election, which was already available to vested Group D members and vested Group B members who separated from service prior to September 1997, allows eligible participants to elect to take a reduced pension and provide an annuity ( $50 \% \mathrm{~J} \& \mathrm{~S}, 100 \% \mathrm{~J} \& \mathrm{~S}$, or 10-year Guarantee) to a designated annuitant. The optional annuity provision does not affect Group A and Group B members who are married at the time of their
termination from employment or do not otherwise fall into the categories of eligible participants as described above.

## CONTACTING THE SYSTEM'S FINANCIAL MANAGEMENT

This financial report is designed to provide our participants, business partners, and taxpayers with a general overview of the System's financial activities. If you have questions about this report or need additional financial information, contact the Executive Director of the Houston Municipal Employees Pension System at 1201 Louisiana, Suite 900, Houston, Texas 77002.

|  |  | 2012 | 2011 |
| :---: | :---: | :---: | :---: |
| Assets |  |  |  |
| Investments, at fair value: |  |  |  |
| Short-term investment funds | \$ | 65,204,046 | 171,329,754 |
| Government securities |  | 71,642,342 | 54,045,962 |
| Corporate bonds |  | 230,905,237 | 200,264,102 |
| Capital stocks |  | 810,010,042 | 841,748,551 |
| Commingled funds |  | 255,302,205 | 315,647,983 |
| Real assets |  | 193,775,820 | 231,463,317 |
| Alternative investments |  | 421,272,705 | 378,178,957 |
| Total investments |  | 2,048,112,397 | 2,192,678,626 |
| Cash and cash equivalents |  | 1,646,509 | 1,064,557 |
| Receivables: |  |  |  |
| Receivables on asset sales |  | 9,934,485 | 7,487,075 |
| Receivables on foreign exchanges |  | 828,082 | 22,322,688 |
| Other receivables |  | 5,889,837 | 5,157,849 |
| Total receivables |  | 16,652,404 | 34,967,612 |
| Collateral on securities lending arrangements, at fair value |  | 261,194,816 | 116,400,998 |
| Furniture, fixtures and equipment, net |  | 324,608 | 306,898 |
| Total assets |  | 2,327,930,734 | 2,345,418,691 |
| $\underline{\text { Liabilities }}$ |  |  |  |
| Payable on asset purchases |  | 36,997,289 | 72,632,210 |
| Payables on foreign exchanges |  | 811,799 | 22,357,390 |
| Accrued liabilities |  | 3,405,703 | 3,605,626 |
| Accrued other post retirement benefits |  | 1,286,400 | 981,125 |
| Collateral on securities lending arrangements, at fair value |  | 261,194,816 | 116,400,998 |
| Total liabilities |  | 303,696,007 | 215,977,349 |
| Plan net assets held in trust for pension benefits | \$ | 2,024,234,727 | 2,129,441,342 |

See accompanying notes to basic financial statements.

|  |  | 2012 | 2011 |
| :---: | :---: | :---: | :---: |
| Additions to plan net assets: |  |  |  |
| Contributions: |  |  |  |
| City of Houston | \$ | 97,161,723 | 87,284,737 |
| Participants |  | 18,472,747 | 19,325,887 |
| Total contributions |  | 115,634,470 | 106,610,624 |
| Other income |  | 654,047 | 1,185,291 |
| Investment income: |  |  |  |
| Interest on bonds and deposits |  | 18,306,213 | 14,720,222 |
| Dividends |  | 20,445,946 | 16,769,039 |
| Earnings from limited partnerships and real estate trusts |  | 14,448,804 | 17,398,328 |
| Net (depreciation) appreciation on investments |  | $(58,314,805)$ | 348,147,880 |
| Total investment (loss) income |  | $(5,113,842)$ | 397,035,469 |
| Proceeds from lending securities |  | 1,031,898 | 679,051 |
| Less costs of securities lending |  | $(394,261)$ | $(243,534)$ |
| Net proceeds from lending securities |  | 637,637 | 435,517 |
| Less costs of investment services |  | $(7,487,343)$ | $(6,375,656)$ |
| Total investment (loss) income |  | $(11,963,548)$ | 391,095,330 |
| Total additions to plan net assets |  | 104,324,969 | 498,891,245 |
| Deductions from plan net assets: |  |  |  |
| Benefits paid to participants |  | 200,014,192 | 189,198,957 |
| Contribution refunds to participants |  | 2,205,685 | 1,619,934 |
| Professional services |  | 1,048,042 | 1,102,761 |
| Administration expenses |  | 6,263,665 | 6,020,407 |
| Total deductions from plan net assets |  | 209,531,584 | 197,942,059 |
| Net (decrease) increase in plan net assets |  | $(105,206,615)$ | 300,949,186 |
| Plan net assets held in trust for pension benefits: |  |  |  |
| Beginning of year |  | 2,129,441,342 | $\underline{1,828,492,156}$ |
| End of year | \$ | 2,024,234,727 | 2,129,441,342 |

See accompanying notes to basic financial statements.

## 1. DESCRIPTION OF PLAN

The Houston Municipal Employees Pension System (the System) was created under Chapter 358, Acts of the 48th Texas Legislature, Regular Session, 1943 (Article 6243g, Vernon's Texas Civil Statutes) and reenacted and continued under HB1573, 77th Texas Legislature, Article 6243h, Vernon's Texas Civil Statutes (the Pension Statute), as amended. The System is a multiple-employer defined benefit pension plan covering all municipal employees, except police officers and firefighters (other than certain police officers in the System as authorized by the Pension Statute), employed full time by the City of Houston, Texas (the City), elected City Officials, and the full time employees of the System (collectively referred to as participants). The System includes a contributory group (Group A) and two noncontributory groups (Group B and Group D) and provides for service, disability and death benefits for eligible participants. System plan net assets are used to pay benefits for eligible participants of Group A, Group B and Group D. The System is a local governmental plan and therefore is not subject to the Employee Retirement Income Security Act of 1974. The System is governed by a Board of Trustees (the Board) and can only be terminated or amended by an act of the Legislature of the State of Texas or by an agreement between the City and the Board pursuant to the Pension Statute.

## Participation

Participants newly hired on or after January 1, 2008 automatically become members of a new noncontributory group (Group D) pursuant to the Fourth Amendment to the Meet and Confer Agreement dated June 27, 2007.

Participants hired before September 1, 1981 participate in Group A, unless they elected before December 1, 1981 or after May 1, 1996 to transfer to Group B. Participants hired or rehired after September 1, 1981 but before September 1, 1999, may make a one-time irrevocable election to participate in Group A; otherwise, they partici-
pate in Group B. Participants hired or rehired on or after September 1, 1999 and before January 1, 2008 participate in Group A; except that Executive Officials of the City and the Executive Director of the System (Executive Officials) participated in Group C. Effective January 1, 2005, the Executive Officials of the City and the Executive Director of the System automatically became Group A members pursuant to the First Amendment to Meet and Confer Agreement, dated December 21, 2004.

At July 1, the System's participants consisted of the following:

|  | $\underline{2011}$ | $\underline{2010}$ |
| :--- | :--- | :--- |
| Retirees and beneficiaries | 8,717 | 8,526 |
| currently receiving benefits |  |  |
| Former employees - vested but | 3,178 | 2,815 |
| not yet receiving benefits | 2,435 | 2,820 |
| Former employees - non-vested | 8,108 | 7,812 |
| Vested active participants | $\underline{2,237}$ | $\underline{5,101}$ |
| Non-vested active participants | $\underline{\underline{26,675}}$ |  |
| Total participants |  |  |

Participants may no longer elect to convert previous Group B service to Group A after December 31, 2005.

## Contributions

For fiscal years 2012 and 2011, covered active Group A participants were required to contribute $5 \%$ of their qualifying base salary to the System.

The System's Pension Statute provides that the employer contribution to the System be based on a percentage contribution rate multiplied by the combined eligible salaries paid to participants of all groups. The percentage contribution rate is based on the results of actuarial valuations made at least every three years, calculated on the basis of an acceptable reserve funding method approved by the Board. Notwithstanding any other provision, the City's minimum percentage contribution rate may not be
less than the greater of two times the contribution rate of Group A participants, or $10 \%$. However, under the terms of the Fourth Amendment to the Meet and Confer Agreement between the Board and the City, dated June 27, 2007, the City agreed to provide funding to the System as follows for the fiscal years 2008, 2009, 2010 and 2011:

|  | Budgeted <br> Contributions |
| :--- | :---: |
| Fiscal year 2008 | $\$ 75.0$ million |
| Fiscal year 2009 | $\$ 78.5$ million |
| Fiscal year 2010 | $\$ 83.5$ million |
| Fiscal year 2011 | $\$ 88.5$ million* |

The Amended and Restated Meet and Confer Agreement became effective July 1, 2011, incorporating all prior Meet and Confer provisions and establishing a new funding schedule for the City, along with other provisions. Under the Agreement, the City contributed $\$ 98.5$ million* to the System in fiscal year 2012. For each of the succeeding fiscal years, the City will contribute either the previous fiscal year's rate (19.36\% of covered payroll in fiscal year 2012) plus 2 percent of payroll or the previous fiscal year's contribution amount plus $\$ 10$ million, whichever is greater. This provision will stay in place until the actuarially determined contribution rate is met, at which time that rate becomes the effective contribution rate.

* The System's contributions are reduced by the contributions to the replacement benefit plan of approximately $\$ 1.34$ million and $\$ 1.22$ million for fiscal years 2012 and 2011, respectively.


## Retirement Eligibility

Effective January 1, 2008, new employees participate in a noncontributory group (Group D) with:

- No employee contributions,
- Normal retirement eligibility of age 62 and 5 years of credited service,
- Benefit accrual of $1.8 \%$ for the first 25 years of credited service, and 1\% thereafter,
- Option to elect an actuarially equivalent benefit with a survivor benefit,
- Option to elect an early reduced retirement benefit, and
- Option to roll over funds from section 457(b) plan to purchase an increased benefit.
A former employee who is rehired as an employee by the City or by the System on or after January 1, 2008 is a member of the group in which the employee participated at the time of the employee's immediately preceding separation from service.

There is no change in benefits for current members and retirees. For those participants in Group A and Group B employed effective January 1, 2005, and prior to January 1, 2008, a participant who terminates employment with the City or the System is eligible for a normal retirement pension beginning on the member's effective retirement date after the date the member completes at least five years of credited service and attains either:
(i) 62 years of age, or
(ii) a combination of years of age and years of credited service, including parts of years, the sum of which equals the number 75 , provided the participant is at least 50 years of age, or
(iii) completed at least 5 years of total credited service and attained any combination of age and credited service that when added together equal 70 or more, provided that the member, prior to January 1, 2005 completed at least 5 years of credited service and attained a combination of age and credited service that when added together equal 68 or more.

## Pension Benefits

Pension benefits are based on a participant's average monthly salary and years of credited service, as defined in the Pension Statute. The maximum pension benefit is $90 \%$ of the participant's average monthly salary.

Pension benefits are increased annually by a Cost of Living Adjustment (COLA) equal to $3 \%$ of the original benefit amount, not compounded, for all persons receiving a pension or survivor benefit as of January 1 of the year in which the increase is made, provided the person receiving the pension was an employee on or before

December 31, 2004, and the person receiving the survivor benefit is an eligible survivor of a person who was an employee on or before December 31, 2004.

Effective January 1, 2005, pension and survivor benefits for all retirees and eligible survivors of Group A and Group $B$ are increased annually by $2 \%$, not compounded, for all persons receiving a pension or survivor benefit as of January 1 of the year in which the increase is made, provided the person receiving the pension was hired or rehired on or after January 1, 2005. Retirees who received a 3\% COLA and who are rehired on or after January 1, 2005 will also receive a 3\% COLA on the subsequent benefit. Individuals participating in Group D do not have a COLA provision.

A participant who is eligible to receive a deferred benefit may elect to receive his or her pension benefit in an early lump sum distribution if the actuarial present value of the participant's benefit is less than $\$ 20,000$ on the date of termination. The Fourth Amendment to the Meet and Confer Agreement established the $\$ 20,000$ threshold. Prior to this agreement, the maximum amount was $\$ 10,000$. Early lump-sum distributions are subject to approval by the Board.

## Disability Benefits

Service-connected disability benefits for covered participants are based on the participant's normal accrued benefit, but are not less than 20\% of the participant's final monthly salary. There is no minimum credited service requirement to qualify for service-connected disability benefits.

Participants with at least five years of credited service who become disabled may qualify for a non-service connected disability allowance equal to the participant's normal accrued pension benefit.

## Survivor Benefits

Survivor benefits are provided for a member's surviving spouse and/or dependent children. A deceased member must have had at least five years of credited service at the time of his or her death to qualify for survivor benefits unless death was caused by a service-connected incident
as defined by the Pension Statute. For a Group D member, death benefits for a death that occurs while actively employed are determined in the same manner as for Group A and Group B. For a death that occurs after the Group D member's termination of employment, the payment of a death benefit depends on whether the participant elected an optional annuity.

A Group D participant with at least five years of credited service has the option to elect an actuarially equivalent amount under one of three joint annuity options in lieu of a normal benefit with no survivor benefit. If a Group D participant with at least five years of credited service elects a normal benefit, no death or survivor benefit is payable. If a Group $D$ participant with at least five years of credited service makes no optional annuity election, the surviving spouse is eligible to receive an amount equal to the amount that would have been paid if the participant had elected a 50\% joint and survivor annuity and named the spouse as the designated beneficiary.

Effective July 1, 2011, eligible unmarried Group A and Group B members who terminate service on or after June 30, 2011 have the option to select a joint and survivor (J\&S) annuity option in lieu of a normal benefit.

The optional annuity election, which was already available to vested Group D members and vested Group B members who separated from service prior to September 1997, allows eligible participants to elect to take a reduced pension and provide an annuity ( $50 \% \mathrm{~J} \& \mathrm{~S}, 100 \%$ J\&S, or 10-year Guarantee) to a designated annuitant. The optional annuity provision does not affect Group A and Group B members who are married at the time of their termination from employment or do not otherwise fall into the categories of eligible participants.

In order to qualify for survivor benefits other than under an annuity option, a surviving spouse must have been married to the deceased participant at the time the participant's employment with the City or System was terminated and at the time of the participant's death. To qualify for benefits, a child must be the natural, or legally adopted, dependent child of the deceased participant at the time of the participant's death and (a) must be under age 21 and never have been married, or (b) have been
totally and permanently disabled before age 18 and at the time of the participant's death and never have been married. Dependent benefits are payable to the legal guardian of the dependent(s) unless the dependent is at least 18 years of age.

## Deferred Retirement Option Plan

A Group A or Group B participant who is eligible to retire, except that he or she has not retired and remains a fulltime employee of the City, or the System, or has been separated from service for not more than thirty calendar days, may elect to participate in the Deferred Retirement Option Plan (DROP). The DROP provides that a monthly amount (monthly DROP credit) will be credited to a notional account (DROP Account). Interest is credited to the DROP Account at a rate approved by the Board, compounded at an interval approved by the Board. Beginning January 1, 2005 and continuing for the duration of the 2004 Meet and Confer Agreement, the DROP interest rate will be equal to half the return on the System's investment for the prior fiscal year, with a minimum rate of $2.5 \%$ and a maximum rate of $7.5 \%$, compounding currently at daily intervals. The first day of DROP participation is the DROP Entry Date. The day a participant's fully executed DROP election is accepted by the System is the DROP Election Date. Normal pension benefits cease to accrue on DROP Entry Date.

Effective September 1, 1999, the DROP Entry Date may precede DROP Election Date. However, effective January 1, 2005, a participant's election to participate in DROP cannot establish a DROP entry date that occurs prior to the date of the System's receipt of the member's request to participate in DROP. The monthly DROP credit is based on the participant's years of credited service and average monthly salary as of DROP Entry Date, and benefit accrual rates in effect on DROP Election Date.

DROP participation terminates when a DROP participant's employment with the City, or the System, terminates. The balance of the participant's notional DROP account (DROP Benefit) at the time of such termination is an amount equal to the sum of a participant's monthly DROP credits and interest accrued on such amount up to
the time the participant's employment terminates. A DROP Benefit is subject to approval by the Board. A DROP participant eligible to receive a DROP Benefit distribution may elect to receive the distribution in a lumpsum, partial distribution, in substantially equal periodic payments over a period of time approved by the Board, or in a combination of a lump-sum followed by substantially equal periodic payments over a period of time approved by the Board until the balance of the DROP Benefit is depleted. The DROP Benefit is not available to a DROP participant until such participant's employment with the City or the System has terminated and the participant has made a DROP distribution election.

Group D participants do not participate in DROP.

## Refunds of Participant Contributions

Group A participants who terminate employment prior to retirement for reasons other than death or disability may request a refund of their accumulated employee contributions, without interest, in lieu of a pension or in the event the participant has fewer than five years of credited service.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

## Basis of Presentation

The accompanying basic financial statements are presented in accordance with generally accepted accounting principles established by the Governmental Accounting Standards Board (GASB), which designates the accounting principles and financial reporting standards applicable to state and local governmental units. The accompanying basic 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 pension benefits required by the governing statutes and amendments thereto.

## Basis of Accounting

The basis of accounting is the method by which revenues and expenses are recognized in the accounts and report-
ed in the basic financial statements. The accompanying basic financial statements are presented on the accrual basis of accounting. Under the accrual basis of accounting, revenues, which include investment and other income, are recognized when they are earned and collection is reasonably assured, and expenses are recognized when the liability is incurred. Accrued income, when deemed not collectible, is charged to operations. Participant and employer contributions are recognized as revenues in the period in which they are due pursuant to formal commitments. Benefits and refunds are recognized when due and payable in accordance with the terms of the Pension Statute.

## Reporting Entity

The System is a component unit of the City and its basic financial statements and required supplemental information are included in the City's Comprehensive Annual Financial Report.

## Investment Valuation and Income Recognition

Investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Mortgages are valued on the basis of future principal and interest payments, and are discounted at prevailing interest rates for similar instruments. The fair value of limited partnerships and real estate trusts is based on independent appraisals or recent financial results. Short-term investments are carried at cost, which approximates fair value. Investments that do not have an established market are reported at estimated fair value.

Purchases and sales of investments and forward foreign exchange contracts are recorded on the trade date. Gains or losses on the forward foreign exchange contracts are recognized when the contract is complete.

Dividend income is recorded on the ex-dividend date. Interest and income from other investments are recorded when earned.

Net appreciation/depreciation on investments represents realized gains and losses on sales of investments during
the year and the change in the fair value of investments between years.

## Furniture, Fixtures and Equipment

Furniture, fixtures and equipment are recorded at cost less accumulated depreciation and amortization. Depreciation and amortization expense is computed using the straight-line method over the estimated useful lives of the related assets ranging from three to ten years or the life of the lease, if shorter. Any gain or loss on the retirement of assets is recognized currently. Maintenance and repairs are charged to expense while expenditures for improvements greater than or equal to $\$ 5,000$ are capitalized.

## Compensated Employee Absences

System employees earn paid leave (vacation and sick leave) based on years of service and may accumulate them subject to certain limitations and be paid upon termination or resignation from the System. The amount paid is determined based on the departing employee's regular rate of pay at separation. Compensated employee absences (vacation, compensatory time off, annual leave and sick leave) are accrued as an expense and liability in the statement of plan net assets at their most current rate.

## Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the basic financial statements and the reported amounts of additions and deductions during the reporting period. Accordingly, actual results could differ from those estimates.

## Income Tax Status

The System obtained its latest determination letter on April 23, 2002, in which the Internal Revenue Service stated that the System, as amended on May 11, 2001, is
in compliance with the applicable requirements of the Internal Revenue Code. The System has been amended since receiving the determination letter. However, the System's management and Board believe that the System is currently designed and being operated in compliance with the applicable requirements of the Internal Revenue Code.

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 (or asset) if the System has taken an uncertain position that more likely than not would not be sustained upon examination by the Internal Revenue Service. System management has analyzed the tax positions taken by the System, and has concluded that as of June 30, 2012 and 2011, there are no uncertain positions taken or expected to be taken that would require recognition of a liability (or asset) or disclosure in the basic financial statements. The System is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress. The System's management believes the System is no longer subject to income tax examinations for years prior to 2009.

## Costs of Administering the System

The costs of administering the System are paid by the System from current earnings pursuant to an annual fiscal budget adopted by the Board.

## Recent Accounting Pronouncements

GASB Statement No. 62, Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements.

This statement is intended to enhance the usefulness of the GASB's Codification by incorporating guidance that previously could only be found in certain Financial Accounting Standards Board (FASB) and American Institute of Certified Public Accountants (AICPA) pronouncements.
This statement incorporates into the GASB's authoritative literature the applicable guidance previously presented in the following pronouncements issued before November 30, 1989:

- FASB Statements and Interpretations
- Accounting Principles Board Opinions
- Accounting Research Bulletins of the AICPA's Committee on Accounting Procedure

By incorporating and maintaining this guidance in a single source, the statement reduces the complexity of locating and using authoritative literature needed to prepare state and local government financial reports.
The requirements of GASB Statement No. 62 are effective for financial statements for periods beginning after December 15, 2011. Management expects no significant changes in the System's financial report as a result of implementing this statement.
GASB Statement No. 63, Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources and Net Position.

This statement is intended to improve financial reporting by providing citizens and other users of state and local government financial reports with information about how past transactions will continue to impact a government's financial statements in the future.

This statement provides a new statement of net position format to report all assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position (which is the net residual amount of the other elements). The statement requires that deferred outflows of resources and deferred inflows of resources be reported separately from assets and liabilities. The statement also discusses how net position (no longer net assets) should be displayed. Ultimately, this new framework will serve to standardize the presentation of deferred balances and their effects on a government's net position and address uncertainty related to their display.

The provisions of this statement are effective for financial statements for periods beginning after December 15, 2011. Management expects no significant changes in the System's financial report as a result of implementing this statement.

GASB Statement No. 64, Derivative Instruments: Application of Hedge Accounting Termination Provisions. This statement will improve financial reporting by state and local governments by clarifying the circumstances in
which hedge accounting continues to be applied when a swap counterparty, or a swap counterparty's credit support provider, is replaced.

