Long-Term Care Actuarial Valuation

As of June 30, 2014

11611 North Meridian Street - Suite 330 Carmel, IN 46032 www.UHASinc.com O: 317.575.7672 F: 317.575.7678

UHAS United Health Actuarial Services Inc.

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

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ACTUARIAL CERTIFICATION

To the best of our knowledge, this report is complete and accurate and contains sufficient information to fully and fairly disclose the funded condition of the CalPERS Long-Term Care Program. This valuation is based on the member and financial data as of June 30, 2014. It is our opinion that the valuation has been performed in accordance with generally accepted actuarial principles, in accordance with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for the Program related to actual and anticipated future experience.

The undersigned, with actuarial credentials, meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Clark A. Heitkamp, FSA, MAAA, LTCP
Consulting Actuary
United Health Actuarial Services, Inc.

Mark E. Shaw, FSA, MAAA, CERA
Senior Consulting Actuary
United Health Actuarial Services, Inc.

HIGHLIGHTS AND EXECUTIVE SUMMARY

- INTRODUCTION
- PURPOSE OF THE REPORT
- FUNDED STATUS AND MARGIN FOR THE PROGRAM
- KEY FINDINGS
- CHANGES SINCE THE PRIOR VALUATION
- SUBSEQUENT EVENTS

Introduction

This is the actuarial valuation report as of June 30, 2014 for the Long-Term Care Program. The June 30, 2013 actuarial valuation was prepared by CalPERS actuarial staff and included support from United Health Actuarial Services, Inc. (UHAS) for assumption and model development. This actuarial valuation reflects the Stabilization Plan that was approved by the Board in October 2012 that includes premium increases for certain policies and permits policy conversions for members to move to a less expensive policy.

This actuarial valuation was performed based on best estimate assumptions that are appropriate at the date of valuation. We do not reflect the potential for adverse deviations in actual future experiences in our best estimate assumptions. Assumptions could change in the future as more information becomes known, which would impact the margin and funded status stated in this report. The models, scenarios and assumptions used are reviewed and, if necessary, updated each year. This report summarizes the approach, assumptions, and results of our actuarial valuation of the CalPERS Long-Term Care (LTC) Program as of June 30, 2014. For information about the sensitivity of actuarial assumptions on the valuation results, please refer to the "Valuation Result" section and Appendix A.

Purpose of the Report

The June 30, 2014 actuarial valuation report of the CalPERS Long-Term Care Program has been prepared by UHAS in order to:

- Determine whether assets as of June 30, 2014 and expected future premium levels are sufficient to provide the future benefits;
- Provide actuarial information as of June 30, 2014 to the CalPERS Board of Administration and other interested parties; and,
- Provide information as of June 30, 2014 to be used in CalPERS financial statements.

Use of this report for other purposes may be inappropriate.

Funded Status and Margin for the Program

As of June 30, 2013, the funded status for the Long-Term Care Program under best estimate assumptions was 123 percent and the margin was 19.66 percent. The margin increased as of June 30, 2014 over the margin from last year because of higher-than-expected investment returns and higher-than-expected conversions. The margin as of June 30, 2014 is now 23.49 percent, and the funded status stayed the same at 123 percent based on the best estimate assumptions. The table below shows the funded status and margin as of June 30, 2014.

Funded Status and Margin as of June 30, 2014

Component	($ in Millions)
1. Present Value of Future Benefits	$6,223
2. Present Value of Future Expenses	$381
3. Present Value of Future Premiums (PVFP)	$3,251
4. Valuation Liabilities (= 1 + 2 – 3)	$3,353
5. Valuation Assets	$4,117
6. Valuation Margin (= 5 – 4)	$764
7. Margin as a % of PVFP (= 6 / 3)	23.49%
8. Funded Status (= 5 / 4)	123%

The funded status and margin/(deficit) have fluctuated greatly over the last few years as a result of plan experience, the investment return assumption changes (in 2010 and 2012) and premium rate adjustment (in 2010 and 2013). The table below shows the funded status and the margin/(deficit) for the Long-Term Care Program for the last 5 years based on the best estimate assumptions (i.e., the "base case" scenario).

