# Financial Section

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**Report of Independent Public Accountants**

The Board of Trustees of
Pennsylvania Public School Employees' Retirement System
Harrisburg, Pennsylvania

**Report on the Financial Statements**

We have audited the accompanying basic financial statements of the Commonwealth of Pennsylvania Public School Employees' Retirement System (PSERS), as of June 30, 2014 and 2013, and for the years then ended, and the related notes to the financial statements, which collectively comprise PSERS' basic financial statements as listed in the table of contents.

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

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

**Auditor's Responsibility**

Our responsibility is to express an opinion on the 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 from material misstatement.

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

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

**Opinion**

In our opinion, the basic financial statements referred to above present fairly, in all material respects, the respective financial position of PSERS, as of June 30, 2014 and 2013, and the respective changes in its financial position thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America (GAAP).

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**Other Matters**

*Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis and Required Supplementary Schedule of Changes in the Employer Net Pension Liability, Schedule of Employer Net Pension Liability, Schedule of Employer Contributions, Schedule of Investment Returns, Schedule of Funding Progress and related notes to Required Supplementary Schedules 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 supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with evidence sufficient to express an opinion or provide any assurance.

*Other Supplementary Information*

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise PSERS' basic financial statements. The Schedule of Operating Expenses, Summary of Investment Expenses, Schedule of Payments to Non-Investment Consultants and Schedule of Employer Contributions are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the basic financial statements as a whole.

The Introductory, Investment, Actuarial, and Statistical Sections as listed in the table of contents have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Hunt Valley, Maryland
September 16, 2014

SB & Company, LLC

## Management's Discussion and Analysis

Management's Discussion and Analysis (MD&A) of the Commonwealth of Pennsylvania Public School Employees' Retirement System (PSERS, System, Fund) for the fiscal year ended June 30, 2014 (FY 2014) provides a narrative summary of PSERS' financial position and performance, including highlights and comparative data. The MD&A is presented as required supplementary information to the financial statements and should be read in conjunction with the financial statements, the notes to financial statements, and the supplementary schedules.

### Overview of Financial Statements

PSERS is primarily responsible for administering a defined benefit pension plan for public school employees in the Commonwealth of Pennsylvania. PSERS also administers two voluntary postemployment healthcare programs, the Health Insurance Premium Assistance Program (Premium Assistance) and the Health Options Program (HOP), for its annuitants. As part of the HOP, PSERS has an Employer/ Union Direct Contract with the Centers for Medicare and Medicaid Services (CMS) to provide a Medicare Part D Prescription Drug Plan to participants. The financial statements present the financial position and activities for the pension plan and the two postemployment healthcare programs.

The ***Statements of Plan Net Position*** provide a snapshot of the financial position of PSERS at June 30, 2014, including comparative amounts for the prior year.

The ***Statements of Changes in Plan Net Position*** summarize PSERS' financial activities that occurred during the fiscal period from July 1, 2013 to June 30, 2014, including comparative amounts for the prior year.

The ***Notes to Financial Statements*** provide additional information that is essential for a full understanding of the financial statements. The notes are an integral part of the financial statements and include detailed information not readily evident in the basic financial statements such as accounting policies, plan membership and benefits, and summary disclosures of selected financial data.

The ***Required Supplementary Schedules*** immediately following the notes to financial statements provide five schedules illustrating the Changes in the Employer Net Pension Liability, Employer Net Pension Liability, Employer Contributions, Investment Returns, and Funding Progress.

The remaining supplementary schedules provide additional detailed information concerning the operating expenses, investment expenses, payments to non-investment consultants, and the employer contributions. These schedules emphasize the long-term nature of the pension and premium assistance plans and show the progress of PSERS in accumulating assets sufficient to pay benefits when due. All of this supplementary information is considered useful in understanding and evaluating the financial activities of PSERS.

### Financial Highlights

- The time-weighted rate of return on investments was 14.91% for FY 2014, 7.96% for the fiscal year ended June 30, 2013 (FY 2013) and 3.43% for the fiscal year ended June 30, 2012 (FY 2012). A time-weighted rate of return considers investment performance of a hypothetical dollar invested from the beginning of an investment period to the period's end. The annualized rate of return for the three years ended June 30, 2014 was 8.66%, which exceeded the 7.5% actuarial investment rate of return assumption. Unless otherwise noted, all rates of return are net of fees.
- PSERS' total plan net position increased by $4.0 billion from $49.3 billion at June 30, 2013 to $53.3 billion at June 30, 2014. This increase was due in large part to net investment income plus member and employer contributions exceeding deductions for benefits and administrative expenses. The change in total plan net position from June 30, 2012 to June 30, 2013 was an increase of $500 million from $48.8 billion at June 30, 2012 to $49.3 billion at June 30, 2013. This increase was also due in large part to net investment income plus member and employer contributions exceeding deductions for benefits and administrative expenses.
- Total member pension contributions decreased from $991.1 million in FY 2013 to $966.9 million in FY 2014. The decrease was mainly due to a $22.6 million decline in purchase of service contributions. Additionally, there was a slight reduction in member contributions from active member payroll. The portion of participant premiums for the HOP grew due to increased participation as well as ongoing health insurance rate increases.
- Total employer contributions increased from $1.6 billion in FY 2013 to $2.1 billion in FY 2014. This increase was primarily attributable to an increase in the total employer contribution rate from 12.36% in FY 2013 to 16.93% in FY 2014. This rate increase, as mandated by Act 120, was partially offset by a slight reduction in active member payroll. Total employer contributions increased from FY 2012 to FY 2013 which was attributable to an increase in the total employer contribution rate from 8.65% in FY 2012 to 12.36% in FY 2013. This rate increase, as mandated by Act 120, was partially offset by a 1% reduction in the active member payroll.

## Management's Discussion and Analysis (continued)

- Total PSERS' benefit expense was steady at $6.4 billion in FY 2013 and FY 2014. The average monthly benefit and the number of members receiving benefits increased in FY 2014. These increases were offset by a decrease in lump sum payments to new retirees. New retirements during FY 2014 decreased by approximately 21% from FY 2013. Total PSERS' benefit expense increased by $400 million from $6.0 billion in FY 2012 to $6.4 billion in FY 2013. This increase is attributable to the number of new retirements for the year, higher lump sum payments, an ongoing increase to the average monthly benefit, and the number of members receiving benefits. New retirements during FY 2013 outpaced those of FY 2012 by approximately 1%.
- Total PSERS' administrative expenses increased from $62.2 million for FY 2013 to $66.7 million in FY 2014 mainly due to a rise in the administrative costs attributable to increased membership in the HOP. Total PSERS' administrative expenses increased from $56.5 million in FY 2012 to $62.2 million for FY 2013 mainly due to an increase in the administrative costs in the HOP from increasing enrollments and other information technology expenditures.

## GASB Standards

In June 2012, the Governmental Accounting Standards Board (GASB) approved a Statement that reflects substantial changes to the accounting and financial reporting of pension plans. Statement No. 67, *Financial Reporting for Pension Plans*, addresses financial reporting for state and local government pension plans. Statement No. 67 replaces the requirements of Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*, for most public employee pension plans and replaces the requirements of Statement No. 50, *Pension Disclosures*, for those governments and public pension plans. Under Statement No. 67, an emphasis is put on accounting for pension plans whereas Statement No. 25 dealt more with funding pension plans.

A key change from Statement No. 25 to Statement No. 67 is the measurement of the liability. GASB 25 subtracts

**Analysis of Plan Net Position**

**(Dollar Amounts in Thousands)**

| Summary of Plan Net Position | FY 2014 | Increase (Decrease) | FY 2013 | Increase (Decrease) | FY 2012 |
|---|---|---|---|---|---|
| **Assets:** | | | | | |
| Receivables | **$ 1,406,029** | $ 232,428 | $ 1,173,601 | $ (259,510) | $ 1,433,111 |
| Investments | **52,928,107** | 3,393,700 | 49,534,407 | 993,558 | 48,540,849 |
| Securities lending collateral pool | **596,936** | (18,223) | 615,159 | 108,355 | 506,804 |
| Capital assets | **22,851** | 447 | 22,404 | 71 | 22,333 |
| **Total Assets** | **54,953,923** | 3,608,352 | 51,345,571 | 842,474 | 50,503,097 |
| **Liabilities:** | | | | | |
| Payables and other liabilities | **1,095,063** | (359,652) | 1,454,715 | 222,001 | 1,232,714 |
| Obligations under securities lending | **596,936** | (18,223) | 615,159 | 108,355 | 506,804 |
| **Total Liabilities** | **1,691,999** | (377,875) | 2,069,874 | 330,356 | 1,739,518 |
| **Plan Net Position** | **$ 53,261,924** | $ 3,986,227 | $ 49,275,697 | $ 512,118 | $ 48,763,579 |
| **Summary of Changes in Plan Net Position** | | | | | |
| **Additions:** | | | | | |
| Contributions | **$ 3,076,878** | $ 530,713 | $ 2,546,165 | $ 507,351 | $ 2,038,814 |
| Participant premiums and CMS | **295,499** | 20,285 | 275,214 | 28,110 | 247,104 |
| Net investment income | **7,098,022** | 2,971,684 | 4,126,338 | 3,032,359 | 1,093,979 |
| **Total Additions** | **10,470,399** | 3,522,682 | 6,947,717 | 3,567,820 | 3,379,897 |
| **Deductions:** | | | | | |
| Benefit expense | **6,417,455** | 44,092 | 6,373,363 | 380,384 | 5,992,979 |
| Administrative expenses | **66,717** | 4,481 | 62,236 | 5,716 | 56,520 |
| **Total Deductions** | **6,484,172** | 48,573 | 6,435,599 | 386,100 | 6,049,499 |
| **Changes in Plan Net Position** | **$ 3,986,227** | $ 3,474,109 | $ 512,118 | $ 3,181,720 | $ (2,669,602) |

## Management's Discussion and Analysis (continued)

**As of June 30, 2013**

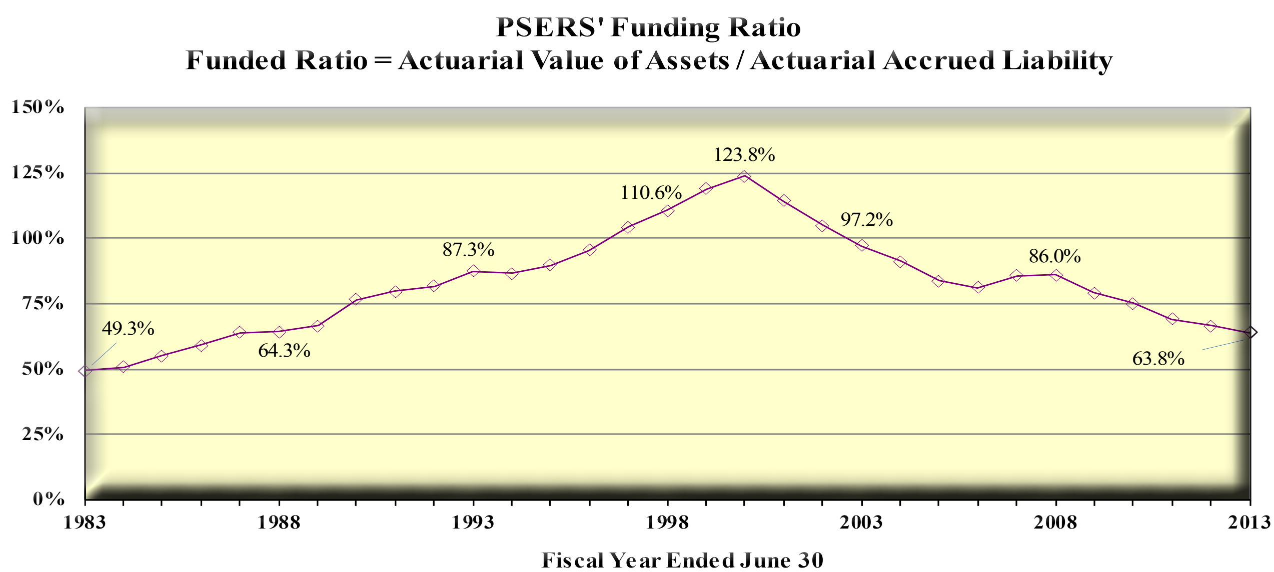
| GASB 67 - Accounting Method | | | GASB 25 - Funding Method | | |
|---|---|---|---|---|---|
| Total Pension Liability (TPL) | $ | 89,951,816 | Actuarial Accrued Liability (AAL) | $ | 89,951,816 |
| Fiduciary Net Position | | 49,015,561 | Actuarial Value of Assets | | 57,353,262 |
| Net Pension Liability (NPL) | | 40,936,255 | Unfunded Actuarial Accrued Liability (UAAL) | | 32,598,554 |
| Ratio - Fiduciary Net Position/TPL | | 54.5% | Funded Ratio | | 63.8% |

the Actuarial Value of Assets from the Actuarial Accrued Liability to achieve the Unfunded Actuarial Accrued Liability. GASB 67 subtracts the Fiduciary Net Position from the Total Pension Liability to attain the Net Pension Liability. The major difference in the measurements is that GASB 25 allows for asset smoothing, whereas, GASB 67 uses the fair value of assets as of the measurement date. A chart illustrating the difference between the liability measurements as of June 30, 2013, the last measurement date GASB 25 information is available, is at the top of this page.

- Under GASB 25, PSERS' funded ratio for the pension plan decreased from 66.3% at June 30, 2012 to 63.8% as of the latest actuarial valuation dated June 30, 2013. This decrease was primarily due to experience losses on investment assets and employer contributions that were less than the normal cost plus interest on the unfunded liability. This ratio is less volatile, as smoothing of the assets is used in the measurement.
- Under GASB 67, PSERS' pension plan ratio of fiduciary net position to total pension liability, increased from 54.5% as of June 30, 2013 to 57.2% as of June 30, 2014. This increase is due to the increase in investment assets outpacing the increase in future benefits calculated in the Total Pension Liability. This ratio is more susceptible to volatility, as the fair value of assets is used in the measurement.
- The NPL is larger than the UAAL since the Actuarial Value of Assets, which is smoothed, is larger than the Fiduciary Net Position. The Actuarial Value of Assets is larger as the impact of the FY 2009 Great Recession losses are not fully recognized. For funding purposes, PSERS smooths asset gains and losses over a 10-year period to reduce volatility.
- GASB 67 separates the accounting for pensions from the funding provisions used for the actuarial valuation. GASB 67 has no impact on how pension plans are funded. The assumptions and methods used in the actuarial valuation to establish the employer contribution rate will not change as a result of its implementation.

### Funded Status

PSERS uses an actuarial reserve type of funding that is financed by member contributions, employer contributions, and earnings from invested assets. A thirty-year history of PSERS' funded status is shown at the bottom of this page. An independent actuarial valuation of PSERS' actuarial assets and liabilities is performed annually. As part of this valuation, the progress toward funding pension obligations of PSERS is measured by comparing the actuarial value of assets to the actuarial accrued liability. This measurement is referred to as the funded ratio or funded status. The most recent actuarial valuation reports that PSERS' pension is 63.8% funded as of June 30, 2013. The funded ratio decreased from 66.4% as of June 30, 2012 due to a decrease



## Management's Discussion and Analysis (continued)

in the actuarial value of assets, which is based on a ten-year smoothing period, employer contributions below the annual required contribution (ARC), and an increase in the actuarial accrued liability.

The results of operations for FY 2014 will be reflected in the actuarial valuation for the year ended June 30, 2014. Due to the normal lag time for completion of the actuarial valuation, the resulting funded status will be available at the end of the 2014 calendar year and will be reported in the financial statements for the fiscal year ending June 30, 2015 (FY 2015). Based on the investment performance for the ten-year period ended June 30, 2014, which is below the investment rate of return assumption during that time period, and employer contributions below the ARC, the funded ratio at June 30, 2014 is expected to decrease. FY 2014 is the final year of a five-year transition from five-year to ten-year smoothing of actuarial assets.

