**COMMONWEALTH OF PENNSYLVANIA**
**DEFERRED COMPENSATION PROGRAM**

Financial Statements
with Required Supplementary Information

December 31, 2015 and 2014

(With Independent Auditors' Report Thereon)

**COMMONWEALTH OF PENNSYLVANIA**
**DEFERRED COMPENSATION PROGRAM**

## Table of Contents

**KPMG LLP**
Suite 1000
30 North Third Street
PO Box 1190
Harrisburg, PA 17108-1190

# Independent Auditors' Report

The Members of the Board
Commonwealth of Pennsylvania
Deferred Compensation Program:

We have audited the accompanying financial statements of the Commonwealth of Pennsylvania Deferred Compensation Program (DCP) as of and for the years ended December 31, 2015 and 2014, and the related notes to the financial statements, which collectively comprise DCP's basic financial statements as listed in the table of contents.

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

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; 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.

## *Auditors' Responsibility*

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

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

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

## *Opinion*

In our opinion, the financial statements referred to above present fairly, in all material respects, the net position available for benefits of Deferred Compensation Program as of December 31, 2015 and 2014, and the changes in its net position available for benefits for the years then ended in accordance with U.S. generally accepted accounting principles.

***Other Matters***

*Required Supplemental Information*

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 3–5 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 sufficient evidence to express an opinion or provide any assurance.

KPMG LLP

Harrisburg, Pennsylvania
May 20, 2016

**COMMONWEALTH OF PENNSYLVANIA**
**DEFERRED COMPENSATION PROGRAM**

Management's Discussion and Analysis

December 31, 2015 and 2014

(Unaudited)

This section presents management's discussion and analysis of the Commonwealth of Pennsylvania Deferred Compensation Program's (DCP) financial statements and the significant events and conditions that affected the operations and performance of DCP during the years ended December 31, 2015, 2014, and 2013.

## Overview of the Financial Statements

1. **Financial Statements**. The DCP presents Statements of Net Position Available for Benefits as of December 31, 2015 and 2014 and Statements of Changes in Net Position Available for Benefits for the years then ended. These statements reflect resources available for the payment of benefits as of year end, and the sources and uses of those funds during the year.

2. **Notes to Financial Statements**. The notes to financial statements are an integral part of the financial statements and provide additional detailed information to provide a better understanding of the financial statements. The notes discuss, among other things, DCP organization, contributions, and how asset values are determined.

## Background

The Pennsylvania State Employees' Retirement Board (SERB) is the trustee for the DCP, an Internal Revenue Code (IRC) Section 457(b) retirement plan for eligible government employees and officers. The DCP is a voluntary tax-deferred supplemental retirement plan. The participants may direct their deferrals among 11 investment options. A Third Party Administrator (TPA) maintains individual participant records. Investment advisors selected by the SERB manage the DCP investment options. The DCP began accepting initial deferrals in 1988.

The investments are composed of primarily three core equity index funds – Stock Index Fund that is a Standard & Poor's (S&P) 500 index of large-cap companies, an Extended Market Fund that is an index of domestic mid- and small-cap companies, and an European; Australian; and Far East markets (EAFE) Equity Index Fund. The DCP also offers an Aggregate Bond Index Fund, a Stable Value Fund (actively managed bond fund with an insurance contract that, through a crediting formula, smoothes the portfolio returns by providing a 'stable' quarterly rate), a Short Term Money Market Fund, and Self-Directed Brokerage Accounts. Three 'Profile Funds' are also available to the participants. These funds are composed of a mix of the equity, cash, and bond core index funds, tailored to a participant's risk profile that allows them to invest in a conservative, moderate, or aggressive portfolio. The DCP also offers a 60/40 Balanced Fund, which uses a mix of the Stock Index and the Aggregate Bond Index Funds. These portfolios are automatically rebalanced each quarter by the TPA.

## Net Position Available for Benefits

Plan net position was $2.98 billion and $2.96 billion as of December 31, 2015 and 2014, respectively, which was an increase of approximately $24.3 million. In 2013, plan net position was $2.76 billion. Of the three asset classes of equities, bonds, and cash, 48.6% of the net plan position was invested in the three core equity funds (large-cap; mid- and small-cap; and international equities) at year end 2015. At the end of 2014, those same investment funds accounted for 49.1% of the plan net position available for benefits. The fixed income portfolios, Aggregate Bond and Stable Value Fund, accounted for 46.0% and 45.7% of plan net position in 2015 and 2014, respectively. The Short Term Money Market Fund accounted for 1.9% and 1.8% of the plan net position available for benefits in 2015 and 2014, respectively.

### Contributions and Investment Income

Contributions experienced an increase to $135.3 million in 2015 from approximately $129.5 million in 2014. Contributions were $127.0 million in 2013.