5 Year History of Funded Status and Margin

Valuation Date	Funded Status	Margin
June 30, 2010	97%	(2.98)%
June 30, 2011	127%	23.14%
June 30, 2012	96%	(4.66)%
June 30, 2013	123%	19.66%
June 30, 2014	123%	23.49%

Key Findings

The following are the key findings from this actuarial valuation:

- The margin increased from 19.66 percent on June 30, 2013 to 23.49 percent on June 30, 2014 while the funded status remained at 123 percent. The main reason for the increase in margin is more conversions than expected and higher investment returns than expected during the fiscal year 2013-2014.
- Higher than expected conversion acceptances increased the margin and funded status. The assumed rate of conversions associated with the 2014 offer was 3 percent; however, the actual conversion rate will likely result in an additional 15% of members that accepted the offer to reduce benefits. This higher than expected conversion rate resulted in an improvement to both the margin and funded status.
- The Program benefited from investment gains greater than expected during 2013-14 fiscal year as a result of an investment return of 10.6 percent, which was higher than the assumed 5.75 percent discount rate assumption. The investment income was greater than expected by $177,740,648 and resulted in an increase to both the funded status and margin.
- Projected mortality improvement has been used in past valuations, and this assumption was reviewed this year. CalPERS actuarial staff performed an experience study in 2013 that led to the adoption by the CalPERS Board of a pension mortality table that included 20 years of mortality improvements for CalPERS pension members using the mortality improvement projection Scale BB. This Pension scale was also compared to recent life mortality studies and was found to be consistent with those results. Accordingly, Scale BB was adopted and used for future projections of mortality in this valuation. This new scale resulted in higher longevity than past improvement assumptions and resulted in a reduction to the margin and funded status. Note that contrary to the static 20 year of mortality improvements that was used for the pension mortality table, for the LTC mortality tables, generational mortality improvements were applied using Scale BB.
- Mortality improvement is usually associated with morbidity improvement for LTC coverage, and with the revisions to the mortality improvement we made similar changes to the morbidity improvement but with upper limits set on the improvement levels. This revised scale resulted in lower projected claims than past improvement assumptions and resulted in an increase to the margin and funded status.

A complete reconciliation of the Program's margin/(deficit) is provided on page 12.

Changes since the Prior Valuation

Actuarial Assumptions

Each year actual experience is measured against the assumptions, and assumptions are updated to reflect actual experiences. In this valuation, we made minor changes to the morbidity, lapse rates, mortality rates and expense assumptions as well as changes to conversion rates to better reflect actual experience over the last 12 months and expected long term trends. The mortality and morbidity improvement assumptions were modified. Please refer to the "Summary of Key Assumptions" Section on page 13 for more information on the changes that were made. Assumptions are documented in more details in Appendix C.

Premiums and Policies

In October 2012, the CalPERS Board approved the Stabilization Plan to help improve the financial position of the Long-Term Care Program. The Stabilization Plan includes premium increases for some members and provides the ability for members to convert to less expensive policies. The ongoing 5 percent premium rate increase was stopped after 2014. For LTC1 and LTC2 members with the lifetime benefit period or inflation protection, they will receive an 85 percent premium rate increase in 2015. The 85 percent rate increase will be implemented over two years, with a 36 percent rate increase in each of 2015 and 2016. Members will be offered options to either pay the rate increase or convert to another benefit coverage plan. Members who are not subject to the 5 percent rate increase in 2014 but are subject to the 85 percent rate increase in 2015 will be given the option to convert to another benefit coverage plan to avoid the 85 percent rate increase in the fall of 2014 and again in the spring of 2015. These premium rate increases conversion options were taken into consideration in the valuation projection.

Subsequent Events

There were no known subsequent events that would impact the result of this valuation as of the time of preparing this report. The actuarial valuation report as of June 30, 2014 is based on financial information as of that date. Changes in the value of assets subsequent to that date, to the extent that they exist, are not reflected. Declines in asset values will decrease the funded status of the Program, while increases will increase the funded status of the Program.

VALUATION RESULTS

- COMPARISON OF CURRENT AND PRIOR YEAR
- RECONCILIATION TO PRIOR VALUATION RESULTS
- SUMMARY OF KEY ASSUMPTIONS

Comparison of Current and Prior Year

The Program results summarized throughout this report refer to funded status and also to "deficits" or "margins". A deficit is an estimate of what level of a one-time immediate rate increase in premiums would be needed to bring the Program back to a zero margin. If the current fund balance and present value of earnings are adequate, a positive number or a "margin" results. A second method of expressing the current financial status of the Program is the funded status. In general, the funded status is the Program assets divided by the accrued liability, or reserves. For the LTC Program, the accrued liability is equal to the present value of future benefits and expenses less the present value of member premiums. This definition is consistent with a statutory gross premium valuation reserve for LTC insurance. In this context, a breakeven position is a funded ratio of 100 percent.