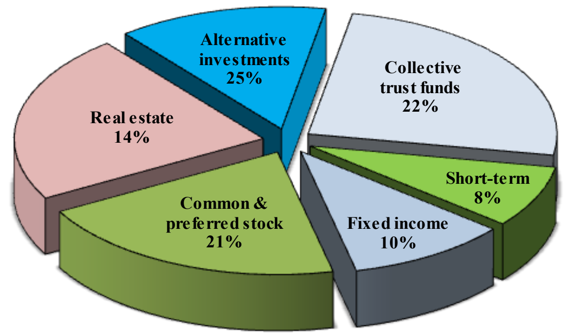
PSERS' State Accumulation Account improved from June 30, 2013 to June 30, 2014 (See Note 3). The deficit decreased in FY 2014 as investment returns exceeding the return assumption were partially offset by employer contributions below the normal cost plus interest. Increased employer contributions, as mandated by Act 120, and investment earnings will be used to reduce the deficit in this account in the future.

## Investments

PSERS is a long-term investor and manages the pension fund with long-term objectives in mind. A primary element of PSERS' investment philosophy is diversification among various asset classes, which is the best way to achieve its goals. PSERS makes estimates of future long-term market returns and establishes an asset allocation plan taking into account the risk associated with each asset class as well as the financial objectives of the Fund.

Economically, the fiscal year that ended June 30, 2014 was characterized by positive gains in each of its four quarters. The positive gains were led by a strong performance in global equities, specifically U.S. equities. Domestically, the Federal Reserve (Fed) implemented a program of outright purchases of longer dated U.S. Treasuries in the amount of $45 billion a month and mortgage-backed securities in the amount of $40 billion in 2013. Given the improvement in economic growth and the unemployment rate, the Fed started tapering these purchases in December 2013 by $10 billion per meeting and has signaled to the market that the asset purchase program will end in October 2014. U.S. economic activity as represented by the U.S. Gross Domestic Product (GDP) and the unemployment rate has been fairly strong during the past fiscal year. The U.S. real GDP increased in three of the four quarters for the fiscal year

**Asset Distribution**
**June 30, 2014**




decreasing only in the winter due to a very cold and snowy climate that impeded economic activity. U.S. housing was strong, up 8.1% as measured by the S&P Case-Shiller 20-City Home Price Index. The official unemployment rate (otherwise known as the U3 unemployment rate) fell during the fiscal year from 7.6% as of June 2013 to 6.1% as of June 2014, approaching what the Fed would consider full employment. Internationally, the Chinese economy continued to be one of the stronger economies in the world. In Japan, the economy remained weak but showed signs of improvement. The Japan real GDP increased modestly over the past fiscal year. The Japanese policy of increasing monetary and fiscal stimulus has transformed years of deflation to inflation. The Eurozone economy during the past year remained very weak and on the verge of recession as fiscal and monetary conditions on the whole have not been loose enough to generate any real improvements in economic growth and employment. In summary, the equity markets led a strong performance year due to improved economies and monetary policies, highlighted by the U.S., China, and Japan economies.

For FY 2014, PSERS' time-weighted rate of return on investments was 14.91% which exceeded PSERS' total fund Policy Index of 12.05% for the same time period. The Policy Index is a custom benchmark, which is based on the Board-established asset allocation structure, that seeks to generate a return that meets the actuarial rate of return assumption. Net investment income of $7.1 billion in FY 2014 increased from a net investment income of $4.1 billion in FY 2013.

The time-weighted annualized rate of return over the past three- and five-year periods ended June 30, 2014 was 8.66% and 12.09%, respectively. The time-weighted returns for the three- and five-year periods exceeded the total fund Policy Index returns for those periods by 252 and 289 basis points, respectively. The annualized time-weighted rate of return for the ten- and twenty-five-year periods ended June 30, 2014 was 7.28% and 8.70%, respectively.

## Management's Discussion and Analysis (continued)

PSERS' long-term actuarial investment rate of return assumption was 7.5% at June 30, 2014.

The asset distribution of PSERS' investment portfolio at June 30, 2014, 2013 and 2012, at fair value, and including postemployment healthcare assets, is presented in the chart on the top of the previous page and the table at the bottom of this page.

Short-term investments (cash and cash equivalents) increased by $1.1 billion from $3.2 billion at June 30, 2013 to $4.3 billion at June 30, 2014. Due to a reallocation of exposure from other asset classes, PSERS increased its short-term investments during FY 2014. Fixed income investments decreased by $0.3 billion from $5.8 billion at June 30, 2013 to $5.5 billion at June 30, 2014 mostly due to manager terminations and reallocation of exposure to other asset classes during FY 2014. Common and preferred stock investments increased by $1.1 billion from $9.8 billion at June 30, 2013 to $10.9 billion at June 30, 2014. The rise in this asset category was mainly the result of strong returns for domestic equity, international equity, and master limited partnerships, as well as the continual reallocation of exposure from other asset classes to master limited partnerships. Collective trust funds rose by $0.5 billion from $11.3 billion at June 30, 2013 to $11.8 billion at June 30, 2014 mostly due to strong investment performance. Real estate investments increased by $0.4 billion from $6.8 billion at June 30, 2013 to $7.2 billion at June 30, 2014 due to contributions to new and existing partnerships combined with valuation increases in partnership portfolio holdings which exceeded significant partnership distributions. Alternative investments increased by $0.6 billion from $12.6 billion at June 30, 2013 to $13.2 billion at June 30, 2014 due to contributions to new and existing partnerships combined with valuation increases in partnership portfolio holdings which exceeded significant partnership distributions.

Short-term investments (cash and cash equivalents) increased by $600 million from $2.6 billion at June 30, 2012 to $3.2 billion at June 30, 2013. This asset class was underweighted at June 30, 2012 and overweighted at June 30, 2013 according to the asset allocation plans approved by the Board. Due to a reallocation of exposure from investments, PSERS increased its short-term investments during FY 2013. Fixed income investments decreased by $1.4 billion from $7.2 billion at June 30, 2012 to $5.8 billion at June 30, 2013 mostly due to manager terminations and reallocation of exposure to other asset classes during FY 2013. Common and preferred stock investments increased by $400 million from $9.4 billion at June 30, 2012 to $9.8 billion at June 30, 2013. The rise in this asset category was mainly the result of strong returns for domestic equity, international equity, and master limited partnerships, as well as reallocation of exposure from other asset classes to master limited partnerships. Collective trust funds rose by $800 million from $10.5 billion at June 30, 2012 to $11.3 billion at June 30, 2013 mostly due to a reallocation of exposure from other asset classes and an increase in investment income. Real estate investments increased by $800 million from $6.0 billion at June 30, 2012 to $6.8 billion at June 30, 2013 due to contributions to new and existing partnerships combined with valuation increases in partnership portfolio holdings. Alternative investments decreased by $300 million from $12.9 billion at June 30, 2012 to $12.6 billion at June 30, 2013 due to significant partnership distributions which exceeded contributions to new and existing partnerships combined with valuation increases in partnership portfolio holdings.

### Securities Lending

The System experienced a significant increase in net income from securities lending activities from $8.2 million in FY 2013 to $18.6 million in FY 2014 due to a recovery from the lending agent of specific losses incurred during the market downturn in 2008.

| | (Dollar Amounts in Thousands) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Asset Class** | | **2014** | **%** | | 2013 | % | | 2012 | % |
| Short-term | **$** | **4,331,188** | **8.2** | $ | 3,242,139 | 6.5 | $ | 2,649,495 | 5.5 |
| Fixed income | | **5,532,214** | **10.4** | | 5,828,418 | 11.8 | | 7,207,558 | 14.8 |
| Common and preferred stock | | **10,851,457** | **20.5** | | 9,762,527 | 19.7 | | 9,357,122 | 19.3 |
| Collective trust funds | | **11,795,390** | **22.3** | | 11,280,497 | 22.8 | | 10,460,482 | 21.5 |
| Real estate | | **7,230,493** | **13.7** | | 6,797,535 | 13.7 | | 6,003,753 | 12.4 |
| Alternative investments | | **13,187,365** | **24.9** | | 12,623,291 | 25.5 | | 12,862,439 | 26.5 |
| **Total** | **$** | **52,928,107** | **100.0** | $ | 49,534,407 | 100.0 | $ | 48,540,849 | 100.0 |

## Management's Discussion and Analysis (continued)

### Contributions

Employer contributions increased from $1.6 billion in FY 2013 to $2.1 billion in FY 2014 due to the increase in the total employer contribution rate from 12.36% in FY 2013 to 16.93% in FY 2014.

A thirty-year history of PSERS' contribution rates is presented at the bottom of this page.

Total member contributions decreased from $991.1 million in FY 2013 to $966.9 million in FY 2014 due to a $22.6 million decrease in purchase of service contributions and a slight decrease in active member payroll. These decreases were partially offset by a small increase in the average member contribution rate. The average member contribution rate for pension increased from 7.40% in FY 2013 to 7.43% in FY 2014. Total member contributions increased from $952.9 million in FY 2012 to $991.1 million in FY 2013 due to a $40 million increase in purchase of service contributions and a small increase in the average member contribution rate. The average member contribution rate for pension increased from 7.37% in FY 2012 to 7.40% in FY 2013. These increases were partially offset by a 1% decrease in active member payroll.

As a result of an increase in member purchase of service contributions in the last quarter of FY 2013 to the last quarter of FY 2014, member contribution receivables increased from $312.0 million at June 30, 2013 to $314.7 million at June 30, 2014. The increase in the employer contribution rate from FY 2013 to FY 2014, combined with an increase in employer purchase of service contributions, resulted in the employer contribution receivables rising from $451.8 million at June 30, 2013 to $624.3 million at June 30, 2014.

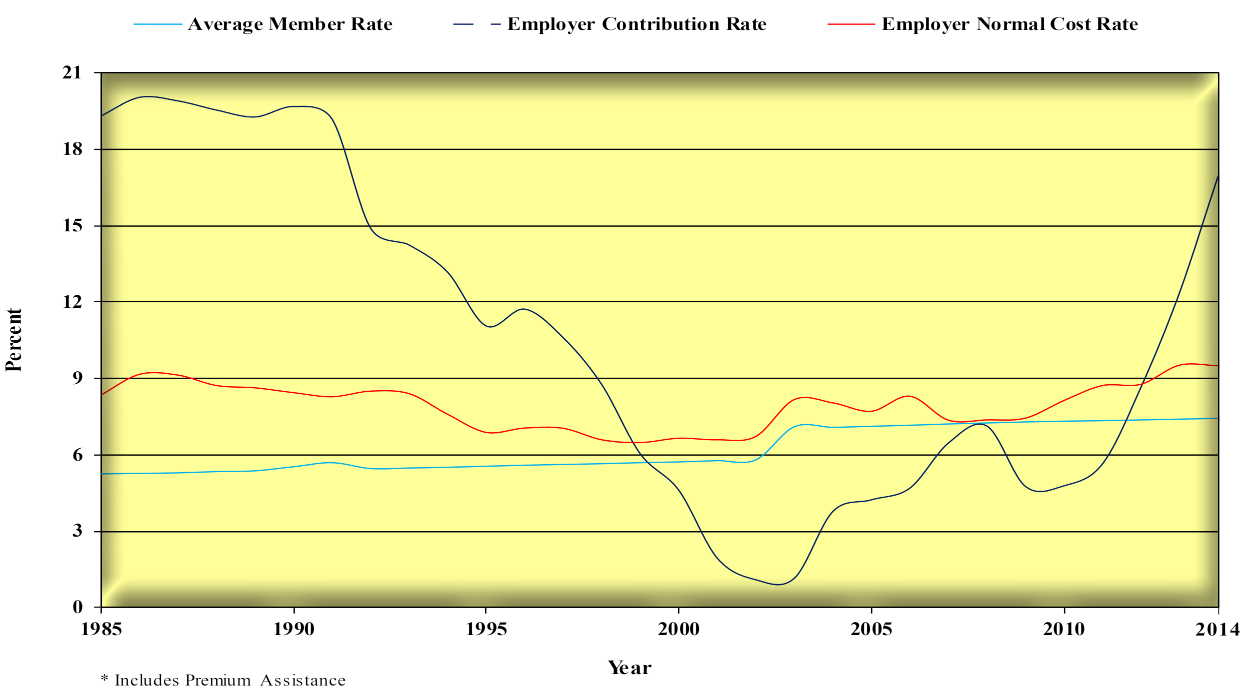
### Progress of Act 120

On November 23, 2010, the Governor signed HB 2497 into law. The legislation is now known as Act 120 of 2010.

Act 120 preserves the benefits of existing members and includes a series of actuarial and funding changes to PSERS and benefit reductions for individuals who become new members of PSERS on or after July 1, 2011. The Act created two new membership classes, T-E and T-F. T-E and T-F members are "shared-risk," meaning that their employee contributions can increase or decrease due to investment performance.

Act 120 has a projected net savings of $1.38 billion through FY 2044 as the $24.65 billion of projected savings from benefit reductions is offset by the $23.27 billion cost of deferring contributions for budgetary purposes. Act 120 addressed the pending employer contribution rate spike projected for FY 2013 by smoothing the projected rate increases over a five- to nine-year time period. Instead of a large rate spike in one year, under Act 120, the employer contribution rate has increased steadily each year from the 5.64% in effect when Act 120 became law to the 16.93% rate in the FY 2014. During that time, PSERS' ARC percentage

**History of PSERS' Contribution Rates as a Percent of Payroll***




* Includes Premium Assistance

## Management's Discussion and Analysis (continued)

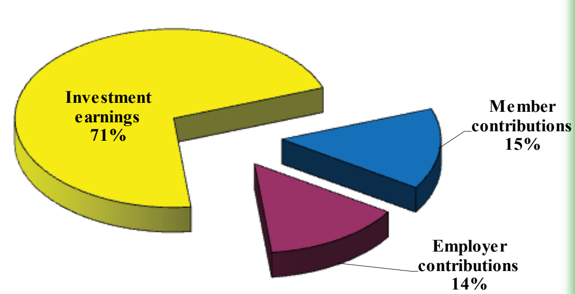
under GASB standards increased from 27% to 58% and is projected to continue to improve until the ARC reaches 100%.

As of June 30, 2014, there were over 38,000 T-E and T-F active members representing approximately 14% of all active members. The employer normal cost of Act 120 members is less than 3% of payroll which is over 65% less than the normal cost for pre-Act 120 members. As the percentage of T-E and T-F membership grows, the annual cost of benefits will decline steadily.

### Investment Income

Net investment income increased from $4.1 billion in FY 2013 to $7.1 billion in FY 2014, which is consistent with the increase in the time-weighted investment rate of return from 7.96% for FY 2013 to 14.91% for FY 2014. Net investment income increased from $1.1 billion in FY 2012 to $4.1 billion in FY 2013, which is consistent with the increase in the investment rate of return from 3.43% for FY 2012 to 7.96% for FY 2013. As depicted in the following chart, investment earnings provided 71% of PSERS' funding over the past 20 years. Net investment income also includes investment expenses as a deduction. The "Total PSERS' Benefits and Expenses" section that follows includes an analysis of investment expenses.

**PSERS' Sources of Funding**
**Twenty Year History (1995-2014)**




### Total PSERS' Benefits and Expenses

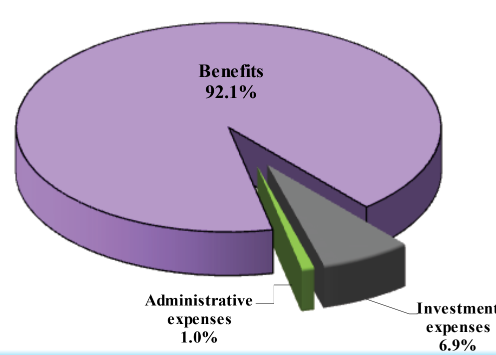
The primary source of expense during FY 2014 was for the payment of benefits approximating $6.4 billion. The breakdown consisted of $6.0 billion for Pension, $104.2 million for Premium Assistance, and $259.8 million for HOP benefits. The chart at the end of this page illustrates the significant portion of expenses attributable to benefit payments.