This statement is intended to clarify GASB Statement No. 53, which was implemented by the System for the year ended June 30, 2010. The provisions of this statement are effective for financial statements for periods beginning after June 15, 2011. The System implemented this statement during fiscal year 2012.

GASB Statement No. 65, Items Previously Reported as Assets and Liabilities.

This statement clarifies the appropriate reporting of deferred outflows of resources and deferred inflows of resources to ensure consistency in financial reporting. It was drafted to clarify the application of GASB Concepts Statement No. 4. It reclassifies certain items currently being reported as assets and liabilities as deferred outflows of resources and deferred inflows of resources. In addition, this Statement recognizes certain items currently being reported as assets and liabilities as outflows of resources and inflows of resources.

The provisions of this statement are effective for financial statements for periods beginning after December 15, 2012. Management expects no significant changes in the System's financial report as a result of implementing this statement. GASB Statement No. 66, Technical Corrections - 2012.

This statement amends GASB Statement No. 10, Accounting and Financial Reporting for Risk Financing and Related Insurance Issues, by removing the provision that limits fund-based reporting of a state and local government's risk financing activities to the general fund and the internal service fund type. As a result, governments would base their decisions about governmental fund type usage for risk financing activities on the definitions in GASB Statement No. 54, Fund Balance Reporting and Governmental Fund Type Definitions.

This statement also amends GASB Statement No. 62, Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements, by modifying the specific guidance on accounting for (1) operating lease payments
that vary from a straight-line basis (2) the difference between the initial investment (purchase price) and the principal amount of a purchased loan or group of loans, and (3) servicing fees related to mortgage loans that are sold when the stated service fee rate differs significantly from a current (normal) servicing fee rate. These changes would eliminate any uncertainty regarding the application of GASB Statement No. 13, Accounting for Operating Leases with Scheduled Rent Increases, and result in guidance that is consistent with the requirements in GASB Statement No. 48, Sales and Pledges of Receivables and Future Revenues and Intra-Entity Transfers of Assets and Future Revenues, respectively.

The provisions of this statement are effective for financial statements for periods beginning after December 15, 2012. Management expects no significant changes in the System's financial report as a result of implementing this statement.

GASB Statement No. 67, Financial Reporting for Pension Plans.

This statement replaces the requirements of GASB Statement No. 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans and GASB Statement No. 50 as they relate to pension plans that are administered through trusts or similar arrangements meeting certain criteria.

The statement builds upon the existing framework for financial reports of defined benefit pension plans, which includes a statement of fiduciary net position (the amount held in a trust for paying retirement benefits) and a statement of changes in fiduciary net position. GASB Statement No. 67 enhances note disclosures and required supplemental information for both defined benefit and defined contribution pension plans. GASB Statement No. 67 also requires the presentation of new information about annual money-weighted rates of return in the notes to the financial statements and in 10-year required supplemental information schedules.
The provisions in GASB Statement No. 67 are effective for financial statements for periods beginning after June 15, 2013. System management has not determined the impact on the disclosures in the financial statements.

## 3. CONTRIBUTIONS AND FUNDING STATUS

## Contributions

Group A active participants are required to contribute to the System amounts as set forth in the Pension Statute. As of June 30, 2012 and 2011, the Group A participant contribution rate was $5 \%$ of a participant's qualifying base salary. Group B and Group D participants do not contribute to the System.
Under the System's Pension Statute, the City's contribution rate shall not be less than the greater of $10 \%$ of all participant salaries or two times the rate contributed by Group A participants. The City is required to contribute amounts to the System to provide funding on an actuarial reserve basis for normal cost plus the level of percentages of payroll payments based on its amortization period for the unfunded actuarial liability. However, under the terms of the Fourth Amendment to the Meet and Confer Agreement dated June 27, 2007, the City agreed to provide funding to the System for fiscal years 2008 through 2011 as follows:

> | $\begin{array}{c}\text { Budgeted } \\ \text { Contributions }\end{array}$ |
| :--- |
| $\$ 75.0$ million |
| $\$ 78.5$ million |
| $\$ 83.5$ million |
| $\$ 88.5$ million* |

Fiscal year 2008
Fiscal year 2009
Fiscal year 2010
Fiscal year 2011
On June 29, 2011, the City approved the Amended and Restated Meet and Confer Agreement (Agreement). The Agreement provides for structured contributions from the City to provide the City budgetary flexibility while strengthening the System, enhancements to Board operations to promote best practices, and increased options for eligible participants that are cost neutral to the System. The Agreement has an effective date of July 1, 2011.

Under the Agreement, the City contributed $\$ 98.5$ million* to the System in fiscal year 2012. For each of the succeeding fiscal years, the City will contribute either the previous fiscal year's rate (19.36\% of covered payroll in fiscal year 2012) plus 2 percent of payroll or the previous fiscal year's contribution amount plus $\$ 10$ million, whichever is greater. This provision will stay in place until the actuarially determined contribution rate is met, at which time that rate becomes the effective contribution rate.

* The System's contributions are reduced by the contributions to the replacement benefit plan of approximately $\$ 1.34$ million and $\$ 1.22$ million for fiscal years 2012 and 2011, respectively.
The employer contribution amounts for fiscal years 2012 and 2011 were not set by actuarial valuations but were instead established under the terms of the Meet and Confer Agreement.
Although the City and participants have contributed the amounts as required under the Pension Statute and the Meet and Confer Agreement, the actual contributions made by the City have been less than the Annual Required Contribution (ARC) for fiscal years 2012 and 2011. The actuarially determined Annual Required Contribution (ARC) for fiscal year 2012 and 2011 were calculated at $23.45 \%$ and $22.36 \%$ of estimated payroll as shown in the July 1, 2011 and 2010 Valuation Reports, respectively.


## Funding Status

The funded ratio is a standard measure of a plan's funded status representing the ratio of the actuarial value of assets to the actuarial accrued liability. The funded ratio as of July 1, 2011 is $61.4 \%$. This is lower than the funded ratio as of July 1, 2010, which was $62.6 \%$. The funded ratio is the direct result of the 2007 Fourth Amendment to the Meet and Confer Agreement. Prior to the Fourth Amendment, the actuarial value of System assets was determined using techniques that spread the effects of short-term volatility in the market value of investments over a five-year period (20\% each year).

Under the previous agreement for purposes of the July 1, 2007 actuarial valuation, instead of recognizing 20\% of the prior years' deferred investment gains/(losses), all of the deferred gains/(losses) from 2006 and prior were fully recognized as of July 1, 2007. Only the 2007 and 2010 investment gain and the 2008 and 2009 investment loss have the normal deferral that is part of the actuarial value of assets (AVA) methodology. In future years, the number of deferral bases will grow until the System is once again recognizing prior years' investment gains/(losses) over five years.

The funded status of the System as of July 1, 2011, the most recent actuarial valuation date, is as follows (dollar amounts in millions):

## Funded Status of the System as of July 1, 2011

|  | Actuarial <br> Value of | Actuarial <br> Accrued <br> Actuarial | Assets | Liability | Unfunded | Funded |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

The City is responsible for funding the deficiency, if any, between the amounts available to pay the System's benefits and the amount required to pay such benefits.

## Actuarial Methods and Assumptions

The July 1, 2011 actuarial valuation used the following significant assumptions:

| Actuarial cost method | Entry age normal cost method |
| :---: | :---: |
| Amortization method | Level funding, open |
| Remaining amortization period | 30 years* |
| Investment rate of return | $8.5 \%$, net of expenses |
| Asset valuation method | 5 year modified ${ }^{* *}$ |
| Salary increases | Graded rates based on years of service (range from 3 percent to 6 percent) |
| Payroll growth factor | 3.0\% per year |
| General inflation rate | 3.0\% per year |
| Life expectancy | Based on 2000 Retirement Pensioners Mortality Tables (healthy participants) <br> Based on 1965 Railroad Retirement Board Disabled Life Table (disabled participants) |
| DROP participation rate | 90\% at first eligibility |
| DROP interest credit | 4.25\% per year |

*As part of the agreement the Amended and Restated Meet and Confer Agreement between the Board and the City of Houston, Dated July 1, 2011, the Board's funding policy has been modified to use an open 30-year rolling amortization period until such time that the City's actual contribution rate is equal to the actuarially determined contribution rate, at which point the funding period will be closed.
**Under the terms of the Fourth Amendment to the Meet and Confer Agreement, all of the deferred gains/(losses) from 2006 and prior were fully recognized as of July 1, 2007. Only the 2007 and 2010 investment gain and the 2008 and 2009 invest-
ment loss have the normal deferral that is part of the AVA methodology. In future years, deferred gains and losses will offset against each other, and the System will recognize $1 / 5$ th of the aggregate deferred gains or losses each year.

Historical trend information is provided as required supplementary information on pages 40 to 41 . This historical information is intended to demonstrate the progress the System has made in accumulating sufficient assets to pay benefits when due and the related actuarial assumptions used in determining the actuarially determined amounts.

## 4. CASH AND CASH EQUIVALENTS

For cash deposits and cash equivalents, custodial credit risk is the risk that in the event of a bank failure, the System's deposits may not be returned to it. The System's deposits are held by State Street Bank and Trust Company. As of June 30, 2012 and 2011, the System had fair value bank balances of \$1,763,257 and $\$ 939,205$, respectively, that are in demand deposit accounts subject to coverage by Federal deposit insurance but not collateralized. The System does not have a deposit policy for custodial credit risk; however, the management believes that the System's credit risk exposure is mitigated by the financial strength of the banking institution in which the deposits are held.

## 5. DEFERRED COMPENSATION PLAN

The System offers its employees a deferred compensation plan (DCP) created in accordance with Internal Revenue Code Section 457. The DCP, available to all employees of the System, permits employees to defer a

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portion of their salary until future years. Distributions from the DCP are not available to employees until termination, retirement, death or unforeseeable emergency. The DCP has a third party administrator, Great-West Retirement Services (Great-West), and the cost of administration and funding are borne by the DCP participants. Amounts deferred are held in trust by Great-West and, since the System has no fiduciary responsibility for the DCP, these amounts are not reflected in the accompanying financial statements in accordance with GASB Statement No. 32.

## 6. POST-EMPLOYMENT BENEFITS OTHER THAN PENSION BENEFITS

## Plan Description

The System provides health care benefits (i.e., medical, prescription, dental) to retired System employees and their beneficiaries. The System also provides System retirees only with $\$ 5,000$ of life insurance. A System employee is eligible for retiree health benefits and life insurance if the individual has at least five years of fulltime service with the System and meets at least one of the conditions:

- Has retired due to disability.
- Age 62 or greater.
- Total of years of age and years of full-time service are greater than or equal to 75 .
- Employee is eligible to begin receiving a retirement pension within five years after the employee's termination of employment.

The health care benefits are partially self-funded by the System. The System is fully responsible for the selffunded benefits. An insurance company processes claims and provides other services to the System related to the self-funded benefits. The insurance company does not insure or guarantee the self-funded benefits.

The System's plan includes an excess loss insurance established by the insurance company and the System is insured for the aggregate excess loss of $\$ 20,000$ maximum amount per covered person.

## Funding Policy and Annual Other Post-employment Benefits Cost

Contribution requirements of the System's retired employees are established and may be amended by the Board. The System currently offers a choice of two insurance plans, a conventional preferred provider organization (PPO) plan and a high deductible plan. Retiree health care contributions depend on their choice of plan. For life insurance, the retiree pays $100 \%$ of the cost of the premium.

The System's annual other post-employment benefits (OPEB) cost is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and to amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed thirty years. The System had its first OPEB actuarial valuation performed as of June 30, 2008 as required by GASB Statement No. 45. The actuarial valuation covers a two year period. The System's annual OPEB cost is as follows:

Three-Year Trend Information

|  | Annual | Percentage | Net |
| :---: | :---: | :---: | ---: |
| Year | OPEB | of ARC | OPEB |
| Ended | $\underline{\text { Cost }}$ | Contributed | Obligation |
| $6 / 30 / 10$ | $\$ 360,090$ | $33.3 \%$ | $\$ 740,321$ |
| $6 / 30 / 11$ | 371,709 | $35.2 \%$ | 981,125 |
| $6 / 30 / 12$ | 416,999 | $26.8 \%$ | $1,286,400$ |

## Funded Status and Funding Progress

The most recent funded status of the System's retiree health care plan, under GASB Statement No. 45 as of June 30, 2012 is shown as follows:

Actuarial Valuation Date as of June 30, 2012

| Actuarial Value of Assets (a) | - |
| :--- | ---: |
| Actuarial Accrued Liability (AAL) (b) | $\$ 4,424,477$ |
| Unfunded (Funded) AAL (UAAL) (b-a) | $\$ 4,424,477$ |
| Funded Ratio (a/b) | $0 \%$ |
| Covered Payroll (c) | $2,251,862$ |
| $\quad 196.5 \%$ |  |

Under the reporting parameters, the System's retiree health care plan is $0 \%$ funded with an estimated actuarial accrued liability exceeding actuarial assets by $\$ 4,424,477$ at June 30, 2012.

## Actuarial Methods and Assumptions

The projected unit credit, level percent of payroll actuarial cost method is used to calculate the GASB ARC for the System's retiree health care plan. Using the plan benefits, the present health premiums and a set of actuarial assumptions, the anticipated future payments are projected. The projected unit credit method then provides for a systematic funding for these anticipated payments. The yearly ARC is computed to cover the cost of benefits being earned by covered members as well as to amortize a portion of the unfunded accrued liability. If experience is in accordance with the assumptions used, the ARC will increase at approximately the same rate as active employee payroll, and the ARC as a percentage of payroll will remain basically level on a year to year basis.

Projections of health benefits are based on the plan as understood by the System and include the types of benefits in force at the valuation date and the pattern of sharing benefit costs between the System and the System's employees to that point. Actuarial calculations reflect a long-term perspective and employ methods and assumptions that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets. Significant methods and assumptions were as follows for the System's retiree healthcare plan:

Actuarial methods and assumptions

| Investment rate of return | $4.5 \%$, net of expenses <br> Salary increases |
| :--- | :--- |
|  | Graded rates based on years <br> of service (range from 3 per- <br> cent to 6 percent) |
| Payroll growth factor | $3.0 \%$ per year |
| General inflation rate | $3.0 \%$ per year |
| Actuarial cost method | Projected Unit Credit Cost <br> Method |
| Amortization method | Level percentage of pay |
| Amortization Period | 30 Year, open |
| Health care inflation rate | Starting at $9 \%$ in 2012 and <br> decreasing by $0.5 \%$ each |
|  | year to 4.5\% by 2021 |

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events in the future. Amounts determined regarding the funded status and the annual required contributions of the System's retiree health care plan are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future. The required schedule of funding progress presented as required supplementary information (see schedule 3) provides multiyear trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

## 7. INVESTMENTS

Portions of the System's investments are classified as security investments. A security is a transferable financial instrument that evidences ownership or creditorship. Investments in commingled funds, limited partnerships, real estate trusts, and loans and mortgages are investments that are evidenced by contracts rather than securities.

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The fair values of the System's investments at June 30 are presented by type, as follows:

|  | $\underline{2012}$ | $\underline{c} \underline{2011}$ |
| :--- | ---: | ---: |
| Short-term investment funds | $\$ 65,204,046$ | $171,329,754$ |
| Government securities | $71,642,342$ | $54,045,962$ |
| Corporate bonds | $230,905,237$ | $200,264,102$ |
| Capital stocks | $810,010,042$ | $841,748,551$ |
| Commingled funds | $255,302,205$ | $315,647,983$ |
| Real assets | $193,775,820$ | $231,463,317$ |
| Alternative investments | $421,272,705$ |  |
|  | $378,178,957$ |  |

The System's Board, in accordance with the power and authority conferred under the Texas Statutes, employed State Street Bank and Trust Company (Custodian) as custodian of the assets of the System, and in said capacity, the Custodian is a fiduciary of the System's assets with respect to its discretionary duties including safekeeping the System's assets. The Custodian has established and maintains a custodial account to hold, or direct its agents to hold, for the account of the System all assets that the Board shall from time to time deposit with the Custodian. All rights, title and interest in and to the System's assets shall at all times be vested in the System's Board.
In holding all System assets, the Custodian shall act with the same care, skill, prudence and diligence under the prevailing circumstances that a prudent person acting in like capacity and familiar with matters of this type would use in the conduct of an enterprise with a like character and with like aims.

Further, the Custodian shall hold, manage and administer the System's assets for the exclusive purpose of providing the benefits to the members and the qualified survivors of the System.

The Board shall manage the investment program of the System in compliance with all applicable Federal and state statutes and regulations concerning the investment of pension assets. The Board has adopted a Statement of Investment Policies and Objectives (Investment Policy)
to set forth the factors involved in the management of investment assets for the System and which is made part of every investment management agreement.

## Custodial Credit Risk

For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, the System will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the System, and are held by either the counterparty or the counterparty's trust department or agent but not in the System's name. At June 30, 2012 and 2011, the System's investments that were not subject to custodial credit risk were the investments in U.S. government securities and corporate bonds as they are registered in the name of the System and held in possession of the Custodian.

## Concentration of Credit Risk

The allocation of assets among various asset classes is set by the Board. For major asset classes (e.g., U.S. equity, international equity, fixed income, real assets, and alternative investments), the System will further diversify by employing managers with demonstrated skills in complementary areas of expertise. The managers retained will utilize varied investment approaches, but, when combined will exhibit characteristics that are similar, but not identical, to the asset class proxy utilized in the strategic asset allocation plan. The Investment Policy of the System provides that no investment manager shall have more than $15 \%$ (at market value) of the System's assets in one investment style offered by the firm, with the exception of passive management.

Representative guidelines by type of investment are as follows:

## U.S. Equity Managers

1. A manager's portfolio shall contain a minimum of twenty-five issues.
2. No more than $5 \%$ of the manager's portfolio at market shall be invested in American Depository Receipts (ADRs).

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3. No individual holding in a manager's portfolio may constitute more than $5 \%$ of the outstanding shares of an issuer.
4. No individual holding may constitute more than $5 \%$ of a manager's portfolio at cost or $10 \%$ at market.
5. Short sales, purchases on margin, non-negotiable or otherwise restricted securities are prohibited, other than where expressly permitted.
6. While there are no restrictions on cash, a manager must notify the System if the cash position exceeds 10\%.

## International Equity Managers

1. Not more than $5 \%$ at cost and $10 \%$ at market value of a manager's portfolio shall be invested in the securities of any one issuer.
2. Not more than $30 \%$ of the assets of a manager's portfolio (at market value) shall be invested in any one country with the exception of Japan.
3. While there are no restrictions on cash, a manager must notify the System if the cash position exceeds 10\%.
4. Forwards foreign currency exchange contracts will be limited as follows:
a. Forward and future exchange contracts of any currency may be used to hedge up to $100 \%$ of the currency exposure of the portfolio in aggregate or of the currency exposure to any single country,
b. Foreign exchange contracts with a maturity exceeding 12 months may not be made, and
c. Currency options may be entered into in lieu of or in conjunction with forward sales of currencies. The same effective limitations specified in (a) and (b) above will apply to currency options.

## Fixed Income Managers

1. No more than $10 \%$ of a manager's portfolio at market shall be invested in the securities of any single issuer,
with the exception of the U.S. government and its agencies.
2. No individual holding in a manager's portfolio shall constitute more than $10 \%$ of the market value of an issue.

## Global Opportunistic Fixed Income/High Yield Managers

1. No more than $5 \%$ at cost and $10 \%$ at market value of a manager's portfolio shall be invested in the securities of any single issuer, with the exception of the U.S. government and its agencies.

There is no security issued by a single issuer that is being held with market value over 5\% of the System's plan net assets as of June 30, 2012 and June 30, 2011.

## Interest Rate Risk

The System invests in fixed income securities including, but not limited to, investments representing instruments with an obligated fixed rate of interest including public and private debentures, mortgages, investments in life insurance general accounts and guaranteed investment contracts, with maturities greater than one year, and options/ futures. Instruments may have an investment grade or non-investment grade rating. Purchases and sales, investment selection and implementation of investment strategies are delegated to the discretion of the investment manager, subject to compliance with its management agreement and the Investment Policy.

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the investment. Duration is a measure of a debt investment's exposure to fair value changes arising from changes in interest rates. It uses the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price. The greater the duration of a bond, or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates and vice-versa. Duration is the measure of a bond price's sensitivity to a 100-basis point change in interest rates. The duration of the System's debt securities are managed by the active managers.

NOTES TO BASIC FINANCIAL STATEMENTS

At June 30, 2012, the following table shows the System's investments by type, amount and the effective duration rate:

|  | Effective <br> Duration | Domestic | International | Fair Value |
| :---: | :---: | :---: | :---: | :---: |
| Collateralized mortgage obligations | 3.25 | \$10,462,087 |  | 10,462,087 |
| Convertible bonds | 3.46 | 11,320,947 | 237,338 | 11,558,285 |
| Corporate bonds | 4.91 | 168,880,837 |  | 168,880,837 |
| Corporate bonds (International) | 5.22 |  | 8,075,601 | 8,075,601 |
| GNMA/FNMA/ |  |  |  |  |
| FHLMC | 2.15 | 40,265,061 |  | 40,265,061 |
| Municipal | 7.45 | 1,266,852 |  | 1,266,852 |
| Government issues | 8.52 | 27,777,674 |  | 27,777,674 |
| Government issues (International) | 7.19 |  | 2,332,757 | 2,332,757 |
| Misc. receivable |  |  |  |  |
| (auto/credit card) | 1.41 | 7,309,002 |  | 7,309,002 |
| Other asset backed securities | 8.16 | 1,338,324 |  | 1,338,324 |
| Bank loans and other | er N/A | 23,281,099 |  | 23,281,099 |
|  |  | \$291,901,883 | 10,645,696 | 302,547,579 |

## Credit Risk

The quality ratings of investments in fixed income securities are set forth in the Investment Policy as follows:

1. All issues purchased by investment grade fixed income managers must be of investment grade quality Baa (Moody's) or BBB (S\&P) unless expressly authorized by the Board, in which case a minimum B rating shall apply, with a maximum limit of non-investment grade credits of $20 \%$ at market.
2. For global opportunistic fixed income/high yield securities, more than 50\% of a manager's portfolio at market shall be invested in non-investment grade fixed income securities, i.e. those with ratings of BA1 (Moody's), BB+ (Standard \& Poor's), or lower, or unrated bonds, including but not limited to corporate bonds, convertible bonds, and preferred stocks.