These two methods of expressing the financial status of the LTC Program are consistent in that both will always produce a margin when the funded ratio is greater than 100 percent and will always produce a deficit when the funded ratio is lower than 100 percent. They are not consistent in that a 10 percent margin for example does not necessarily produce a 110 percent funded ratio.

The table below summarizes the results of the actuarial valuation of the CalPERS Long-Term Care Program as of June 30, 2014, compared to that of June 30, 2013. Results presented include the present value of future cash flows for the inforce members as of the respective valuation dates. Present values are based on 60 years of projected cash flow.

Component	June 30, 2014 ($ in Millions)	June 30, 2013 ($ in Millions)
1. Present Value of Future Benefits	$6,223	$6,110
2. Present Value of Future Expenses	$381	$353
3. Present Value of Future Premiums (PVFP)	$3,251	$3,455
4. Valuation Liabilities (= 1 + 2 – 3)	$3,353	$3,008
5. Valuation Assets	$4,117	$3,687
6. Valuation Margin (= 5 – 4)	$764	$679
7. Margin as a % of PVFP (= 6 / 3)	23.49%	19.66%
8. Funded Status (= 5 / 4)	123%	123%

Our analysis indicates that if experience conforms to our best estimate assumptions, the current assets and approved rate structure are sufficient to fund future claims and expenses for the next 60 years.

Liability cash flows were derived through the application of a projection of expected future cash flows based on the inforce policies as of June 30, 2014 using a set of underlying assumptions based upon the CalPERS Long-Term Care Program's experience. Policies are grouped and projected using specific characteristics including issue age, issue date, policy form, benefit period, elimination period, underwriting status and benefit options. We have not generated liabilities and reserves consistent with statutory reporting requirements as this self-funded plan is not subject to such requirements.

Detailed yearly cash flows and projected cash balances are provided in Appendix A.

Reconciliation to Prior Valuation Results

Between June 30, 2013 and June 30, 2014, the Long-Term Care Program increased from a margin of 19.66% to a margin of 23.49%. Several factors impacted the margin either positively or negatively during the fiscal year. The Program had a demographic experience gain in part resulting from higher conversions during the 2013-14 fiscal year. The Program benefited from an investment gain during the 2013-14 fiscal year as a result of an investment return of 10.6 percent, which was higher than the assumed 5.75 percent discount rate assumption. The higher than expected return resulted in an increase in the margin. Adjustments were made to the actuarial assumptions, specifically changes were made to the morbidity, lapse rates, mortality, mortality improvement, and expense assumptions as well as to the conversion rates to better reflect actual experience over the last 12 months. The aggregate impact of these assumption changes was an increase in the margin. The table below provides a detailed reconciliation as to the factors that contributed to the overall increase in the margin.

	Results as a Present-Value of Premiums	Results In Millions
Margin as of 6/30/13:	19.66%	$679.12
Demographic Experience Gain	0.76%	$13.27
Positive Cash Flows for FY 2013-2014 Mostly From Higher Investment Income	5.02%	$163.49
Revised Assumptions	(0.96)%	$(59.84)
Other Including Model Change	(0.99)%	$(32.58)
Margin as of June 30, 2014:	23.49%	$763.47

Summary of Key Assumptions

To calculate the future claim payments, premiums and investment income, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions, and assumptions are updated to reflect actual experience. This section provides general information on key assumptions that were updated in the 2014 valuation.

Discount Rate

The discount rate used in this valuation represents the expected long term rate of return, based on CalPERS investment policy. For valuation purposes, the discount rate is 5.75 percent net of investment expenses. The rate was approved by the Board in April 2012. The discount rate is a major component of the valuation process and is used to project asset growth and to determine present values of future premiums, expenses and benefits. CalPERS Long-Term Care Program experienced an investment gain during the fiscal year ended June 30, 2014 since the actual return for the year was greater than the assumed rate. The actual return was about 10.6 percent.