Total PSERS' benefit expense increased from $6.3 billion in FY 2013 to $6.4 billion in FY 2014. The increase is attributable to an ongoing increase to the average monthly benefit and an increase in the number of members receiving benefits. Fourth quarter retirements in FY 2014 were lower compared to the same period in FY 2013, resulting in a lower pension benefits payable figure at June 30, 2014 of $531.6 million compared to $747.6 million at June 30, 2013. New retirements during FY 2014 decreased by approximately 21% from FY 2013. Benefit expense increased from $6.0 billion in FY 2012 to $6.3 billion in FY 2013. The increase is attributable to higher lump sum payments as well as an ongoing increase to the average monthly benefit and an increase in the number of members receiving benefits.

Investment expenses decreased by $75.4 million from $557.6 million in FY 2013 to $482.2 million in FY 2014 mainly due to a decrease in management fees in the collective trust fund and alternative investment asset classes. The fee decrease in the collective trust fund asset class is mainly attributable to higher performance fees due to the stronger performance this asset class had for FY 2013. The decrease in the alternative investment class is attributable to changes in fee structure brought on by partnerships maturing. Investment expenses increased by $76.3 million from $481.3 million in FY 2012 to $557.6 million in FY 2013 mainly due to an increase in management fees in the collective trust fund and alternative investment asset classes. The rise in the collective trust fund asset class is mainly attributable to an increase in performance fees due to the strong performance this asset class had for FY 2013. The rise in the alternative investment class is attributable to new investments made in alternative investment partnerships during FY 2013.

Administrative expenses increased by $4.5 million from $62.2 million during FY 2013 compared to $66.7 million during FY 2014 mainly due to a rise in the administrative costs attributable to increased membership in the HOP. Administrative expenses increased by $5.7 million from $56.5 million during FY 2012 compared to $62.2 million during FY 2013 due to an increase in the administrative costs in the HOP from increasing enrollments and other information technology expenditures.

**Total PSERS' Benefits and Expenses**
**Fiscal Year Ended June 30, 2014**



## Management's Discussion and Analysis (continued)

## Postemployment Healthcare

PSERS administers two postemployment healthcare programs, the Health Insurance Premium Assistance Program (Premium Assistance) and the Health Options Program (HOP) for its annuitants. The following paragraphs and summary financial data provide supplementary information to the financial statements which contain the financial position and activities for the two postemployment healthcare programs.

### Health Insurance Premium Assistance Program (Premium Assistance)

#### Financial Highlights

- Total plan net position increased by $11.7 million in FY 2014 due to an increase in employer contributions driven by the increase in the contribution rate from 0.86% for FY 2013 to 0.93% for the FY 2014. The change from June 30, 2012 to June 30, 2013 was an increase of $6.6 million due to an increase in employer contributions driven by the increase in the contribution rate from .65% for FY 2012 to .86% for the FY 2013.
- Total receivables increased from $38.2 million at June 30, 2013 to $48.5 million at June 30, 2014 due to an increase in interfund receivables from pension and employer receivables.
- Investments increased from $62.6 million at June 30, 2013 to $64.1 million at June 30, 2014 mainly due to the increase in the contribution rate.

#### Contributions

Total employer contributions for Premium Assistance increased from $108.7 million in FY 2013 to $117.9 million in FY 2014 due to the increase in the employer contribution rate from FY 2013 to FY 2014. The contribution rate increased from 0.86% in FY 2013 to 0.93% in FY 2014.

#### Investment Income

Total investment income for Premium Assistance remained at $0.1 million for FY 2014 and FY 2013 due to a continued period of low short-term interest rates.

#### Benefits and Expenses

Overall expenses for Premium Assistance increased from $102.2 million in FY 2013 to $106.2 million in FY 2014. This increase is primarily due to the increase in number of members receiving premium assistance benefits.

### Health Options Program (HOP)

#### Financial Highlights

- Total plan net position increased by $10.0 million in FY 2014. The change from June 30, 2012 to June 30, 2013 is also primarily due to the rise in premiums that outpaced the rise in expenses.
- Total receivables increased from $23.0 million at June 30, 2013 to $27.9 million at June 30, 2014. The increase is tied primarily to higher premiums due to an increase in participation in the HOP.
- Investments increased from $175.7 million at June 30, 2013 to $187.4 million at June 30, 2014 due to positive cash flow and increased participation, which increased premium revenues.
- Total liabilities increased 17% from $38.9 million at June 30, 2013 to $45.5 million at June 30, 2014. The increase is due to increased participation in the program and an increase in claims payable.

#### Participant and CMS Premiums

Total participant Centers for Medicare and Medicaid Services (CMS) premiums for HOP increased from $275.2 million in FY 2013 to $295.5 million in FY 2014. This increase is representative of the 8.1% increase in plan participation.

#### Investment Income

Investment income for HOP remained at $0.2 million for FY 2013 and FY 2014 due to a continued period of low short-term interest rates.

#### Benefits and Expenses

Overall expenses for HOP increased from $251.7 million in FY 2013 to $285.7 million in FY 2014. This increase is primarily due to the increase in number of members enrolled in the HOP combined with an increase in the administrative costs.

## Management's Discussion and Analysis (continued)

### Premium Assistance

**Summary of Plan Net Position**

(Dollar Amounts in Thousands)

| Assets: | FY 2014 | Increase (Decrease) | FY 2013 | Increase (Decrease) | FY 2012 |
|---|---|---|---|---|---|
| Receivables | **$ 48,502** | $ 10,292 | $ 38,210 | $ 9,108 | $ 29,102 |
| Investments | **64,099** | 1,522 | 62,577 | (2,495) | 65,072 |
| **Total Assets** | **112,601** | 11,814 | 100,787 | 6,613 | 94,174 |
| **Liabilities:** | | | | | |
| Payables and other liabilities | **541** | 103 | 438 | 17 | 421 |
| **Total Liabilities** | **541** | 103 | 438 | 17 | 421 |
| **Plan Net Position** | **$ 112,060** | $ 11,711 | $ 100,349 | $ 6,596 | $ 93,753 |

**Summary of Changes in Plan Net Position**

| Additions: | FY 2014 | Increase (Decrease) | FY 2013 | Increase (Decrease) | FY 2012 |
|---|---|---|---|---|---|
| Contributions | **$ 117,868** | $ 9,192 | $ 108,676 | $ 27,333 | $ 81,343 |
| Net investment income | **70** | (40) | 110 | (313) | 423 |
| **Total Additions** | **117,938** | 9,152 | 108,786 | 27,020 | 81,766 |
| **Deductions:** | | | | | |
| Benefit expenses | **104,197** | 4,119 | 100,078 | 2,872 | 97,206 |
| Administrative expenses | **2,030** | (82) | 2,112 | 47 | 2,065 |
| **Total Deductions** | **106,227** | 4,037 | 102,190 | 2,919 | 99,271 |
| **Changes in Plan Net Position** | **$ 11,711** | $ 5,115 | $ 6,596 | $ 24,101 | $ (17,505) |

### Health Options Program

**Summary of Plan Net Position**

(Dollar Amounts in Thousands)

| Assets: | FY 2014 | Increase (Decrease) | FY 2013 | Increase (Decrease) | FY 2012 |
|---|---|---|---|---|---|
| Receivables | **$ 27,864** | $ 4,821 | $ 23,043 | $ 6,230 | $ 16,813 |
| Investments | **187,403** | 11,713 | 175,690 | 17,905 | 157,785 |
| **Total Assets** | **215,267** | 16,534 | 198,733 | 24,135 | 174,598 |
| **Liabilities:** | | | | | |
| Payables and other liabilities | **45,518** | 6,572 | 38,946 | 378 | 38,568 |
| **Total Liabilities** | **45,518** | 6,572 | 38,946 | 378 | 38,568 |
| **Plan Net Position** | **$ 169,749** | $ 9,962 | $ 159,787 | $ 23,757 | $ 136,030 |

**Summary of Changes in Plan Net Position**

| Additions: | FY 2014 | Increase (Decrease) | FY 2013 | Increase (Decrease) | FY 2012 |
|---|---|---|---|---|---|
| Participant and CMS premiums | **$ 295,499** | $ 20,285 | $ 275,214 | $ 28,110 | $ 247,104 |
| Net investment income | **191** | (35) | 226 | (11) | 237 |
| **Total Additions** | **295,690** | 20,250 | 275,440 | 28,099 | 247,341 |
| **Deductions:** | | | | | |
| Benefit expenses | **259,753** | 30,714 | 229,039 | 16,012 | 213,027 |
| Administrative expenses | **25,975** | 3,331 | 22,644 | 2,431 | 20,213 |
| **Total Deductions** | **285,728** | 34,045 | 251,683 | 18,443 | 233,240 |
| **Changes in Plan Net Position** | **$ 9,962** | $ (13,795) | $ 23,757 | $ 9,656 | $ 14,101 |

## Statements of Plan Net Position
## June 30, 2014 and 2013
(Dollar Amounts in Thousands)

| | 2014 | | | |
|---|---|---|---|---|
| | | Postemployment Healthcare | | |
| | Pension | Premium Assistance | Health Options Program | Totals |
| **Assets:** | | | | |
| Receivables: | | | | |
| Members | **$ 310,305** | **$ 4,395** | **$ 31** | **$ 314,731** |
| Employers | **590,953** | **33,352** | **-** | **624,305** |
| Investment income | **238,202** | **65** | **12** | **238,279** |
| Investment proceeds | **189,746** | **-** | **-** | **189,746** |
| CMS Part D and prescriptions | **-** | **-** | **27,793** | **27,793** |
| Interfund | **-** | **9,917** | **-** | **9,917** |
| Miscellaneous | **457** | **773** | **28** | **1,258** |
| Total Receivables | **1,329,663** | **48,502** | **27,864** | **1,406,029** |
| Investments, at fair value: | | | | |
| Short-term | **4,079,686** | **64,099** | **187,403** | **4,331,188** |
| Fixed income | **5,532,214** | **-** | **-** | **5,532,214** |
| Common and preferred stock | **10,851,457** | **-** | **-** | **10,851,457** |
| Collective trust funds | **11,795,390** | **-** | **-** | **11,795,390** |
| Real estate | **7,230,493** | **-** | **-** | **7,230,493** |
| Alternative investments | **13,187,365** | **-** | **-** | **13,187,365** |
| Total Investments | **52,676,605** | **64,099** | **187,403** | **52,928,107** |
| Securities lending collateral pool | **596,936** | **-** | **-** | **596,936** |
| Capital assets (net of accumulated depreciation $24,080) | **22,851** | **-** | **-** | **22,851** |
| **Total Assets** | **54,626,055** | **112,601** | **215,267** | **54,953,923** |
| **Liabilities:** | | | | |
| Accounts payable and accrued expenses | **86,328** | **355** | **1,725** | **88,408** |
| Benefits payable | **531,621** | **186** | **21,531** | **553,338** |
| Participant premium advances | **-** | **-** | **22,262** | **22,262** |
| Investment purchases and other liabilities | **421,138** | **-** | **-** | **421,138** |
| Obligations under securities lending | **596,936** | **-** | **-** | **596,936** |
| Interfund payable | **9,917** | **-** | **-** | **9,917** |
| **Total Liabilities** | **1,645,940** | **541** | **45,518** | **1,691,999** |
| **Net position held in trust for pension and postemployment healthcare benefits** | **$ 52,980,115** | **$ 112,060** | **$ 169,749** | **$ 53,261,924** |

The accompanying notes are an integral part of the financial statements.

## Statements of Plan Net Position
## June 30, 2014 and 2013
(Dollar Amounts in Thousands)

| | 2013 | | | |
|---|---|---|---|---|
| | | Postemployment Healthcare | | |
| | Pension | Premium Assistance | Health Options Program | Totals |
| **Assets:** | | | | |
| Receivables: | | | | |
| Members | $ 306,802 | $ 5,197 | $ 26 | $ 312,025 |
| Employers | 421,104 | 30,685 | - | 451,789 |
| Investment income | 155,306 | 81 | 19 | 155,406 |
| Investment proceeds | 228,612 | - | - | 228,612 |
| CMS Part D and prescriptions | - | - | 22,849 | 22,849 |
| Interfund | - | - | - | - |
| Miscellaneous | 524 | 2,247 | 149 | 2,920 |
| Total Receivables | 1,112,348 | 38,210 | 23,043 | 1,173,601 |
| Investments, at fair value: | | | | |
| Short-term | 3,003,872 | 62,577 | 175,690 | 3,242,139 |
| Fixed income | 5,828,418 | - | - | 5,828,418 |
| Common and preferred stock | 9,762,527 | - | - | 9,762,527 |
| Collective trust funds | 11,280,497 | - | - | 11,280,497 |
| Real estate | 6,797,535 | - | - | 6,797,535 |
| Alternative investments | 12,623,291 | - | - | 12,623,291 |
| Total Investments | 49,296,140 | 62,577 | 175,690 | 49,534,407 |
| Securities lending collateral pool | 615,159 | - | - | 615,159 |
| Capital assets (net of accumulated depreciation $22,127) | 22,404 | - | - | 22,404 |
| **Total Assets** | 51,046,051 | 100,787 | 198,733 | 51,345,571 |
| **Liabilities:** | | | | |
| Accounts payable and accrued expenses | 148,264 | 336 | 1,466 | 150,066 |
| Benefits payable | 747,575 | 102 | 17,094 | 764,771 |
| Participant premium advances | - | - | 20,386 | 20,386 |
| Investment purchases and other liabilities | 519,492 | - | - | 519,492 |
| Obligations under securities lending | 615,159 | - | - | 615,159 |
| Interfund payable | - | - | - | - |
| **Total Liabilities** | 2,030,490 | 438 | 38,946 | 2,069,874 |
| **Net position held in trust for pension and postemployment healthcare benefits** | $ 49,015,561 | $ 100,349 | $ 159,787 | $ 49,275,697 |

The accompanying notes are an integral part of the financial statements.

## Statements of Changes in Plan Net Position
## Years Ended June 30, 2014 and 2013
(Dollar Amounts in Thousands)

| | 2014 | | | |
|---|---|---|---|---|
| | | Postemployment Healthcare | | |
| | Pension | Premium Assistance | Health Options Program | Totals |
| **Additions:** | | | | |
| Contributions: | | | | |
| Members | $ **966,926** | $ **-** | $ **-** | $ **966,926** |
| Employers | **1,992,084** | **117,868** | **-** | **2,109,952** |
| Total contributions | **2,959,010** | **117,868** | **-** | **3,076,878** |
| Participant premiums | **-** | **-** | **257,740** | **257,740** |
| Centers for Medicare & Medicaid Services premiums | **-** | **-** | **37,759** | **37,759** |
| Investment income: | | | | |
| From investing activities: | | | | |
| Net appreciation (depreciation) in fair value of investments | **6,024,512** | **(651)** | **-** | **6,023,861** |
| Short-term | **7,695** | **816** | **191** | **8,702** |
| Fixed income | **220,447** | **-** | **-** | **220,447** |
| Common and preferred stock | **284,808** | **-** | **-** | **284,808** |
| Collective trust funds | **7,069** | **-** | **-** | **7,069** |
| Real estate | **374,076** | **-** | **-** | **374,076** |
| Alternative investments | **642,727** | **-** | **-** | **642,727** |
| Total investment activity income | **7,561,334** | **165** | **191** | **7,561,690** |
| Investment expenses | **(482,141)** | **(95)** | **-** | **(482,236)** |
| Net income from investing activities | **7,079,193** | **70** | **191** | **7,079,454** |
| From securities lending activities: | | | | |
| Securities lending income | **19,859** | **-** | **-** | **19,859** |
| Securities lending expense | **(1,291)** | **-** | **-** | **(1,291)** |
| Net income from securities lending activities | **18,568** | **-** | **-** | **18,568** |
| Total net investment income | **7,097,761** | **70** | **191** | **7,098,022** |
| **Total Additions** | **10,056,771** | **117,938** | **295,690** | **10,470,399** |
| **Deductions:** | | | | |
| Benefits | **6,028,795** | **104,197** | **259,753** | **6,392,745** |
| Refunds of contributions | **22,823** | **-** | **-** | **22,823** |
| Net transfer to State Employees' Retirement System | **1,887** | **-** | **-** | **1,887** |
| Administrative expenses | **38,712** | **2,030** | **25,975** | **66,717** |
| **Total Deductions** | **6,092,217** | **106,227** | **285,728** | **6,484,172** |
| **Net increase** | **3,964,554** | **11,711** | **9,962** | **3,986,227** |
| **Net position held in trust for pension and postemployment healthcare benefits:** | | | | |
| **Balance, beginning of year** | **49,015,561** | **100,349** | **159,787** | **49,275,697** |
| **Balance, end of year** | $ **52,980,115** | $ **112,060** | $ **169,749** | $ **53,261,924** |

The accompanying notes are an integral part of the financial statements.