Net investment income in 2015 was $11.2 million as compared to $188.2 million in 2014. Net investment income was $315.0 million in 2013. The decrease in net investment income in 2015 is attributed primarily to the lower returns across most funds. The decrease in net investment income in 2014 was attributed primarily to the lower broad market equity returns as the S&P 500 and MSCI EAFE returned 13.7% and -4.5%, respectively, versus returns of 32.4% and 23.3%, respectively, in 2013.

### Program Benefits and Expenses

Benefits paid to participants increased to $82.4 million in 2015 from $74.5 million in 2014. Benefits paid to participants in 2013 were $67.7 million. The election to select a payment is voluntary up to age 70½ and is dependent upon the participant's separation from service. The DCP offers a variety of payout methods. A vast majority of participants select a periodic payment either annually, semi-annually, quarterly, or monthly. The number of participants receiving payments increased to 7,287 for 2015 from 6,920 in 2014. The number of participants receiving payments in 2013 was 6,442. A 457(b) plan is permitted to accept rollovers from other retirement plans, and to permit rollovers out of the DCP into Individual Retirement Accounts (IRAs), 401(k) plans, or other qualified plans. Net rollovers out of the DCP decreased to $35.9 million in 2015 from $42.8 million in 2014. In 2013, net rollovers out of the DCP were $39.2 million.

Plan participants are responsible for all DCP fees. The TPA expenses were $3.8 million in 2015 and $3.5 million in 2014. In 2013, these expenses were $3.1 million. A large portion of the fee is based on a percentage of plan assets, as the plan asset base changes, a corresponding change to the fees occurs.

### Roth 457(b) Provision

The Small Business Jobs Act of 2010 was signed into law on September 27, 2010. It includes a provision to allow those participating in 457(b) plans to contribute through a Roth option. Those who contribute using the Roth option do not receive a reduction of their current taxable income for a contribution to the plan, but they do earn returns within the plan tax-free and the withdrawals from the plan are tax-free. The SERB passed a motion in 2010 to allow the DCP to implement a Roth 457(b) provision. The DCP began accepting Roth contributions in 2012. In 2014, the SERB passed a motion to allow for in-plan Roth conversions while a participant is still actively employed by the Commonwealth of Pennsylvania (commonwealth). This allows participants to convert their traditional pre-tax contributions to Roth contributions. The participant is responsible for paying the taxes on the converted funds with monies outside of the plan. This provision became effective starting in 2015.



(Continued)

**COMMONWEALTH OF PENNSYLVANIA**
**DEFERRED COMPENSATION PROGRAM**

Management’s Discussion and Analysis

December 31, 2015 and 2014

(Unaudited)

**DEFERRED COMPENSATION PROGRAM**

**Condensed Financial Information**

($ millions)

| | 2015 | Increase (decrease) | 2014 | Increase (decrease) | 2013 |
|---|---|---|---|---|---|
| Net position: | | | | | |
| Assets: | | | | | |
| Total receivables | $ 7 | $ 1 | $ 6 | $ 1 | $ 5 |
| Total investments | 2,979 | 23 | 2,956 | 196 | 2,760 |
| Securities lending collateral pool | 3 | 3 | — | (10) | 10 |
| Total assets | 2,989 | 27 | 2,962 | 187 | 2,775 |
| Liabilities: | | | | | |
| Total payables | 2 | — | 2 | 1 | 1 |
| Obligations under securities lending | 3 | 3 | — | (10) | 10 |
| Total liabilities | 5 | 3 | 2 | (9) | 11 |
| Total net position | $ 2,984 | $ 24 | $ 2,960 | $ 196 | $ 2,764 |
| Changes in net position: | | | | | |
| Additions: | | | | | |
| Net investment income | $ 11 | $ (177) | $ 188 | $ (127) | $ 315 |
| Contributions | 135 | 6 | 129 | 2 | 127 |
| Total additions | 146 | (171) | 317 | (125) | 442 |
| Deductions: | | | | | |
| Benefit payments | 82 | 7 | 75 | 7 | 68 |
| Plan transfers | 36 | (7) | 43 | 4 | 39 |
| Third party and administrative expenses | 4 | 1 | 3 | — | 3 |
| Total deductions | 122 | 1 | 121 | 11 | 110 |
| Increase in net position | $ 24 | $ (172) | $ 196 | $ (136) | $ 332 |