Morbidity

For Long-Term Care insurance products, the substantial financial risks lie in morbidity assumptions. The morbidity assumption reflects the amount of claim costs expected for members. The key components driving claim costs are:

- Claim incidence, which is the probability of going on claim,
- Claim continuance, which is the length of time staying on claim, and
- Utilization, which is the level of claim compared to the benefits available.

In 2013-14, the actual paid claim experience for the CalPERS Long-Term Care Program was slightly higher than expected, which in part resulted from more members requesting benefits on unreported claims than expected. Minor changes were made to the future morbidity assumptions. To revise the morbidity assumption, expected claim costs were credibility weighted between LTCG's manual morbidity assumptions utilized in 2005 and CalPERS actual claims experience. Some changes were also made to address the potential for anti-selection resulting from less healthy members not converting to less expensive policies as offered as part of the Stabilization Plan. Please see the policy conversion section below for additional discussion. Actual claim experience is summarized in the table "Comparison of Actual to Expected Cash Flows for 2013-14" in the Assets Section on page 27.

Morbidity improvement was also reviewed in conjunction with the modified mortality improvement assumption. Because of the relationship between mortality and morbidity improvement, we assumed the morbidity improvement would have the same percentage improvement as the mortality improvement but we set the maximum morbidity improvement at

1.25%. This change in assumption had a large positive impact on the results. Please see the mortality section below for additional discussion regarding mortality improvement.

Lapse

The lapse assumption reflects the expected portion of members who voluntarily terminate their policies each year by not paying the renewal premiums. Lapse assumptions can vary based on a variety of factors, including the members' age at enrollment and the number of years members have had their policies. In general, it is assumed that the longer that members keep their policies, the less likely they are to lapse. Lapse rate assumptions greatly affect long-term care insurance premiums because when individuals lapse, future liabilities are immediately reduced although current assets are not affected.

In 2013-14, the CalPERS Long-Term Care Program experienced lapses was nearly the same as the expected lapses. Lapse rates were adjusted slightly for the June 30, 2014 valuation based on historical experience through June 2014. The assumed lapse rates were decreased slightly, which had a small negative impact on the results.

Shock lapses are an insurance phenomenon where individuals drop their coverage at a higher rate than usual due to the occurrence of a specific event such as a premium rate increase. Individuals who let their policies lapse because of rate increases are usually in better health. Members do not normally drop their policies if they anticipate that they will soon have claims. As a result, individuals who retain their policies are often, on average, in worse health than those who lapse their policies. This member decision process is referred to as anti-selection. To minimize shock lapses, CalPERS offered and will continue to offer through 2015 many benefit change options to alleviate the impact of the rate increase. The election to switch coverage is referred to as conversion.

CalPERS historically has experienced very minimal shock lapses from the implemented rate increases. This trend continued in the last fiscal year and is likely to continue for the announced 2015/2016 premium rate increase because of the following reasons:

- An industry-wide steep slope to issue-age premiums generally does not allow the members to purchase less expensive coverage elsewhere; and
- For 2015, CalPERS will continue to offer conversion options.

Shock lapse rates are based on historical experiences, which have varied by attained age where the older the member was, the less likely the policy was going to lapse. A low level of future shock lapse rates were included in the analysis because of the higher rate increase in 2015, and the assumed shock lapses are consistent with past experience which varied by attained age.

Policy Conversion

As part of the 2013 valuation, an assumption was made that 3 percent of the members subject to the 2014 5 percent premium rate increase would convert to a less expensive policy. However, early conversion information suggests that this conversion rate will end up being closer to 15 percent. As a result of the higher-than-expected conversion activity, the conversion assumption for this same group is being increased from 1 percent to 10 percent for the next conversion offer in 2015. The higher conversion assumptions for the members that will receive their first option to convert were maintained at their previously assumed combined levels of 14-30% occurring in 2014 and 2015. The conversion rates are shown in Appendix C.

Conversion and downgrade activity continues to help the financial position of the LTC Program, but there is also likely to be anti-selection associated with these conversions - i.e. on average healthier members convert to less expensive policies believing they are less likely to go on claims in the near future and less healthy members who fear a near term claim being more likely to accept the rate increase. For this reason, the morbidity assumption was modified to reflect the fact that members who do not convert to a less expensive policy may be more likely to go on claim.

Mortality

The mortality assumption reflects the expected death rate of the population. Similar to the lapse assumption, mortality reduces future liabilities without affecting assets.