## Statements of Changes in Plan Net Position
## Years Ended June 30, 2014 and 2013
(Dollar Amounts in Thousands)

| | 2013 | | | |
|---|---|---|---|---|
| | | Postemployment Healthcare | | |
| | Pension | Premium Assistance | Health Options Program | Totals |
| **Additions:** | | | | |
| Contributions: | | | | |
| Members | $ 991,087 | $ - | $ - | $ 991,087 |
| Employers | 1,446,402 | 108,676 | - | 1,555,078 |
| Total contributions | 2,437,489 | 108,676 | - | 2,546,165 |
| Participant premiums | - | - | 234,516 | 234,516 |
| Centers for Medicare & Medicaid Services premiums | - | - | 40,698 | 40,698 |
| Investment income: | | | | |
| From investing activities: | | | | |
| Net appreciation (depreciation) in fair value of investments | 3,428,449 | (1,140) | - | 3,427,309 |
| Short-term | 7,758 | 1,306 | 226 | 9,290 |
| Fixed income | 228,760 | - | - | 228,760 |
| Common and preferred stock | 255,248 | - | - | 255,248 |
| Collective trust funds | 17,749 | - | - | 17,749 |
| Real estate | 251,742 | - | - | 251,742 |
| Alternative investments | 485,622 | - | - | 485,622 |
| Total investment activity income | 4,675,328 | 166 | 226 | 4,675,720 |
| Investment expenses | (557,533) | (56) | - | (557,589) |
| Net income from investing activities | 4,117,795 | 110 | 226 | 4,118,131 |
| From securities lending activities: | | | | |
| Securities lending income | 9,541 | - | - | 9,541 |
| Securities lending expense | (1,334) | - | - | (1,334) |
| Net income from securities lending activities | 8,207 | - | - | 8,207 |
| Total net investment income | 4,126,002 | 110 | 226 | 4,126,338 |
| **Total Additions** | 6,563,491 | 108,786 | 275,440 | 6,947,717 |
| **Deductions:** | | | | |
| Benefits | 6,016,892 | 100,078 | 229,039 | 6,346,009 |
| Refunds of contributions | 24,461 | - | - | 24,461 |
| Net transfer to State Employees' Retirement System | 2,893 | - | - | 2,893 |
| Administrative expenses | 37,480 | 2,112 | 22,644 | 62,236 |
| **Total Deductions** | 6,081,726 | 102,190 | 251,683 | 6,435,599 |
| **Net increase** | 481,765 | 6,596 | 23,757 | 512,118 |
| **Net position held in trust for pension and postemployment healthcare benefits:** | | | | |
| **Balance, beginning of year** | 48,533,796 | 93,753 | 136,030 | 48,763,579 |
| **Balance, end of year** | $ 49,015,561 | $ 100,349 | $ 159,787 | $ 49,275,697 |

The accompanying notes are an integral part of the financial statements.

# Notes to Financial Statements
# Years Ended June 30, 2014 and 2013

## 1. Organization and Description of the System

### (A) Organization

The System was established on July 18, 1917, under the provisions of Pamphlet Law 1043, No. 343 as a governmental cost-sharing multiple-employer plan that provides retirement allowances and other benefits to its members. Membership in the System is mandatory for nearly all qualifying public school employees in the Commonwealth of Pennsylvania (Commonwealth). As of June 30, 2014, there were 789 participating employers, generally school districts. Membership as of June 30, 2013, the most recent year for which actual amounts are available, is presented in the table at the bottom of this page.

The Public School Employees' Retirement Board (Board) is established by state law as an independent administrative board of the Commonwealth. The Board exercises control and management of the System, including the investment of its assets. The Board has fifteen members including the Commonwealth's Secretary of Education, the State Treasurer, the Executive Director of the Pennsylvania School Boards Association, two members appointed by the Governor, six elected members (three from among the System's certified members, one from among the System's noncertified members, one from among the System's annuitants, and one from among school board members in Pennsylvania), two members from the Senate, and two members from the House of Representatives.

The State Treasurer is the custodian of the System's fund. The retirement plan of the System is a contributory defined benefit plan for which the benefit payments to members and contribution provisions by employers and employees are specified in the Pennsylvania Public School Employees' Retirement Code (Code). Changes in benefit and contribution provisions for the retirement plan must be made by legislation. Pursuant to state law, all legislative bills and amendments proposing to change the System's retirement plan are to be accompanied with an actuarial note prepared by an enrolled pension actuary from the Public Employee Retirement Commission providing an estimate of the cost and actuarial effect of the proposed change.

Based upon criterion of financial accountability as defined by governmental accounting standards, the System is considered a component unit of the Commonwealth of Pennsylvania financial reporting entity and is included in the Comprehensive Annual Financial Report of the Commonwealth of Pennsylvania.

### (B) Pension Plan

#### i. Pension Benefits

Under the provisions of the 1975 revision of the Code by the Pennsylvania General Assembly, members are eligible for monthly retirement benefits upon reaching (a) age 62 with at least 1 year of credited service; (b) age 60 with 30 or more years of credited service; or (c) 35 or more years of service regardless of age. Act 120 of 2010 (Act 120) preserves the benefits of existing members and introduced benefit reductions for individuals who become new members on or after July 1, 2011. Act 120 created two new membership classes, Membership Class T-E (Class T-E) and Membership Class T-F (Class T-F). To qualify for normal retirement, Class T-E and Class T-F members must work until age 65 with a minimum of 3 years of service or attain a total combination of age and service that is equal to or greater than 92 with a minimum of 35 years of service. The Internal Revenue Code (IRC) limitation on the annual benefits for a defined benefit plan was $210,000 for 2014 and $205,000 for 2013.

Benefits are generally equal to 2% or 2.5%, depending upon membership class, of the member's final average salary (as defined in the Code) multiplied by the number of years of credited service. For members whose membership started prior to July 1, 2011, after completion of five years of service, a member's right to the defined benefits is vested and early retirement benefits may be elected. For Class

| Membership as of June 30, 2013 | | |
|---|---|---|
| Currently employed members: | | |
| Vested | 195,062 | |
| Nonvested | 72,366 | |
| **Total currently employed members** | | **267,428** |
| Retirees and beneficiaries currently receiving benefits | 209,204 | |
| Inactive members and vestees entitled to but not receiving benefits* | 18,911 | |
| **Total retirees and other members** | | **228,115** |
| **Total number of members** | | **495,543** |

*Does not include 109,739 inactive members who are no longer participating.

**Notes to Financial Statements (continued)**

| | | |
|---|---|---|
| **PSERS members whose membership started prior to July 1, 2011:** | | |
| Membership Class T-C | Active Members hired before July 22, 1983 | 5.25% |
| Membership Class T-C | Active Members hired on or after July 22, 1983 | 6.25% |
| Membership Class T-D | Active Members hired before July 22, 1983 | 6.50% |
| Membership Class T-D | Active Members hired on or after July 22, 1983 | 7.50% |
| **PSERS members whose membership started on or after July 1, 2011 (Act 120 members):** | | |
| Membership Class T-E* | | 7.50% |
| Membership Class T-F** | | 10.30% |

* Shared risk program could cause future contribution rates to fluctuate between 7.5% and 9.5%

** Shared risk program could cause future contribution rates to fluctuate between 10.3% and 12.3%

T-E and Class T-F members, the right to benefits is vested after ten years of service. Active members may purchase credit for various types of school and non-school service on a lump-sum, installment purchase basis, or through an actuarially calculated benefit reduction. Class T-E and Class T-F members must purchase Non Qualifying Part Time service and most other types of non-school or non-state service credit at full actuarial cost. Class T-E and Class T-F members must purchase credit for Non Qualifying Part Time service within 365 days of enrollment in the system.

In addition to regular retirement benefits, the System also provides for disability retirement benefits and death benefits. Participants are eligible for disability retirement benefits after completion of five years of credited service. Such benefits are generally equal to 2% or 2.5%, depending upon membership class, of the member's final average salary (as defined in the Code) multiplied by the number of years of credited service, but not less than one-third of such salary nor greater than the benefit the member would have had at normal retirement age. Members over normal retirement age may apply for disability benefits.

Death benefits are payable upon the death of an active member who has reached age 62 with at least one year of credited service (age 65 with at least three years of credited service for Class T-E and Class T-F members) or who has at least five years of credited service (ten years for Class T-E and Class T-F members). Such benefits are actuarially equivalent to the benefit that would have been effective if the member had retired on the day before death. Benefits may be distributed for a deceased member by a nonspouse beneficiary via a direct trustee-to-trustee transfer to an Individual Retirement Account (IRA), which is treated as an inherited account.

Members with credited service in the Commonwealth of Pennsylvania State Employees' Retirement System (SERS) may elect to transfer service to the Public School Employees' Retirement System upon commencement of employment in the public school system. Similarly, a member with credited service in the System may transfer such service to SERS upon becoming a member of that system.

All members are fully vested in their individual balance in the Members' Savings Account which is described in Note 3. All non-vested members may receive a refund of their individual balance of member contributions and interest from the Members' Savings Account upon termination of public school employment. Vested members who enrolled prior to July 1, 2011 may elect to receive a return of their accumulated contributions and interest upon their retirement which results in a reduced monthly annuity. Vested Class T-E and Class T-F members cannot withdraw their accumulated contributions and interest from the Members' Savings Account upon their retirement.

### ii. Contributions

The contribution policy is set by the Code and requires contributions by active members, employers, and the Commonwealth. The System's funding policy provides for periodic employer and Commonwealth contributions at actuarially determined rates, expressed as a percentage of annual covered payroll, such that they, along with employee contributions and an actuarially determined rate of investment return, are adequate to accumulate assets to pay retirement benefits when due. Level percentage of payroll employer contribution rates are determined using the entry age normal actuarial funding method. This method determines the amount of contributions necessary to (1) fully fund all current costs, (also known as normal cost), which represents the estimated amount necessary to pay for the benefits earned by the employees during the current service year; and (2) liquidate the prior service cost for service earned prior to the current service year and subsequent benefit increases, which represents the amount necessary to fund accrued liabilities over the appropriate amortization periods.

Contribution rates for active members are set by law (redefined with the provisions of Act 9 of 2001 and Act

## Notes to Financial Statements (continued)

120) and are dependent upon membership class. The contribution rates based on qualified member compensation for virtually all members are presented in the table at the top of the previous page. The IRC limitation on the annual compensation for a defined benefit plan was $255,000 for 2013 and $260,000 for 2014.

Active members who enrolled between July 1, 2001, the effective date of Act 9, and June 30, 2011 are Membership Class T-D (Class T-D). The contribution rates for all members in Class T-D were effective January 1, 2002. For Act 120 members, all new members automatically become Class T-E members. New members, however, have a one-time opportunity to elect Class T-F within 45 days of receiving written notification from PSERS. Failure to elect Class T-F at time of original eligibility will make the member ineligible for Class T-F forever. Act 120 introduced a shared risk program that could affect Class T-E and Class T-F members' contribution rates in future fiscal years. With the shared risk program Class T-E and Class T-F members benefit when investments of the fund are doing well and share some of the risk when investments underperform. The member contribution rate will stay within the specified range allotted for Class T-E or Class T-F; but could increase or decrease by .5% every three years starting July 1, 2015, dependent on investment performance of PSERS. The member contribution rate will never go below the base rate of 7.5% for Class T-E and 10.3% for Class T-F members, or above 9.5% for Class T-E and 12.3% for Class T-F members.

The total contribution rate for the employers and the Commonwealth was 16.93% and 12.36% (16.00% and 11.50% for pension component) of qualified compensation for the years ended June 30, 2014 and 2013, respectively.

Act 120 suppresses the employer contribution rate by using rate caps in future years to keep the rate from rising too high, too fast for budgetary purposes.

The rate caps limit the amount the pension component of the employer contribution rate can increase over the prior year's rate. For FY 2014 and thereafter, the rate can increase no more than 4.5% plus the premium assistance contribution rate.

The rate cap remains at 4.5% until the rate cap no longer applies, i.e., the rise in the employer contribution rate is less than the rate cap in effect at that time. Once the rate caps no longer apply, the employer normal cost becomes the contribution rate floor.

According to requirements established in Act 29 of 1994, the Commonwealth reimburses school entity employers a portion of the employer contributions paid to the System. All school entity employers are reimbursed by the Commonwealth at least 50% of the total employer contributions based on the total contribution rate. The Commonwealth reimburses certain school entity employers at a rate greater than 50% based upon non-pension criteria which stipulate that the entity must have a Commonwealth Department of Education calculated Market Value / Personal Income Aid Ratio in excess of .5000. The Commonwealth remits 50% of the total employer contributions for employers other than school entities directly to the System. All contributions from employers and the Commonwealth are shown as employer contributions on the Statements of Changes in Plan Net Position.

### (C) Postemployment Healthcare Plans

#### i. Health Insurance Premium Assistance Program

##### (a) Premium Assistance Benefits

The System provides a Health Insurance Premium Assistance Program (Premium Assistance) for all eligible annuitants who qualify and elect to participate. Under this program, employer contribution rates for Premium Assistance are established to provide reserves in the Health Insurance Account that are sufficient for the payment of Premium Assistance benefits for each succeeding year. Effective January 1, 2002, under the provisions of Act 9 of 2001, participating eligible annuitants are entitled to receive premium assistance payments equal to the lesser of $100 per month or their out-of-pocket monthly health insurance premium. To receive premium assistance, eligible annuitants must obtain their health insurance through either their school employer or the PSERS' Health Options Program. As of June 30, 2014 there were no assumed future benefit increases to participating eligible annuitants in the Premium Assistance program.

##### (b) Contributions

A portion of each employer and Commonwealth contribution to the System is set aside for the funding of Premium Assistance. The Premium Assistance contribution rate is set at a level necessary to establish reserves sufficient to provide Premium Assistance payments for all participating eligible members for the subsequent fiscal year. The portion of the total contribution rate for employers and the Commonwealth used to fund Premium Assistance was 0.93% and 0.86% for the years ended June 30, 2014 and 2013, respectively.

## Notes to Financial Statements (continued)

### (c) Funding Status and Annual Required Contributions (ARC)

As of June 30, 2013, the most recent actuarial valuation, the plan was 7.2% funded. The actuarial accrued liability for benefits was $1.385 billion, and the actuarial value of assets was $100.3 million, resulting in an unfunded accrued liability of $1.285 billion. The covered payroll of active members was $12.6 billion and the ratio of the unfunded actuarial accrued liability to the covered payroll was 10.2%.

For fiscal year ended June 30, 2014, the ARC was $121.3 million. The actual employer contributions for fiscal year ended June 30, 2014 was $117.5 million resulting in a 97% contributed rate. The ratio of assets to Actuarial Accrued Liabilities (AAL) was 7.2%, 6.9%, and 8.3% for fiscal years ended June 30, 2013, 2012, and 2011, respectively. Assets have decreased in relation to AAL from fiscal year ended June 30, 2011 to 2012 and increased from fiscal year ended June 30, 2012 to 2013.