## Quality Ratings

The quality ratings of investments in fixed income securities as described by nationally recognized statistical rating organizations at June 30, 2012 are as follows:

| Quality <br> Rating | СМО | Convertible <br> Bonds | Corporate Bonds | Sponsored Agencies | Municipals | vernmental issues (Int) | Other | Other Asset Backed | Grand Total Fair Value | Percentage of Holdings |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AAA | \$ 8,191,487 |  | 309,388 |  |  |  | 4,104,210 | 1,338,324 | 13,943,409 | 0.68\% |
| AA |  |  | 1,487,154 |  |  |  | 75,933 |  | 1,563,087 | 0.08\% |
| AA+ |  |  |  | 33,917,574 |  |  | 177,337 |  | 34,094,911 | 1.66\% |
| AA- |  |  | 194,207 |  | 117,557 |  |  |  | 311,764 | 0.02\% |
| A |  |  | 947,434 |  | 356,187 |  | 126,581 |  | 1,430,202 | 0.07\% |
| A+ | 801,494 |  | 179,496 |  | 665,900 |  |  |  | 1,646,890 | 0.08\% |
| A- | 319,152 |  | 6,543,506 |  | 127,208 |  |  |  | 6,989,866 | 0.34\% |
| BBB |  | 176,231 | 11,433,500 |  |  |  |  |  | 11,609,731 | 0.57\% |
| BBB+ |  |  | 6,596,366 |  |  | 2,194,311 |  |  | 8,790,677 | 0.43\% |
| BBB- |  |  | 11,141,307 |  |  |  |  |  | 11,141,307 | 0.54\% |
| BB |  | 529,489 | 7,450,606 |  |  | 138,446 |  |  | 8,118,541 | 0.40\% |
| BB+ |  | 1,559,307 | 6,307,731 |  |  |  |  |  | 7,867,038 | 0.38\% |
| BB- |  | 2,660,969 | 4,197,026 |  |  |  |  |  | 6,857,995 | 0.33\% |
| B |  | 1,731,706 | 35,015,893 |  |  |  |  |  | 36,747,599 | 1.79\% |
| B+ |  | 1,585,863 | 17,321,828 |  |  |  |  |  | 18,907,691 | 0.92\% |
| B- |  | 492,444 | 26,206,727 |  |  |  |  |  | 26,699,171 | 1.30\% |
| Below C |  | 929,088 | 35,525,976 |  |  |  |  |  | 36,455,064 | 1.78\% |
| NA | 1,149,954 | 1,893,188 | 6,098,293 | 7,489,294 |  |  | $\underline{26,106,046}$ |  | 42,736,775 | 2.09\% |
| Subtotal | \$ 10,462,087 | 11,558,285 | 176,956,438 | 41,406,868 | 1,266,852 | 2,332,757 | 30,590,107 | 1,338,324 | 275,911,718 | 13.47\% |
| Total credit risk debt securities |  |  |  |  |  |  |  |  | \$ 275,911,718 | 13.47\% |
| U.S. government fixed income securities |  |  |  |  |  |  |  |  | 26,635,861 | 1.30\% |
| Total fixed income securities |  |  |  |  |  |  |  |  | 302,547,579 | 14.77\% |
| Other investments |  |  |  |  |  |  |  |  | 1,745,564,818 | 85.23\% |
| Total investments |  |  |  |  |  |  |  |  | \$ 2,048,112,397 | 100.00\% |

NOTES TO BASIC FINANCIAL STATEMENTS JUNE 30, 2012 AND 2011

## Foreign Currency Risk

International securities investment managers are expected to maintain diversified portfolios by sector and by issuer using the System's Investment Policy.

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. Each investment manager, through the purchase of units in a commingled investment trust fund or international equity mutual fund, establishes investments in international equities. The System has an indirect exposure to foreign currency fluctuation as of June 30, 2012 as follows:

|  | Fair Value | Percentage |
| :---: | :---: | :---: |
| Australian Dollar | \$ 8,424,135 | 4.09\% |
| Brazilian Real | 3,904,399 | 1.90\% |
| Canadian Dollar | 7,585,236 | 3.68\% |
| Danish Krone | 1,576,201 | 0.77\% |
| Euro Currency | 52,888,889 | 25.67\% |
| Hong Kong Dollar | 12,375,671 | 6.01\% |
| Indonesian Rupiah | 1,540,580 | 0.75\% |
| Japanese Yen | 23,670,490 | 11.49\% |
| Malaysian Ringgit | 798,898 | 0.39\% |
| Mexican Peso | 2,326,310 | 1.13\% |
| New Taiwan Dollar | 482,232 | 0.23\% |
| Norwegian Krone | 4,991,231 | 2.42\% |
| Pound Sterling | 48,562,057 | 23.57\% |
| Singapore Dollar | 4,633,328 | 2.25\% |
| South African Rand | 5,541,623 | 2.69\% |
| South Korean Won | 4,469,039 | 2.17\% |
| Swedish Krona | 7,641,956 | 3.71\% |
| Swiss Franc | 10,504,481 | 5.10\% |
| Thailand Baht | 1,970,535 | 0.96\% |
| Turkish Lira | 2,127,606 | 1.02\% |
|  | \$ 206,014,897 | 100.00\% |

Schedule 6 on page 45 lists the System's investment and professional service providers.

## Securities Lending

The System is authorized under its Investment Policy to participate in a securities lending program through its
agent and Custodian. Under this program, for an agreed upon fee, System-owned investments are loaned to a borrowing financial institution. During the years ended June 30, 2012 and 2011, the Custodian lent the System's securities and received cash and securities issued or guaranteed by the United States government as collateral. The cash collateral received on each loan is invested together with the cash collateral of other lenders, in a collective investment pool comprised of a liquidity pool and a duration. As of June 30, 2012 and June 30, 2011, the liquidity pool had an average duration of 36 and 32 days and an average weighted final maturity of 73 and 62 days respectively. As of June 30, 2012 and 2011, the duration pool had an average duration of 40 and 36 days and an average weighted final maturity of 1,328 and 484 days, respectively. Because the loans were terminable at will, their duration did not generally match the duration of the investments made with cash collateral.

Borrowers are required to deliver collateral for each loan equal to: (i) in the case of loaned securities denominated in United States dollars or whose primary trading market was located in the United States or sovereign debt issued by foreign governments, $102 \%$ of the market value of the loaned securities; and (ii) in the case of loaned securities not denominated in United States dollars or whose primary trading market was not located in the United States, $105 \%$ of the market value of the loaned securities. The Custodian does not have the ability to pledge or sell securities delivered for collateral, absent a borrower's default. The Board and the borrowers maintained the right to terminate all securities lending transactions on demand.

On March 26, 2009, the Board amended its securities lending agreement with its Custodian to clarify responsibilities regarding borrower defaults. The amendment requires that if at the time of a default by a borrower, the Custodian shall indemnify the System against the failure of the borrower to return the loaned securities by purchasing a number of replacement securities equal to the number of such unreturned loaned securities, to the extent that such replacement securities are available on the open market. To the extent that such proceeds are insufficient or the collateral is unavailable, the purchase

NOTES TO BASIC FINANCIAL STATEMENTS
JUNE 30, 2012 AND 2011
of replacement securities shall be made at the Custodian's expense. If replacement securities are unavailable, the Custodian will credit to the System's account an amount equal to the market value of the unreturned loaned securities for which replacement securities are not purchased. The Board also approved a motion limiting the System's securities lending program utilization level (on-loan balance as a percentage of lendable assets) at 33.5\%.

The collateral held and the fair value of securities on loan as of June 30, 2012 was $\$ 261,194,816$ and $\$ 260,751,596$, respectively, and $\$ 116,400,998$ and $\$ 114,702,600$ as of June 30, 2011, respectively.

The fair values of the underlying securities lent as of June 30, are as follows:

|  | $\underline{2012}$ | $\underline{\underline{2011}}$ |  |
| :--- | :---: | :---: | :---: |
| Domestic equity | $\$$ | $194,836,769$ | $76,556,964$ |
| Domestic fixed income | $47,640,524$ | $38,145,636$ |  |
| International equity |  | $\underline{18,274,303}$ |  |
|  | $\$$ | $\underline{260,751,596}$ | $\underline{ }$ |

## Derivative Investing

The System's investment managers may invest in derivatives if permitted by the guidelines established by the System's Board. Derivatives are generally defined as contracts whose values depend on, or are derived from, the value of an underlying asset, reference rate or index. Short options positions will generally be hedged with cash, cash equivalents, current portfolio security holdings, or other options or futures positions.

During fiscal years 2012 and 2011, the System recognized $\$(1,401,347)$ and $\$ 814,156$, respectively in investment loss/revenue related to derivatives.

The System's investment guidelines allow fixed income managers to hold stock rights and warrants acquired as a result of a re-organization. Domestic equity managers may use index futures as a cash flow hedge. Five and four of the System's domestic investment managers held rights and warrants on behalf of the System during fiscal years 2012 and 2011, respectively.

The System's four international money managers hold foreign exchange forwards and stock rights and warrants to mitigate the risk associated with these investments.

As of June 30, 2012 and 2011, the System held derivatives with a notional value of $\$ 244,119$ and $\$ 700,219$ and a fair value of $\$ 2,614,251$ and $\$ 3,370,619$, respectively. The System had no counterparty risk as of June 30, 2012. The System's holdings were with three counterparties, UBS AG, Bank of America and JP Morgan Stanley and Co. Inc., which have Fitch credit ratings of A+, A+ and A, respectively as of June 30, 2011.

The following is a summary of derivatives held by the System:

| Fair Value $\underline{2012}$ |  |  | $\underline{2011}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| Classification | Amount | Notional | Amount | Notional |
| Common Stock | \$2,614,251 | 244,119 | 4,751 | 327,700 |
| Common Stock |  |  | 3,365,868 | 372,519 |
| Totals | \$2,614,251 | 244,119 | 3,370,619 | 700,219 |
| Changes in Fair Value |  |  | $\underline{2012}$ | $\underline{2011}$ |
| Investment |  |  |  |  |
| Derivatives | Classification |  |  |  |
| FX Forwards | Investment re | enue | \$ | $(45,884)$ |
| Rights | Investment re | enue | $(8,637)$ | 56,976 |
| Warrants | Investment re | enue | $(1,392,710)$ | 803,064 |
| Totals |  |  | \$(1,401,347) | 814,156 |

In addition to the above, the System has exposure to derivatives through its investments in hedge funds, which are reported in alternative investments in the financial statements.

## Covered Call Options

The System writes covered call options as an investment technique to enhance portfolio returns and to reduce portfolio volatilities. When a call option is sold (written), it obligates the System to deliver stock at a set price for a specific period of time. The System receives premium income for options written, and the value of the options are recorded as a liability due to the obligation to deliver stock. The liability is recorded at the current fair value of

NOTES TO BASIC FINANCIAL STATEMENTS
the options written. Fair value is the amount that the System would pay to terminate the contracts at the reporting date.
If a call option expires, a gain is realized to the extent of the premium received. If a call option is exercised, the premium received is realized as a gain. A gain or loss is also realized on the underlying security to satisfy the delivery obligation. The System may repurchase a call option written at its discretion when it is favorable to do so. When a contract is repurchased, the liability is reduced and the difference between the premium received and the amount paid to close the contract is realized as a gain or loss.

The System held no options at June 30, 2012 and 2011.

## Forward Foreign Exchange Contracts

A currency forward is a contractual agreement between two parties to pay or receive specific amounts of foreign currency at a future date in exchange for another currency at an agreed upon exchange rate. Forward commitments are not standardized and carry credit risk due to the possible nonperformance by one of the counter parties. The maximum potential loss is the aggregate face value in U.S. dollars at the time the contract was opened; however, the likelihood of such loss is remote. No such losses occurred during fiscal years 2012 and 2011. Forwards are usually traded over-the-counter. These transactions are entered into in order to hedge risks from exposure to foreign currency rate fluctuation and to facilitate trade settlement of foreign security transactions.
Forwards carry market risk resulting from adverse fluctuations in foreign exchange rates. Recognition of realized gain or loss depends on whether the currency exchange rate has moved favorable or unfavorable to the contract holder upon termination of the contract. Prior to termination of the contract, the System records the unrealized currency translation gain or loss based on the applicable forward exchange rates.

## Mortgage-backed Securities

A mortgage-backed security depends on the underlying pool of mortgage loans to provide the cash flow to make
principal and interest payments on the security. A decline in interest rates can result in prepayments, called contraction risk. This risk occurs as mortgages are pre-paid or refinanced which reduces the expected return of the security. If interest rates rise the likelihood of prepayments decrease, resulting in extension risk. Since loans in a pool underlying a security are being prepaid at a slower rate, investors are unable to capitalize on higher interest rates because their investments are locked in at a lower rate for a longer period of time. A collateralized mortgage obligation (CMO) is a type of mortgage-backed security that creates separate pools of pass-through rates for different classes of bondholders with varying maturities, called tranches. The repayments from the pool of pass-through securities are used to retire the bonds in the order specified by the bonds' prospectus.

The System may invest in mortgage-backed securities to enhance fixed-income returns. Mortgage-backed securities are subject to credit risk, in that the borrower may be unable to meet its obligations.

## 8. FURNITURE, FIXTURES AND EQUIPMENT

Furniture, fixtures and equipment are comprised as follows at June 30:

|  | $\underline{2012}$ | $\underline{2011}$ |  |
| :--- | ---: | ---: | ---: |
| Office furniture and equipment | $\$$ | 49,391 | 77,291 |
| Computer equipment | 721,473 | 815,660 |  |
| Leasehold improvements | 130,773 | 398,232 |  |
|  | 901,637 | $1,291,183$ |  |

Less accumulated depreciation and amortization

$$
\$ \xlongequal{\underline{(577,029)}} \begin{aligned}
& \underline{(984,285)} \\
& \hline
\end{aligned}
$$

## 9. COMMITMENTS

As described in note 1, certain participants of the System are eligible to receive, upon request, a refund of their accumulated Group A and/or Group C contributions, without interest, upon termination of employment with the City, or System, prior to being eligible for pension benefits. At June 30, 2012 and 2011, aggregate contributions from

## NOTES TO BASIC FINANCIAL STATEMENTS

 JUNE 30, 2012 AND 2011these eligible participants of the System were approximately $\$ 134,469,000$ and $\$ 125,127,000$, respectively.

The System's investments in limited partnerships and real estate trusts are included in the table appearing in note 7. In connection with those investments, the System has remaining commitments as of June 30, 2012 and 2011 of approximately $\$ 309$ million and $\$ 213$ million, respectively, pursuant to terms of the respective limited partnerships and real estate trusts.

The System leases office facilities under a five year lease, ending October 30, 2016. This lease agreement provides for two months of abated rent and a base rent of \$14 per square foot for the first eighteen months. Subsequently, it will increase by $\$ 0.50$ per square foot per year for the remainder of the term. The payments under the lease will be:

| Year | Amount |
| :--- | ---: |
| Fiscal year 2013 | $\$ 297,971$ |
| Fiscal year 2014 | 307,382 |
| Fiscal year 2015 | 316,794 |
| Fiscal year 2016 | 326,205 |
| Fiscal year 2017 | $\underline{\$ 1,359,701}$ |
| Total |  |

Additional amounts are assessed for use of common areas, utilities and maintenance. Total rental expense, including these assessments, amounted to approximately \$439,000 and \$677,000 during the years ended June 30, 2012 and 2011, respectively.

## 10. RISKS AND UNCERTAINTIES

The System invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the value of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statements of plan net assets.

The System's contribution rates are made and the actuarial information included in the notes and in Schedules 1,2 and 3 are based on certain assumptions pertaining to interest rates, inflation rates and participant demographics, all of which are subject to change. Due to uncertainties inherent in the estimations and assumptions process, it is at least reasonably possible that changes in these estimates and assumptions in the near term could be material to the basic financial statements.

## 11. SUBSEQUENT EVENTS

Management has evaluated subsequent events through September 27, 2012, the date which the financial statements were available to be issued. Management has determined that no subsequent events require disclosure in these financial statements.

## SCHEDULE 1 - SCHEDULE OF FUNDING PROGRESS (UNAUDITED) (IN MILLIONS OF DOLLARS)

| Actuarial | Actuarial | Acturial |  |  |  | UAAL as a Percentage |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Value of Assets | Accrued Liability | Unfunded | Funded | Covered |  |
| Valuation | (AVA) | (AAL) | (UAAL) | Ratio | Payroll | Payroll |
| Date | (1) | (2) | (2-1) | (1/2) | (3) | ((2-1)/3 |
| 07/01/02 | \$ 1,519.7 | 2,515.2 | 995.5 | 60\% | \$ 399.8 | 249\% |
| 07/01/03 | 1,510.3 | 3,278.2 | 1,767.9 | 46\% | 390.3 | 453\% |
| 07/01/04 | 1,501.2 | 2,633.8 | 1,132.6 | 57\% | 366.2 | 309\% |
| 07/01/05 | 1,777.6 | 2,725.3 | 947.7 | 65\% | 404.6 | 234\% |
| 07/01/06 | 1,867.3 | 2,894.3 | 1,027.0 | 65\% | 422.5 | 243\% |
| 07/01/07 | 2,193.7 | 3,128.7 | 935.0 | 70\% | 448.9 | 208\% |
| 07/01/08 | 2,310.4 | 3,296.3 | 985.9 | 70\% | 483.8 | 204\% |
| 07/01/09 | 2,284.4 | 3,451.4 | 1,167.0 | 66\% | 539.0 | 217\% |
| 07/01/10 | 2,273.1 | 3,632.5 | 1,359.4 | 63\% | 550.7 | 247\% |
| 07/01/11 | 2,328.8 | 3,790.3 | 1,461.5 | 61\% | 544.7 | 268\% |

Analysis of the dollar amounts of the actuarial value of assets, actuarial accrued liability, and unfunded actuarial accrued liability in isolation can be misleading. Expressing the actuarial value of assets as a percentage of the actuarial accrued liability provides one indication of the System's funding status on a going-concern basis. Analysis of this percentage over time indicates whether the plan is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the plan. Trends in unfunded actuarial accrued liability and covered payroll are both affected by inflation. Expressing the unfunded actuarial accrued liability as a percentage of covered payroll approximately adjusts for the effects of inflation and aids analysis of the System's progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the plan.

See accompanying independent auditors' report.
See accompanying note to required supplemental schedules.

## SCHEDULE 2 - SCHEDULE OF EMPLOYER CONTRIBUTIONS (UNAUDITED)

| Fiscal <br> Year | Actuarial <br> Valuation <br> Date | Annual Required <br> Contributions <br> (in millions) | Percentage <br> Contributed |
| :---: | :---: | :---: | :---: |
| $06 / 30 / 03$ | $\underline{07 / 01 / 01}$ | $\$ 17.9$ | $56.5 \%$ |
| $06 / 30 / 05$ | $07 / 01 / 02$ | 123.9 | $46.0 \%$ |
| $06 / 30 / 06$ | $07 / 01 / 03$ | 102.9 | $61.0 \%$ |
| $06 / 30 / 07$ | $07 / 01 / 05$ | 119.1 | $56.2 \%$ |
| $06 / 30 / 08$ | $07 / 01 / 06$ | 101.8 | $69.0 \%$ |
| $06 / 30 / 09$ | $07 / 01 / 07$ | 110.6 | $66.0 \%$ |
| $06 / 30 / 10$ | $07 / 01 / 08$ | 93.8 | $81.9 \%$ |
| $06 / 30 / 11$ | $07 / 01 / 09$ | 99.3 | $82.6 \%$ |
| $06 / 30 / 12$ | $07 / 01 / 10$ | 115.1 | $77.0 \%$ |
|  | $07 / 01 / 11$ | 133.1 | $74.0 \%$ |


#### Abstract

* The required contributions are calculated based on actuarially determined contribution rates. Actuarial valuations generally are performed annually. The contribution rate, which is based on a given actuarial valuation and approved by the Board, becomes effective one year after the valuation date. However, a Fourth Amendment to the Meet and Confer Agreement between the System and the City of Houston was adopted in 2007 (Fourth Amendment). As part of this amendment, a funding schedule was implemented consisting of a $\$ 75$ million employer contribution for fiscal year 2008, a $\$ 78.5$ million employer contribution for fiscal year 2009, a $\$ 83.5$ million employer contribution for fiscal year 2010, and a $\$ 88.5$ million employer contribution for fiscal year 2011. Beginning in fiscal year 2012, the employer contributions shown above are based on a negotiated amount of $\$ 98.5$ million in fiscal year 2012 followed by increases in the following fiscal years equal to the greater of $\$ 10$ million or the set contribution rate of $19.36 \%$ increased by $2 \%$ per year since fiscal year 2012. This method of determining the contribution rate remains in place until the contribution rate reaches the actuarially determined contribution rate determined by the valuation on the year prior (i.e., the fiscal year 2013 rate is set by the July 1,2011 valuation). Schedule 2 does not provide information with respect to contributions actually made in relation to the amounts required under the Fourth Amendment.


See accompanying independent auditors' report.
See accompanying note to required supplemental schedules.

## NOTES TO REQUIRED SUPPLEMENTAL SCHEDULES 1 and 2 (UNAUDITED)

The information presented in the required supplemental information was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:
Valuation date
Actuarial cost method
Amortization method
Amortization period
Asset valuation method
Actuarial assumptions:
Investment rate of return
Salary increases
Payroll growth factor
General inflation rate
DROP participation rate
DROP interest credit
Mortality rates

July 1, 2011
Entry Age Normal
Level funding, open
30 -Year open funding period*
5-year modified
8.5\%, net of expenses

Graded rates based on years of service
3.0\% per year
3.0\% per year

90\% at first eligibility
4.25\% per year

Based on 2000 Retirement
Pensioners Mortality Table
(healthy participants);
1965 Railroad Retirement
Board Disabled Life Table
(disabled participants)

[^1]See accompanying independent auditors' report.