A mortality study was completed as part of this valuation based on actual deaths through 2013, and the resulting revised mortality assumption slightly reduced the results. In addition to the mortality study, the mortality improvement assumption was reviewed based on work completed by CalPERS actuarial staff and updated industry mortality improvement studies. Based on these two sources of data, the mortality improvement assumption was revised, which had a significant negative impact to the results. Please see Appendix C for greater detail on developing the mortality assumptions.

Expense

The expenses of managing the Program include administrative expenses. Expenses are based on the Third Party Administrator fee and CalPERS expenses related to internal staff working on the LTC Program. The expenses were updated based on last year’s actual expenses and are expressed either as per member per month, flat expenses per month, or as a percent of future incurred claims.

Rate Increase

Rate increases are assumed in the projections. We assumed a 5 percent rate increase in 2014 for those LTC1 policies with lifetime benefit period and inflation protection, and a 36 percent rate increase in each of 2015 and 2016 for those LTC1 and LTC2 policies with either lifetime benefit period or inflation protection. We applied shock lapses, morbidity anti-selection, and plan conversions related to those rate increases.

Members receiving the 5 percent premium rate increase in 2014 were offered a conversion option, and for those members who accepted the conversion option the effective date was after the valuation date of this report, i.e. after June 30, 2014. To account for these accepted conversions, the inforce file as of July 31, 2014 was used to adjust the June 30, 2014 valuation inforce file to account for conversions accepted after the valuation date. Conversion rates associated with 2014 and 2015 offer are based on the responses received for 2013 and the early results from the 2014 offer and also vary by benefit type and the available options for conversion.

Regarding all assumptions previously discussed, actual experience will likely differ from that assumed in the projections. To the extent actual experience is different from the assumptions underlying this report, actual results will also differ from the projected results shown herein. Sensitivity of results to changes in assumptions is provided in the Risk Analysis section.

RISK ANALYSIS

- SENSITIVITY TESTING OF KEY ASSUMPTIONS
- ADDITIONAL SENSITIVITY TESTING

RISK ANALYSIS

The actuarial calculations supplied in this report are based on a number of assumptions about very long-term demographic and economic behavior. Unless these assumptions (morbidity, lapses, deaths, expenses, premium increases, conversions and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and either increase or decrease the funded status and margin of the LTC Program. If actual experience differs from the assumptions over a prolonged period, it may result in a need for premium changes to ensure the financial integrity of the LTC Program. Included next are the results of sensitivity testing that was performed around key actuarial assumptions.

Sensitivity Testing of Key Assumptions

Several scenarios were run to test the sensitivity of future cash flows to changes in assumptions with respect to morbidity, voluntary lapses, mortality, conversion, and investment earnings. Tables below illustrate the impact of changes to the base assumptions on asset adequacy levels.

Results are highly sensitive to the assumptions underlying the calculations. While these tests indicate outcomes under each of these scenarios, they do not indicate the likelihood of each scenario occurring, and therefore, this testing does not indicate the probability that projected values will be realized.

Detailed yearly cash flows and projected fund balances for the base case and each of the scenarios tested as part of the sensitivity testing are provided in Appendix A. The first scenario in Appendix A is the scenario that is based on the current actuarial assumptions used for this valuation and is referred to as the base case. Please see Appendix C for greater detail on the actuarial assumptions.

Discount Rate

The discount rate assumption used in this valuation is 5.75 percent. For the sensitivity analysis, we are testing the impact of future investment returns on the margin and funded ratio of the LTC Program by lowering and increasing the discount rate by 0.5 percent. The table below shows the impact on the margin and funded status from such assumption changes. As expected, a lower discount rate results in a lower margin and lower funded status while a higher discount rate results in an increase for both measures.

Impact of Discount Rate on Margin and Funded Ratio

Scenario Description	Margin	Funded Ratio
Base Case	23.49%	123%
Discount rate increased by adding 0.5% (6.25%)	34.18%	135%
Discount rate decreased by subtracting 0.5% (5.25%)	12.31%	111%

Morbidity

The morbidity assumption reflects the amount of claim costs expected for members in the future. For the sensitivity analysis, we are testing the impact claims have on the margin and funded ratio of the LTC Program by decreasing and increasing future expected claims by 10 percent. As shown in the table below, if future expected claims are higher than assumed in the valuation, both the margin and funded status will be lower while lower than expected claims would result in an increase for both measures.