The Schedule of Funding Progress and the Schedule of Employer Contributions included as Required Supplementary Information following the notes to the financial statements provide multiple year presentations of funding status and ARC to illustrate their trends over time.

### (d) Actuarial Assumptions and Methods

The health insurance liability and funding provisions of the PSERS Code differ from the GASB disclosure requirements. As a result, there are different determinations of actuarial liability and contribution requirements for GASB accounting purposes and for Commonwealth funding purposes. For purposes of funding, the actuarial liability equals the assets in the Premium Assistance account, and the contribution required is the amount necessary to establish reserves sufficient to provide Premium Assistance payments to all participating eligible annuitants during the fiscal year that immediately follows the year the employer contribution is made. For GASB accounting purposes, the actuarial liability has been determined under the entry age normal actuarial cost method, and the ARC is equal to the entry age normal cost for health insurance plus an amount that will amortize the entry age unfunded actuarial liability for health insurance over a period of 30 years using level dollar open amortization. The entry age actuarial cost method was selected for this calculation because it meets the GASB parameters for determining actuarial liability and normal cost, and is the cost method specified by the PSERS Code for the PSERS pension plan.

Each annual actuarial valuation for Premium Assistance includes calculations that are based on the Premium Assistance benefits provided under the terms of the substantive plan in effect at the time of each valuation. The valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. The actuarial calculations for Premium Assistance reflect a long-term perspective. Actuarially determined amounts are subject to continual revision as results are compared to past expectations and new estimates are made about the future. Other significant actuarial assumptions employed by the actuary as of June 30, 2013, the date of the most recent actuarial valuation were:

- Investment return - 7.50%, includes inflation at 3.00%
- Salary increases - 5.50%, which reflects an allowance for inflation of 3.00%, real wage growth of 1%, and merit or seniority increases of 1.50%
- Multiple decrement tables - mortality, vesting, retirement age, and withdrawal estimates are based upon tables provided by the actuary

### ii. Health Options Program

The Health Options Program (HOP) is a PSERS-sponsored voluntary health insurance program for the sole benefit of annuitants of PSERS, spouses of annuitants, survivor annuitants and their dependents who participate in HOP. The HOP is funded exclusively by the premiums paid by its participants for the benefit coverage they elect. HOP offers several health plans. Participants may select among a self-funded Medicare supplement plan, two Medicare Rx plans, and multiple Medicare Advantage plans for those eligible for Medicare. Participants not eligible for Medicare have a choice of a self-funded high deductible indemnity plan and multiple managed care plans. Medicare Advantage and managed care plans are available to retirees residing in the plan's service area. The Medicare Advantage and managed care plans are provided by private insurance companies or managed care organizations and benefits are fully insured. The Medicare supplement and high deductible plans are self-funded and claims are adjudicated by a third party administrator. The Medicare Rx Options and the prescription drug benefit of the high deductible plan for those not eligible for Medicare are also self-funded and, HOP uses a pharmacy benefits manager to administer the benefits. Effective January 1, 2006, PSERS entered into an Employer/Union Entity contract with the Centers for Medicare and Medicaid Services (CMS) to operate a voluntary Medicare Prescription Drug Plan (PDP). Monthly premiums are received from CMS covering the 62,636 participants in the PDP. An independent actuarial consulting firm sets the rates for the self-funded benefits. The HOP maintains reserves for claims that are incurred but not reported (IBNR) and for claim fluctuation for the self-funded benefit plans. At June 30, 2014 and 2013 PSERS recorded $16,308,000 and $12,810,000, respectively, in IBNR. The IBNR is included in benefits payable. The

**Notes to Financial Statements (continued)**

PSERS pension fund assets are not available to fund or satisfy obligations of the HOP.

## 2. Summary of Significant Accounting Policies

### (A) Basis of Accounting

The financial statements of the System are prepared on the accrual basis of accounting under which expenses are recorded when the liability is incurred, revenues are recorded in the accounting period in which they are earned and become measurable, and investment purchases and sales are recorded as of their trade date. Member and employer contributions are recognized in the period for which employees' salaries are reported. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

The accounting and reporting policies of the System conform to accounting principles generally accepted in the United States of America (GAAP). The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions in plan net position during the reporting period. Actual results could differ from those estimates.

### (B) Investments

The System's investments are reported at fair value. Fair value is the amount that the System can reasonably expect to receive for an investment in a current sale between a willing buyer and a willing seller, that is, other than in a forced or liquidation sale. Short-term securities are carried at cost, which approximates fair value, unless they have published market prices or quotations from national securities exchanges or securities pricing services, in which case they are valued at the published market price. Fixed income securities and common and preferred stocks are generally valued based on published market prices and quotations from national securities exchanges or securities pricing services. Securities which are not traded on a national securities exchange are valued by the respective fund manager or other third parties based on similar sales.

Directly-owned real estate investments are primarily valued based on appraisals performed by independent appraisers and, for properties not appraised, the present value of the projected future net income stream is used. Real estate owned investments are reported net of related debt borrowed against the market value of the property. As of June 30, 2014 and 2013, $132,000,000 in line of credit advances were netted against the related property valuation. The line of credit balance is due on March 9, 2015. The line is payable at an interest rate equivalent to the lender's commercial paper rate plus 75 basis points and is collateralized by certain fixed income investments of the System.

For alternative investments, which include private equity, private debt, venture capital and equity real estate investments where no readily ascertainable market value exists, management, in consultation with the general partner and investment advisors, has determined the fair values for the individual investments based upon the partnership's most recent available financial information. Futures contracts, foreign exchange contracts, and options are marked-to-market daily based on published market prices and quotations from national securities exchanges or securities pricing services. The changes in market value are recognized as part of net appreciation/depreciation in the fair value of investments. Initial margin requirements for such financial instruments are provided by investment securities pledged as collateral or by cash.

Collective trust fund investments (CTF) consist primarily of domestic and international institutional funds. The funds generally do not pay interest or dividends to shareholders and reinvest all income earned on securities held by the fund. The fair value of CTF is based on the reported share value of the respective fund. CTF are managed by state chartered banks for which various state banking departments have regulatory oversight and investment advisors for which regulatory agencies such as the Securities and Exchange Commission have regulatory oversight. Investments that are not subject to this oversight are subject to annual independent audits.

In accordance with PSERS' investment guidelines, cash collateral from securities loaned is invested in one of two collateral investment pools, the first of which is denominated in U.S. dollars (USD) and the second in Euros. The USD pool is invested entirely in overnight repurchase agreements carried at amortized cost which approximates fair value. The Euro pool is invested in asset-backed floating rate notes which are marked-to-market daily based on published market prices and quotations from national securities exchanges or securities pricing services. In addition to the floating rate notes, the Euro pool is invested in repurchase agreements.

Investment expenses consist of investment manager fees and those administrative expenses directly related to the System's investment operations. Unsettled investment sales are reported as investment proceeds receivable and unsettled investment purchases are included in investment purchases and other liabilities.

## Notes to Financial Statements (continued)

### (C) Capital Assets

Capital assets consist primarily of data processing equipment, software, and internally developed computer software recognized as intangible assets. Capital assets are depreciated using the straight-line method over an estimated useful life of five years. Intangible assets are amortized using the straight-line method over an estimated useful life of twenty years for assets purchased prior to July 1, 2012 and 5 years for assets purchased after June 30, 2012.

### (D) Benefits Payable

Benefits payable identifies the obligations of the System, on an accrual basis, at the end of the fiscal year. It includes the estimated retirement and death benefits payable, premium assistance benefits payable, and the HOP IBNR claims for its participants.

### (E) Compensated Absences

The System uses the accrual basis of accounting for measuring vacation leave, sick leave, and other compensated absences liabilities. Employees of the System are paid for accumulated vacation leave upon termination or retirement. Retiring employees of the System that meet service, age, or disability requirements are paid between 30% and 100% of sick days available at retirement, up to 161 maximum days paid. As of June 30, 2014 and 2013, $3,649,000 and $3,419,000, respectively, were accrued for unused vacation and sick leave for the System's employees and are included in "Accounts payable and accrued expenses" on the Statements of Plan Net Position.

### (F) Participant Premium Advances

Premium advances in the fiscal years ended June 30, 2014 and 2013 are for HOP premiums related to health care coverage to be provided in calendar year 2014 and 2013, respectively.

### (G) Federal Income Taxes

The Internal Revenue Service (IRS) issued a determination letter dated September 30, 2013 which stated that the plan and its underlying trust qualify under the provisions of Section 501(a) of the Internal Revenue Code (IRC) and therefore are exempt from federal income taxes.

### (H) Risk Management

The System is exposed to various liabilities and risks of loss, including, without limitation, the ordinary risks of investment losses, risks related to theft or destruction of assets, liabilities resulting from injuries to employees, and liabilities resulting from court challenges to fiduciary decisions. As an administrative agency of the Commonwealth of Pennsylvania, the System is accorded sovereign immunity. For claims not shielded by sovereign immunity, the System participates in certain Commonwealth pooled insurance programs and requires asset managers to carry certain insurance coverage for the protection of the System. The System has implemented a self-insurance program for fiduciary and director and officer liability coverage. During the past three fiscal years, insurance settlements did not exceed insurance coverage.

### (I) Reclassifications

Certain 2013 amounts have been reclassified in conformity with the 2014 presentation. These reclassifications had no effect on net position held in trust for pension benefits or the change in plan net position.

### (J) Members Receivables

Members receivables include an amount for members' obligations to the System for the purchase of service credit. Members have a variety of options to remit purchase of service payments:

- Remit a lump sum payment.
- Request an installment plan from one to seven years where the member's employer establishes a payroll deduction process. The member's employer then forwards monthly payments of the withheld amounts to PSERS.
- Accept an actuarial reduction debt through which the amount of the purchase plus accumulated interest will reduce the member's retirement or death benefit.
- Rollover funds from an eligible distribution.

The following is a summary of the members receivables at June 30, 2014 and 2013:

(Dollar Amounts in Thousands)

| | 2014 | 2013 |
|---|---|---|
| **Pension:** | | |
| Member contributions | **$ 69,874** | $ 71,895 |
| Purchase of service | **234,727** | 229,130 |
| Other | **5,704** | 5,777 |
| **Total Members Receivables** | **$ 310,305** | $ 306,802 |

### (K) Interfund Transactions and Balances

Interfund transfers of assets take place on a regular recurring basis between Pension and Premium Assistance. The transfers occur upon receipt of employer contributions and

**Notes to Financial Statements (continued)**

payment of benefits or expenses. The interfund receivables and payables related to interfund activity are classified under receivables and liabilities on the financial statements.

## (L) Adoption of New Accounting Standards

During the fiscal year ended June 30, 2014 the System adopted GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities*. This Statement specifies items that were previously reported as assets and liabilities that should now be reported as deferred outflows of resources or deferred inflow of resources.

During the fiscal year ended June 30, 2014 the System adopted GASB Statement No. 67 which addresses accounting and financial reporting requirements for pension plans. The requirements for GASB No. 67 require changes in presentation of the financial statements, notes to the financial statements, and required supplementary information. Significant changes include an actuarial calculation of total and net pension liability. It also includes comprehensive footnote disclosure regarding the pension liability, the sensitivity of the net pension liability to the discount rate, and increased investment activity disclosures.

During the fiscal year ended June 30, 2014 the System adopted GASB Statement No. 70, *Accounting and Financial Reporting for Nonexchange Financial Guarantees*. This Statement establishes accounting and financial reporting standards for situations where a state or local government, as a guarantor, agrees to indemnify a third-party obligation holder under specified conditions. Upon examination of GASB 70, it was determined to have no current impact on PSERS.

During the fiscal year ended June 30, 2013 the System adopted GASB Statement No. 63, *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources and Net Position*. This statement provides accounting and financial reporting requirements to address the presentation issues associated with the new financial position elements created in GASB's Concepts Statement No. 4, "Elements of Financial Statements." This Statement amends the net asset reporting requirements in Statement No. 34, *Basic Financial Statements - and Management's Discussion and Analysis - for State and Local Governments.*

## 3. Description of Accounts

The Code requires the System to maintain the following accounts which represent reserves held for future and current benefit payments as follows and as illustrated in the table at the top of the following page.

## (A) State Accumulation Account

The State Accumulation Account is credited with contributions from the Commonwealth and the employers. Additionally, interest earnings of the System (after crediting the Members' Savings Account with 4% interest and the reserve for retirement with 5.50% statutory interest) are credited to this account. Each year, the necessary amounts, as determined by the actuary for the payment of retirement, disabilities, and death benefits, are transferred from the State Accumulation Account to the Annuity Reserve Account increasing the reserve credit to the 7.50% valuation assumption rate determined by the actuary. All administrative expenses necessary for the operation of the System, except for Premium Assistance and HOP expenses, are paid from the State Accumulation Account.

## (B) Members' Savings Account

The Members' Savings Account is credited with all contributions made by active members of the System. Interest is added to the member's individual account at an annual rate of 4%.

Upon death or retirement of a member, the accumulated contributions plus interest are transferred to the Annuity Reserve Account for subsequent payment of benefits.

## (C) Annuity Reserve Account

The Annuity Reserve Account represents the amounts transferred from the Members' Savings and State Accumulation Accounts, plus additional contributions made by the Commonwealth and employers for the payment of supplemental annuities and cost-of-living increases. All death, disability, and retirement benefits are paid from this account. Annual interest of 5.50% is credited to the Annuity Reserve Account.

## (D) Health Insurance Account

The Health Insurance Account is credited with contributions from the Commonwealth and the employers for Premium Assistance. Effective January 1, 2002, under the provisions of Act 9 of 2001, participating eligible annuitants are entitled to receive premium assistance payments equal to the lesser of $100 per month or their out-of-pocket monthly health insurance premium. The Health Insurance Account pays all administrative expenses necessary to operate the Premium Assistance.

## (E) Health Insurance Program Account

The Health Insurance Program Account is credited with premiums from members of the HOP and from CMS. All benefits related to the HOP (premium payments to the

## Notes to Financial Statements (continued)

| | (Dollar Amounts in Thousands) | |
|---|---|---|
| | **2014** | 2013 |
| **Pension:** | | |
| State Accumulation Account | **$ (13,136,437)** | $ (13,758,928) |
| Members' Savings Account | **13,554,229** | 13,089,342 |
| Annuity Reserve Account | **52,562,323** | 49,685,147 |
| | **$ 52,980,115** | $ 49,015,561 |
| **Postemployment Healthcare:** | | |
| Health Insurance Account | **$ 112,060** | $ 100,349 |
| Health Insurance Program Account | **169,749** | 159,787 |
| | **$ 281,809** | $ 260,136 |

insurance companies and self-funded benefits) are paid from this account. The Health Insurance Program Account pays all administrative expenses necessary to operate the HOP.

## 4. Investments

### (A) Summary of Investments

The Board has the responsibility to invest and reinvest available funds of the System in accordance with the guidelines and limitations set forth in the Code and other applicable state law. The Board accomplishes the daily management of the System's investments through investment advisors who act as agents for the System and through internal investment managers.

The Board invests the funds of the System using the Prudent Investor Standard, as articulated in the Code, which means "the exercise of that degree of judgment, skill and care under the circumstances then prevailing which persons of prudence, discretion and intelligence who are familiar with such matters exercise in the management of their own affairs not in regard to speculation, but in regard to the permanent disposition of the fund, considering the probable income to be derived therefrom as well as the probable safety of their capital." The Board has adopted its investment policy to formally document investment objectives and responsibilities. This policy, as well as applicable state law, establishes guidelines for permissible investments of the System. See the summary of investments table on the following page.

### (B) Deposit and Investment Risk Disclosures

#### i. Deposits

Custodial credit risk for deposits is the risk that, in the event of a financial institution failure, the System would not be able to recover the value of the deposits. The Commonwealth's Treasury Department is the custodian of the System's funds. Commonwealth Treasury Department deposits must be held in insured depositories approved by the Commonwealth's Board of Finance and Revenue and must be fully collateralized.