SCHEDULE 3 - SCHEDULE OF FUNDING PROGRESS FOR OPEB (UNAUDITED)

| Actuarial Valuation Date | Actuarial Value of Assets <br> (a) | Actuarial Accrued Liability (AAL) (b) | $\begin{aligned} & \text { Unfunded } \\ & \text { AAL (UAAL) } \\ & (b-a) \\ & \hline \end{aligned}$ | Funded <br> Ratio <br> (a/b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a)/c) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 30, 2012 | \$ | 4,424,477 | 4,424,477 | 0\% | 2,251,862 | 196\% |
| June 30, 2010 |  | 3,594,835 | 3,594,835 | 0\% | 2,062,917 | 174\% |
| June 30, 2008 | - | 3,297,680 | 3,297,680 | 0\% | 2,150,026 | 153\% |

See accompanying independent auditors' report.
See accompanying note to required supplemental schedule.

## NOTE TO REQUIRED SUPPLEMENTAL SCHEDULE 3 (UNAUDITED)

This information presented in the required supplemental information was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

| Valuation date | June 30, 2012 |
| :--- | :--- |
| Actuarial cost method | Projected unit credit |
| Amortization method | Level percent of payroll |
| Amortization period | 30 -Year period |
| Asset valuation method | Market value of assets |
| Actuarial assumptions: | $4.5 \%$, net of expenses |
| $\quad$ Investment rate of return | Graded rates based on years of service |
| $\quad$ Salary increases | $3.0 \%$ per year |
| Payroll growth factor | $3.0 \%$ per year |
| General inflation rate | Starting at 9\% in 2012 and decreasing |
| Health care inflation rate | by $0.5 \%$ each year to $4.5 \%$ by 2021 |

See accompanying independent auditors' report.

## OTHER SUPPLEMENTAL INFORMATION

SCHEDULE 4 - INVESTMENT SUMMARY JUNE 30, 2012 and 2011

|  | June 30, 2012 |  |  | June 30, 2011 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Cost | Fair Value | Unrealized Appreciation (Depreciation) | Cost | Fair Value | Unrealized <br> Appreciation <br> (Depreciation) |
| Fixed income: |  |  |  |  |  |  |
| Government securities | \$ 69,414,811 | 71,642,342 | 2,227,531 | 54,104,119 | 54,045,962 | $(58,157)$ |
| Corporate bonds | 221,237,073 | 230,905,237 | 9,668,164 | 187,032,602 | 200,264,102 | 13,231,500 |
| Total fixed income | 290,651,884 | 302,547,579 | 11,895,695 | 241,136,721 | 254,310,064 | 13,173,343 |
| Short-term investment funds | 65,204,046 | 65,204,046 |  | 171,329,754 | 171,329,754 |  |
| Capital stocks | 800,028,115 | 810,010,042 | 9,981,927 | 771,940,258 | 841,748,551 | 69,808,293 |
| Commingled funds | 215,341,820 | 255,302,205 | 39,960,385 | 257,573,107 | 315,647,983 | 58,074,876 |
| Real assets | 239,777,964 | 193,775,820 | $(46,002,144)$ | 239,211,550 | 231,463,317 | $(7,748,233)$ |
| Alternative investments | 380,726,515 | 421,272,705 | 40,546,190 | 343,097,776 | 378,178,957 | 35,081,181 |
| Total investments | \$1,991,730,344 | 2,048,112,397 | 56,382,053 | 2,024,289,166 | 2,192,678,626 | 168,389,460 |

Space and cost restrictions make it impractical to print the entire investment portfolio in this report. A portfolio listing is available for review at the System's office by appointment, upon request.

See accompanying independent auditors' report.

SCHEDULE 5 - INVESTMENT SERVICES, PROFESSIONAL SERVICES, AND ADMINISTRATION EXPENSES YEARS ENDED JUNE 30, 2012 AND 2011

|  |  | $\underline{2012}$ | $\underline{2011}$ |
| :---: | :---: | :---: | :---: |
| Investment services: |  |  |  |
| Custodial services | \$ | 355,614 | 306,633 |
| Money management services |  | 6,272,729 | 5,249,610 |
| Consulting services |  | 859,000 | 819,413 |
| Total investment services | \$ | 7,487,343 | 6,375,656 |
| Professional services: |  |  |  |
| Actuarial services | \$ | 67,809 | 77,452 |
| Auditing and consulting services |  | 43,507 | 100,537 |
| Legal services |  | 915,226 | 911,022 |
| Other professional services |  | 21,500 | 13,750 |
| Total professional services | \$ | 1,048,042 | 1,102,761 |
| Administration expenses: |  |  |  |
| Office costs | \$ | 606,805 | 776,060 |
| Insurance costs |  | 181,779 | 135,407 |
| Costs of staff and benefits |  | 4,264,486 | 3,981,842 |
| Costs of equipment and supplies |  | 812,116 | 710,947 |
| Depreciation and amortization |  | 203,159 | 270,417 |
| Costs of education and research |  | 195,320 | 145,734 |
| Total administration expenses | \$ | 6,263,665 | 6,020,407 |

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See accompanying independent auditors' report.

## SCHEDULE 6 - SUMMARY OF COSTS OF INVESTMENT AND PROFESSIONAL SERVICES YEARS ENDED JUNE 30, 2012 AND 2011

| Service Provider | Service Provided | $\underline{2012}$ | $\underline{2011}$ |
| :---: | :---: | :---: | :---: |
| Investment services: |  |  |  |
| Axiom Int'l Investors, LLC | Money management | \$ | 669,822 |
| Baring Asset Management | Money management | 409,435 |  |
| BlackRock (formerly Barclays) | Money management | 301,015 | 312,869 |
| Brandes Investment Partners, LLC | Money management |  | 453,051 |
| DDJ Capital Management, LLC | Money management | 637,048 | 620,281 |
| DePrince, Race and Zollo, Inc. | Money management | 515,485 | 528,141 |
| Earnest Partners, LLC | Money management | 768,794 | 176,243 |
| Enhanced Investment (INTECH) | Money management | 201,631 | 199,265 |
| Global Forest Partners, LP/UBS Timber Investors | Money management | 54,705 | 53,738 |
| Loomis, Sayles and Company, LP | Money management | 498,124 | 449,915 |
| Neumeier Investment Counsel, LLC | Money management | 422,128 | 414,045 |
| Oakbrook | Money management | 149,955 | 150,699 |
| OFI Institutional | Money management | 476,954 | 18,558 |
| Panagora | Money management | 201,656 | 198,144 |
| Piedmont Investment Advisors | Money management | 112,318 | 111,731 |
| Profit Investment Management | Money management | 181,250 | 171,476 |
| Pugh Capital Management | Money management | 79,854 | 35,873 |
| Smith Graham \& Company | Money management | 327,171 | 205,897 |
| Thomas White | Money management | 445,162 | 24,786 |
| T. Rowe Price Associates | Money management | 229,213 | 226,701 |
| Tortoise Capital Advisors | Money management | 5,531 |  |
| UBS Global Asset (formerly Brinson Part) | Money management | 202,232 | 197,464 |
| State Street Global Advisors | Money management | 53,068 | 30,911 |
| State Street Bank and Trust Company | Custodial services | 355,614 | 306,633 |
| Willshire Associates, Incorporated | Consulting services | 284,000 | 284,000 |
| Cliffwater LLC | Consulting services | 550,000 | 535,413 |
| Gray \& Company | Consulting services | 25,000 |  |
| Total investment services |  | 7,487,343 | 6,375,656 |
| Professional services: |  |  |  |
| Gabriel, Roeder, Smith \& Co. | Actuarial services | 67,809 | 77,452 |
| MFR, P.C. | Auditing and professional services | 41,907 | 38,785 |
| VR Election Services | Auditing and professional services |  | 22,696 |
| Champion Capital Research, Inc. | Consulting services |  | 36,106 |
| Pension Benefits Information | Consulting services | 1,600 | 2,950 |
| Baker Botts, LLP | Legal services | 258,828 | 74,500 |
| Daughtry \& Jordan PC | Legal services |  | 263 |
| HillCo Partners, LLC | Legal services | 102,000 | 102,000 |
| Jackson Walker LLP | Legal services | 51,112 | 17,242 |
| Gibbs \& Bruns, LLP | Legal services | 1,080 | 3,480 |
| LT Communications | Legal services | 48,000 | 48,000 |
| Locke, Lord, Bissell \& Liddell | Legal services | 454,206 | 662,927 |
| Ahmad, Zavitsanos \& Anaipakos, PC | Legal services |  | 2,610 |
| Accountemps | Professional services |  | 13,750 |
| Houston City Personnel | Professional services | 6,000 |  |
| CP Paragon Solutions, L.P. | Professional services | 12,500 |  |
| The Pressley Partnership | Professional services | 3,000 |  |
| Total professional services |  | 1,048,042 | 1,102,761 |
| Total costs of investment and professional services |  | \$ 8,535,385 | $\underline{ } 7,478,417$ |

See accompanying independent auditors' report.



The Board of Trustees ("Board") of the Houston Municipal Employees Pension System (the "System") has adopted an Investment Policy Statement ("IPS") as a framework for the investment of the System's assets. The authority to amend the IPS rests solely with the Board. The following provides an outline of the IPS.

## General

The Board recognizes the following investment responsibilities: a) to establish investment policies and objectives for the investment of System assets; b) to select independent investment managers and consultants to implement investment management strategies in conformity with stated investment policies and objectives;c) to select private investment vehicles in which to invest System assets in conformity with stated investment policies and objectives; and d) to monitor the activities of investment managers, private investment vehicles and consultants.

## Investment Objectives

The investment objective of the total portfolio is to produce annualized investment returns that exceed the return of a composite benchmark or policy portfolio. The policy portfolio is comprised of market indices, which are consistent with the overall investment policy. The policy portfolio reflects a passive implementation of the investment policy. The current policy portfolio is comprised of $20 \%$ Wilshire 5000 Stock Index, 20\% Morgan Stanley Capital International (MSCI) All Country World Ex-U.S. Index, 10\% Barclays Capital Aggregate Bond Index, 10\% Merrill Lynch High Yield Master II Index, 18\% Standard \& Poor's 500 Index + 3\%, 12\% National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index, 5\% London Interbank Offered Rate (LIBOR) $+4 \%$ and $5 \%$ Consumer Price Index (CPI) $+4 \%$. This policy portfolio was last updated on April 1, 2011, and the fund is currently working toward its target asset allocation goal.

Comparisons of total fund performance are also made with a universe of public pension funds implementing generally comparable investment policies. The public pension fund universe used for comparative purposes is the TUCS Master Trusts - Public Universe.

## Investment Strategies

## Asset Allocation

The System's investment allocation provides an efficient allocation of assets that is designed to achieve overall portfolio risk and return objectives. The Board periodically undertakes strategic studies to address the appropriateness of asset classes to be considered for inclusion in the asset allocation and to define the targeted percentage to each asset class to achieve the desired level of diversification. During fiscal year 2009, the Board conducted a comprehensive asset/liability study which resulted in three changes to the System's asset allocation targets. These changes were intended to reduce the volatility of the System's investment returns and to further control the composition and management of the System's alternative investment portfolio. First, the target exposure to U.S. Equities was reduced from $30 \%$ to $20 \%$ to equal the target exposure of Non-U.S. Equities, thus eliminating the home country bias. Second, the Real Assets asset class was segregated into two new asset classes, Real Estate and Inflation-Linked with the target exposure of the two increased from $15 \%$ to $17 \%$. And third, the Alternative Investments asset class was segregated into new asset classes, Private Equity and Absolute Return, with the target exposure of the two increased from $15 \%$ to $23 \%$.

As of June 30, 2012, the System's current investment policy targets are: 20\% U.S. Equities, 20\% Non-U.S. Equities, 20\% Fixed Income, 18\% Private Equity, 12\% Real Estate, 5\% Absolute Return and 5\% Inflation-Linked. The System continues to search for managers to fill the new asset allocation targets. The target and actual allocations are included in table 2.

## Diversification

The System invests in seven major asset classes (U.S Equities, Non-U.S. Equities, Fixed Income, Real Estate, Private Equity, Inflation-Linked, and Absolute Return) and engages the services of numerous professional investment managers (including in both public markets and private partnerships) with demonstrated skills and expertise
in managing portfolios within each asset class as a method to maximize overall fund diversification. The managers retained are expected to utilize varied investment approaches that, when combined, will exhibit characteristics that are similar to the asset class proxy utilized in the strategic asset allocation plan. As of June 30, 2012, the System had retained the services of 73 investment management firms, several of which manage multiple mandates. Cash inflows and outflows are directed, within the targeted asset class, to the various managers so that actual characteristics of the portfolio will be consistent with the strategic plan. No investment manager is permitted to have more than $20 \%$ of the fair value of the System's assets in a single investment style.

## Rebalancing

The IPS requires a periodic adjustment, or rebalancing, of assets be made to ensure conformance with policy target levels. Such rebalancing is necessary to reflect sizable cash flows and performance imbalances among the various asset classes that may occur over time. During fiscal year 2012, Staff directed the rebalancing of assets within the strategic asset allocation targets in response to market dynamics and the System's liquidity needs.

## Investment Manager Guidelines - Public Markets

Investment managers are subject to guidelines and objectives incorporated in the investment management agreement entered into by the Board and the respective investment managers. Investment managers are expected to perform their fiduciary duties as prudent people skilled in such matters and, further, are expected to comply with all applicable state and federal statutes governing the investment of retirement funds. Within the context of the guidelines, investment managers have full discretion with respect to the purchase and sale of individual securities and portfolio weightings. Portfolios are to be managed in a manner similar to other portfolios within an organization with similar guidelines and performance objectives.

The Board requires that all investment managers seek best execution for all trades ordered on behalf of the System. Equity managers are encouraged to direct a designated percentage of their brokerage activity to an approved list of brokers. Fixed income managers are encouraged to direct primary trading activity wherever
there is an opportunity to recapture a portion of the syndication costs for the System.

## Manager Evaluation

Managers of portfolios are evaluated periodically against predetermined benchmarks such as an appropriate market index or a comparable peer group. All public market managers are required to provide written reports to HMEPS of their activities and performance according to standards set forth in the Statement. In addition, System personnel and professional consultants engaged by the Board monitor, pursuant to instructions by the Board, managers' performance and conformity with their guidelines and objectives.

## Investment Performance Evaluation

The Board reviews System investment performance on a periodic basis to evaluate conformity to the goals and objectives established in the strategic plan. The Board recognizes that financial markets from time-to-time may not support attainment of those goals and objectives. During such times, progress toward conformity is evaluated by comparing the System's performance to the policy index and to a peer group comparable in class and weight to the styles in the System's investment portfolio. Investment results are calculated using a time-weighted rate of return based on the market rate of return.

## Proxy Voting

The Board authorizes each investment manager to vote all proxies relating to shares of securities under management, and requires each investment manager to provide a written proxy voting policy statement. Each manager is expected to promptly vote all proxies and related actions in a manner consistent with the long-term interests of the System and its participants and beneficiaries. Each investment manager is required to keep detailed records of all voting of proxies and related actions and to comply with all related regulatory obligations. The System's management staff periodically reviews each investment manager's policies and actions in respect to proxy voting.

## Investment Results

## Long-Term Results

The 10-year period ended June 30, 2012, has produced annual returns that have been quite volatile, both for the markets as a whole, and also for the System. The System generated double-digit positive returns in six of the past 10 fiscal years, met or exceeded its policy index in six of those 10 fiscal years, and outperformed its peer group in seven of those 10 years. Despite severe market volatility over the past decade, the System's 10-year annualized return is $8.52 \%$, in line with its return target of $8.50 \%$. The 20 -year return stands at $8.68 \%$.

As shown in the investment results table, HMEPS' total fund return exceeds its policy portfolio for the five- and 10 -year time periods. In addition, HMEPS' total fund performance compares very favorably to the median public fund, as represented by the TUCS Master Trusts-Public Universe, and has outperformed this benchmark for the five- and 10 -year periods. Over the 10 -year period, HMEPS is in the top decile of funds in the TUCS Master Trusts-Public Universe.

The consistent long-term above-benchmark performance is best illustrated by the growth of $\$ 1,000$ invested in HMEPS' total fund, the policy portfolio and median public fund during the past 10 years. The ending points indicate that $\$ 1,000$ invested in HMEPS' total fund would have grown to $\$ 2,264$, while the same $\$ 1,000$ would have grown to $\$ 2,065$ and $\$ 1,800$ respectively in the policy portfolio and the median public fund.

TABLE 1


## Fiscal Year 2012 Results

For the fiscal year ended June 30, 2012, the System returned $-0.14 \%$. This rate of return lagged the System's policy benchmark return of $3.2 \%$, and the return of the median fund in the TUCS Master TrustsPublic Universe of $1.25 \%$.

The Investment Section was written by Chief Investment Officer, Gregory Brunt, CFA, and Financial Analyst Jumana Aumir.

## SCHEDULE OF ASSET ALLOCATION

TABLE 2
(Calculated based on a time-weighted rate of return based on the market rate of return)

| Asset Class | Allocation |  | Investment Performance |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Target | Actual | 1 Yr . | 3 Yrs. | 5 Yrs. | $10 \mathrm{Yrs}$. |
| U.S. Equity | 20.0 \% | 23.1 \% | 3.4 \% | 17.5 \% | -0.4 \% | 5.8 \% |
| Wilshire 5000 Index |  |  | 4.0 | 16.7 | 0.4 | 6.0 |
| S\&P 500 Index |  |  | 5.4 | 16.4 | 0.2 | 5.3 |
| Non-U.S. Equity | 20.0 | 21.7 | -12.9 | 6.4 | -5.0 | 6.7 |
| MSCI All Country World Ex-US Index |  |  | -14.2 | 7.4 | -4.2 | 7.2 |
| MSCI EAFE Index |  |  | -13.8 | 6.0 | -6.1 | 5.1 |
| Fixed Income | 20.0 | 21.3 | 6.3 | 10.8 | 6.8 | 7.3 |
| Barclays Aggregate Index |  |  | 7.5 | 6.9 | 6.8 | 5.6 |
| Merrill Lynch High Yield Master II Index |  |  | 6.5 | 16.2 | 8.2 | 9.9 |
| Private Equity ${ }^{1}$ | 18.0 | 15.4 | 11.0 | 16.7 | 7.1 | 11.0 |
| S\&P 500 Index + 3\% |  |  | 8.4 | 19.4 | 3.2 | 8.3 |
| Real Estate ${ }^{2}$ | 12.0 | 9.1 | 3.8 | 1.4 | -6.0 | 6.7 |
| NCREIF Property Index |  |  | 12.0 | 8.8 | 2.5 | 8.3 |
| Inflation-Linked ${ }^{3}$ | 5.0 | 4.1 | -22.0 | 9.8 | n/a | n/a |
| CPI $+4 \%^{4}$ |  |  | 5.7 | 6.7 | n/a | n/a |
| Absolute Return ${ }^{5}$ | 5.0 | 4.7 | -0.9 | 11.7 | n/a | n/a |
| LIBOR + 4\% ${ }^{6}$ |  |  | 4.5 | 5.0 | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ |
| Cash | - | 0.6 |  |  |  |  |
| Total Portfolio | 100.0 | 100.0 | -0.1 | 11.1 | 2.9 | 8.5 |
| Policy Benchmark |  |  | 3.2 | 12.8 | 2.4 | 7.6 |

1 Beginning October 1, 2008, Private Equity is separate from Absolute Return. Prior returns were combined in the Private Equity composite.
2 Beginning October 1, 2008, Real Estate is separate from Inflation Linked. Prior returns were combined in the Real Estate composite.
3 The Inflation-Linked composite was created on October 1, 2008. Prior returns are included in the Real Estate composite.
4 Prior to April 1, 2011, the benchmark for Inflation-Linked was CPI + 5\%. Longer term benchmark returns reflect a blend of both benchmarks.
5 The Absolute Return composite was created on October 1, 2008. Prior returns are included in the Private Equity composite.
6 Prior to April 1, 2011, the benchmark for Absolute Return was LIBOR $+5 \%$. Longer term benchmark returns reflect a blend of both benchmarks.

## SCHEDULE OF TOP INVESTMENTS AS OF JUNE 30, 2012*

| Name of Investment | Fair Value of Investment | Percent of Portfolio |
| :--- | :---: | :---: |
| BlackRock U.S. Debt Index (Barclays Aggregate) | $103,457,219$ | $5.1 \%$ |
| BlackRock ACWI ex-U.S. Index | $92,135,920$ | $4.5 \%$ |
| State Street Global Advisors REIT Index | $36,425,381$ | $1.8 \%$ |
| BlackRock Energy and Natural Resources Fund | $35,000,497$ | $1.7 \%$ |
| Platinum Equity Partners II | $22,907,255$ | $1.1 \%$ |
| RREEF America REIT II Inc | $22,194,045$ | $1.1 \%$ |
| AG Super Fund LP | $19,603,650$ | $1.0 \%$ |
| CB Richard Ellis V | $17,019,678$ | $0.8 \%$ |
| Harborvest Partners VI Partnership Fund | $14,880,383$ | $0.7 \%$ |
| Carlyle Partners IV | $14,222,117$ | $0.7 \%$ |

* A complete list of the System's holdings is available at the System's office by appointment.