Impact of Morbidity on Margin and Funded Ratio

Scenario Description	Margin	Funded Ratio
Base Case	23.49%	123%
Lower Morbidity (Future claims reduced by 10%)	42.31%	150%
Higher Morbidity (Future claims increased by 10%)	4.66%	104%

Lapses

The lapse assumption reflects the expected portion of members who voluntarily terminate their policies each year by not paying the renewal premiums. For the sensitivity analysis, we are testing the impact lapses have on the margin and funded ratio of the LTC Program by increasing and decreasing the assumed lapse rates by an amount of 0.25 percent. As shown in the table below, if future expected lapses are lower than assumed in the valuation, both the margin and funded status will be lower while higher than expected lapses would result in an increase for both measures.

Impact of Lapses on Margin and Funded Ratio

Scenario Description	Margin	Funded Ratio
Base Case	23.49%	123%
Lapse rates increased by adding 0.25%	27.54%	127%
Lapse rates decreased by subtracting 0.25%	19.38%	118%

Policy Conversion

As part of the Stabilization Plan adopted by the Board in October 2012, members would be offered the ability to convert to less expensive policies. Generally, conversions to less expensive policies help the financial position of the LTC Program. It is important to note that members who do not elect to convert to a less expensive policy are generally more likely to go on claims than members who elect the less expensive policy. This is referred to as anti-selection. As a result, as part of this sensitivity analysis, different anti-selection factors are applied either assuming higher or lower rates of conversion. Higher conversion rates lead to the use of higher anti-selection factors and vice-versa. For the sensitivity analysis, we are testing the impact of conversions on the margin and funded ratio of the LTC Program by increasing and decreasing the assumed conversion rates which are shown in Appendix C. As shown in the table below, higher conversion rates than assumed will slightly increase the margin while lower conversion rates than expected would result in a slight decrease in the margin. The changes to the margin due to changes in conversion rates are relatively small compared to changes in other assumptions.

Impact of Change in Conversion Rates on Margin and Funded Ratio

Scenario Description	Margin	Funded Ratio
Base Case	23.49%	123%
Higher Conversion rates	26.96%	125%
Lower Conversion rates	20.18%	120%

Mortality

The mortality assumption reflects the expected death rate of the members in the LTC Program. Similar to the lapse assumption, mortality reduces future liabilities without affecting the assets on hand. For this reason higher than expected mortality will generally result in an increase in the margin and funded status. For the sensitivity analysis, we are testing the impact mortality rates have on the margin and funded ratio of the LTC Program by decreasing and increasing the mortality rates by 10 percent. As shown in the table below, if mortality rates improve (i.e. rates are lower) both the margin and funded status will be lower while if mortality rates deteriorate (i.e. rates are higher), both measures would increase.

Impact of Mortality on Margin and Funded Ratio

Scenario Description	Margin	Funded Ratio
Base Case	23.49%	123%
Mortality rates increased by 10%	29.25%	129%
Mortality rates decreased by 10%	17.13%	116%

Best and Worst Case

In order to test for what could be referred as potential "best case" and "worst case" scenarios, the sensitivity of four of the key assumptions was tested simultaneously. The table below shows the combined impact on the margin and the funded status if the experience were to be worse and better than expected simultaneously for the discount rate, morbidity, lapses and mortality.

Combined Impact of key Assumptions on Margin and Funded Status

Scenario Description	Margin	Funded Ratio
Base Case	23.49%	123%
Discount rate increases by 0.5% (6.25%) Lower Morbidity (Future claims reduced by 10%) Lapses increased by 0.25% Mortality rates increased by 10%	61.39%	182%
Discount rate decreases by 0.5% (5.25%) Higher Morbidity (Future claims increased by 10%) Lapses decreased by 0.25% Mortality rates decreased by 10%	(18.85)%	86 %

Additional Sensitivity Testing

In addition to the sensitivity testing summarized above, we tested more robust investment scenarios on the base case scenario using the New York Seven interest rate scenarios. In the private industry, most LTC insurance companies use the seven interest rate scenarios defined in New York Regulation 126 to test asset adequacy and form an opinion with respect to asset adequacy analysis. Those scenarios prescribe the use of specific discount rate assumptions as described in the table below