## BASIC FINANCIAL STATEMENTS

**COMMONWEALTH OF PENNSYLVANIA**
**DEFERRED COMPENSATION PROGRAM**

Statements of Net Position Available for Benefits

December 31, 2015 and 2014

($ thousands)

| | 2015 | 2014 |
|---|---|---|
| Assets: | | |
| Receivables: | | |
| Contributions receivable | $ 6,859 | $ 5,519 |
| Accrued investment income receivables | 27 | 11 |
| Other receivables | 431 | 39 |
| Total receivables | 7,317 | 5,569 |
| Investments: | | |
| Cash and temporary investments | 5,390 | 5,637 |
| Short term money market fund | 57,973 | 54,753 |
| Aggregate bond index fund | 306,175 | 298,858 |
| Stock index fund | 973,524 | 964,502 |
| Extended market fund | 323,324 | 339,999 |
| EAFE equity index fund | 154,713 | 150,181 |
| Stable value fund | 1,068,012 | 1,053,533 |
| Group annuity contract | 1,337 | 1,533 |
| Self-directed brokerage accounts | 88,574 | 87,459 |
| Total investments | 2,979,022 | 2,956,455 |
| Securities lending collateral pool | 2,512 | 81 |
| Total assets | 2,988,851 | 2,962,105 |
| Liabilities: | | |
| Payables: | | |
| Participant payables | 228 | 187 |
| Fees payable and accrued expenses | 1,624 | 1,561 |
| Other payables | 136 | 145 |
| Total payables | 1,988 | 1,893 |
| Obligations under securities lending | 2,512 | 81 |
| Total liabilities | 4,500 | 1,974 |
| Net position available for benefits | $ 2,984,351 | $ 2,960,131 |

See accompanying notes to financial statements.

**COMMONWEALTH OF PENNSYLVANIA**
**DEFERRED COMPENSATION PROGRAM**

Statements of Changes in Net Position Available for Benefits

Years ended December 31, 2015 and 2014

($ thousands)

| | 2015 | 2014 |
|---|---|---|
| Additions: | | |
| Investment income: | | |
| From investing activities: | | |
| Net (depreciation)/appreciation in fair value of investments | $ (10,562) | $ 161,907 |
| Interest | 25,421 | 29,453 |
| Total investing activities income | 14,859 | 191,360 |
| Less investment expenses | 3,659 | 3,476 |
| Net income from investing activities | 11,200 | 187,884 |
| From securities lending activities: | | |
| Securities lending income | 38 | 333 |
| Securities lending expense | (2) | (1) |
| Net income from securities lending activities | 36 | 332 |
| Net investment income | 11,236 | 188,216 |
| Contributions from participants | 135,272 | 129,472 |
| Total additions | 146,508 | 317,688 |
| Deductions: | | |
| Benefits and refunds to participants | 82,390 | 74,547 |
| Transfers to other plans | 35,869 | 42,773 |
| Third party expenses | 3,753 | 3,463 |
| Administrative expenses | 276 | 281 |
| Total deductions | 122,288 | 121,064 |
| Increase in net position | 24,220 | 196,624 |
| Net position available for benefits, beginning of year | 2,960,131 | 2,763,507 |
| Net position available for benefits, end of year | $ 2,984,351 | $ 2,960,131 |

See accompanying notes to financial statements.

## (1) Organization and Description of the Plan

### *(a) Program Summary*

The following description of the Commonwealth of Pennsylvania Deferred Compensation Program (DCP) provides only general information. Participants should refer to the Plan Document for a more complete description of the DCP provisions.

The DCP was established by the Commonwealth of Pennsylvania General Assembly on November 6, 1987, through Act 81 and in accordance with Section 457(b) of the IRC of 1986, as amended. Under the DCP provisions, eligible employees of the commonwealth may voluntarily elect to contribute a portion of their compensation into the DCP through payroll deductions. The commonwealth does not make any contributions to the DCP. The DCP is included in the commonwealth's financial reporting entity and in the financial statements as a pension trust fund.

### *(b) Contributions*

Under the DCP provisions, eligible employees may contribute to the DCP through payroll deductions. In accordance with Section 457(b) of the IRC, the amount of an individual's annual contributions for 2015 was limited to an amount not to exceed the lesser of $18,000 or 100% of the individual's gross compensation. In 2014, the annual contribution level was $17,500. Individuals age 50 or over may make an additional "catch-up" contribution. In 2015, the additional "catch-up" contribution was $6,000. In 2014, the "catch-up" contribution was $5,500. Special catch-up is allowed for previously missed contributions for participants within three years of normal retirement age. In 2015 and 2014, the deferral limit for special catch-up was $36,000 and $35,000, respectively. Contributions can be made to the DCP using either the before-tax method in which amounts are deferred for federal income tax purposes or the Roth option in which contributions are made on an after-tax basis.

Contributions receivable represent amounts withheld from employees' pay but not remitted to the investment managers at December 31. Contributions are credited by the applicable investment managers upon receipt from the commonwealth.

### *(c) Participant Accounts*

Participants electing to contribute to the DCP have the option of investing their contributions in any of the following core investments:

- *Short Term Money Market Fund*, which invests in a variety of securities including those issued by the U.S. Treasury, agency securities, short-term corporate debt instruments such as commercial paper, repurchase agreements, and certificates of deposit, is managed by the Commonwealth of Pennsylvania State Treasury Department (Treasury Department).
- *Aggregate Bond Index Fund*, which is a collective investment fund that invests in investment grade corporate and government issues, mortgage-backed securities, asset-backed securities, and commercial mortgage-backed securities, is managed by Mellon Capital Management Corporation (MCM).