PERFORMANCE BY FISCAL YEAR LAST TEN YEARS


COMPARISON OF INVESTMENT RETURNS - YEARS ENDED JUNE 30
(Calculated based on a time-weighted rate of return based on the market rate of return)


SCHEDULE OF FEES AND COMMISSIONS PAID IN FISCAL YEAR 2012

| Broker Name | Shares | Commissions (\$) | Cents/Share |
| :---: | :---: | :---: | :---: |
| BNY CONVERGEX LJR | 127,589,972 | 98,666 | 0.08 |
| G-TRADE SERVICES LTD | 10,889,503 | 87,172 | 0.80 |
| CAPITAL INSTITUTIONAL SVCS INC EQUITIES | 2,667,029 | 64,816 | 2.43 |
| JONES TRADING INSTITUTIONAL SERVICES LLC | 1,664,475 | 57,219 | 3.44 |
| J.P. MORGAN SECURITIES INC | 2,481,044 | 41,817 | 1.69 |
| UBS AG | 1,298,761 | 37,999 | 2.93 |
| INSTINET | 1,648,776 | 37,196 | 2.26 |
| DEUTSCHE BANK SECURITIES INC | 2,112,236 | 25,601 | 1.21 |
| MERRILL LYNCH PIERCE FENNER + SMITH INC | 2,008,443 | 24,200 | 1.20 |
| PERSHING LLC | 6,554,837 | 23,860 | 0.36 |
| STIFEL NICOLAUS + CO INC | 523,472 | 19,102 | 3.65 |
| MORGAN STANLEY CO INCORPORATED | 652,205 | 18,771 | 2.88 |
| CANTOR FITZGERALD + CO. | 414,101 | 15,648 | 3.78 |
| CREDIT SUISSE SECURITIES (USA) LLC | 870,415 | 14,047 | 1.61 |
| BARCLAYS CAPITAL | 632,219 | 12,566 | 1.99 |
| SANFORD C. BERNSTEIN LTD | 1,140,812 | 12,532 | 1.10 |
| GOLDMAN SACHS + CO | 445,145 | 11,661 | 2.62 |
| KEYBANC CAPITAL MARKETS INC | 288,250 | 11,447 | 3.97 |
| HUDSON SECURITIES INC | 229,100 | 9,164 | 4.00 |
| SIDOTI + COMPANY LLC | 197,400 | 7,884 | 3.99 |
| ABEL NOSER CORPORATION | 273,000 | 7,197 | 2.64 |
| JEFFERIES+ COMPANY INC | 355,652 | 7,018 | 1.97 |
| ROBERT W. BAIRD CO.INCORPORATE | 171,835 | 6,019 | 3.50 |
| CHARLES SCHWAB \& CO INC | 324,200 | 5,334 | 1.65 |
| CABRERA CAPITAL MARKETS LLC | 905,455 | 5,297 | 0.59 |
| CRAIG - HALLUM | 131,600 | 5,264 | 4.00 |
| GUZMAN AND COMPANY | 305,459 | 4,966 | 1.63 |
| NOMURA SECURITIES | 286,648 | 4,654 | 1.62 |
| ROSENBLATT SECURITIES LLC | 239,045 | 4,457 | 1.86 |
| KEEFE BRUYETTE + WOODS INC | 108,730 | 4,331 | 3.98 |
| KNIGHT EQUITY MARKETS L.P. | 255,250 | 4,285 | 1.68 |
| STATE STREET GLOBAL MARKETS, LLC | 131,285 | 4,047 | 3.08 |
| CITIGROUPGLOBAL MARKETS INC | 206,509 | 3,360 | 1.63 |
| DONGWON SECURITIES | 34,425 | 3,133 | 9.10 |
| STEPHENS,INC. | 72,430 | 2,897 | 4.00 |

SCHEDULE OF FEES AND COMMISSIONS PAID - CONT.

| Broker Name | Shares | Commissions (\$) | Cents/Share |
| :--- | ---: | ---: | ---: |
| COWEN AND COMPANY, LLC | 123,900 |  |  |
| WEEDEN + CO. | 117,900 | 2,451 | 1.98 |
| NORTHLAND SECURITIES INC. | 59,500 | 2,417 | 2.05 |
| STERNE AGEE \& LEACH INC. | 60,020 | 2,380 | 4.00 |
| RBC CAPITAL MARKETS | 145,953 | 2,377 | 3.96 |
| WELLS FARGO SECURITIES, LLC | 167,845 | 2,203 | 1.51 |
| OTHERS | $\underline{4,616,139}$ | $\underline{42,266}$ | 1.21 |
| Total | $\underline{173,400,975}$ | $\underline{759,741}$ | $\underline{0.92}$ |
|  |  |  | .44 |

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PLANNING


# Gabriel Roeder Smith \& Company 

February 23, 2012

Board of Trustees
Houston Municipal Employees Pension System
1201 Louisiana, Suite 900
Houston, TX 77002

## Dear Members of the Board:

This report describes the current actuarial condition of the Houston Municipal Employees Pension System (HMEPS), determines the calculated employer contribution rate, and analyzes changes in this contribution rate. Valuations are prepared annually, as of July 1, the first day of the HMEPS plan year.

Under the HMEPS statute, the employer contribution rate is determined actuarially, based on the Board's funding policy and HMEPS' governing law. The contribution rate determined by a given actuarial valuation and implemented by the Board becomes effective twelve months after the valuation date, i.e., the rates determined by this July 1, 2011 actuarial valuation will be used by the Board when determining the employer contribution rate for the year beginning July 1, 2012 and ending June 30, 2013.

Under the Amended and Restated Meet \& Confer Agreement between the Board and the City of Houston, the City will contribute $\$ 98.5$ million in fiscal year 2012. Contributions in future fiscal years will increase by the greater of $\$ 10$ million or $2 \%$ of payroll until such time that the City's contribution rate equals the actuarially determined contribution rate. As part of the agreement the Board's funding policy has been modified to use an open 30-year rolling amortization period until such time that the City's actual contribution rate is equal to the actuarially determined contribution rate, at which point the funding period will be closed.

The employer contribution amounts for FY 2011 and FY 2012 were not set by actuarial valuations. Therefore, the calculated contribution rates from those valuations are not being contributed. Instead, employer contributions of $\$ 88.5$ million for FY 2011 and $\$ 98.5$ million for FY 2012 are made under the terms of the Amended and Restated Meet \& Confer Agreement.

The calculated required employer contribution rate for FY2013 is $23.45 \%$ of payroll. Using an estimated payroll of \$587.4 million for FY2013 projects an estimated calculated employer contribution for FY2013 of $\$ 137.8$ million. This compares to a minimum actual employer contribution of $\$ 108.5$ million that will be paid under the terms Amended and Restated Meet \& Confer Agreement (it is possible the contribution will be more than $\$ 108.5$ million if a $2 \%$ increase in the contribution rate as a percentage of pay represents a larger increase).

## Financing objectives and funding policy

The amortization period is set by statute, and was modified under the Amended and Restated Meet \& Confer Agreement. The contribution rate and liabilities are computed using the Entry Age Normal actuarial cost method. The employer contribution rate is the sum of two pieces: the employer normal cost rate and the amortization rate. The normal cost rate is determined as a percent of pay. The amortization rate is determined as a level percent of pay. It is the amount required to amortize the unfunded actuarial accrued liability over an open 30-year period. The amortization rate is
adjusted for the one-year deferral in contribution rates. The amortization period will remain open until the actual employer contribution rate is equal to the actuarially determined employer contribution rate.

## Progress toward realization of financing objectives

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. In the absence of benefit improvements, it should increase over time, until it reaches 100\%. The funded ratio as of July 1, 2011 is $61.4 \%$. This is a decrease from the $62.6 \%$ funded ratio from the prior year valuation.

The calculated employer contribution rate for FY 2013 is $23.45 \%$. This rate is more than the $22.36 \%$ rated calculated in the 2010 valuation. This increase is mostly due to continued recognition of the deferred investment losses from FY2009 and the impact of the covered payroll actually decreasing rather than increasing by $3.0 \%$ as assumed. Please see page 68 for a detailed analysis of the change in the calculated employer contribution rate from the prior year to this year.

Like most large public pension plans, HMEPS was significantly impacted by the substantial decline in the investment markets during FY 2009 and some of the losses are still being deferred due to the smoothing methodology used in the valuation. Approximately $\$ 199$ million in deferred investment losses are still to be recognized. In the absence of future investment gains, the contribution rate needed to amortize the UAAL will increase over the next few valuation cycles. Future decreases in covered payroll could also increase the percentage of pay contribution rate needed to amortize the UAAL.

## Plan Experience

As part of each valuation, we examine the System's experience relative to the assumptions. The aggregate results of these analyses are disclosed in Tables 5 \& 6. This past fiscal year the System had a total liability gain of approximately $\$ 5.0$ million. Relative to the total liabilities of the System we do not consider this aggregate gain significant.

## Benefit provisions

The benefit provisions reflected in this valuation are those which were in effect on July 1, 2011. The Fourth Amendment between the City and the Board changed the benefit provisions substantially, effective January 1, 2008. The benefits for employees hired prior to January 1, 2008 were not modified, but the benefits for employees newly hired on or after January 1, 2008 were modified substantially, including the elimination of member contributions. There have been no changes in the benefit provisions since the prior valuation date that have a material financial impact on HMEPS.

The benefit provisions are summarized on page 83.

## Assumptions and methods

Actuarial assumptions and methods are set by the Board of Trustees, based upon recommendations made by the plan's actuary. The assumptions used in this valuation were adopted by the Board effective with the July 1, 2010 actuarial valuation based on recommendations from an Experience Study conducted by GRS in the spring of 2010.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. The actuarial calculations are intended to provide information for rational decision making.

The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in GASB 25.

All assumptions and methods are described on page 79.

## Data

Member data for retired, active and inactive members was supplied as of July 1, 2011 by the HMEPS staff. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data.

## ACTUARY'S CERTIFICATION

Asset information as of July 1, 2011 was taken from the Comprehensive Annual Financial Report for the Year Ended June 30, 2011.

## Certification

We were asked to determine if an unanticipated actuarial cost occurred in the administration of the Deferred Retirement Option Plan (DROP). It is our opinion that the administration of the (DROP) had no material unanticipate actuarial costs during the prior fiscal year.

All of the tables contained in this actuarial valuation report and in the actuarial section of the HMEPS CAFR were prepared by Gabriel, Roeder, Smith \& Company. We certify that the information presented herein is accurate and fairly portrays the actuarial position of HMEPS as of July 1, 2011.

All of our work conforms with generally accepted actuarial principles and practices, and the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The under-
signed are independent actuaries and consultants. Mr. Newton is an Enrolled Actuary and also a Member of the American Academy of Actuaries, and meets the Qualification Standards of the American Academy of Actuaries. Both of the undersigned are experienced in performing valuations for large public retirement systems.

Sincerely,
Gabriel, Roeder, Smith \& Company


Joseph P. Newton, FSA, EA, MAAA Senior Consultant


Lewis Ward
Consultant

## Item

July 1, 2011
July 1, 2010

## Membership

- Number of:
- Active members 12,913
- Retirees and beneficiaries 8,517 8,526
- Inactive members
- Total
- Annualized Payroll supplied by HMEPS

Calculated Contribution rates

- Employer
23.45\%
22.36\%


## Assets

- Market value
- Actuarial value
- Estimation of return on market value
- Estimation of return on actuarial value
- Employer contribution
- Member contribution

| \$ | $2,129,441$ | \$ | $1,828,492$ |
| ---: | ---: | ---: | ---: |
|  | $2,328,804$ |  | $2,273,142$ |
|  | $21.8 \%$ |  | $11.8 \%$ |
|  | $6.3 \%$ |  | $3.5 \%$ |
| \$ | 87,285 | $\$$ | 82,052 |
| \$ | 19,326 | $\$$ | 19,736 |
|  | $109.4 \%$ |  | $124.3 \%$ |

Actuarial Information

- Employer normal cost \%
- Unfunded actuarial accrued liability (UAAL)
- Amortization rate
- Funding period
- GASB funded ratio
30.0 years
29.0 years
61.4\%
62.6\%

Projected employer contribution based on calculated rate

- Fiscal year ending June 30, 2013
- Projected payroll (millions) \$ 587.4 \$ 595.2
- Projected employer contribution (millions)
\$ $\quad 137.8$ \$ 133.1 (actual contribution rate set by Meet \& Confer)

Note: Dollar amounts in $\$ 000$, unless otherwise noted
${ }^{1}$ Employee contribution rate is 5\%. Members newly hired after January 1, 2008 are noncontributory.

## STATEMENT OF PLAN NET ASSETS

July 1, 2011
A. ASSETS

1. Current Assets
a. Cash and short term investments
1) Cash on hand
\$ 1,065
2) Short term investments
171,330
b. Accounts Receivable
3) Sale of investments 7,487
4) Other
c. Total Current Assets
\$ $\quad \begin{array}{r}27,481 \\ 207,363\end{array}$
2. Long Term Investments
a. US. Government securities
\$ 54,046
b. Corporate bonds 200,264
c. Capital stocks 841,748
d. Commingled Funds 315,648
e. LP's, real estate trusts, loans and mortgages 609,642
f. Total long term investments 2,021,348
3. Other Assets
a Collateral on securities lending
\$ 116,401
b. Furniture, fixtures and equipment, net
c. Total other assets
4. Total Assets

|  | 307 |
| :--- | ---: |
| \$ | $\frac{116,708}{2,345,419}$ |
| \$ |  |

B. LIABILITIES

1. Current Liabilities
a. Amounts due on asset purchases
\$ 94,990
b. Accrued liabilities
4,587
c. Collateral on securities lending
2. Total Liabilities
3. Net Assets Held in Trust
\$ 2,129,441
C. TARGET ASSET ALLOCATION FOR CASH \& LONG TERM INVESTMENTS
4. Cash 0.0\%
5. Fixed Income $\quad 20.0 \%$
6. Real Estate $12.0 \%$
7. Domestic Equities $\quad 20.0 \%$
8. International Equities $\quad 20.0 \%$
9. Alternative Investments $\quad \underline{28.0 \%}$
10. Total
100.0\%

Note: Dollar amounts in \$000
Columns may not add due to rounding

## RECONCILIATION OF PLAN NET ASSETS

Year Ending June 30, 2011

1. Market value of assets at beginning of year
\$ 1,828,492
2. Revenue for the year
a. Contributions
i. Member contributions
\$ 19,326
ii. Employer contributions (see note)
iii. Total
$\begin{array}{r}\text { \$ } \\ \\ \hline 106,611\end{array}$
b. Net investment income
i. Interest
\$ 14,720
ii. Dividends

16,769
iii. Earnings from LP's and real estate trusts 17,398
iv. Net appreciation (depreciation) on investments 348,148
v. Net proceeds from lending securities 436
vi. Less investment expenses $(6,376)$
vii. Other
c. Total revenue
\$ 498,891
3. Expenditures for the year
a. Refunds
\$ $\quad 1,620$
b. Benefit payments
c. Administrative and miscellaneous expenses
d. Total expenditures
$\$ \quad 197,942$
4. Increase in net assets (Item 2c - Item 3d)
\$ 300,949
5. Market value of assets at end of year (Item $1+$ Item 4)
\$ 2,129,441

Note: Dollar amounts in \$000
Employer contribution does not include amounts contributed to the replacement benefit plan.
Columns may not add due to rounding

## DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

$$
\text { July 1, } 2011
$$

1. Actuarial value of assets, at beginning of year
2. Net new investments
a. Contributions
\$ 106,611
b. Benefits paid $(189,199)$
c. Refunds
d. Total

| $\quad(1,620)$ |
| :--- |
| $\$ \quad(84,208)$ |

3. Assumed investment return rate $8.50 \%$
4. Expected return
\$ 189,711
5. Expected value of assets at end of year
6. Market value of assets at end of year
\$ $2,129,441$
7. Excess of market value over expected value (6)-(5)
8. $20 \%$ adjustment towards market value
9. Actuarial value of assets at end of year: (5) + (8)
\$ 2,328,804

Note: Dollar amounts in \$000

## ACTUARIAL PRESENT VALUE OF FUTURE BENEFITS

July 1, 2011

1. Active members
a. Retirement benefits
b. Deferred termination benefits
c. Refunds
d. Death benefits
e. Disability benefits
f. Total
2. Members in Pay Status
a. Service retirements
b. Disability retirements
c. Beneficiaries
d. Total
3. Inactive members
a. Vested terminations
b. Nonvested terminations
c. Total
4. Total actuarial present value of future benefits

Note: Dollar amounts in $\$ 000$
\$ 143,766
\$ 1,748,276
121,363
14,852
71,987
13,264
\$ 1,969,742
\$ 1,797,254
38,207
$\begin{array}{r}171,276 \\ \hline\end{array}$
\$ 2,006,737
$\begin{array}{r}4,458 \\ \hline\end{array}$
\$ 148,224
\$ 4,124,703

## CALCULATION OF TOTAL ACTUARIAL GAIN OR LOSS

1. Unfunded actuarial accrued liability (UAAL) as of July 1, 2010 \$ 1,359,328
2. Employer normal cost for year* 31,440
3. Employer Contributions during year ending June 30, 2011* $(87,285)$
4. Interest on UAAL for one year 115,543
5. Interest on Item 2 and Item 3 for one-half year
6. Expected UAAL as of July 1, $2011(1+2+3+4+5)$ $(2,325)$
7. Actual UAAL as of July 1, 2011 1,416,701 1,461,522
8. Actuarial gain/(loss) for the period (6-7)

## SOURCE OF GAINS/(LOSSES)

9. Asset gain/(loss) (See page 78)
$\$ \quad(49,841)$
10. Assumption changes 0
11. Changes from Meet \& Confer 0
12. Total liability gain/(loss) for the period
13. Actuarial gain/(loss) for the period

| $\$$ | 5,020 |
| :--- | ---: |
|  | $(44,821)$ |

Note: Dollar amounts in \$000

* Employee contributions are excluded due to use of replacement life normal cost method for ongoing plan. New members (Group D) do not contribute to the plan.
NEAR TERM OUTLOOK

These projections are based on the Amended and Restated Meet and Confer agreement assuming that the benefit provisions that went into effect January 1 , 2008 remain in effect throughout the projection. Also, beginning in FY2012, the employer contributions shown above are based on a negotiated amount of $\$ 98.5$ million in FY2012 followed by increases in the following fiscal years equal to the greater of $\$ 10$ million or the set contribution rate of $19.36 \%$ increased by $2 \%$ per year since FY 2012 . This method of determining the contribution rate remains in place until the contribution rate reaches the actuarially determined contribution rate determined by the valuation of the year prior (i.e. the FY 2013 rate is set by the July 1, 2011 valuation). Any changes to future accruals or failure to contribute the calculated rate will change the results of this projection.
1 The agreement between the City and HMEPS includes a \$98.5 million employer contribution for FY 2012.
2 The agreement between the City and HMEPS includes an open 30 year amortization period until the actual City contribution rate reaches the actuarially determined contribution rate.
Note: Dollar amounts in \$000.


## ANALYSIS OF NORMAL COST

| July 1, 2011 <br> (1) | July 1, 2010 <br> (2) |
| :---: | :---: |
| 4.68\% | 4.69\% |
| 0.72\% | 0.72\% |
| 0.00\% | 0.00\% |
| 0.07\% | 0.07\% |
| 0.39\% | 0.39\% |
| 5.86\% | 5.87\% |

## CHANGE IN CALCULATED CONTRIBUTION RATE SINCE THE PRIOR VALUATION

1. Calculated Contribution Rate as of July 1, 2010
22.36\%
2. Change in Contribution Rate During Year
a. Change in Employer Normal Cost
(0.01\%)
b. Recognition of prior asset losses (gains)
1.20\%
c. Actuarial (gain) loss from current year asset performance
(0.58\%)
d. Actuarial (gain) loss from liability sources
(0.08\%)
e. Impact of City contributing different than expected
0.39\%
f. Effect of Payroll growing slower than Payroll Growth Rate 0.74\%
g. Effect of resetting amortization period to 30
(0.57\%)
h. Total Change
1.09\%
3. Calculated Contribution Rate as of July 1, 2011
$23.45 \%$

## CALCULATION OF ANNUAL REQUIRED CONTRIBUTION RATE

|  | July 1, 2011 |  | July 1, 2010 |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | (1) |  | (2) |
| 1. Covered payroll | \$ | 544,665 | \$ | 550,709 |
| 2. Covered payroll adjusted for one-year's pay increase | \$ | 567,679 | \$ | 574,496 |
| 3. Present value of future pay | \$ | 3,742,172 | \$ | 3,799,669 |
| 4. Employer normal cost rate |  | 5.86\% |  | 5.87\% |
| 5. Actuarial accrued liability for active members |  |  |  |  |
| a. Present value of future benefits for active members | \$ | 1,969,742 | \$ | 1,916,303 |
| b. Less: present value of future employer normal costs |  | $(207,667)$ |  | $(212,094)$ |
| c. Less: present value of future employee contributions |  | $(126,708)$ |  | $(130,552)$ |
| d. Actuarial accrued liability | \$ | 1,635,367 | \$ | 1,573,657 |
| 6. Total actuarial accrued liability for: |  |  |  |  |
| a. Retirees and beneficiaries | \$ | 2,006,737 | \$ | 1,917,593 |
| b. Inactive participants | \$ | 148,224 |  | 141,220 |
| c. Active members (Item 5d) | \$ | 1,635,367 |  | 1,573,657 |
| d. Total | \$ | 3,790,328 | \$ | 3,632,470 |
| 7. Actuarial value of assets | \$ | 2,328,804 | \$ | 2,273,142 |
| 8. Unfunded actuarial accrued liability (UAAL) |  |  |  |  |
| 9. Funding period |  | 30 years |  | 29 years |
| 10. Assumed payroll growth rate |  | 3.00\% |  | 3.00\% |
| 11. Employer Contribution requirement |  |  |  |  |
| a. UAAL amortization payment as \% of pay |  | 17.59\% |  | 16.49\% |
| b. Employer normal cost |  | 5.86\% |  | 5.87\% |
| c. Contribution requirement ( $\mathrm{a}+\mathrm{b}$ ) |  | 23.45\% |  | 22.36\% |