New York Regulation 126 Discount Rate Sensitivity											
Scenarios	Projection Years										
	1	2	3	4	5	6	7	8	9	10	11+
Scenario #1	5.75%	5.75%	5.75%	5.75%	5.75%	5.75%	5.75%	5.75%	5.75%	5.75%	5.75%
Scenario #2	5.75%	6.25%	6.75%	7.25%	7.75%	8.25%	8.75%	9.25%	9.75%	10.25%	10.75%
Scenario #3	5.75%	6.75%	7.75%	8.75%	9.75%	10.75%	9.75%	8.75%	7.75%	6.75%	5.75%
Scenario #4	8.75%	8.75%	8.75%	8.75%	8.75%	8.75%	8.75%	8.75%	8.75%	8.75%	8.75%
Scenario #5	5.75%	5.25%	4.75%	4.25%	3.75%	3.25%	2.75%	2.25%	1.75%	1.25%	0.75%
Scenario #6	5.75%	4.75%	3.75%	2.75%	1.75%	0.75%	1.75%	2.75%	3.75%	4.75%	5.75%
Scenario #7	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%

The table below shows the impact on the margin and the funded status of varying the discount rate assumption as described in the above table.

Impact of Additional Discount Rate Sensitivity on Margin and Funded Ratio

Scenario	Margin	Funded Ratio
Scenario #1	23.49%	123%
Scenario #2	83.17%	230%
Scenario #3	50.58%	155%
Scenario #4	81.86%	213%
Scenario #5	(89.24)%	53%
Scenario #6	(3.73)%	99%
Scenario #7	(52.87)%	65%

Detailed yearly cash flows and projected fund balances for these additional discount rate sensitivity scenarios are provided in Appendix B.

ASSETS

- RECONCILIATION OF THE MARKET VALUE OF ASSETS OVER THE PRIOR FISCAL YEAR
- COMPARISON OF ACTUAL TO EXPECTED CASH FLOWS
- ASSET ALLOCATION

Reconciliation of the Market Value of Assets Over the Prior Fiscal Year

1. Market Value of Assets as of June 30, 2013	$3,686,636,696
2. Premiums Received during fiscal year 2013 - 2014	$286,570,526
3. Benefit Payments in 2013 - 2014	$(225,691,101)
4. Expense Payments in 2013 - 2014	$(22,727,373)
5. Investment Returns in 2013 - 2014	$391,738,544
6. Market Value of Assets as of June 30, 2014 [(1) + (2) - (3) - (4) + (5)]	$4,116,527,291

Comparison of Actual to Expected Cash Flows

Below is a table comparing the actual cash flows in the 2013-14 fiscal year to the cash flows that were projected as part of the June 30, 2013 valuation. As can be seen, the investment experience had the largest impact on the assets.

Comparison of Actual to Expected Cash Flows for Fiscal Year 2013-14

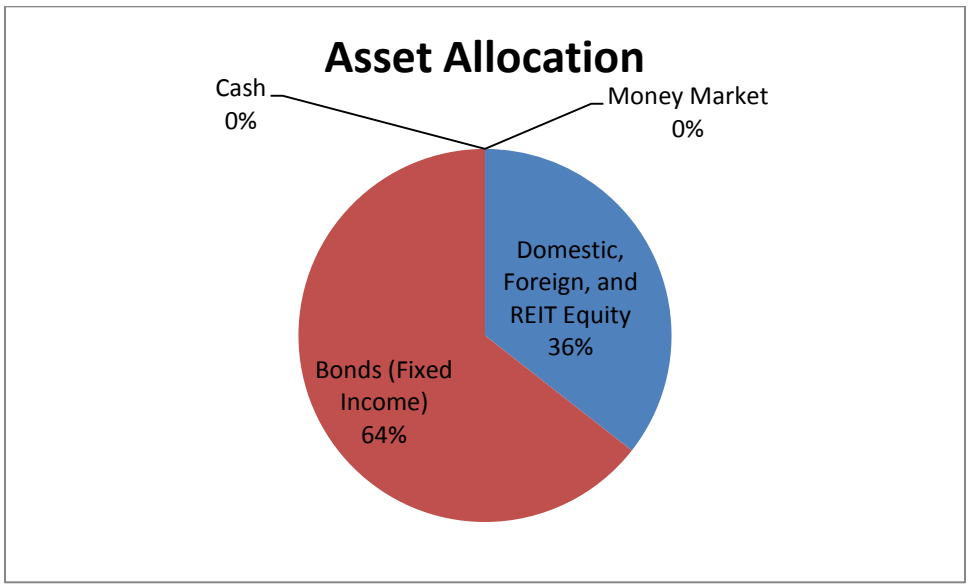
	Projected Results in the June 30, 2013 Valuation	Actual Results in June 30, 2014 Valuation	Difference
Fund Balance as of June 30, 2013	$3,686,636,696	$3,686,636,696	$-
Cash Flows for 2013-14			
• Premiums	$285,096,591	$286,570,526	$1,473,935
• Investment Income	$213,998,076	$391,738,544	$177,740,468
• Paid Claims	$(216,511,796)	$(225,691,101)	$(9,179,305)
• Expenses	$(22,043,483)	$(22,727,373)	$(683,890)
Balance as of June 30, 2014	$3,947,176,084	$4,116,527,291	$169,351,207