- *Stock Index Fund*, which is a collective investment fund that invests in publicly traded common stocks included in the S&P 500 Index, is managed by MCM.
- *Extended Market Fund*, which is a collective investment fund that invests in medium and small capitalization components of the U.S. equity market (primarily the portion not covered by the S&P 500 Index), is managed by MCM.
- *EAFE Equity Index Fund*, which is a collective investment fund that invests in international stocks in the European, Australian, and Far East markets, is managed by MCM.
- *Stable Value Fund*, which is comprised of two investment accounts, is managed by separate investment advisors. An active bond account is managed by Weaver C. Barksdale & Associates. The return on the active bond account is insured through a contract with Monumental Life Insurance Company. This contract insures a crediting rate on the active bond account as determined by a formula established by the insurer. This crediting rate is adjusted quarterly, based on the actual returns of the active bond account. A temporary investment account is managed by the Treasury Department and contains short-term securities, which are purchased when payments or pay downs are received for the active bond account investments.

In addition to the core investments, the DCP also offers the following:

- *Aggressive Portfolio Fund*, which is a blend of the core investments, consists of 48% in the Stock Index Fund, 20% in the Aggregate Bond Index Fund, 20% in the EAFE Equity Index Fund, and 12% in the Extended Market Fund.
- *Moderate Portfolio Fund*, which is a blend of the core investments, consists of 40% in the Aggregate Bond Index Fund, 36% in the Stock Index Fund, 15% in the EAFE Equity Index Fund, and 9% in the Extended Market Fund.
- *Conservative Portfolio Fund*, which is a blend of the core investments, consists of 50% in the Aggregate Bond Index Fund, 20% in the Short Term Money Market Fund, 17% in the Stock Index Fund, 8% in the EAFE Equity Index Fund, and 5% in the Extended Market Fund.
- *60/40 Balanced Fund*, which is a blend of the core investments, consists of 60% in the Stock Index Fund and 40% in the Aggregate Bond Index Fund.
- *Self-Directed Brokerage Accounts*, which is a mutual fund window whereby a participant may choose to invest in a variety of mutual funds offered through the Charles Schwab Corporation.

Investment income includes the realized and unrealized gains/losses and interest for each of the funds. These funds do not distribute dividends to shareholders. Earnings and dividends on securities held are reinvested. Purchases and sales of securities are recorded on a trade-date basis.

The Pennsylvania State Employees’ Retirement System provides certain management and administrative services to the DCP on an ongoing basis. During 2015 and 2014, the DCP paid approximately $276,000 and approximately $281,000 for those services, respectively. The DCP receives $275,000 annually from the TPA to cover these costs, which is a reduction of third party expenses.

### *(d) Payment of Benefits*

Participants may withdraw the current value of funds contributed to the DCP upon termination of employment, death, disability, retirement, or approved unforeseeable emergencies within DCP guidelines. Accounts that have no activity in a two year period and a balance under $5,000 may also be voluntarily distributed.

Upon retirement or termination of service, participants may elect various payout options including lump sum, equal annual payments, or elect to defer receipt of funds until some future date. Minimum distributions as required by Internal Revenue Service (IRS) guidelines must commence no later than age 70½ including the Roth option. Rollovers to other qualified retirement plans or IRAs are permitted. All investments are for the exclusive benefit of participants and their beneficiaries.

Upon a participant's death, with certain exceptions, any amount due under the participant's account is paid to the beneficiary or the estate. Distributions to participants are recorded at the time withdrawals are made from participant accounts.

## (2) Summary of Significant Accounting Policies

### *(a) Basis of Accounting in Preparing Financial Statements*

The financial statements of the DCP are prepared on the accrual basis of accounting under which deductions are recorded when the liability is incurred, additions 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.

### *(b) Use of Estimates*

Management of the DCP has made certain estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of contingent assets and liabilities to prepare these financial statements in conformity with accounting principles generally accepted in the United States of America. Actual results could differ from those estimates.

### *(c) Valuation of Investments*

The Short Term Money Market Fund and temporary investment portion of the Stable Value Fund are valued at cost, which approximates fair value. The Aggregate Bond Index, Stock Index, Extended Market, EAFE Equity Index, Stable Value Fund – Active Bond Account, and Self-Directed Brokerage Accounts are valued based on quoted redemption values, which represent fair value, on the last business day of the calendar year.

The group annuity contract, which is no longer offered to participants as an investment option is valued at contract value, which approximates fair value. Contract value for the group annuity contract represents contributions made under the contract, plus earnings, less payments made to retirees and terminated participants.