The System, through its third party administrator, maintains certain bank deposits for the operation of its voluntary HOP. These deposits are not required to be collateralized by statute or policy. These deposits totaled $98,774,000 and $87,258,000 at June 30, 2014 and 2013, respectively, and are under the custody of M&T Bank which has an A- rating by Standard and Poor's (S&P) and an A3 rating by Moody's Investor Services (Moody's).

#### ii. Investment Risks

The System's investments, including derivatives and other similar investments, may be subject to various risks. Among these risks are concentration of credit risk, custodial credit risk, credit risk, interest rate risk, and foreign currency risk. The policies addressing each one of these risks, discussed in more detail below, are contained within the Investment Policy Statement, Objectives, and Guidelines reviewed and approved annually by the Board. Due to the level of risk associated with certain investments, it is possible that changes in the values of investments may occur in the near term and that such changes could materially affect the amounts reported in the Statements of Plan Net Position.

##### (a) Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer. As of June 30, 2014 and 2013 the System had no single issuer that exceeded 5% of total investments. Investments issued or explicitly guaranteed by the U.S. government and investments in mutual funds, external investment pools, and other pooled investments were excluded.

##### (b) Custodial Credit Risk

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, the System would not be able to recover the value of investment or collateral securities that are in the possession of an outside party. In accordance with a contractual relationship between the Commonwealth's Treasury Department and its custodial agent, substantially all investments, where securities are used as evidence of the investment, are held by the custodian in book-entry form in the System's name. Those investments are defined as insured or registered investments for which the securities are held by the System or its agent and, therefore, have a very minimal level of custodial credit risk. The remaining investments, which do not have securities that are used as evidence of the investment, are primarily in collective

## Notes to Financial Statements (continued)

A summary of the fair value of investments at June 30, 2014 and 2013 follows:

| | (Dollar Amounts in Thousands) | |
|---|---|---|
| | **2014** | 2013 |
| **Pension investments:** | | |
| **Short-term:** | | |
| PSERS Short-Term Investment Fund | **$ 3,730,820** | $ 2,267,954 |
| Other domestic short-term | **216,570** | 606,776 |
| International short-term | **132,296** | 129,142 |
| | **4,079,686** | 3,003,872 |
| **Fixed income:** | | |
| Domestic asset-backed and mortgage-backed securities | **1,739,734** | 1,871,421 |
| U.S. government and agency obligations | **1,523,266** | 1,344,866 |
| Domestic corporate and taxable municipal bonds | **1,103,634** | 1,378,989 |
| International fixed income | **1,165,580** | 1,233,142 |
| | **5,532,214** | 5,828,418 |
| **Common and preferred stock:** | | |
| Domestic common and preferred stock | **6,675,218** | 5,634,776 |
| International common and preferred stock | **4,176,239** | 4,127,751 |
| | **10,851,457** | 9,762,527 |
| **Collective trust funds** | **11,795,390** | 11,280,497 |
| **Real estate:** | | |
| Equity real estate | **6,944,983** | 6,526,261 |
| Directly-owned real estate | **285,510** | 271,274 |
| | **7,230,493** | 6,797,535 |
| **Alternative investments:** | | |
| Private equity | **8,748,284** | 8,380,952 |
| Private debt | **3,471,149** | 3,399,037 |
| Venture capital | **967,932** | 843,302 |
| | **13,187,365** | 12,623,291 |
| **Pension investments at fair value** | **$ 52,676,605** | $ 49,296,140 |

| | | |
|---|---|---|
| **Postemployment healthcare investments:** | | |
| **Premium Assistance:** | | |
| PSERS Short-Term Investment Fund | **$ 53,052** | $ 42,994 |
| Other domestic short-term | **11,047** | 19,583 |
| | **64,099** | 62,577 |
| **Health Options Program:** | | |
| PSERS Short-Term Investment Fund | **88,629** | 88,432 |
| Other domestic short-term | **98,774** | 87,258 |
| | **187,403** | 175,690 |
| **Postemployment healthcare investments at fair value** | **$ 251,502** | $ 238,267 |

## Notes to Financial Statements (continued)

trust funds and limited partnerships, which include real estate and alternative investments.

### (c) Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The credit risk of a debt instrument is measured by nationally recognized statistical rating organizations (NRSRO) such as Fitch Investor Services (Fitch), Moody's, and S&P. Annually, the Board establishes an asset allocation plan. This plan manages the overall credit risk of the fixed income asset class through a clearly defined long-term asset allocation policy. This policy establishes a long-term target allocation of the fixed income asset class at 23.0% of the investment portfolio. The fixed income target allocation consists of:

- An allocation of 5.0% of the portfolio has been made to the U.S. core plus segment of the fixed income asset class benchmarked to the Barclays Capital U.S. Aggregate Index. The U.S. core plus allocation is composed of primarily investment grade, relatively liquid, public domestic bonds with an overall weighted-average NRSRO credit rating of A or better.

- An allocation of 6.0% of the portfolio has been made to the high yield segment of the fixed income asset class benchmarked to the Barclays Capital U.S. High Yield Index. The high yield allocation is composed of less liquid public non-investment grade fixed income securities with an overall weighted-average NRSRO credit rating of B- or better.

- An allocation of 6.0% of the portfolio has been made to the Treasury Inflation-Protected Securities (TIPS) segment of the fixed income asset class benchmarked to the Barclays Capital U.S. TIPS Index and composed of primarily government issued TIPS with an overall weighted-average NRSRO credit rating of AA or better. The portfolio manager is permitted to leverage the portfolio using TIPS total return swaps up to 3:1.

- An allocation of 1.0% of the portfolio has been made to the non-U.S. developed markets fixed income asset class benchmarked to the Barclays Capital Global Aggregate GDP-weighted Developed Market ex-U.S. (Unhedged) Index composed of primarily investment grade, relatively liquid non-U.S. public bonds with an overall weighted-average NRSRO credit rating of A or better.

- An allocation of 2.0% of the portfolio has been made to the emerging markets fixed income asset class benchmarked to the Barclays Capital EM Local Currency-Government-MV Weighted (Unhedged) -10% Country Cap Index composed of primarily investment grade, relatively liquid non-U.S. public bonds with an overall weighted-average NRSRO credit rating of BB- or better.

- An allocation of 3.0% of the portfolio has been made to cash benchmarked to the Merrill Lynch U.S. Treasury Bill 0-3 Months Index composed of primarily investment grade, relatively liquid U.S. and non-U.S. public bonds with an overall weighted-average NRSRO credit rating of AA or better.

The following table discloses aggregate market value by credit quality rating category. Many securities have ratings from more than one NRSRO and sometimes those ratings differ from one NRSRO to another. The data listed below uses the rating (expressed as S&P equivalent) available from Fitch, Moody's and/or S&P that indicates the lowest credit quality at June 30, 2014 and 2013.

| | (Dollar Amounts in Thousands) | |
|---|---|---|
| | **2014** | 2013 |
| **Quality Rating** | **Fair Value** | Fair Value |
| AAA | **$ 533,518** | $ 462,587 |
| AA | **613,511** | 732,914 |
| A | **460,003** | 501,547 |
| BBB | **648,371** | 773,066 |
| BB and Below | **362,024** | 901,324 |
| NR* | **13,249,826** | 10,777,373 |
| **Total Exposed to Credit Risk** | **15,867,253** | 14,148,811 |
| **US Government Guaranteed**** | **2,189,602** | 2,572,807 |
| **Total Fixed Income and Short-Term Investments** | **$ 18,056,855** | $ 16,721,618 |

* Not Rated securities include $8,194,002 and $7,651,061 in collective trust funds at June 30, 2014 and 2013 respectively.

** Comprised of U.S. government and agency obligations explicitly guaranteed by the U.S. government and not considered to have credit risk.

For derivatives exposed to credit risk, the table below presents aggregate market value by the least favorable credit rating provided by NRSROs at June 30, 2014 and 2013.

| | (Dollar Amounts in Thousands) | |
|---|---|---|
| | **2014** | 2013 |
| **Quality Rating** | **Fair Value** | Fair Value |
| A | **$ 87,881** | $ (93,228) |
| **Total Swaps-Total Return** | **$ 87,881** | $ (93,228) |

## Notes to Financial Statements (continued)

At June 30, 2014 and 2013, the System's fixed income portfolio had the following option-adjusted durations by fixed income sector:

| | (Dollar Amounts in Thousands) | | | |
|---|---|---|---|---|
| | **2014** | | 2013 | |
| **Investment Type** | **Option-Adjusted Duration** | **Fair Value** | Option-Adjusted Duration | Fair Value |
| Domestic asset-backed and mortgage-backed securities | **1.3** | **$ 1,739,734** | 1.8 | $ 1,871,421 |
| U.S. government and agency obligations | **7.6** | **1,523,266** | 8.6 | 1,344,866 |
| Domestic corporate and taxable municipal bonds | **3.3** | **1,103,634** | 3.6 | 1,378,989 |
| International fixed income | **5.3** | **1,165,580** | 5.4 | 1,233,142 |
| Collective trust funds | **4.1** | **8,194,002** | 4.0 | 7,651,061 |
| PSERS Short-Term Investment Fund | **0.1** | **3,872,501** | 0.1 | 2,399,380 |
| **Total** | 3.3* | **$ 17,598,717** | 3.6* | $ 15,878,859 |

* Fixed income investment managers enter into futures contracts to adjust the durations of their portfolios as a whole rather than any particular investment type within the portfolio. In total, the futures contracts have adjusted PSERS' total portfolio duration upward by 0.1 at June 30, 2014 and 2013. The total portfolio option-adjusted duration is calculated by weighting each investment type by fair value.

### (d) Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of a fixed income investment. The System manages its interest rate risk by diversifying the fixed income portfolio and maintaining the fixed income portfolio at a Board-approved effective duration range of the benchmark index.

Duration is a measure of the approximate sensitivity of a bond's value to interest rate changes. The higher the duration, the greater the changes in fair value when interest rates change. For example, a duration of 4.0 would mean that, given a 100-basis point change up/down in rates, a bond's price would move down/up approximately 4.0%. PSERS measures interest rate risk using option-adjusted duration, which recognizes the fact that yield changes may change the expected cash flows due to embedded options.

### (e) Foreign Currency Risk

Foreign currency risk is the risk that fluctuations in exchange rates will adversely affect the fair value of an investment. As part of the System's program to manage risk and enhance returns, the System invests in non-U.S. markets. Investment managers in non-U.S. equity and global fixed income may hedge their non-U.S. foreign currency exposure back to U.S. dollars. During FY 2014, the System adopted an 8% total fund-level currency hedge on foreign currency exposure to developed market currencies which include, but are not limited to, the Australian dollar, Swiss franc, Euro, British pound sterling, Hong Kong dollar, and Japanese yen.

At June 30, 2014 and 2013, the System had foreign currency exposures for its derivatives (except for foreign exchange contracts which are included in Note 5) as presented in the table at the bottom of this page.

| | (Dollar Amounts in Thousands) | |
|---|---|---|
| | **2014** | 2013 |
| **Currency** | **Notional Value** | Notional Value |
| Japanese yen | **$ 501,484** | $ 65,407 |
| Euro | **144,193** | 74,402 |
| British pound sterling | **118,565** | 83,290 |
| Canadian dollar | **40,219** | 29,289 |
| Australian dollar | **29,941** | 22,700 |
| Hong Kong dollar | **1,640** | 267 |
| **Total Futures Contracts and Total Return Swaps** | **$ 836,042** | $ 275,355 |

## Notes to Financial Statements (continued)

Non-U.S. currency exposures at June 30, 2014 and 2013:

**2014**

(Dollar Amounts in Thousands)

| **Currency** | **Equity** | **Fixed Income** | **Alternative Investments & Real Estate** | **Short-Term*** | **Currency Hedge** | **Total Fair Value** |
|---|---|---|---|---|---|---|
| Euro | $ 676,095 | $ 211,282 | $ 2,991,462 | $ 50,951 | $ (1,941,107) | **$ 1,988,683** |
| British pound sterling | 702,457 | 54,218 | 56,465 | 51,156 | 49,029 | **913,325** |
| Canadian dollar | 270,360 | 27,266 | 48 | 6,681 | (87,043) | **217,312** |
| Japanese yen | 629,041 | 57,363 | - | 46,142 | (535,133) | **197,413** |
| Australian dollar | 213,541 | 20,878 | - | 5,992 | (60,118) | **180,293** |
| South Korean won | 114,168 | 43,328 | - | 542 | 2,719 | **160,757** |
| Hong Kong dollar | 144,030 | - | - | 1,806 | 177 | **146,013** |
| Swedish krona | 128,351 | 2,572 | - | 154 | (9,108) | **121,969** |
| Taiwan new dollar | 100,911 | - | - | 587 | (386) | **101,112** |
| Other non-U.S. currencies | 759,979 | 469,532 | - | 20,031 | (180,847) | **1,068,695** |
| **Total** | **$ 3,738,933** | **$ 886,439** | **$ 3,047,975** | **$ 184,042** | **(2,761,817)** | **$ 5,095,572** |

**2013**

(Dollar Amounts in Thousands)

| **Currency** | **Equity** | **Fixed Income** | **Alternative Investments & Real Estate** | **Short-Term*** | **Currency Hedge** | **Total Fair Value** |
|---|---|---|---|---|---|---|
| Euro | $ 555,685 | $ 217,309 | $ 2,697,145 | $ 70,839 | $ (97,569) | **$ 3,443,409** |
| British pound sterling | 656,998 | 41,197 | 29,062 | 39,252 | (36,194) | **730,315** |
| Japanese yen | 641,692 | 64,537 | - | 45,570 | (55,216) | **696,583** |
| Canadian dollar | 246,348 | 21,888 | 47 | 282 | 7,359 | **275,924** |
| Hong Kong dollar | 244,622 | - | - | 533 | (456) | **244,699** |
| South Korean won | 100,066 | 44,102 | - | (222) | 255 | **144,201** |
| Swiss franc | 191,796 | - | - | 2,442 | (50,700) | **143,538** |
| Brazil real | 65,173 | 67,787 | - | (685) | 394 | **132,669** |
| Swedish krona | 100,390 | 170 | - | (40) | 8,697 | **109,217** |
| South African rand | 74,211 | 31,740 | - | 54 | 318 | **106,323** |
| Taiwan new dollar | 103,916 | - | - | 2,377 | (184) | **106,109** |
| Mexican new peso | 38,304 | 68,633 | - | 459 | (3,084) | **104,312** |
| Other non-U.S. currencies | 661,058 | 320,349 | - | 21,223 | (183,047) | **819,583** |
| **Total** | **$ 3,680,259** | **$ 877,712** | **$ 2,726,254** | **$ 182,084** | **(409,427)** | **$ 7,056,882** |

* Includes investment receivables and payables

**Notes to Financial Statements (continued)**

### (C) Securities Lending

In accordance with a contract between the Commonwealth and its custodial agent, the System participates in a securities lending program. Under this program, the custodian, acting as the lending agent, loans securities (equities, fixed income and money market instruments) to independent brokers and dealers in exchange for collateral in an amount not less than 102% of the fair value of any securities loaned except for non-U.S. corporations for which 105% of the fair value is required. For Euro fixed income debt issues, for which the Commonwealth receives Euros as collateral and international fixed income debt issues denominated in U.S. dollars, the collateral required to be exchanged is in an amount not less than 102% of the fair value of any securities loaned. Collateral is marked-to-market daily. If the fair value of the collateral held falls below the minimum guidelines for securities loaned, additional collateral is obtained. In lieu of certain approved securities or cash, the borrower may deliver to the lending agent irrevocable bank letters of credit as collateral. If the collateral obtained consists in whole or in part of cash, the lending agent may use or invest the cash in accordance with reinvestment guidelines approved by the System.