Note: Dollar amounts in $\$ 000$
HISTORICAL SOLVENCY TEST

| Valuation Date <br> (1) | Aggregated Accrued Liabilities for |  |  | Actuarial Value of Assets <br> (5) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Active <br> Members <br> Contributions |  |  |  | by Reported Assets |  |  |
|  |  | Beneficiaries and Vested Terminations ${ }^{1}$ | Members (City Financed Portion) <br> (4) |  | (5)/(2) <br> (6) | $[(5)-(2)] /(3)$ <br> (7) | $[(5)-(2)-(3)] /$ <br> (4) <br> (8) |
| July 1, 1992 | \$ 32,850 | \$ 317,849 | \$ 414,600 | \$ 608,524 | 100.0\% | 100.0\% | 62\% |
| July 1, 1993 | 32,866 | 369,561 | 437,894 | 660,637 | 100.0\% | 100.0\% | 59\% |
| July 1, 1994 | 32,410 | 384,100 | 470,189 | 713,696 | 100.0\% | 100.0\% | 63\% |
| July 1, 1995 | 31,130 | 420,830 | 511,752 | 770,189 | 100.0\% | 100.0\% | 62\% |
| July 1, 1996 | 45,819 | 438,486 | 558,154 | 857,332 | 100.0\% | 100.0\% | 67\% |
| July 1, 1998 | 34,781 | 502,335 | 703,025 | 1,095,617 | 100.0\% | 100.0\% | 79\% |
| July 1, 1999 | 33,985 | 599,270 | 706,678 | 1,222,240 | 100.0\% | 100.0\% | 83\% |
| July 1, 2000 | 38,292 | 646,611 | 824,470 | 1,376,020 | 100.0\% | 100.0\% | 84\% |
| July 1, 2001 | 36,449 | 804,901 | 1,114,456 | 1,490,179 | 100.0\% | 100.0\% | 58\% |
| July 1, 2002 | 35,888 | 893,568 | 1,585,733 | 1,519,717 | 100.0\% | 100.0\% | 37\% |
| July 1, 2003 | 44,388 | 1,115,801 | 2,118,063 | 1,510,264 | 100.0\% | 100.0\% | 17\% |
| July 1, 2004 | 62,062 | 1,355,157 | 1,216,599 | 1,501,235 | 100.0\% | 100.0\% | 7\% |
| July 1, 2005 | 48,150 | 1,577,345 | 1,099,777 | 1,777,656 | 100.0\% | 100.0\% | 14\% |
| July 1, 2006 | 58,043 | 1,729,863 | 1,106,389 | 1,867,293 | 100.0\% | 100.0\% | 7\% |
| July 1, 2007 | 69,544 | 1,824,992 | 1,234,178 | 2,193,745 | 100.0\% | 100.0\% | 24\% |
| July 1, 2008 | 81,182 | 1,904,333 | 1,310,855 | 2,310,384 | 100.0\% | 100.0\% | 25\% |
| July 1, 2009 | 95,268 | 1,974,714 | 1,381,428 | 2,284,442 | 100.0\% | 100.0\% | 16\% |
| July 1, 2010 | 107,421 | 2,058,813 | 1,466,236 | 2,273,142 | 100.0\% | 100.0\% | 7\% |
| July 1, 2011 | 118,202 | 2,154,959 | 1,517,167 | 2,328,804 | 100.0\% | 100.0\% | 4\% |

[^2]
## SCHEDULE OF FUNDING PROGRESS

| Date | Actuarial Value of Assets (AVA) | Actuarial Accrued Liability (AAL) | Unfunded Actuarial Accrued Liability (UAAL) (3) - (2) | Funded Ratio (2)/(3) | Annual Payroll | UAAL as \% of Payroll (4)/(6) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| July 1, 1992 | \$ 608,524 | \$ 765,299 | \$ 156,775 | 79.5\% | \$ 314,686 | 49.8\% |
| July 1, 1993 | 660,637 | 840,321 | 179,684 | 78.6\% | 340,249 | 52.8\% |
| July 1, 1994 | 713,696 | 886,699 | 173,003 | 80.5\% | 366,561 | 47.2\% |
| July 1, 1995 | 770,189 | 963,712 | 193,523 | 79.9\% | 378,511 | 51.1\% |
| July 1, 1996 | 857,332 | 1,042,459 | 185,127 | 82.2\% | 367,610 | 50.4\% |
| July 1, 1998 | 1,095,617 | 1,240,141 | 144,524 | 88.3\% | 397,698 | 36.3\% |
| July 1, 1999 | 1,222,240 | 1,339,933 | 117,693 | 91.2\% | 407,733 | 28.9\% |
| July 1, 2000 | 1,376,020 | 1,509,373 | 133,353 | 91.2\% | 432,604 | 30.8\% |
| July 1, 2001 | 1,490,179 | 1,955,806 | 465,627 | 76.2\% | 418,234 | 111.3\% |
| July 1, 2002 | 1,519,717 | 2,515,189 | 995,472 | 60.4\% | 399,794 | 249.0\% |
| July 1, 2003 | 1,510,264 | 3,278,251 | 1,767,987 | 46.1\% | 390,314 | 453.0\% |
| July 1, 2004 | 1,501,235 | 2,633,817 | 1,132,582 | 57.0\% | 366,190 | 309.3\% |
| July 1, 2005 | 1,777,656 | 2,725,272 | 947,616 | 65.2\% | 404,565 | 234.2\% |
| July 1, 2006 | 1,867,293 | 2,894,295 | 1,027,002 | 64.5\% | 422,496 | 243.1\% |
| July 1, 2007 | 2,193,745 | 3,128,713 | 934,968 | 70.1\% | 448,925 | 208.3\% |
| July 1, 2008 | 2,310,384 | 3,296,370 | 985,986 | 70.1\% | 483,815 | 203.8\% |
| July 1, 2009 | 2,284,442 | 3,451,410 | 1,166,968 | 66.2\% | 539,023 | 216.5\% |
| July 1, 2010 | 2,273,142 | 3,632,470 | 1,359,328 | 62.6\% | 550,709 | 246.8\% |
| July 1, 2011 | 2,328,804 | 3,790,328 | 1,461,524 | 61.4\% | 544,665 | 268.3\% |

Note: Dollar amounts in \$000

## HISTORICAL CITY CONTRIBUTION RATES


DISTRIBUTION OF GROUP A ACTIVE MEMBERS BY AGE AND BY YEARS OF SERVICE

| Attained Age | 0 <br> No. \& Avg Comp. | 1 <br> No. \& Avg. Comp. | 2 <br> No. \& Avg Comp. | $3$ <br> No. \& Avg Comp. | 4 <br> No. \& Avg Comp. | No. \& Avg Comp. | 10-14 <br> No. \& Avg <br> Comp. | 15-19 <br> No. \& Avg Comp. | $20-24$ <br> No. \& Avg Comp. | $25-29$ <br> No. \& Avg Comp. | $30-34$ <br> No. \& Avg. Comp. | 35 \& Over <br> No. \& Avg. Comp. | Total No. \& Avg. Comp. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Under 25 |  |  | 1 | 19 | 6 | 9 |  |  |  |  |  |  | 35 |
|  |  |  | \$30,524 | \$28,117 | \$27,458 | \$35,523 |  |  |  |  |  |  | \$29,977 |
| 25-29 | 3 | 3 | 8 | 106 | 85 | 154 | 1 |  |  |  |  |  | 360 |
|  | \$25,016 | \$41,572 | \$29,087 | \$32,766 | \$33,548 | \$33,827 | \$47,834 |  |  |  |  |  | \$33,373 |
| 30-34 | 5 |  | 11 | 114 | 126 | 334 | 58 | 1 |  |  |  |  | 649 |
|  | \$28,789 |  | \$30,858 | \$36,146 | \$40,140 | \$39,782 | \$39,635 | \$59,279 |  |  |  |  | \$38,994 |
| 35-39 | 3 | 4 | 9 | 85 | 110 | 334 | 121 | 40 | 2 |  |  |  | 708 |
|  | \$35,978 | \$49,103 | \$34,457 | \$39,405 | \$41,467 | \$42,828 | \$39,567 | \$45,921 | \$65,517 |  |  |  | \$41,787 |
| 40-44 | 2 | 4 | 12 | 79 | 126 | 384 | 182 | 124 | 51 | 2 |  |  | 966 |
|  | \$27,692 | \$50,797 | \$49,987 | \$40,392 | \$41,708 | \$45,419 | \$45,201 | \$49,814 | \$44,101 | \$40,816 |  |  | \$45,010 |
| 45-49 | 5 | 4 | 8 | 71 | 139 | 385 | 237 | 181 | 161 | 80 | 5 |  | 1,276 |
|  | \$34,035 | \$49,927 | \$40,712 | \$38,636 | \$43,653 | \$44,887 | \$45,075 | \$51,855 | \$48,199 | \$48,672 | \$49,777 |  | \$46,049 |
| 50-54 | 3 | 5 | 9 | 67 | 106 | 396 | 238 | 236 | 197 | 168 | 71 |  | 1,496 |
|  | \$35,610 | \$64,819 | \$43,554 | \$42,225 | \$41,978 | \$44,865 | \$45,453 | \$52,534 | \$53,540 | \$53,640 | \$54,752 |  | \$48,483 |
| 55-59 | 3 |  | 4 | 42 | 88 | 348 | 220 | 206 | 181 | 93 | 60 | 5 | 1,250 |
|  | \$74,001 |  | \$35,808 | \$50,578 | \$40,093 | \$46,830 | \$49,797 | \$52,517 | \$58,366 | \$59,874 | \$58,902 | \$71,693 | \$51,291 |
| 60-64 | 1 | 2 | 2 | 26 | 62 | 218 | 148 | 151 | 70 | 69 | 19 | 6 | 774 |
|  | \$55,904 | \$93,616 | \$74,367 | \$53,248 | \$44,575 | \$45,386 | \$47,417 | \$54,603 | \$61,146 | \$58,218 | \$58,184 | \$74,038 | \$51,090 |
| 65 \& Over | 1 |  | 1 | 14 | 20 | 120 | 64 | 59 | 27 | 21 | 9 | 7 | 343 |
|  | \$101,466 |  | \$24,101 | \$50,287 | \$55,525 | \$50,941 | \$47,154 | \$50,781 | \$64,834 | \$65,526 | \$78,825 | \$73,520 | \$53,696 |
| Total | 26 | 22 | 65 | 623 | 868 | 2,682 | 1,269 | 998 | 689 | 433 | 164 | 18 | 7,857 |
|  | \$39,950 | \$56,152 | \$39,175 | \$39,251 | \$41,256 | \$43,965 | \$45,589 | \$52,021 | \$54,111 | \$55,308 | \$57,837 | \$73,185 | \$46,430 |
|  |  | Average: | Age: | 48.13 |  | ber of par | ipants: | lly vested: | 6,253 |  | Males: | 4,306 |  |
|  |  |  | Service: | 11.54 |  |  |  | t Vested: | 1,604 |  | Females: | 3,551 |  |

Note: A former Group A employee who is rehired on or after January 1, 2008 is still a Group A employee.
DISTRIBUTION OF GROUP B ACTIVE MEMBERS BY AGE AND BY YEARS OF SERVICE

| Attained No. \& Avg. Age Comp. | No. \& Avg. Comp. | 2 <br> No. \& Avg. Comp. | No. \& Avg. Comp. | 4 <br> No. \& Avg Comp. | No. \& Avg. Comp. | 10-14 <br> No. \& Avg. Comp. | 15-19 <br> No. \& Avg. <br> Comp. | 20-24 <br> No. \& Avg Comp. | 25-29 <br> No. \& Avg. Comp. | 30-34 <br> No. \& Avg. Comp. | 35 \& Over <br> No. \& Avg Comp. | Total <br> No. \& Avg. Comp. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Under 25 |  |  |  |  |  |  |  |  |  |  |  |  |
| 25-29 |  |  | 2 |  |  |  |  |  |  |  |  | 2 |
|  |  |  | \$42,144 |  |  |  |  |  |  |  |  | \$42,144 |
| 30-34 |  | 2 | 3 |  |  | 24 | 2 |  |  |  |  | 31 |
|  |  | \$31,279 | \$33,032 |  |  | \$38,997 | \$40,864 |  |  |  |  | \$38,042 |
| 35-39 |  | 6 | 1 |  |  | 71 | 42 |  |  |  |  | 121 |
|  |  | \$38,598 | \$31,923 |  |  | \$38,289 | \$38,549 |  |  |  |  | \$38,370 |
| 40-44 | 1 | 6 | 5 |  |  | 102 | 136 | 49 |  |  |  | 303 |
|  | \$46,210 | \$40,850 | \$32,573 |  |  | \$38,021 | \$42,500 | \$41,366 |  |  |  | \$40,601 |
| 45-49 | 1 | 10 | 5 |  |  | 88 | 133 | 125 | 54 | 1 |  | 419 |
|  | \$85,839 | \$44,830 | \$30,665 |  |  | \$38,897 | \$41,944 | \$43,628 | \$40,700 | \$50,182 |  | \$41,705 |
| 50-54 |  | 8 | 5 |  |  | 82 | 146 | 102 | 65 | 14 |  | 423 |
|  |  | \$52,445 | \$32,892 |  |  | \$41,746 | \$41,786 | \$44,336 | \$42,221 | \$43,742 |  | \$42,611 |
| 55-59 | 1 | 3 | 4 |  |  | 64 | 132 | 98 | 39 | 13 | 1 | 355 |
|  | \$53,348 | \$32,326 | \$60,018 |  |  | \$41,381 | \$40,444 | \$45,516 | \$43,350 | \$51,083 | \$35,905 | \$42,897 |
| 60-64 |  | 4 | 1 |  |  | 40 | 76 | 41 | 28 | 4 | 1 | 195 |
|  |  | \$44,978 | \$26,837 |  |  | \$44,737 | \$42,524 | \$44,731 | \$50,854 | \$47,344 | \$37,755 | \$44,682 |
| 65 \& Over |  |  | 1 |  |  | 14 | 34 | 20 | 11 | 2 | 1 | 83 |
|  |  |  | \$45,086 |  |  | \$39,078 | \$47,714 | \$38,349 | \$58,214 | \$93,793 | \$33,874 | \$46,304 |
| Total | 3 | 39 | 27 |  |  | 485 | 701 | 435 | 197 | 34 | 3 | 1,932 |
|  | \$61,799 | \$43,179 | \$37,331 |  |  | \$39,925 | \$41,873 | \$43,826 | \$44,148 | \$50,106 | \$35,845 | \$42,180 |
|  | Average: | Age: | 50.71 | Num | ber of parti | cipants: F | Fully vested: | 1,855 |  | Males: | 962 |  |
|  |  | Service: | 18.03 |  |  |  | Not Vested: | 77 |  | Females: | 970 |  |

DISTRIBUTION OF GROUP D ACTIVE MEMBERS BY AGE AND BY YEARS OF SERVICE

| Attained Age | No. \& Avg. Comp. | 1 <br> No. \& Avg Comp. | $\begin{gathered} 2 \\ \text { No. \& Avg. } \\ \text { Comp. } \end{gathered}$ | $\begin{gathered} 3 \\ \text { No. \& Avg. } \\ \text { Comp. } \end{gathered}$ | No. \& Avg. Comp. | 5-9 <br> No. \& Avg. Comp. | 10-14 <br> No. \& Avg. Comp. | 15-19 <br> No. \& Avg. Comp. | No. \& Avg. <br> Comp. |  | $30-34$ <br> No. \& Avg. Comp. | 35 \& Over <br> No. \& Avg. <br> Comp. | Total No. \& Avg. Comp. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Under 25 | 47 | 32 | 90 |  |  |  |  |  |  |  |  |  | 213 |
|  | \$27,734 | \$29,522 | \$26,099 |  |  |  |  |  |  |  |  |  | \$27,302 |
| 25-29 | 74 | 72 | 241 | 135 |  |  |  |  |  |  |  |  | 522 |
|  | \$31,755 | \$34,049 | \$32,666 | \$31,910 |  |  |  |  |  |  |  |  | \$32,532 |
| 30-34 | 54 | 59 | 197 | 110 |  |  |  |  |  |  |  |  | 420 |
|  | \$37,161 | \$39,484 | \$35,970 | \$34,502 |  |  |  |  |  |  |  |  | \$36,232 |
| 35-39 | 48 | 50 | 126 | 91 |  |  |  |  |  |  |  |  | 315 |
|  | \$38,772 | \$40,922 | \$39,341 | \$39,905 |  |  |  |  |  |  |  |  | \$39,668 |
| 40-44 | 46 | 51 | 124 | 72 |  |  |  |  |  |  |  |  | 293 |
|  | \$38,677 | \$41,419 | \$40,875 | \$36,996 |  |  |  |  |  |  |  |  | \$39,671 |
| 45-49 | 58 | 58 | 91 | 87 |  |  |  |  |  |  |  |  | 294 |
|  | \$45,576 | \$50,790 | \$42,916 | \$40,501 |  |  |  |  |  |  |  |  | \$44,280 |
| 50-54 | 29 | 26 | 101 | 57 |  |  |  |  |  |  |  |  | 213 |
|  | \$50,576 | \$50,146 | \$39,440 | \$43,040 |  |  |  |  |  |  |  |  | \$43,226 |
| 55-59 | 16 | 31 | 78 | 52 |  |  |  |  |  |  |  |  | 177 |
|  | \$52,994 | \$51,539 | \$45,914 | \$45,956 |  |  |  |  |  |  |  |  | \$47,551 |
| 60-64 | 9 | 18 | 29 | 23 |  |  |  |  |  |  |  |  | 79 |
|  | \$41,425 | \$68,505 | \$47,689 | \$51,894 |  |  |  |  |  |  |  |  | \$52,942 |
| 65 \& Over | 2 | 3 | 16 | 4 |  |  |  |  |  |  |  |  | 25 |
|  | \$57,580 | \$44,362 | \$52,245 | \$43,053 |  |  |  |  |  |  |  |  | \$50,255 |
| Total | 383 | 405 | 1,093 | 675 |  |  |  |  |  |  |  |  | 2,556 |
|  | \$38,502 | \$42,607 | \$37,531 | \$37,554 |  |  |  |  |  |  |  |  | \$38,487 |
|  |  | Average: | Age: | 38.33 | Nu | mber of partic | ipants: F | Fully vested: | - |  | Males: | 1,377 |  |
|  |  |  | Service: | 2.30 |  |  |  | Not Vested: | 2,556 |  | Females: | $1,179$ |  |

DISTRIBUTION OF ACTIVE MEMBERS BY AGE AND BY YEARS OF SERVICE ALL EMPLOYEES

| Under 25 | 47 | 32 | 91 | 63 | 6 | 9 |  |  |  |  |  |  | 248 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$27,734 | \$29,522 | \$26,147 | \$27,816 | \$27,458 | \$35,523 |  |  |  |  |  |  | \$27,679 |
| 25-29 | 77 | 75 | 249 | 243 | 85 | 154 | 1 |  |  |  |  |  | 884 |
|  | \$31,493 | \$34,350 | \$32,551 | \$32,368 | \$33,548 | \$33,827 | \$47,834 |  |  |  |  |  | \$32,897 |
| 30-34 | 59 | 59 | 210 | 227 | 126 | 334 | 82 | 3 |  |  |  |  | 1,100 |
|  | \$36,452 | \$39,484 | \$35,658 | \$35,308 | \$40,140 | \$39,782 | \$39,448 | \$47,002 |  |  |  |  | \$37,912 |
| 35-39 | 52 | 54 | 141 | 177 | 110 | 334 | 192 | 82 | 2 |  |  |  | 1,144 |
|  | \$38,667 | \$41,528 | \$38,997 | \$39,620 | \$41,467 | \$42,828 | \$39,094 | \$42,145 | \$65,517 |  |  |  | \$40,842 |
| 40-44 | 52 | 56 | 142 | 156 | 126 | 384 | 284 | 260 | 100 | 2 |  |  | 1,562 |
|  | \$38,410 | \$42,174 | \$41,644 | \$38,574 | \$41,708 | \$45,419 | \$42,623 | \$45,988 | \$42,761 | \$40,816 |  |  | \$43,153 |
| 45-49 | 65 | 63 | 109 | 163 | 139 | 385 | 325 | 314 | 286 | 134 | 6 |  | 1,989 |
|  | \$44,581 | \$51,292 | \$42,930 | \$39,387 | \$43,653 | \$44,887 | \$43,402 | \$47,657 | \$46,201 | \$45,459 | \$49,845 |  | \$44,873 |
| 50-54 | 33 | 31 | 118 | 129 | 106 | 396 | 320 | 382 | 299 | 233 | 85 |  | 2,132 |
|  | \$48,813 | \$52,512 | \$40,635 | \$42,223 | \$41,978 | \$44,865 | \$44,503 | \$48,427 | \$50,400 | \$50,454 | \$52,938 |  | \$46,793 |
| 55-59 | 19 | 32 | 85 | 98 | 88 | 348 | 284 | 338 | 279 | 132 | 73 | 6 | 1,782 |
|  | \$56,311 | \$51,595 | \$44,958 | \$48,511 | \$40,093 | \$46,830 | \$47,900 | \$47,802 | \$53,853 | \$54,992 | \$57,509 | \$65,729 | \$49,247 |
| 60-64 | 10 | 20 | 35 | 50 | 62 | 218 | 188 | 227 | 111 | 97 | 23 | 7 | 1,048 |
|  | \$42,873 | \$71,016 | \$48,904 | \$52,097 | \$44,575 | \$45,386 | \$46,847 | \$50,559 | \$55,083 | \$56,092 | \$56,299 | \$68,855 | \$50,038 |
| 65 \& Over | 3 | 3 | 17 | 19 | 20 | 120 | 78 | 93 | 47 | 32 | 11 | 8 | 451 |
|  | \$72,208 | \$44,362 | \$50,590 | \$48,490 | \$55,525 | \$50,941 | \$45,705 | \$49,660 | \$53,564 | \$63,012 | \$81,547 | \$68,564 | \$52,145 |
| Total | 417 | 430 | 1,197 | 1,325 | 868 | 2,682 | 1,754 | 1,699 | 1,124 | 630 | 198 | 21 | 12,345 |
|  | \$38,635 | \$43,434 | \$37,805 | \$38,347 | \$41,256 | \$43,965 | \$44,023 | \$47,834 | \$50,130 | \$51,818 | \$56,510 | \$67,851 | \$44,120 |
|  |  | verage: | Age: | 46.51 |  | er of par | ants: | vested: | 8,108 |  |  |  |  |
|  |  |  | Service: | 10.64 |  |  |  | ested: | 4,237 | Fem |  |  |  |

HISTORICAL ACTIVE PARTICIPANT DATA

| Valuation <br> Date <br> $(1)$ | Active Count <br> $(2)$ | Average <br> Age <br> $(3)$ | Average <br> Service <br> $(4)$ | Covered <br> Payroll <br> $(5)$ | Average <br> Salary <br> $(6)$ | Percent <br> Changes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1988 | 11,344 | N/A | $\mathrm{N} / \mathrm{A}$ | $\$ 227,900$ | $\$ 20,090$ | $(7)$ |

Note: Dollar amounts in $\$ 000$
1 Excludes DROP participants
2 Beginning with the 2005 valuation, a change in methodology now annualizes payroll for new entrants. If the methodology had not been changed, the covered payroll for 2005 would have been $\$ 376,208,345$ and the average payroll would have been $\$ 31,419$.