(Continued)

## (3) Agreement with Program Administrator

Effective with the agreement dated July 1, 2013, the SERB reappointed Great-West Life & Annuity Insurance Company (Great-West) as the DCP TPA for a term of four years, with the option to renew for one year. Today, Empower Retirement is the brand name for the company's retirement services division, and Great-West Financial is the brand for its insurance, annuity, and investment businesses. Great-West receives the following compensation for program administration services:

- Program administration charge – A $24.00 annual fee is charged to each participant in the DCP for record-keeping services. The full fee is due to Great-West. This charge is assessed monthly.
- Program asset fee – This charge is assessed monthly on the value of all accounts in the DCP. The fee varies depending on the type of investment. The fee ranges from 0.07% to 0.395%. This includes 0.07% payable to Great-West for TPA services and manager fees ranging from 0.00% to 0.325%. The program asset fee is assessed against the account of each participant proportionately according to the value of each individual account.
- Investment advice fee – Great-West, through a subsidiary Advised Assets Group LLC, provides participants with online advisory tools and services based upon the level of involvement desired in managing their accounts. Guidance is offered at no additional cost. Advice is offered for an annual fee of $25.00. All advice fees are assessed quarterly. Managed accounts provide ongoing professional asset management at the individual participant level. Plan participants receive a personalized and strategically designed retirement portfolio that is automatically managed quarterly. The managed account fee structure is asset based and ranges from 0.30% to 0.60% based on the participant account balance.

## (4) Investments

The DCP core investments are managed by three fund managers. At December 31, 2015 and 2014, one fund manager, MCM, managed approximately 59.0% and 59.3%, respectively, of the DCP total investment portfolio. The fixed income portfolios consisting of the Aggregate Bond Index Fund and Stable Value Funds, which are managed by MCM and Weaver C. Barksdale, was 46.1% and 45.7%, respectively, of the DCP total investment portfolio in 2015 and 2014. These concentrations are solely determined by the participants' elections to invest in the available investment options selected by the SERB.

The DCP cash and temporary investments, Short Term Money Market Fund, Stable Value Fund, and Aggregate Bond Index Fund are subject to various risks. Among these risks are: custodial credit risk, credit risk, and interest rate risk. Each of these risks is discussed below.

The DCP proportionate share of the underlying investments of the Aggregate Bond Index Fund, which is a collective investment fund, are included in the disclosures below. The DCP interest in the Aggregate Bond Index Fund was 24.4% representing $306.2 million and 24.9% representing $298.9 million at December 31, 2015 and 2014, respectively.

Custodial credit risk is the risk that, in the event of the failure of the counterparty to a transaction, the DCP would be unable to recover the value of investment or collateral securities that are in the possession of an outside party. In accordance with the contractual relationship between the Treasury Department and its custodial agent, where securities are used as evidence of the investment, these securities are held by the custodian in book-entry form. These securities are defined as insured or registered investments for which the securities are held by the agent in the DCP name, and therefore have a minimal level of custodial credit risk losses. The other remaining investments do not have securities that are used as evidence of the investments.

Credit risk is the risk that an issuer or the counterparty to an investment will not fulfill its obligations. The credit risk of a debt instrument is measured by nationally recognized statistical rating agencies such as Moody’s Investor Services (Moody’s), S&P, and Fitch Ratings (Fitch). The DCP manages the overall credit risk of the active bond account by requiring the manager to invest in accordance with the SERB approved Investment Strategy Statement specifically designed for the Stable Value Fund. This statement lists the primary goal of the fund to maintain safety of principal, while recognizing that liquidity is an important element due to participant market expectations and/or investment selection. A secondary goal is to provide the participants with a steady, long-term growth of principal. The manager is expected to exercise due care and diligence in making investment decisions.

For securities exposed to credit risk in the fixed income investments of the DCP, the following tables disclose aggregate fair value, by the least favorable credit rating issued using Moody's, S&P, and Fitch credit ratings at December 31, 2015 and 2014:

**Debt Securities Exposed to Credit Risk (2015)**
**($ thousands)**

| | AAA | AA | A | BAA | BA and below | Short-Term Investments[1/] | Total Exposed to Credit Risk[2/] |
|---|---|---|---|---|---|---|---|
| Mortgage-backed securities | $ 3,722 | $ 243,171 | $ 250 | $ 129 | $ — | $ — | $ 247,272 |
| Corporates | 5,191 | 21,648 | 119,532 | 55,671 | 1,316 | — | 203,358 |
| Short-term investments[1/] | — | — | — | — | — | 72,614 | 72,614 |
| Asset-backed securities | 35,249 | 21,824 | 52 | — | — | — | 57,125 |
| Agencies | 335 | 12,530 | 1,698 | 225 | 31 | — | 14,819 |
| Sovereign debt | 6,723 | 1,697 | 1,772 | 2,713 | 751 | — | 13,656 |
| Private placements[3/] | — | — | 10,042 | — | — | — | 10,042 |
| Total | $ 51,220 | $ 300,870 | $ 133,346 | $ 58,738 | $ 2,098 | $ 72,614 | $ 618,886 |

[1/]Represents investments in the PA Treasury Department's money market and short-term investment fund (STIF). This fund is comprised of short-term, investment-grade securities, which are mainly U.S. Treasuries, agencies, or repurchase agreements. It is also comprised of short-term assets in the Aggregate Bond Index Fund and Stable Value Fund from the Statements of Net Position Available for Benefits.