As of June 30, 2014 and 2013, the System had no credit risk exposure to borrowers because the amounts the System owed the borrowers exceeded the amounts the borrowers owed the System. Under the securities lending program, the lending agent provides indemnification to the Commonwealth if the same borrowers fail to return the underlying securities (and the collateral is inadequate to replace the loaned securities) or fail to pay income distributions on them. There were no losses during the fiscal years ended June 30, 2014 and 2013, resulting from a default of the borrowers or the lending agent.

All securities loans can be terminated on demand by either the System or the borrower, although the average term of the loan is one day. There were no term loans as of June 30, 2014 and 2013.

Cash collateral is invested in one of two short-term collateral investment pools, the first of which is denominated in U.S. dollars and the second in Euros. Each collateral investment pool is managed by the lending agent, is segregated from all other clients of the lending agent, and is not subject to custodial credit risk. The System's income from securities lending represents its pro-rata share from participating in the program. The weighted-average maturity of the investments in the pool was one-day at June 30, 2014 and 2013. During the fiscal years ended June 30, 2014 and 2013, the mismatch between the maturities of the investments made with cash collateral and the maturities of the securities loans may have posed some interest rate risk to the System. The System cannot pledge or sell collateral securities received unless the borrower defaults. In the event of a default, the lending agent may use the collateral to replace the loaned securities.

As of June 30, 2014, the fair value of loaned securities was $2,305,109,000, which includes $1,722,457,000 of loaned securities which are collateralized by securities and irrevocable letters of credit that are not included in the Statements of Plan Net Position. The fair value of the associated collateral was $2,476,587,000 of which $596,936,000 was cash. As of June 30, 2013, the fair value of loaned securities was $2,394,222,000, which includes $1,802,924,000 of loaned securities which are collateralized by securities and irrevocable letters of credit that are not included in the Statements of Plan Net Position. The fair value of the associated collateral was $2,556,501,000 of which $615,159,000 was cash.

## 5. Derivative and Other Similar Investments

The System enters into a variety of financial contracts, which include options and futures. The System also enters into foreign exchange positions, such as forward and spot contracts to obtain or hedge foreign currency exposure; swap agreements to gain exposure to certain sectors of the equity and fixed income markets; collateralized mortgage obligations (CMOs); other forward contracts, and U.S. Treasury strips. The System is not a dealer, but an end-user of these instruments. The contracts are used primarily to enhance performance and reduce the volatility of the portfolio. The System is exposed to credit risk in the event of non-performance by counterparties to financial instruments. The System generally enters into transactions only with high quality institutions. Legal risk is mitigated through selection of executing brokers and review of all documentation. The System is exposed to market risk, the risk that future changes in market conditions may make an instrument less valuable. Exposure to market risk is managed in accordance with risk limits set by senior management, through buying or selling instruments or entering into offsetting positions.

The notional or contractual amounts of derivatives indicate the extent of the System's involvement in the various types and uses of derivative financial instruments and do not measure the System's exposure to credit or market risks and do not necessarily represent amounts exchanged by the parties. The amounts exchanged are determined by reference to the notional amounts and the other terms of the derivatives.

Futures contracts are contracts in which the buyer agrees to purchase and the seller agrees to make delivery of a specific financial instrument at a predetermined date and price. Gains and losses on futures contracts are settled daily based on a notional (underlying) principal value and do not

## Notes to Financial Statements (continued)

involve an actual transfer of the specific instrument. Futures contracts are standardized and are traded on exchanges. The exchange assumes the risk that a counterparty will not pay and generally requires margin payments to minimize such risk. In addition, the System enters into short sales, sales of securities it does not presently own, to neutralize the market risk of certain equity positions. Initial margin requirements on futures contracts and collateral for short sales are provided by investment securities pledged as collateral and by cash held by various brokers. Although the System has the right to access individual pledged securities, it must maintain the amount pledged by substituting other securities for those accessed. The value of securities pledged and the amount of cash held at June 30, 2014 and 2013 represent a restriction on the amount of assets available as of year-end for other purposes.

Option contracts provide the option purchaser with the right, but not the obligation, to buy or sell the underlying security at a set price during a period or at a specified date. The option writer is obligated to buy or sell the underlying security if the option purchaser chooses to exercise the option. The System generally uses exchange listed currency, index, stock, and futures options. The System held no option positions at June 30, 2014. The fair value of option contracts of $(76,000) at June 30, 2013 is included in the Statements of Plan Net Position.

Foreign exchange contracts involve an agreement to exchange the currency of one country for the currency of another country at an agreed-upon price and settlement date. To reduce the risk of counterparty non-performance, the investment managers generally enter into these contracts with institutions regarded as meeting high standards of credit worthiness. The contracts reported below primarily include forwards. The $5,644,996,000 of foreign currency contracts outstanding at June 30, 2014 consist of "buy" contracts, which represent the U.S. dollar equivalents of commitments to purchase foreign currencies of $1,465,116,000 and "sell" contracts, which represent U.S. dollar equivalents of commitments to sell foreign currencies of $4,179,880,000. The $1,834,065,000 of foreign currency contracts outstanding at June 30, 2013 consist of "buy" contracts of $718,075,000 and "sell" contracts of $1,115,990,000. The unrealized gain (loss) on contracts of $(32,195,000) and $1,920,000 at June 30, 2014 and 2013, respectively, is included in the Statements of Plan Net Position and represents the fair value of the contracts.

The table presented below summarizes the aggregate notional or contractual amounts for the System's derivative financial instruments at June 30, 2014 and 2013.

| | (Dollar Amounts in Thousands) | |
|---|---|---|
| | **2014** | 2013 |
| Futures contracts - long: | | |
| Treasury futures | **$ 1,724,904** | $ 631,594 |
| Eurodollar futures | **-** | 3,719 |
| U.S. equity futures | **605,732** | 556,477 |
| Non-U.S. equity futures | **748,268** | 238,147 |
| Commodity futures | **815,786** | 1,118,598 |
| Non-U.S. bond futures | **102,093** | 29,059 |
| Futures contracts - short: | | |
| Treasury futures | **105,342** | 147,528 |
| Eurodollar futures | **-** | 14,200 |
| U.S. equity futures | **94,272** | - |
| Commodity futures | **26,553** | 29,446 |
| Non-U.S. bond futures | **7,087** | 11,425 |
| Foreign exchange forward and spot contracts, gross | **5,644,996** | 1,834,065 |
| Options - calls purchased | **-** | 3,952 |
| Options - puts purchased | **-** | 23,684 |
| Options - puts sold | **-** | 27,792 |
| Swaps - total return type | **3,203,881** | 1,686,905 |

## Notes to Financial Statements (continued)

Swap agreements provide for periodic payments at predetermined future dates between parties based on the change in value of underlying securities, indexes, or interest rates. During the year ended June 30, 2014 and 2013, the System entered into total return type swaps. Under the total return type swap arrangements, the System receives the net return of certain equity securities or indexes in exchange for a short-term rate minus a spread or a predetermined fixed charge. The receivable (payable) on the total return type swap contracts of $87,881,000 and $(93,228,000) at June 30, 2014 and 2013, respectively, is included in the Statements of Plan Net Position and represents the fair value of the contracts. The contracts have varying maturity dates ranging from July 1, 2014 to July 2, 2015.

The System also invests in mortgage-backed securities (MBS) such as CMOs and MBS forwards to maximize yields. These securities are sensitive to prepayments of mortgages, which may result from a drop in interest rates. The MBS forwards are subject to credit risk in the event of nonperformance by counterparties. The fair value of CMOs at June 30, 2014 and 2013 is $990,794,000 and $1,318,695,000, respectively.

The System invests in U.S. Treasury strips which essentially act as zero coupon bonds and are subject to market volatility from a rise or drop in interest rates.

Through certain collective trust funds, the System also indirectly holds various derivative financial instruments. The collective trust funds invest in futures and options thereon; forward foreign currency contracts; options; interest rate, currency, equity, index, and total return swaps; interest-only strips; and CMOs, to enhance the performance and/or reduce the volatility of their portfolios.

The fair values of derivative instruments outstanding at June 30, 2014 and 2013 are classified by type and by the changes in fair value of the derivative instrument in the table below.

(Dollar Amounts in Thousands)

| | **Change in Fair Value Gain/(Loss) FY 2014** | | **Fair Value at June 30, 2014** | |
|---|---|---|---|---|
| **Investment Derivative Type** | **Classification** | **Amount** | **Classification** | **Amount** |
| Futures | Investment income | **$ 21,549** | Receivable/(Payable) | **$ 21,549** |
| Total return type swaps | Investment income | **87,881** | Receivable/(Payable) | **87,881** |
| Foreign exchange contracts | Investment income | **(32,195)** | Receivable/(Payable) | **(32,195)** |
| **Total** | | **$ 77,235** | | **$ 77,235** |

| | Change in Fair Value Gain/(Loss) FY 2013 | | Fair Value at June 30, 2013 | |
|---|---|---|---|---|
| **Investment Derivative Type** | Classification | Amount | Classification | Amount |
| Futures | Investment income | $ (93,969) | Receivable/(Payable) | $ (93,969) |
| Total return type swaps | Investment income | (93,228) | Receivable/(Payable) | (93,228) |
| Options | Investment income | (76) | Investment | (76) |
| Foreign exchange contracts | Investment income | 1,920 | Receivable/(Payable) | 1,920 |
| Total | | $ (185,353) | | $ (185,353) |

## Notes to Financial Statements (continued)

The following table summarizes the System's foreign exchange contracts by currency at June 30, 2014 and 2013:

**2014**

(Dollar Amounts in Thousands)

| Currency | Buys | Unrealized Gain/(Loss) | Sells | Unrealized Gain/(Loss) |
|---|---|---|---|---|
| British pound sterling | $ 487,597 | $ 3,772 | $ 438,568 | $ (7,071) |
| Japanese yen | 249,459 | 750 | 784,593 | (7,534) |
| Euro | 235,252 | 1,433 | 2,144,922 | (15,155) |
| Australian dollar | 194,925 | 1,508 | 255,045 | (4,251) |
| Canadian dollar | 128,865 | 1,836 | 215,908 | (3,933) |
| New Zealand dollar | 32,404 | 70 | 54,237 | (839) |
| Swedish krona | 28,814 | 86 | 25,512 | (56) |
| Norwegian krone | 24,614 | (417) | 17,420 | 456 |
| Swiss franc | 22,514 | (2) | 214,648 | (2,716) |
| Philippine dollar | 14,670 | 69 | 1,990 | (7) |
| Brazilian real | 8,287 | 38 | 10,875 | (130) |
| Polish zloty | 5,944 | 8 | 5,960 | (48) |
| Malaysian ringgit | 5,483 | 47 | 2,003 | 1 |
| Other non-US currencies | 26,288 | (101) | 8,199 | (9) |
| **Total** | **$ 1,465,116** | **$ 9,097** | **$ 4,179,880** | **$ (41,292)** |

**2013**

(Dollar Amounts in Thousands)

| Currency | Buys | Unrealized Gain/(Loss) | Sells | Unrealized Gain/(Loss) |
|---|---|---|---|---|
| Euro | $ 231,677 | $ (1,154) | $ 324,089 | $ 3,676 |
| Japanese yen | 121,855 | (900) | 177,071 | 671 |
| British pound sterling | 117,687 | (985) | 153,881 | 1,718 |
| Canadian dollar | 78,764 | (1,153) | 71,405 | 871 |
| Australian dollar | 59,836 | (1,862) | 262,798 | 1,889 |
| Swedish krona | 21,779 | (200) | 9,918 | 118 |
| Norwegian krone | 18,645 | (514) | 14,183 | 98 |
| New Zealand dollar | 18,031 | (547) | 16,367 | 236 |
| Philippine dollar | 14,675 | (683) | - | - |
| Swiss franc | 8,146 | 110 | 58,846 | 833 |
| Mexican new peso | 6,064 | (279) | 9,148 | (192) |
| Singapore dollar | 4,838 | (47) | 435 | (2) |
| Turkish lira | 3,398 | (73) | 3,099 | 56 |
| Other non-US currencies | 12,680 | 11 | 14,750 | 224 |
| **Total** | **$ 718,075** | **$ (8,276)** | **$ 1,115,990** | **$ 10,196** |

## Notes to Financial Statements (continued)

## 6. Net Pension Liability of Participating Employers

The components of the net pension liability of the participating employers at June 30, 2014 were as follows:

| (Dollar amounts in thousands) | | |
|---|---|---|
| Total pension liability | $ | 92,560,832 |
| Plan fiduciary net position | | (52,980,115) |
| Employer net pension liability | $ | 39,580,717 |
| Plan fiduciary net position as a percentage of the total pension liability | | 57.24% |

### *Actuarial Assumptions*

The total pension liability as of June 30, 2014 was determined by rolling forward the System's total pension liability as of June 30, 2013 to June 30, 2014 using the following actuarial assumptions, applied to all periods included in the measurement:

- Actuarial cost method - Entry Age Normal -level % of pay
- Investment return - 7.50%, includes inflation at 3.00%
- Salary increases - Effective average of 5.50%, which reflects an allowance for inflation of 3.00%, real wage growth of 1%, and merit or seniority increases of 1.50%
- Mortality rates were based on the RP-2000 Combined Healthy Annuitant Tables (male and female) with age set back 3 years for both males and females. For disabled annuitants the RP-2000 Combined Disabled Tables (male and female) with age set back 7 years for males and 3 years for females.

### *Investments*

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The pension plan's policy in regard to the allocation of invested plan assets is established and may be amended by the Board. Plan assets are managed with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension.

| Asset Class | Target Allocation | Long-Term Expected Real Rate of Return |
|---|---|---|
| Public markets global equity | 19% | 5.0% |
| Private markets (equity) | 21% | 6.5% |
| Private real estate | 13% | 4.7% |
| Global fixed income | 8% | 2.0% |
| U.S. long treasuries | 3% | 1.4% |
| TIPS | 12% | 1.2% |
| High yield bonds | 6% | 1.7% |
| Cash | 3% | 0.9% |
| Absolute return | 10% | 4.8% |
| Risk parity | 5% | 3.9% |
| MLPs/Infrastructure | 3% | 5.3% |
| Commodities | 6% | 3.3% |
| Financing (LIBOR) | (9%) | 1.1% |
| | 100% | |

The above was the Board's adopted asset allocation policy and best estimates of geometric real rates of return for each major asset class as of June 30, 2014.

For the year ended June 30, 2014, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 14.98%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

### *Discount Rate*

The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate and that contributions from employers will be made at contractually required rates, actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

### *Sensitivity of the Net Pension Liability*

The following presents the net pension liability, calculated using the discount rate of 7.50%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower (6.50%) or 1-percentage-point higher (8.50%) than the current rate:

## Notes to Financial Statements (continued)

(Dollar amounts in thousands)

| | 1% Decrease 6.50% | Current Discount Rate 7.50% | 1% Increase 8.50% |
|---|---|---|---|
| Net pension liability | $ 49,371,459 | $ 39,580,717 | $ 31,222,108 |

### 7. Pension Plan for Employees of the System

The System contributes to the Commonwealth's State Employees' Retirement System (SERS), a cost-sharing multiple-employer defined benefit pension plan. SERS provides retirement, death, and disability benefits to plan members and beneficiaries according to Commonwealth statute. SERS issues a publicly available financial report which can be downloaded from SERS' website at www.sers.state.pa.us.

The contribution requirements of plan members and the System are mandated by Commonwealth statute. Most SERS plan members are required to contribute 5%, 6.25%, or 9.37% of their annual covered payroll depending upon service class. The System is required to contribute at an actuarially determined rate.

The rates applied to annual covered payroll were 15.12% at June 30, 2014, 10.51% at June 30, 2013, and 6.99% at June 30, 2012. The System's contributions to SERS for the years ended June 30, 2014, 2013 and 2012 were $2,838,000, $2,375,000, and $1,363,000 respectively, which were equal to the required contributions each year.