## RETIREES, BENEFICIARIES, AND DISABLED PARTICIPANTS ADDED TO AND REMOVED FROM ROLLS

|  | Added to Rolls |  |  | Removed from Rolls |  |  | Rolls-End of Year |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Note: Dollar amounts in \$000

## MEMBERSHIP DATA

July 1, 2011

1. Active members
a. Number 12,345
b. Number vested
8,108
c. Total payroll
\$ 544,665,000
d. Average salary
44,120
e. Average age
46.5
f. Average service 10.6
2. Inactive participants
a. Vested 3,178
b. Total annual benefits (deferred)
\$ 20,507,195
c. Average annual benefit

6,453
d. NonVested

2,435
3. Service retirees
a. Number
6,663
b. Total annual benefits
\$ 151,805,680
c. Average annual benefit
22,783
d. Average age
67.4
4. Disabled retirees
a. Number

398
b. Total annual benefits
c. Average annual benefit
\$ 3,723,460
d. Average age

9,355
63.0
5. Beneficiaries and spouses
a. Number

1,656
b. Total annual benefits
c. Average annual benefit
\$ 19,680,539
d. Average age

11,884
68.0

## ESTIMATION OF INVESTMENT RETURN YIELD

| Item | Market Value | Actuarial Value |  |  |
| :--- | :--- | ---: | ---: | ---: |
|  | $(1)$ | $(2)$ | $(3)$ |  |
| 1. | Assets as of July 1, 2010 (A) | $\$$ | $1,828,492$ | $\$$ |
| 2. Contributions during FY11 | 106,611 | $2,273,142$ |  |  |
| 3. Benefit payments made during FY11 | 189,199 | $\$$ | 106,611 |  |
| 4. Refunds of contributions during FY11 | 1,620 | $\$$ | 189,199 |  |
| 5. Expenses during FY11 | 7,123 | $\$, 620$ |  |  |
| 6. Investment return during FY11 | 392,280 | 7,123 |  |  |
| 7. Assets as of July 1, 2011 (B): $(1+2-3-4-5+6)$ | $2,129,441$ | 146,993 |  |  |
| 8. Approximate rate of return on average invested assets | 385,157 | $2,328,804$ |  |  |
|  | a. Net investment income $(6-5=I)$ | $21,81 \%$ | 139,870 |  |
|  | b. Estimated return* |  | $6.27 \%$ |  |

*Market rate of return as reported in HMEPS 2011 CAFR, net $0.36 \%$ of expenses
Actuarial return is based on ( $21 /(A+B-I)$ )
Note: Dollar amounts in $\$ 000$
INVESTMENT EXPERIENCE GAIN OR LOSS

| Item <br> (1) | Valuation as of 6/30/2011 <br> (2) |  | Valuation as of 6/30/2010 <br> (3) |  |
| :---: | :---: | :---: | :---: | :---: |
| 1. Actuarial assets, prior valuation | \$ | 2,273,142 | \$ | 2,284,442 |
| 2. Total contributions since prior valuation | \$ | 106,611 | \$ | 101,788 |
| 3. Benefits and refunds since prior valuation | \$ | $(190,819)$ | \$ | $(192,334)$ |
| 4. Assumed net investment income at $8.5 \%$ |  |  |  |  |
| a. Beginning assets | \$ | 193,216 | \$ | 194,177 |
| b. Contributions |  | 4,439 |  | 4,238 |
| c. Benefits and refunds paid |  | $(7,944)$ |  | $(8,007)$ |
| d. Total | \$ | 189,711 | \$ | 190,408 |
| 5. Expected actuarial assets (Sum of Items 1 through 4) | \$ | 2,378,645 | \$ | 2,384,305 |
| 6. Actual actuarial assets, this valuation | \$ | 2,328,804 | \$ | 2,273,142 |
| 7. Asset gain (loss) since prior valuation (Item 6 - Item 5) | \$ | $(49,841)$ | \$ | $(111,163)$ |

Note: Dollar amounts in $\$ 000$

## HISTORY OF INVESTMENT RETURNS

| For Fiscal Year Ending | Market Value | Actuarial Value |
| :---: | :---: | :---: |
| (1) | (2) | (3) |
| June 30, 2000 | 22.10\% | 13.00\% |
| June 30, 2001 | (4.56\%) | 8.97\% |
| June 30, 2002 | (7.99\%) | 3.64\% |
| June 30, 2003 | 2.34\% | 1.69\% |
| June 30, 2004 | 18.10\% | 4.16\% |
| June 30, 2005 | 12.85\% | 4.12\% |
| June 30, 2006 | 16.41\% | 8.95\% |
| June 30, 2007 | 17.85\% | 21.51\% |
| June 30, 2008 | (0.25\%) | 8.97\% |
| June 30, 2009 | (16.50\%) | 2.60\% |
| June 30, 2010 | 11.84\% | 3.54\% |
| June 30, 2011 | 21.81\% | 6.27\% |
| Average Compound Return - last 5 years | 5.98\% | 8.37\% |
| Average Compound Return - last 10 years | 6.93\% | 6.41\% |

[^3]
## Summary of Actuarial Assumptions and Methods

The following methods and assumptions were used in preparing the July 1, 2011, actuarial valuation. These assumptions were adopted by the Board effective for the July 1, 2010 valuation.

## 1. Valuation Date

The valuation date is July 1st of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

## 2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial liability.
a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 8.5 percent), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability, or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable on account of the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Plan on account of the present group of participants and beneficiaries.
b. The employer contributions required to support the benefits of the Plan are determined using a level
funding approach, and consist of a normal contribution and an accrued liability contribution.
c. The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his behalf based on the benefits provisions for new employees hired on or after January 1, 2008.
d. The unfunded accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 30 years from the valuation date.

The contribution rate determined by this valuation will not be effective until one year later and the determination of the rate reflects this deferral. It is assumed that there will be no change in the employer normal cost rate due to the deferral, and it is assumed that payments are made uniformly throughout the year.

## 3. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income on an aggregate basis. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses.

## 4. Economic Assumptions

a. Investment return: 8.50\% per year, compounded annually, composed of an assumed $3.00 \%$ inflation

## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

rate and a $5.50 \%$ net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.
b. Salary increase rate: A service-related component, plus a $3.00 \%$ inflation component, plus a 0.0\% general increase, as follows:

|  | Total Annual Rate of Increase <br> Including 3.00\% Inflation |  |
| :--- | :---: | :---: |
| Years of | Service-related | Component and |
| Service | Component | $\underline{0.0 \%}$ General Increase |


| $(1)$ | $(2)$ | $(3)$ |
| :---: | :---: | :---: |
| 1 | $3.00 \%$ | $6.00 \%$ |
| 2 | 2.75 | 5.75 |
| 3 | 2.50 | 5.50 |
| 4 | 2.00 | 5.00 |
| $5-6$ | 1.75 | 4.75 |
| 7 | 1.50 | 4.50 |
| $8-9$ | 1.25 | 4.25 |
| $10-14$ | 1.00 | 4.00 |
| $15-19$ | 0.75 | 3.75 |
| $20-24$ | 0.50 | 3.50 |
| $25+$ | 0.00 | 3.00 |

c. Payroll growth rate: In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 3.00\% per year. This increase rate is solely due to the effect of inflation on salaries, with no allowance for future membership growth.

## 5. Demographic Assumptions

a. Retirement Rates (see table next page).
b. DROP Participation
$90 \%$ of eligible members are assumed to enter DROP at first eligibility.
c. DROP Entry Date

Active members (not already in DROP) are assumed to take advantage of the DROP and enter when first eligible. For members who have already entered DROP, the actual DROP entry date supplied in the data is used.
d. DROP Interest Credit
4.25\% per year
e. DROP Payout

It is assumed members with DROP balances will take their DROP balance in 6 equal annual installments beginning the year after retirement. Members currently retired with DROP balances are assumed to take 6 equal annual installments from the valuation date.
f. Mortality rates (for active and retired members)

- Healthy males - Based on the Retired Pensioners 2000 Mortality Table (combined) for males. Rates are scaled by $110 \%$.
- Healthy females - Based on the Retired Pensioners 2000 Mortality Table (combined) for females. Rates are scaled by $95 \%$.
- Disabled males and females - 1965 Railroad Retirement Board Disabled Life Table. Rates are set-back two years for males and eight years for females.

Sample rates are shown on following page:
g. Termination Rates and Disability Rates

Termination rates (for causes other than death, disability or retirement):

Termination rates are a function of the member's age and service. Termination rates are not applied after a member becomes eligible for a retirement benefit. Rates at selected ages are shown on page 82.

## 6. Other Assumptions

a. Percent married: 70\% of employees are assumed to be married. (No beneficiaries other than the spouse assumed)
b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.

## Retirement Rates

Group A \& B Members Group D Members

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Age | Males | Females | Males | Females |
| (1) | (2) | (3) | (4) | (5) |
| 45-49 | 15 | 12 | 0 | 0 |
| 50-54 | 12 | 12 | 3 | 3 |
| 55 | 12 | 12 | 4 | 4 |
| 56 | 12 | 12 | 5 | 5 |
| 57 | 12 | 12 | 6 | 6 |
| 58 | 12 | 12 | 7 | 7 |
| 59 | 12 | 12 | 8 | 8 |
| 60 | 14 | 14 | 10 | 10 |
| 61 | 16 | 16 | 13 | 13 |
| 62 | 25 | 20 | 35 | 35 |
| 63 | 25 | 18 | 25 | 18 |
| 64 | 18 | 20 | 18 | 20 |
| 65 | 20 | 20 | 20 | 20 |
| 66-69 | 20 | 19 | 20 | 19 |
| 70-74 | 20 | 19 | 20 | 19 |
| 75+ | 100 | 100 | 100 | 100 |

Expected Deaths Per 100 Lives

| Age | Healthy <br> Males | Healthy <br> Females | Disabled <br> Males | Disabled <br> Females |
| :---: | :---: | :---: | :---: | :---: |
| 25 | 0.04 | 0.02 | $(3)$ | 4.41 |
| 30 | 0.05 | 0.03 | 4.41 | 4.41 |
| 35 | 0.09 | 0.05 | 4.41 | 4.41 |
| 40 | 0.12 | 0.07 | 4.41 | 4.41 |
| 45 | 0.17 | 0.11 | 4.42 | 4.41 |
| 50 | 0.24 | 0.16 | 4.48 | 4.41 |
| 55 | 0.40 | 0.26 | 4.67 | 4.42 |
| 60 | 0.74 | 0.48 | 5.09 | 4.46 |
| 65 | 1.40 | 0.92 | 5.76 | 4.62 |
| 70 | 2.44 | 1.59 | 6.84 | 4.98 |
| 75 | 4.16 | 2.67 | 8.62 | 5.60 |
| 80 | 7.08 | 4.36 | 11.40 | 6.58 |

For pre-retirement mortality, $90 \%$ of the rates shown above are assumed to be for non-service related deaths and $10 \%$ for service related deaths.
Mortality Improvement: To account for future mortality improvement, the healthy mortality rates were chosen so that the assumed mortality rates are smaller than the rates observed in the most recent experience study (dated $5-25-2010$ ). The margin at the time of the study was $22 \%-27 \%$ for non-disabled annuitants. No future mortality improvement after the measurement date is assumed except as described above.

Probability of Decrement Due to Withdrawal - Male Members Years of Service

| Age | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | $10+$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 20 | 0.3244 | 0.2682 | 0.2300 | 0.2060 | 0.1926 | 0.1824 | 0.1617 | 0.1507 | 0.1400 | 0.1278 | 0.1639 |
| 30 | 0.2585 | 0.2146 | 0.1808 | 0.1563 | 0.1396 | 0.1275 | 0.1143 | 0.1057 | 0.0985 | 0.0919 | 0.0946 |
| 40 | 0.2003 | 0.1645 | 0.1351 | 0.1124 | 0.0954 | 0.0832 | 0.0750 | 0.0683 | 0.0634 | 0.0603 | 0.0427 |
| 50 | 0.1559 | 0.1258 | 0.1013 | 0.0824 | 0.0681 | 0.0577 | 0.0510 | 0.0454 | 0.0411 | 0.0383 | 0.0206 |
| 60 | 0.1341 | 0.1083 | 0.0887 | 0.0740 | 0.0634 | 0.0557 | 0.0469 | 0.0407 | 0.0344 | 0.0277 | 0.0199 |

Probability of Decrement Due to Withdrawal - Female Members
Years of Service

| Age | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | $10+$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 20 | 0.2811 | 0.2574 | 0.2344 | 0.2123 | 0.1912 | 0.1711 | 0.1506 | 0.1282 | 0.1040 | 0.0784 | 0.1385 |
| 30 | 0.2155 | 0.1943 | 0.1736 | 0.1539 | 0.1356 | 0.1188 | 0.1032 | 0.0879 | 0.0730 | 0.0585 | 0.0795 |
| 40 | 0.1688 | 0.1460 | 0.1250 | 0.1063 | 0.0903 | 0.0770 | 0.0664 | 0.0581 | 0.0517 | 0.0472 | 0.0367 |
| 50 | 0.1510 | 0.1223 | 0.0984 | 0.0791 | 0.0645 | 0.0544 | 0.0481 | 0.0452 | 0.0453 | 0.0481 | 0.0339 |
| 60 | 0.1794 | 0.1373 | 0.1049 | 0.0812 | 0.0653 | 0.0570 | 0.0540 | 0.0552 | 0.0601 | 0.0682 | 0.0339 |


|  | Rates of Decrement Due to Disability <br> Males |  |
| :---: | :---: | :---: |
| 20 | .00000 | Females |
| 25 | .00006 | .00001 |
| 30 | .00050 | .00002 |
| 35 | .00219 | .00008 |
| 40 | .00448 | .00013 |
| 45 | .00868 | .00029 |
| 50 | .01514 | .00066 |
| 55 | .02187 | .00157 |
| 60 | .02888 | .00253 |

Rates of disability are reduced to zero once a member becomes eligible for retirement.
Rates of decrement due to Ordinary Disabilities are assumed to be 120\% of the base rates shown above. Rates of decrement due to Service Related Disabilities are assumed to be $10 \%$ of the base rates shown above.
d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
e. There will be no recoveries once disabled.
f. No surviving spouse will remarry and there will be no children's benefit.
g. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available.
h. Administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.
i. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
j. Decrement timing: Decrements of all types are assumed to occur mid-year.
k. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
I. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
m. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
n. Benefit Service: All members are assumed to accrue 1 year of service each year. Exact fractional service is used to determine the amount of benefit payable.

## 7. Participant Data

Participant data was supplied on electronic files. There were separate files for (i) active members, (ii) inactive members, and (ii) members and beneficiaries receiving benefits.

The data for active members included birth date, sex, most recent hire date, salary paid during last fiscal year, hours worked by the employee, and employee contribution amounts. For retired members and beneficiaries, the data included date of birth, sex, amount of monthly benefit, and date of retirement. Also included was the member's Group and for members participating in DROP, their account balances and monthly DROP income.

All healthy and disabled retirees are assumed to have $100 \%$ joint and survivor, prorated by the $70 \%$ marriage assumption and reflecting the 3 year spousal age differential. All non-children beneficiaries are assumed to have life only benefits and all children beneficiaries' annuities are assumed to stop at age 21.
Salary supplied for the current year was based on the earnings for the year preceding the valuation date. This salary was adjusted by the salary increase rate for one year. For members who worked less than 1900 hours but were not new entrants, the salary was annualized to 1900 hours.

In fiscal years when a 27th pay period occurs the individual pays for employees who were employed throughout the year will be adjusted by multiplying their reported pay by the ratio of $26 / 27$. In years that have only 26 pay periods no adjustment would be needed.

Assumptions were made to correct for missing, bad, or inconsistent data. These had no material impact on the results presented.

## 8. Group Transfers

We assume no current Group B members will transfer to Group A.

## Summary of Plan Provisions

The provisions summarized in this section apply to persons who are members (active employees). Former members may have been covered under different plan provisions, depending on their dates of separation from service.

## 1. Covered Members

Any person who is a participant of Group A, under the original act.

Persons who became employees of the City of Houston after September 1, 1981 and prior to September 1, 1999, and elected officials of the City of Houston who assumed office after September 1, 1981 and prior to September 1, 1999, participate in Group B, but may make an irrevocable election to participate in Group A instead.

Persons who become employees of the City and persons who are elected as City officials after September 1, 1999 and prior to January 1, 2008 become members of Group A. Certain persons who were or became a Director of a City Department, Chief Financial Executive, or Executive Director of HMEPS on or after September 1, 1999 and prior to January 1, 2005 participate in Group C. Effective January 1, 2005, all Group C participation ceased and all Group C participants became Group A participants. Accruals earned by Group C participants prior to January 1, 2005 are retained, but all future accruals are based on the Group A formulas.

SUMMARY OF PLAN PROVISIONS

All future references to Group C participants in this appendix are intended to reflect this change in the Group C status.

Covered employees newly hired on or after January 1, 2008 will be members of Group D.

A former employee who is rehired on or after January 1, 2008 is a member of the group in which such employee participated at the time of his/her immediately preceding separation from service.

## 2. Monthly Final Average Salary (FAS)

The sum of the seventy-eight highest biweekly salaries paid to a member during his period of credited service, divided by thirty-six. Salary includes base pay, longevity pay, and any shift differential pay.

## 3. Credited Service

All services and work performed by an employee, including prior service. For members of Group A and former Group C, all services and work performed after September 1, 1943 must have been accompanied by corresponding contributions to HMEPS by the employee or legally authorized repayments must have been made.

Credited service for former participants in Group C means the number of years of eligible service after the executive official's effective date of participation in Group C. A former Group C member receives two times the number of actual years of credited service in Group C solely for the purpose of fulfilling the eligibility requirements in Group C.

## 4. Normal Retirement

a. Eligibility

Prior to January 1, 2005 (with 68 points as of January 1, 2005):

The earliest of: age 62 and 5 years of Credited Service; 5 years of Credited Service, and age plus years of Credited Service equal 70 or more: age 65 (Group C only)

On or after January 1, 2005 (less than 68 points as of January 1, 2005):

The earliest of: age 62 and 5 years of Credited Service; 5 years of Credited Service, and age plus years of Credited Service equal 75 or more with minimum age 50

For employees newly hired on or after January 1, 2008 (Group D):

Age 62 and 5 years of Credited Service
b. Benefit

Prior to January 1, 2005:
Group A: 3.25\% of FAS for each of the first 10 years
of Credited Service plus $3.50 \%$ for Credited Service greater than 10 years but less than 20 years plus 4.25\% for FAS for each year of Credited Service greater than 20 years (excludes current DROP participants). Maximum benefit is $90 \%$ of FAS for all future retirees.

Group B: 1.75\% of FAS for each of the first 10 years of Credited Service plus $2.00 \%$ of FAS for each year of Credited Service from 10 through 20, and 2.75\% of FAS for each year of Credited Service over 20. Maximum benefit is $90 \%$ of FAS for all future retirees.

Group C: Double the rate for Group A

All accruals after January 1, 2005:
All accruals under the prior multipliers were frozen as of January 1, 2005 and the following benefit multipliers apply to service after that date:

Group A: 2.50\% of FAS for each of the first 20 years of Credited Service plus $3.25 \%$ of FAS for each year Credited Service greater than 20 years. Maximum benefit is $90 \%$ of FAS for all future retirees.

Group B: 1.75\% of FAS for each of the first 10 years of Credited Service plus 2.00\% of FAS for each year of Credited Service from 10 through 20, and $2.50 \%$ of FAS for each year of Credited Service over 20. Maximum benefit is $90 \%$ of FAS for all future retirees.

Group D: 1.80\% of FAS for each of the first 25 years of Credited Service, and $1.00 \%$ of FAS for each year of Credited Service over 25. Maximum benefit is $90 \%$ of FAS for all future retirees.

## 5. Vested Pension

a. Eligibility

5 years of Credited Service.
b. Benefit

Group A and Group C: Either the accrued normal retirement benefit with payments beginning at the normal retirement eligibility date or a refund of employee contributions, if any, without interest.

Group B and Group D: Accrued normal retirement benefit payable at the normal retirement eligibility date.
If the actuarial present value of a pension is less than $\$ 20,000$, a terminated participant who is not eligible to begin receiving a pension may request an early lump sum distribution of the pension. Such early lump sum distribution is irrevocable. Credited Service associated therewith can be reinstated after reemployment and pursuant to the rules of the plan.

## 6. Withdrawal Benefit

If a nonvested member withdraws from service with less than 5 years, a refund of the member's contributions is made without interest, upon request.

## 7. Service-Connected Disability Retirement

a. Eligibility

Any age
b. Benefit

Group A: Accrued normal retirement benefit, but not less than $20 \%$ of final monthly salary at time of disability plus $1 \%$ of final monthly salary per year of Credited Service, to a maximum of $40 \%$ of final monthly salary.

Group B and Group D: Accrued normal retirement benefit, but not less than $20 \%$ of final monthly salary at time of disability.

## 8. Non-service-Connected Disability Retirement

a. Eligibility

5 years of Credited Service.
b. Benefit

Accrued normal retirement benefit payable immediately.

## 9. Pre-retirement Survivor Benefits

A. Service-connected
a. Eligibility

Any age or Credited Service
b. Benefit

If there is a surviving spouse, $100 \%$ of FAS payable to the spouse. $10 \%$ of FAS is payable to each qualifying dependent to a maximum of $20 \%$ for all dependents. Surviving spouse's benefit will be reduced by the amount of dependent benefits. If no surviving spouse, dependent benefits are $50 \%$ of the amount a surviving spouse would have received for each dependent to a maximum of $100 \%$ for all dependents in the aggregate.
B. Non service-connected
a. Eligibility

5 years of Credited Service
b. Benefit

Benefits for survivorship and terminated vested Group D members after January 1, 2008:

If there is a surviving spouse, $50 \%$ of accrued normal retirement benefit payable to the spouse plus $10 \%$ of accrued normal retirement benefit to each qualifying dependent to a maximum of $20 \%$ for all dependents. If there is no surviving spouse, dependent benefits are doubled.