[2/]Fixed income securities exposed to credit risk and U.S. government guaranteed securities, as noted in the subsequent paragraph, are comprised of cash and temporary investments, the Short Term Money Market Fund, the Aggregate Bond Index Fund, and the Stable Value Fund from the Statements of Net Position Available for Benefits.

[3/]Private placements raise capital via offerings directly to qualified investors rather than through public offerings. Private placements do not have to register with the Securities and Exchange Commission (SEC) if the securities are purchased for investment as opposed to resale. These private placements are corporate debt purchased pursuant to SEC Rule 144A and have registration rights with the SEC.

**Debt Securities Exposed to Credit Risk (2014)**
**($ thousands)**

| | AAA | AA | A | BAA | BA and below | NA[1/] | Short-Term Investments[2/] | Total Exposed to Credit Risk[3/] |
|---|---|---|---|---|---|---|---|---|
| Mortgage-backed securities | $ 3,711 | $ 306,500 | $ 2,368 | $ 311 | $ 81 | $ — | $ — | $ 312,971 |
| Corporates | 9,590 | 60,158 | 177,853 | 58,541 | 850 | — | 1 | 306,993 |
| Asset-backed securities | 58,428 | 21,839 | 49 | — | — | — | — | 80,316 |
| Short-term investments[2/] | — | — | — | — | — | — | 65,067 | 65,067 |
| Agencies | 269 | 20,370 | 1,326 | 88 | — | — | — | 22,053 |
| Sovereign debt | 3,321 | 1,689 | 2,784 | 4,479 | 798 | — | — | 13,071 |
| Private placements[4/] | — | — | 1,759 | — | — | 225 | — | 1,984 |
| Total | $ 75,319 | $ 410,556 | $ 186,139 | $ 63,419 | $ 1,729 | $ 225 | $ 65,068 | $ 802,455 |

[1/]NA represents securities that are either not rated or had a withdrawn rating.

[2/]Represents investments in the PA Treasury Department's money market and short-term investment fund (STIF). This fund is comprised of short-term, investment-grade securities, which are mainly U.S. Treasuries, agencies, or repurchase agreements. It is also comprised of short-term assets in the Aggregate Bond Index Fund and Stable Value Fund from the Statements of Net Position Available for Benefits.

[3/]Fixed income securities exposed to credit risk and U.S. government guaranteed securities, as noted in the subsequent paragraph, are comprised of cash and temporary investments, the Short Term Money Market Fund, the Aggregate Bond Index Fund, and the Stable Value Fund from the Statements of Net Position Available for Benefits.

[4/]Private placements raise capital via offerings directly to qualified investors rather than through public offerings. Private placements do not have to register with the SEC if the securities are purchased for investment as opposed to resale. These private placements are corporate debt purchased pursuant to SEC Rule 144A and have registration rights with the SEC.

Obligations explicitly guaranteed by the U.S. government (treasuries and Government National Mortgage Association securities) with a fair value of $819 million and $610 million as of December 31, 2015 and 2014, respectively, were not included in the preceding tables because they are not considered to have credit risk.

Interest rate risk is the risk that will adversely affect the fair value of an investment, should market interest rates rise or fall. Option adjusted duration is the measure of the portfolio's exposure to changes in interest rates. The following table discloses the interest rate types and durations of the fixed income investments of the DCP as of December 31, 2015 and 2014:

**Debt Option-Adjusted Durations**
**($ thousands)**

| | 2015 | | 2014 | |
|---|---|---|---|---|
| | **Fair value** | **Option-adjusted duration** | **Fair value** | **Option-adjusted duration** |
| Sovereign debt | $ 22,865 | 4.8 | $ 23,096 | 5.5 |
| Government | 656,968 | 4.8 | 401,439 | 5.1 |
| Corporates | 258,442 | 4.8 | 372,157 | 4.3 |
| Mortgaged-backed securities | 344,260 | 3.5 | 446,154 | 3.5 |
| Agencies | 14,819 | 4.5 | 22,054 | 3.2 |
| Asset-backed securities | 57,125 | 1.8 | 80,317 | 2.0 |
| Private placements[1/] | 10,457 | 0.2 | 2,497 | 0.5 |
| Short-term investments | 72,614 | 0.1 | 65,067 | 0.1 |
| Total [2/] | $ 1,437,550 | | $ 1,412,781 | |

[1/]Private placements raise capital via offerings directly to qualified investors rather than through public offerings. Private placements do not have to register with the SEC if the securities are purchased for investment as opposed to resale. These private placements are corporate debt purchased pursuant to SEC Rule 144A and have registration rights with the SEC.