### 8. Postemployment Healthcare Plan for Employees of the System

The System participates in the Commonwealth's Retired Employees Health Program (REHP). The REHP is a single-employer plan and provides certain healthcare benefits to qualifying individuals meeting specified age and/or service requirements. The Commonwealth's Office of Administration (OA), in its sole discretion, determines available REHP benefits on an ongoing basis. The Pennsylvania Employees Benefit Trust Fund (PEBTF) is a third-party administrator for the REHP under the provisions of an Administration Agreement between OA and PEBTF.

Employer costs for retiree healthcare benefits are charged as a component of payroll expenditures on a 'pay-as-you-go' basis. REHP funding is arranged between OA and the Governor's Budget Office. FY 2014 employer costs were charged at the rate of $305/employee/bi-weekly pay period. Plan members who retired after June 30, 2005 contribute to the plan based on a percentage of their final annual gross base salary at the time of retirement. Plan member contribution rates vary based on their REHP enrollment date.

In September 2013, the Commonwealth released an Actuarial Valuation of its Post-Retirement Medical Plan with calculations made as of July 1, 2013 using census data collected as of December 2012 and health care claims costs for calendar 2012. This valuation provided Other Postemployment Benefits (OPEB) reporting that was used for both FY 2012 and FY 2013. For FY 2013, the valuation indicated overall Annual OPEB Cost (AOC) of $869.1 million with the System's allocated AOC of $4.0 million. Based on the aggregate REHP qualifying contributions for FY 2013, the net OPEB liability for the System was $1.2 million for that fiscal year. For FY 2014, the valuation indicated overall AOC of $898.3 million with the System's allocated AOC of $4.1 million. Based on the aggregate REHP qualifying contributions for FY 2014, the net OPEB liability for the System was $0.9 million for that fiscal year. The ARC/AOCs and OPEB for fiscal years 2014, 2013, and 2012 are illustrated in the following table:

(Dollar Amounts in Thousands)

| Fiscal Year | Commonwealth ARC/AOC | PSERS' ARC/AOC | PSERS' Net OPEB |
|---|---|---|---|
| 2014 | $ 898,330 | $ 4,099 | $ 948 |
| 2013 | 869,100 | 3,966 | 1,166 |
| 2012 | 870,200 | 3,133 | 871 |

### 9. Litigation and Contingencies

The System is subject to various threatened and pending lawsuits. These lawsuits include issues related to benefit calculations and eligibility. It is the opinion of management that the ultimate liability arising from such threatened and pending litigation will not have a material effect on the financial position of the System. The System is exposed to various other liabilities and risks related to fiduciary responsibilities of directors and officers.

### 10. Commitments

As of June 30, 2014, PSERS had commitments for the future purchase of investments in alternative investments of $6.8 billion and real estate of $2.1 billion.

### 11. Subsequent Events

The System has performed an evaluation of subsequent events through September 16, 2014, the date the basic financial statements were available to be issued. No material events were identified by the System.

## Required Supplementary Schedule 1
## Schedule of Changes in the Employer Net Pension Liability
## (Unaudited – See Accompanying Auditor's Report)
(Dollar Amounts in Thousands)

| | 2014 |
|---|---|
| Total pension liability | |
| Service cost | $ 2,139,037 |
| Interest | 6,523,484 |
| Changes of benefit terms | - |
| Differences between expected and actual experience | - |
| Changes of assumptions | - |
| Benefit payments | (6,053,505) |
| Net change in total pension liability | 2,609,016 |
| Total pension liability - beginning | 89,951,816 |
| Total pension liability - ending (a) | $ 92,560,832 |
| Plan fiduciary net position | |
| Contributions - employer | $ 1,992,084 |
| Contributions - member | 966,926 |
| Net investment income | 7,097,761 |
| Benefit payments | (6,053,505) |
| Administrative expense | (38,712) |
| Other | - |
| Net Change in plan fiduciary net position | 3,964,554 |
| Plan fiduciary net position - beginning | 49,015,561 |
| Plan fiduciary net position - ending (b) | $ 52,980,115 |
| Employer net pension liability - ending (a) - (b) | $ 39,580,717 |

## Required Supplementary Schedule 2
## Schedule of Employer Net Pension Liability
## (Unaudited – See Accompanying Auditor's Report)
(Dollar Amounts in Thousands)

| | 2014 |
|---|---|
| Total pension liability | $ 92,560,832 |
| Plan fiduciary net position | (52,980,115) |
| Employer net pension liability | $ 39,580,717 |
| Plan fiduciary net position as a percentage of the total pension liability | 57.24% |
| Covered-employee payroll | $ 12,760,785 |
| Employer net pension liability as a percentage of covered-employee payroll | 310.17% |

## Required Supplementary Schedule 3
## Schedule of Employer Contributions
## (Unaudited – See Accompanying Auditor's Report)
(Dollar Amounts in Thousands)

**Pension**

| | 2014 |
|---|---|
| Actuarially determined contribution | $ 2,965,715 |
| Contractually required contribution | 1,992,084 |
| Contributions in relation to the actuarially determined contribution | 1,992,084 |
| Contribution deficiency | $ 973,631 |
| Covered-employee payroll | $ 12,760,785 |
| Contributions as a percentage of covered-employee payroll | 15.61% |

**Premium Assistance**

| Year Ended June 30 | Annual Required Contributions | Actual Employer Contributions | Percentage Contributed |
|---|---|---|---|
| 2014 | $ 121,260 | $ 117,471 | 97% |
| 2013 | 113,016 | 107,993 | 96% |
| 2012 | 102,104 | 80,936 | 79% |

## Required Supplementary Schedule 4
## Schedule of Investment Returns
## (Unaudited – See Accompanying Auditor's Report)

| | 2014 |
|---|---|
| Annual money-weighted rate of return, net of investment expense | 14.98% |

## Required Supplementary Schedule 5
## Schedule of Funding Progress*
## (Unaudited – See Accompanying Auditor's Report)
(Dollar Amounts in Millions)

**Premium Assistance**

| Valuation as of June 30 | (1) Actuarial Accrued Liabilities (AAL) | (2) Actuarial Value of Assets | (3) Unfunded Actuarial Accrued Liabilities UAAL (1) - (2) | (4) Ratio of Assets to AAL (2) / (1) | (5) Annualized Salaries | (6) UAAL as a Percentage of Covered Payroll (3) / (5) |
|---|---|---|---|---|---|---|
| 2013 | $ 1,385.0 | $ 100.3 | $ 1,284.7 | 7.2% | $ 12,577.1 | 10.2% |
| 2012 | 1,364.7 | 93.8 | 1,270.9 | 6.9% | 12,714.4 | 10.0% |
| 2011 | 1,339.4 | 111.3 | 1,228.2 | 8.3% | 12,910.0 | 9.5% |
| 2010 | 1,162.2 | 116.8 | 1,045.4 | 10.1% | 12,788.8 | 8.2% |

* The amounts reported above in the Schedule of Funding Progress do not include assets or liabilities for the HOP.

# Notes to Required Supplementary Information for the Year Ended June 30, 2014

***Changes in benefit terms***

None

***Changes in assumptions***

None

***Method and assumptions used in calculations of actuarially determined contributions***

The actuarially determined contributions are calculated as of the June 30 preceding the fiscal year in which contributions are made. That is, the contribution calculated as of the June 30, 2013 actuarial valuation will be made during the fiscal year ended June 30, 2015. The following actuarial methods and assumptions were used to determine contribution rates reported in that schedule:

- Investment return - 7.50%, includes inflation at 3.00%
- Salary increases - Effective average of 5.50%, which reflects an allowance for inflation of 3.00%, real wage growth of 1%, and merit or seniority increases of 1.50%
- Benefit payments - no postretirement benefit increases assumed in the future
- Multiple decrement tables - mortality, vesting, retirement age, and withdrawal estimates are based upon tables provided by the actuary

## Supplementary Schedule 1
## Schedule of Operating Expenses
## Year Ended June 30, 2014
(Dollar Amounts in Thousands)

| | Administrative Expenses (1) | Investment Expenses (2) | Total |
|---|---|---|---|
| **Personnel costs:** | | | |
| Salaries and wages | $ 14,765 | $ 4,285 | **$ 19,050** |
| Social security contributions | 1,115 | 254 | **1,369** |
| Retirement contributions | 2,220 | 649 | **2,869** |
| Employees' insurance contributions | 5,342 | 651 | **5,993** |
| Other employee benefits | 213 | 124 | **337** |
| **Total personnel costs** | 23,655 | 5,963 | **29,618** |
| **Operating costs:** | | | |
| Investment managers' fees | - | 463,400 | **463,400** |
| Custodian fees | - | 1,221 | **1,221** |
| Specialized services | 28,060 | 3,737 | **31,797** |
| Rental of real estate, electricity | 2,036 | 220 | **2,256** |
| Consultant and legal fees | 1,544 | 5,279 | **6,823** |
| Treasury and other Commonwealth services | 1,504 | 199 | **1,703** |
| Postage | 1,350 | - | **1,350** |
| Contracted maintenance and repair services | 1,147 | - | **1,147** |
| Office supplies | 168 | 8 | **176** |
| Rental of equipment and software | 3,819 | 442 | **4,261** |
| Printing | 199 | - | **199** |
| Travel and training | 154 | 23 | **177** |
| Telecommunications | 449 | - | **449** |
| Equipment (non-capital assets) | 113 | - | **113** |
| Miscellaneous expenses | 566 | 1,744 | **2,310** |
| **Total operating costs** | 41,109 | 476,273 | **517,382** |
| **Other charges:** | | | |
| Depreciation | 1,953 | - | **1,953** |
| **Total other charges** | 1,953 | - | **1,953** |
| **Total operating expenses** | $ 66,717 | $ 482,236 | **$ 548,953** |

(1)Includes administrative expenses of $2,030 related to Postemployment Healthcare Premium Assistance and $25,975 related to Postemployment Healthcare Health Options Program for the fiscal year ended June 30, 2014.

(2)Includes investment expenses of $95 related to Postemployment Healthcare Premium Assistance for fiscal year ended June 30, 2014 and does not include $7,948 in capitalized broker commissions for the fiscal year ended June 30, 2014.

## Supplementary Schedule 2
## Summary of Investment Expenses*
## Year Ended June 30, 2014
(Dollar Amounts in Thousands)

| | | Fees |
|---|---|---|
| **External management:** | | |
| Domestic equity | $ | 3,051 |
| International equity | | 18,392 |
| Fixed income | | 81,835 |
| Real estate | | 73,926 |
| Alternative investments | | 116,951 |
| Absolute return | | 140,523 |
| Commodities | | 11,334 |
| Master limited partnership | | 11,133 |
| Risk parity | | 6,255 |
| **Total external management** | | **463,400** |
| **Total internal management** | | **12,336** |
| **Total investment management** | | **475,736** |
| Custodian fees | | 1,221 |
| Consultant and legal fees | | 5,279 |
| **Total investment expenses** | **$** | **482,236** |

* External management fees classified on an asset allocation basis

## Supplementary Schedule 3
## Schedule of Payments to Non-Investment Consultants
## Year Ended June 30, 2014
(Dollar Amounts Greater than $100,000)

| Consultant | Fees | Services Provided |
|---|---|---|
| CoreSource Inc. | $ 17,827,860 | Postemployment healthcare benefits administration and claims adjudication |
| ViTech Systems Group Inc. | 5,852,332 | Pension administration system services |
| Rx Solutions, Inc. | 4,548,820 | Administration of postemployment healthcare benefits and prescription drug plan |
| The Segal Company, Inc. | 2,579,589 | Actuarial services and consulting for HOP and prescription drug plan |
| Independent Pharmaceutical Consultants, Inc. | 513,149 | Pharmacy benefit consulting services |
| Buck Consultants LLC | 378,286 | Pension benefit actuarial services |

# Supplementary Schedule 4
# Schedule of Employer Contributions
# (Unaudited – See Accompanying Auditor's Report)
(Dollar Amounts in Thousands)

**Pension**

| Year Ended June 30 | Annual Required Contributions | Actual Employer Contributions | Percentage Contributed |
|---|---|---|---|
| 2014 | $ 3,410,373 | $ 1,986,384 | 58% |
| 2013 | 3,110,429 | 1,434,815 | 46% |
| 2012 | 2,629,244 | 1,001,140 | 38% |
| 2011 | 2,436,602 | 646,560 | 27% |
| 2010 | 1,928,278 | 527,212 | 27% |
| 2009 | 1,761,295 | 503,227 | 29% |

The schedule above and information below is not required by current GASB standards. PSERS is voluntarily providing this supplemental information for historical perspective as PSERS transitions to GASB Statement No. 67.

The Board adopted all contribution rates as recommended by the Board's actuary pursuant to the prevailing provisions of the Retirement Code for each year, with the exception of the year ended June 30, 2011. Act 46 required the Board to recertify the employer contribution rate from 8.22% to 5.64%, allocating 5% to the pension component and .64% to the premium assistance component.

## Funding Status and Annual Required Contributions (ARC)

As of June 30, 2013, the most recent actuarial valuation, the plan was 63.8% funded. The actuarial accrued liability for pension benefits was $90.0 billion, and the actuarial value of pension assets was $57.4 billion, resulting in an unfunded accrued liability of $32.6 billion. The covered payroll of active members was $12.6 billion and the ratio of the unfunded actuarial accrued liability to the covered payroll was 259.2%.

For fiscal year ended June 30, 2014, the ARC was $3.4 billion. The actual employer contributions, net of purchase of service contributions, for fiscal year ended June 30, 2014 was $2.0 billion resulting in a 58% contributed rate.

The Schedule of Funding Progress and the Schedule of Employer Contributions included as Required Supplementary Information following the notes to the financial statements provide multiyear presentations of funding status and ARC to illustrate their trends over time.

## Actuarial Assumptions and Methods

### (A) Funding Method

For purposes of determining pension contributions under the PSERS Code, the entry-age normal actuarial cost method is used in determining benefit liabilities and normal cost. Act 120 modified the funding method. The outstanding balance of the unfunded accrued liability as of June 30, 2010 was re-amortized over a 24-year period with amortization payments based on level percentage of pay. Future valuation experience gains or losses, and changes in the unfunded accrued liability resulting from changes in actuarial assumptions and methods, are amortized over a 24-year period as a level percent of pay. Future increases in accrued liability enacted by legislation after June 30, 2010 will be funded over a 10-year period as a level percent of pay.

### (B) Asset Valuation Method

For actuarial purposes, Act 120 extended the asset smoothing from five years to ten years. Assets are valued using a ten-year moving market average value that will recognize the actuarial expected investment return immediately and spread the difference between actual and expected investment return beginning with fiscal year ended June 30, 2010 over a period of ten years (the averaging period is being phased-in from fiscal year 2006). Previously, PSERS recognized the actuarial expected return immediately and spread the difference between actual and expected investment return over a period of five years.

### (C) Actuarial Assumptions

Significant actuarial assumptions employed by the actuary for funding purposes as of June 30, 2013, the date of the most recent actuarial valuation, include:

- Investment return - 7.50%, includes inflation at 3.00%
- Salary increases - Effective average of 5.50%, which reflects an allowance for inflation of 3.00%, real wage growth of 1%, and merit or seniority increases of 1.50%
- Benefit payments - no postretirement benefit increases assumed in the future
- Multiple decrement tables - mortality, vesting, retirement age, and withdrawal estimates are based upon tables provided by the actuary

The System's actuarial liabilities are calculated separately for retirees and beneficiaries and for active and inactive members. The actuarial present value of benefits to be paid to retirees and beneficiaries currently receiving benefits and deferred survivor beneficiaries, whose benefits have been determined, is calculated using the assumptions noted above. The Annuity Reserve Account with interest credited thereon at an annual rate of 5.50% is compared to the actuarial accrued liability for the remaining lifetimes of the retirees and beneficiaries and any deficiency is then funded by a transfer from the State Accumulation Account.

The actuarial accrued liability for active and inactive members is calculated on the projected benefit basis using the entry-age normal actuarial cost method under which the present value of each member's expected benefit payable at retirement or death is determined. The assets of the Members' Savings Account, State Accumulation Account and the fair value adjustment are subtracted from this present value to arrive at the funded or unfunded actuarial accrued liability.