## For all other Groups on or after August 1, 2001:

If there is a surviving spouse, $100 \%$ of accrued normal retirement benefit payable to the spouse and $10 \%$ of accrued normal retirement benefit to each qualifying dependent to a maximum of $20 \%$ for all dependents in the aggregate. The surviving spouse's benefit will be reduced by dependent benefits, if any. If there is no surviving spouse, each dependent will receive $50 \%$ of the benefit a surviving spouse would have received subject to a maximum of $100 \%$ of a surviving spouse's benefit for all dependents in the aggregate.

# SUMMARY OF PLAN PROVISIONS 

## 10. Postretirement Survivor Benefits

All Groups except Option-Eligible Participants:
If there is a surviving spouse, $100 \%$ of the retirement benefit the deceased retiree was receiving at the time of death payable to the spouse and $10 \%$ of that retirement benefit payable to each qualifying dependent to a maximum of $20 \%$ for all dependents. The surviving spouse's benefit will be reduced by dependent benefits, if any. If there is no surviving spouse, each dependent will receive $50 \%$ of the benefit a surviving spouse would have received subject to $100 \%$ of a surviving spouse's benefit for all dependents in the aggregate.

Option-Eligible Participants:
Life only to the retiree. Option-Eligible Participants may elect other options based on actuarial factors

All Group D members, Group A \& B members who terminate after June 30, 2011 eligible for a normal retirement benefits and who are not married at their termination of service, and Group B members who terminated prior to September 1, 1977 and who are eligible for a normal retirement benefit are Option-Eligible Participants.

## 11. Benefit Adjustments

Before January 1, 2005:
Each year, effective February 1, monthly benefits will be increased 4.0\%, not compounded, for all retirees and survivors whose benefit was effective on or before January 1 of the current year.

On or after January 1, 2005:
Each year, effective February 1, monthly benefits will be increased $3.0 \%$, not compounded, for all retirees and survivors. This will affect all members currently in payment status and members who enter payment status in the future. For members hired on or after January 1, 2005 future increases will be 2.0\%, not compounded. However, pre-2005 retirees who are rehired will receive a 3\% COLA on their subsequent benefit instead.

## Group D Members:

None assumed. Group D members may elect an actu-
arially equivalent optional form of payment with a COLA feature.

## 12. Contribution Rates

## a. Members

5\% of salary only for Group A members. None for Group B or Group D members.
b. City

Beginning in 1993, the rate required to fund the Retirement Fund on an actuarial reserve basis. However, effective September 1, 1999, the minimum contribution rate is equal to the greater of $10 \%$ of covered payroll or twice the contribution rate a Group A member is required to make by statute. As negotiated in the meet and confer agreement, the city contributions will be $\$ 69$ million for FY2006, $\$ 72$ million for FY2007, $\$ 75$ million for FY2008, $\$ 78.5$ million for FY2009, $\$ 83.5$ million for FY2010, and $\$ 88.5$ million for FY2011.

## 13. Deferred Retirement Option

a. Eligibility

Participants (other than Group D) who are eligible to retire but who have not retired and who remain in service with the City may participate in the DROP.
b. [Intentionally left blank]
c. Monthly DROP Credit

An amount equal to the accrued normal retirement benefit as of the effective date of DROP participation. The Monthly DROP Credit is credited to a notional account (DROP Account) on the last calendar day each month.
d. DROP Credits-Interest

Interest is credited to the DROP Account at the beginning of each day based on the DROP Account balance at the end of the previous day and posted monthly on the last calendar day of each month. Effective January 1, 2005, the annual interest rate effective beginning January 1 each year is half of HMEPS' investment return percentage for the prior fiscal year, not less than 2.5\% and not greater than 7.5\%.

## e. DROP Credits-COLA

On or after January 1, 2005:
The Monthly DROP Credit for participants who entered the DROP effective on or before January 1 of the then current year will be increased effective February 1 each year by $3.0 \%$, not compounded.

The Monthly DROP Credit for participants who were first hired on or after January 1, 2005 who entered the DROP effective on or before January 1 of the then current year will be increased effective February 1 each year by $2.0 \%$, not compounded.

## f. DROP Account Balance

The sum of a participant's Monthly DROP (DROP Benefit) Credits, Monthly DROP Credit Adjustments, applicable interest, and employee contributions as applicable.

## 14. DROP Benefit Pay-out

A terminated DROP participant may elect to:
a. Receive the entire DROP Account Balance in a lump sum.
b. Receive the DROP Account Balance in periodic payments as approved by the Pension Board.
c. Receive a portion of the DROP Account balance in a lump sum and the remainder in periodic payments as approved by the Pension Board.
d. Receive a partial payment of not less than $\$ 1,000$, no more than once each 4 (four) months.
e. Defer election of a payout option until a future date.

## 15. Post DROP Retirement

The Final Pension is the accrued normal retirement benefit as of the effective date of DROP participation, increased with COLAs since DROP entry.

## Changes in Plan Provisions Since Prior Year

Actuarial equivalent optional forms of payment were made available to members of Group A and Group B who terminate after June 30, 2011, are eligible for a normal retirement benefit and who are not married at termination. Actuarial equivalent optional forms of payment were also
made available to Group B members who terminated prior to September 1, 1997 and who are eligible for a normal retirement benefit.



SECTION
5

STATISTICAL INFORMATION

## INTRODUCTION

The Statistical section of the Comprehensive Annual Financial Report presents detailed information related to the System's financial statements. The schedules within the Statistical section are classified as Financial Trends and Participant Information. All information was derived from Audited Annual Financials and/or our benefit administration system.

## FINANCIAL TRENDS

The Changes in Plan Net Assets schedule shows the additions and deductions from plan net assets and the resulting changes in plan net assets for the ten years ending June 30, 2012.

Additions to Net Assets include city and member contributions to the System which are external sources of addi-
tions to plan net assets. Additions also include earnings from the System's investment activity and are the System's internal sources of, and typically the larger component of, additions to plan net assets.

Deductions from Net Assets are primarily comprised of benefit payments and refunds paid to participants.

## OPERATING INFORMATION

Participant data for the last ten years ending June 30, 2011 can be found on page 91 and include several schedules regarding benefit payments to participants and participant demographics. The date of the participant information is consistent with the date of the latest actuarial valuation date of July 1, 2011.

## FINANCIAL TRENDS

SCHEDULE OF CHANGES IN PLAN NET ASSETS (\$000)

|  | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | 2004 | 2003 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Additions |  |  |  |  |  |  |  |  |  |  |
| Employer contributions | 97,162 | 87,285 | 82,052 | 76,837 | 73,272 | 70,265 | 66,968 | $363,247^{1}$ | 57,308 | 40,622 |
| Member contributions | 18,473 | 19,326 | 19,736 | 20,449 | 21,176 | 20,966 | 21,888 | 23,488 | 26,189 | 23,762 |
| Investment Income | $(11,964)$ | 391,095 | 195,433 | $(440,298)$ | $(29,133)$ | 337,259 | 272,766 | 184,419 | 227,361 | 33,931 |
| Other income | 654 | 1,185 | 557 | 489 | 29,839 | 29,031 | 26,950 | 17,250 | 726 | 114 |
| Total additions to plan net assets | 104,325 | 498,891 | 297,778 | $(342,523)$ | 95,154 | 457,521 | 388,572 | 588,404 | 311,584 | 98,429 |
| Deductions |  |  |  |  |  |  |  |  |  |  |
| Benefit payments | 200,014 | 189,199 | 191,048 | 180,361 | 169,483 | 157,716 | 154,311 | 175,480 | 153,202 | 98,789 |
| Refund of contributions | 2,206 | 1,620 | 1,285 | 1,795 | 1,760 | 1,398 | 1,037 | 992 | 635 | 475 |
| Professional services fees | 1,048 | 1,103 | 805 | 792 | 638 | 883 | 708 | 1,088 | 712 | 366 |
| Cost of administration | 6,264 | 6,020 | 6,290 | 6,420 | 5,837 | 5,223 | 5,072 | 4,718 | 4,500 | 4,299 |
| Total deduction from plan net assets | 209,532 | 197,942 | 199,428 | 189,368 | 177,718 | 165,220 | 161,128 | 182,278 | 159,049 | 103,929 |
| Changes in net assets | $(105,207)$ | 300,949 | 98,350 | $(531,891)$ | $(82,564)$ | 292,301 | 227,444 | 406,126 | 152,535 | $(5,500)$ |
| Net assets as of June 30 | $\underline{\text { 2,024,234 }}$ | 2,129,441 | 1,828,492 | 1,730,142 | 2,262,033 2 | 2,344,597 | 2,052,296 | 1,824,852 | 1,418,726 | 1,266,191 |

[^4]
## OPERATING INFORMATION

## SCHEDULE OF AVERAGE BENEFIT PAYMENT AMOUNTS

 FOR THE TEN YEARS ENDED JUNE 30, 2011| Year Ended | Number <br> Receiving <br> Benefits | Benefits <br> Paid <br> $(\$ 000)$ | Average <br> Annual <br> Benefit |
| :---: | :---: | :---: | :---: |
| June 30, 2002 | 5,928 | 72,256 | 12,189 |
| June 30, 2003 | 6,215 | 84,519 | 13,599 |
| June 30, 2004 | 6,878 | 107,083 | 15,569 |
| June 30, 2005 | 7,523 | 123,211 | 16,378 |
| June 30, 2006 | 7,780 | 135,688 | 17,441 |
| June 30, 2007 | 7,971 | 142,961 | 17,935 |
| June 30, 2008 | 8,155 | 150,593 | 18,466 |
| June 30, 2009 | 8,340 | 158,356 | 18,988 |
| June 30, 2010 | 8,526 | 166,458 | 19,524 |
| June 30, 2011 | 8,717 | 175,210 | 20,100 |

## SCHEDULE OF BENEFITS BY TYPE (\$000) FOR THE TEN YEARS ENDED JUNE 30, 2011

| Fiscal Year <br> Ended | Normal <br> Retirement <br> Benefits | Disability <br> Retirement <br> Benefits | Survivors' <br> Benefits | Total <br> Benefits |
| :--- | ---: | ---: | ---: | ---: |
| June 30, 2002 | 59,746 | 3,638 | 8,872 | 72,256 |
| June 30, 2003 | 71,246 | 3,715 | 9,558 | 84,519 |
| June 30, 2004 | 92,766 | 3,832 | 10,485 | 107,083 |
| June 30, 2005 | 108,217 | 3,762 | 11,232 | 123,211 |
| June 30, 2006 | 119,287 | 3,658 | 12,743 | 135,688 |
| June 30, 2007 | 125,246 | 3,700 | 14,015 | 142,961 |
| June 30, 2008 | 131,765 | 3,648 | 15,180 | 150,593 |
| June 30, 2009 | 138,123 | 3,689 | 16,544 | 158,356 |
| June 30, 2010 | 144,421 | 3,663 | 18,374 | 166,458 |
| June 30, 2011 | 151,806 | 3,723 | 19,681 | 175,210 |

## SCHEDULE OF ANNUITANTS BY TYPE

|  | June 30, 2011 |  |  | June 30, 2010 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Schedule of Annuitants by Type | Number | Benefits <br> (\$000) | Average Benefit | Number | Benefits (\$000) | Average Benefi |
| Retirees receiving benefits | 6,663 | 151,806 | 22,783 | 6,482 | 144,421 | 22,280 |
| Retired on disability | 398 | 3,723 | 9,355 | 404 | 3,663 | 9,067 |
| Survivors and beneficiaries | 1,656 | 19,681 | 11,884 | 1,640 | 18,374 | 11,204 |
| Total retirees, survivors and beneficiaries | 8,717 | 175,210 | 20,100 | 8,526 | 166,458 | 19,524 |
| Former participants eligible but not yet receiving benefits | 3,178 | 20,507 | 6,453 | 2,815 | 19,275 | 6,847 |
| Total Eligible for Benefits | 11,895 | 195,717 | 16,454 | 11,341 | 185,733 | 16,377 |

## HISTORICAL ACTIVE PARTICIPANT DATA

## HISTORICAL ACTIVE PARTICIPANT DATA

| Valuation <br> Date | Number of <br> Participants | Annual Payroll <br> $\$(000)$ | Average <br> Salary (\$) | \% Salary <br> Increase |
| :--- | :---: | :---: | :---: | :---: |
| July 1, 2002 | 12,527 | 399,794 | 31,915 | $(0.1)$ |
| July 1, 2003 | 12,120 | 390,314 | 32,204 | 0.9 |
| July 1, 2004 | 11,856 | 366,190 | 30,886 | $(4.1)$ |
| July 1, 2005 | 11,974 | 404,565 | 33,787 | 9.4 |
| July 1, 2006 | 12,145 | 422,496 | 34,788 | 3.0 |
| July 1, 2007 | 12,376 | 448,925 | 36,274 | 4.3 |
| July 1, 2008 | 12,653 | 483,815 | 38,237 | 5.4 |
| July 1, 2009 | 13,333 | 539,023 | 40,428 | 5.7 |
| July 1, 2010 | 12,913 | 550,709 | 42,648 | 5.5 |
| July 1, 2011 | 12,345 | 544,665 | 44,120 | 3.5 |

Beginning with 2005, a change in methodology now annualizes payroll for new entrants. If the methodology had not been changed, the covered payroll for 2005 would have been $\$ 376,208,345$ and the average payroll would have been $\$ 31,422$

## AVERAGE BENEFIT PAYMENTS BY YEARS OF CREDITED SERVICE

Member Retiring During Fiscal Years

|  |  |  | Years of Credited Service |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 5-10 |  | 11-15 |  | 16-20 |  | 21-25 |  | 26-30 |  | $30+$ |  | All Members |  |
| 2011 | Average monthly benefit | \$ | 593 | \$ | 925 | \$ | 1,611 | \$ | 2,378 | \$ | 2,310 | \$ | 2,789 | \$ | 1,486 |
|  | Average monthly salary | \$ | 3,474 | \$ | 3,247 | \$ | 3,578 | \$ | 3,794 | \$ | 3,266 | \$ | 3,996 | \$ | 3,505 |
|  | Average DROP balance | \$ | 52,041 | \$ | 97,571 | \$ | 181,686 | \$ | 241,297 | \$ | 249,370 | \$ | 320,514 | \$ | 182,068 |
|  | Number of retirees |  | 82 |  | 91 |  | 97 |  | 83 |  | 35 |  | 7 |  | 395 |
| 2010 | Average monthly benefit | \$ | 572 | \$ | 1,107 | \$ | 1,579 | \$ | 2,631 | \$ | 3,309 | \$ |  | \$ | 1,579 |
|  | Average monthly salary | \$ | 3,512 | \$ | 3,478 | \$ | 3,796 | \$ | 4,154 | \$ | 4,342 | \$ |  | \$ | 3,769 |
|  | Average DROP balance | \$ | 66,061 | \$ | 87,798 | \$ | 174,978 | \$ | 244,143 | \$ | 312,750 | \$ |  | \$ | 181,870 |
|  | Number of retirees |  | 84 |  | 81 |  | 76 |  | 64 |  | 32 |  |  |  | 337 |
| 2009 | Average monthly benefit | \$ | 582 | \$ | 881 | \$ | 1,526 | \$ | 1,839 | \$ | 2,320 | \$ | 2,400 | \$ | 1,290 |
|  | Average monthly salary | \$ | 3,278 | \$ | 3,032 | \$ | 3,267 | \$ | 3,166 | \$ | 3,383 | \$ | 2,959 | \$ | 3,189 |
|  | Average DROP balance | \$ | 42,190 | \$ | 55,623 | \$ | 173,415 | \$ | 164,178 | \$ | 283,627 | \$ | 19,301 | \$ | 140,745 |
|  | Number of retirees |  | 76 |  | 89 |  | 76 |  | 86 |  | 21 |  | 3 |  | 351 |
| 2008 | Average monthly benefit | \$ | 532 | \$ | 1,036 | \$ | 1,503 | \$ | 2,342 | \$ | 3,721 | \$ | 1,826 | \$ | 1,519 |
|  | Average monthly salary | \$ | 2,967 | \$ | 3,169 | \$ | 3,138 | \$ | 3,279 | \$ | 3,956 | \$ | 2,527 | \$ | 3,191 |
|  | Average DROP balance | \$ | 37,547 | \$ | 67,218 | \$ | 122,902 | \$ | 155,089 | \$ | 422,202 | \$ | 10,629 | \$ | 137,606 |
|  | Number of retirees |  | 62 |  | 92 |  | 88 |  | 76 |  | 20 |  | 2 |  | 340 |
| 2007 | Average monthly benefit | \$ | 550 | \$ | 956 | \$ | 1,350 | \$ | 2,042 | \$ | 3,360 | \$ | 3,252 | \$ | 1,354 |
|  | Average monthly salary | \$ | 2,867 | \$ | 2,893 | \$ | 2,958 | \$ | 2,943 | \$ | 3,555 | \$ | 3,476 | \$ | 2,962 |
|  | Average DROP balance | \$ | 37,590 | \$ | 56,962 | \$ | 81,073 | \$ | 135,316 | \$ | 273,677 | \$ | 368,268 | \$ | 107,410 |
|  | Number of retirees |  | 81 |  | 102 |  | 63 |  | 73 |  | 24 |  | 4 |  | 347 |
| 2006 | Average monthly benefit | \$ | 553 | \$ | 1,147 | \$ | 1,608 | \$ | 2,344 | \$ | 2,870 | \$ | 2,725 | \$ | 1,684 |
|  | Average monthly salary | \$ | 2,906 | \$ | 3,243 | \$ | 3,263 | \$ | 3,186 | \$ | 3,118 | \$ | 2,812 | \$ | 3,156 |
|  | Average DROP balance | \$ | 33,642 | \$ | 57,946 | \$ | 93,836 | \$ | 126,830 | \$ | 162,450 | \$ | 217,721 | \$ | 105,088 |
|  | Number of retirees |  | 74 |  | 91 |  | 93 |  | 132 |  | 40 |  | 5 |  | 435 |
| 2005 | Average monthly benefit | \$ | 655 | \$ | 993 | \$ | 1,715 | \$ | 2,106 | \$ | 2,810 | \$ | 2,898 | \$ | 1,786 |
|  | Average monthly salary | \$ | 2,930 | \$ | 2,847 | \$ | 3,069 | \$ | 2,807 | \$ | 3,084 | \$ | 2,979 | \$ | 2,927 |
|  | Average DROP balance | \$ | 31,291 | \$ | 46,690 | \$ | 81,834 | \$ | 88,719 | \$ | 167,759 | \$ | 250,593 | \$ | 93,754 |
|  | Number of retirees |  | 89 |  | 138 |  | 173 |  | 275 |  | 116 |  | 14 |  | 805 |
| 2004 | Average monthly benefit | \$ | 794 | \$ | 1,071 | \$ | 1,736 | \$ | 2,536 | \$ | 3,270 | \$ | 3,392 | \$ | 2,155 |
|  | Average monthly salary | \$ | 3,146 | \$ | 3,117 | \$ | 3,006 | \$ | 3,206 | \$ | 3,391 | \$ | 3,368 | \$ | 3,186 |
|  | Average DROP balance | \$ | 58,583 | \$ | 61,685 | \$ | 77,000 | \$ | 103,731 | \$ | 183,094 | \$ | 264,073 | \$ | 112,328 |
|  | Number of retirees |  | 92 |  | 105 |  | 174 |  | 300 |  | 164 |  | 12 |  | 847 |
| 8 Years | Average monthly benefit | \$ | 604 | \$ | 1,014 | \$ | 1,578 | \$ | 2,277 | \$ | 2,996 | \$ | 2,410 | \$ | 1,607 |
| Ended | Average monthly salary | \$ | 3,135 | \$ | 3,128 | \$ | 3,259 | \$ | 3,317 | \$ | 3,512 | \$ | 2,765 | \$ | 3,236 |
| 6/30/2011 | Average DROP balance | \$ | 44,868 | \$ | 66,437 | \$ | 123,340 | \$ | 157,413 | \$ | 256,866 | \$ | 181,387 | \$ | 132,609 |
|  | Average Number of retirees |  | 80 |  | 99 |  | 105 |  | 136 |  | 57 |  | 6 |  | 482 |

## ACKNOWLEDGEMENT

HMEPS would like to thank the City of Houston employees whose photographs appear in this report.

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[^0]:    1 Prior to October 1, 2008, the Real Estate composite included returns of real assets, public and private real estate and energy. Starting October 1, 2008, the Real Estate composite is just the public and private real estate.
    2 Prior to October 1, 2008, the Private Equity composite included the returns of private equity and absolute return. Starting October 1, 2008, the Private Equity composite only contains private equity.
    3 The Absolute Return composite was created on October 1, 2008. The underlying funds' historical performances are included in the private equity and real estate composites.
    4 The Inflation Linked composite was created on October 1, 2008. The underlying funds' historical performances are included in the private equity and real estate composites.

[^1]:    *The agreement between the City and the System included an open 30 year amortization period until 2009 valuation. Beginning with the 2009 valuation, the amortization period will be a closed 30 years from July 1, 2009. As part of the agreement under the Amended and Restated Meet and Confer Agreement between the Board and the City of Houston, dated July 1, 2011, the Board's funding policy has been modified to use an open 30-year rolling amortization period until such time that the City's actual contribution rate is equal to the actuarially determined contribution rate, at which point the funding period will be closed.

[^2]:    ${ }^{1}$ Column (3) included AAL for DROP participants until 2003, now in Column (4)

[^3]:    * Market returns prior to June 30, 2009 are dollar-weighted returns. Market returns for June 30, 2009 and later are time-weighted returns as reported in HMEPS CAFR. All returns (market and actuarial) are net of administrative and investment expenses.

[^4]:    12005 employer contributions include $\$ 300$ million pension obligation note