[2/]Total fair values of the fixed income sector are comprised of cash and temporary investments, the Short Term Money Market Fund, the Aggregate Bond Index Fund, and the Stable Value Fund from the Statements of Net Position Available for Benefits.

The DCP prohibits investments by the manager in the active bond portfolio in the following categories: real estate, Real Estate Investment Trust issues, mortgages (mortgage pass-throughs are exempt), secured term loans, oil and gas production properties, convertible or preferred stock, private placements (other than corporate debt purchased pursuant to SEC Rule 144A that has registration rights with the SEC), loaning of money or securities, hypothecating of any assets in the portfolio, interest and principal only strips, inverse floaters, and inverse interest only securities.

Foreign currency risk is the risk that changes in the exchange rates will adversely affect the fair value of an investment. The EAFE Equity Index Fund seeks to track more than 1,000 foreign stocks representing established companies in 21 countries located in Western Europe and the Pacific Rim. At December 31, 2015 and 2014, the DCP had the following currency exposures through its 58.2% and 61.9% interest in the EAFE Equity Index Fund at December 31, 2015 and 2014, respectively:

**Foreign Currency Exposures**
**($ thousands)**

| Currency | 2015 Fair value | 2014 Fair value |
|---|---|---|
| European Euro | $ 46,936 | $ 45,434 |
| Japanese Yen | 36,367 | 31,901 |
| British Pound Sterling | 30,025 | 31,662 |
| Swiss Franc | 14,569 | 14,000 |
| Australian Dollar | 10,536 | 11,248 |
| Hong Kong Dollar | 4,753 | 4,681 |
| Swedish Krona | 4,443 | 4,609 |
| Danish Krone | 2,926 | 2,258 |
| Singapore Dollar | 1,941 | 2,343 |
| New Israeli Sheqel | 1,144 | 861 |
| Norwegian Krone | 829 | 973 |
| New Zealand Dollar | 244 | 211 |
| Total | $ 154,713 | $ 150,181 |

## (5) Derivative Financial Instruments

The DCP, through investments in collective investment funds managed by MCM and trusteed by The Bank of New York Mellon, indirectly holds certain derivative financial instruments. A derivative is a risk-shifting agreement, the value of which is derived from the value of an underlying asset. The underlying asset could be a physical commodity, an interest rate, a company’s stock, a stock index, a currency, or virtually any other tradable instrument upon which two parties can agree. The derivatives most commonly used by MCM include currency forwards, futures, options, and swaps. The notional value of these instruments is not significant as of December 31, 2015 and 2014. The collective investment funds that the DCP is invested in currently utilize the following derivative instruments:

- Stock Index Fund – stock index futures
- Extended Market Fund – stock index futures
- EAFE Equity Index Fund – stock index futures, currency forwards

These instruments are used in the investment management of the collective funds to the extent that their use is consistent with the specific collective fund’s objective. Derivatives are viewed within the context of the collective fund’s total portfolio. MCM has instituted policies and procedures designed to ensure that derivative transactions are in keeping with the overall strategy and that such transactions are properly reviewed and monitored.

MCM may take long or short positions in derivative instruments for, but not limited to, the following purposes: to create or hedge required exposure; to create or hedge model-driven recommended exposure; as an adjustment to asset exposures within the parameters set in the collective fund's investment instructions and guidelines; to achieve transactional efficiency; to adjust the duration of a fixed income portfolio; if applicable, to achieve the appropriate degree of leverage, as stated in the collective fund's investment instructions and guidelines; and to facilitate meeting the collective fund's objectives.

Some of the risks associated with the use of derivatives include the following:

Market Risk: Market risk represents the risk of adverse movements in markets (including asset prices, volatility, changes in yield curve, implied volatility, or other market variables) for the derivatives or the underlying assets, reference rate or index to which the derivative instrument relates. Such risk is created by holding any security, physical, or derivative which creates exposure to movements in process of a security or market. Additionally, some derivatives involve economic leverage, which could increase the volatility of these investments as they may fluctuate in value more than the underlying instrument. MCM assesses the risk associated with derivatives in the context of the collective fund's total portfolio, taking into account the effective exposure of derivative instruments.

Liquidity Risk: Two types of liquidity risk are generally faced in derivative activities. The first is market liquidity risk, which applies to all investments. This is the risk that positions cannot easily be sold or unwound due to inadequate market depth or disruptions in the marketplace. The second is portfolio liquidity risk, which is the risk that there are insufficient funds in the portfolio to meet margin calls and other financial obligations resulting from derivative activities. MCM has established restrictions and processes to assist with minimizing the impact of liquidity risk on the collective fund's portfolio.

Counterparty Risk: Counterparty risk is the risk that a counterparty (the party with whom a derivatives contract is made) will fail to perform contractual obligations under a contract. This is also sometimes referred to as credit risk. MCM has established guidelines and procedures designed to limit the impact of counterparty risk. The creditworthiness of counterparties is evaluated prior to approval and counterparty exposure is reviewed regularly.

Operational Risk: Operational risk is the risk that deficiencies in the effectiveness and accuracy of the information systems or internal controls will result in a material loss. This risk is associated with human error, systems failures, inadequate procedures, and internal management controls. For example, there is risk that the valuation system incorrectly calculates a price for a derivative or its equivalent exposure.

The DCP offers participants the ability to invest in a Stable Value Fund, which is a Synthetic Guaranteed Investment Contract (SGIC). The SGIC provides a guaranteed crediting rate based on the underlying bond portfolio and is adjusted quarterly. For 2015, the annualized crediting rates were 2.659% for the first quarter, 2.560% for the second quarter, 2.497% for the third quarter, and 2.339% for the fourth quarter. For 2014, the annualized crediting rates were 2.566% for the first quarter, 2.591% for the second quarter, 2.669% for the third quarter, and 2.787% for the fourth quarter. The fair value of the SGIC at December 31, 2015 is $1,068 million and the contract or book value is $1,048 million. The fair value of the SGIC at December 31, 2014 is $1,054 million and the contract or book value is $1,021 million. The wrap contract is reported to have no value for the respective years shown in the table below because the fair value of the underlying investments was greater than the contract or book value, hence no exposure to the insurer. The following table discloses the fair value of the SGIC at December 31, 2015 and 2014:

**($ thousands)**

| SGIC components | 2015 Fair value | 2014 Fair value |
|---|---|---|
| Underlying investments | $ 1,068,012 | $ 1,053,533 |
| Wrap contract | — | — |
| Total | $ 1,068,012 | $ 1,053,533 |

## (6) Securities Lending

In accordance with a contract between the commonwealth's treasurer and its custodian, the DCP participates in a securities lending program.

The custodian, acting as lending agent, is able to loan securities from the DCP actively managed bond account for cash, securities, or letter of credit collateral. Collateral is required at 102% of the fair value of the securities. Collateral is marked-to-market daily. If the collateral falls below guidelines for the fair value of the securities loaned, additional collateral is obtained. Cash collateral is invested by the lending agent in accordance with investment guidelines approved by the SERB. The lending agent cannot pledge or sell securities collateral unless the borrower defaults.

As of December 31, 2015 and 2014, the DCP credit exposure to individual borrowers was limited because the amounts the DCP owed the borrowers exceeded the amounts the borrowers owed the DCP. The treasurer's contract with the lending agent requires the agent to indemnify the DCP if the borrowers fail to return the underlying securities and the collateral is inadequate to replace the loaned securities or if the borrowers fail to pay income distributions on the loaned securities.

All loaned securities at December 31, 2015 and 2014 could be terminated on demand by either the lending agent or the borrower. Cash collateral is invested, together with the cash collateral on loaned securities of other commonwealth entities, in a short-term collective investment pool. The duration of the investments in the pool at December 31, 2015 was one day and in 2014 it was two days. The relationship between the average maturities of the investment pool and the DCP loans is affected by the maturities of the loans made by other entities in the investment pool. In addition, the interest rate risk posed by mismatched maturities is affected by other program features, such as the lending agent's ability to reallocate loaned securities among all of its lending customers.

As of December 31, 2015 and 2014, the fair value of loaned securities was approximately $2.4 million and $79 thousand, respectively; the fair value of the associated collateral was approximately $2.5 million and $81 thousand, of which $2.5 million and $81 thousand was cash, respectively. The rise in loaned securities was due to an increase in the amount of securities lending activity for the DCP at December 31, 2015.

## (7) Tax Qualification Status

In 2000 according to the U.S. Treasury Department, the DCP is an eligible deferred compensation plan pursuant to IRC Section 457(b). Therefore, compensation deferred under the DCP, including income attributable to the deferred compensation, will be includible in gross income for the taxable year or years in which amounts are paid or otherwise made available to a participant or a participant's beneficiary in accordance with the terms of the DCP.

The Small Business Jobs Act of 2010 was signed into law on September 27, 2010. It includes a provision to allow those participating in 457(b) plans to do so through a Roth option. Those participants who use designated Roth accounts do not receive a deduction from their current income for a contribution to the plan, but their plan earnings and qualified withdrawals from the plan are tax-free. The SERB passed a motion in 2010 to allow the DCP to implement a Roth 457(b) provision. The DCP implemented the Roth option in 2012.

## (8) Risks and Uncertainties

The DCP, as directed by participants, may invest in various types of investment securities. Investment securities are exposed to various risks, such as interest rate, market, and credit risk. Due to the level of risk associated with certain investment securities, it is possible that changes in the values of investment securities may occur in the near term and that such change could materially affect the amounts reported in the statements of net position available for benefits.

## (9) Related Parties

Certain members of the SERB are participants in the DCP.