Asset Allocation

CalPERS follows a strategic allocation policy that identifies the percentage of funds to be invested in each asset class. The target allocation was changed to a more conservative asset mix by the Board in April 2012.

The asset allocation and market value of assets are shown below as of June 30, 2014. Note the market value of assets provided below is further adjusted by accounts receivables and payables which results in the final market value of assets used for this valuation and shown on the previous page.

Asset Class	Current Allocation	Current Market Value
Cash	0.0%	$317,922
Money Market	0.0%	$206
Domestic, Foreign, and REIT Equity	35.6%	$1,475,935,887
Bonds (Fixed Income)	64.4%	$2,672,251,857
Total Net Assets At Market:	**100.0%**	**$4,148,505,874**



APPENDIX A

60 Year Projection of Fund Balance for Scenarios Used in Sensitivity Testing of Key Assumptions

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Base Case Scenario

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years based on the actuarial assumptions used in this valuation.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
23.49%	$763.47	123%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,731	$139,141	$119,856	$11,738	$117,040	$4,241,115
2015	131,829	$294,281	$257,337	$23,511	$244,529	$4,499,077
2016	126,893	$340,674	$281,088	$23,874	$259,945	$4,794,734
2017	121,987	$357,554	$302,489	$24,556	$277,353	$5,102,597
2018	117,105	$338,416	$320,812	$25,858	$293,911	$5,388,254
2019	112,216	$320,023	$336,170	$26,898	$309,297	$5,654,506
2020	107,309	$302,025	$351,208	$27,211	$323,633	$5,901,745
2021	102,417	$284,405	$366,921	$27,492	$336,869	$6,128,606
2022	97,568	$267,314	$382,373	$27,683	$348,949	$6,334,813
2023	92,771	$250,874	$395,989	$27,792	$359,907	$6,521,814
2024	87,999	$235,011	$407,397	$27,888	$369,847	$6,691,387
2034	43,908	$101,895	$508,079	$24,503	$408,738	$7,295,509
2044	12,981	$24,679	$413,946	$12,776	$380,426	$6,794,438
2054	1,979	$2,926	$170,882	$4,098	$442,589	$8,054,514
2064	145	$151	$34,353	$2,942	$700,063	$12,856,848
2074	7	$2	$1,999	$2,871	$596,444	$21,633,941

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,352,319	$16,756,680	$872,580	$29,794,355
Present Value as of June 30, 2014	$3,250,849	$6,222,453	$381,457	$6,436,082

Discount Rate Increased by 0.50 Percent to 6.25 Percent

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years if the assumed discount rate were 6.25 percent i.e. 0.50 percent higher.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
34.18%	$1,072.33	135%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,731	$139,141	$119,856	$11,738	$127,065	$4,251,140
2015	131,829	$294,281	$257,337	$23,512	$266,419	$4,530,991
2016	126,893	$340,674	$281,088	$23,876	$284,543	$4,851,243
2017	121,987	$357,554	$302,489	$24,560	$305,002	$5,186,751
2018	117,105	$338,416	$320,812	$25,863	$324,728	$5,503,220
2019	112,216	$320,023	$336,170	$26,905	$343,378	$5,803,546
2020	107,309	$302,025	$351,208	$27,221	$361,092	$6,088,235
2021	102,417	$284,405	$366,921	$27,505	$377,820	$6,356,034
2022	97,568	$267,314	$382,373	$27,699	$393,510	$6,606,786
2023	92,771	$250,874	$395,989	$27,811	$408,206	$6,842,065
2024	87,999	$235,011	$407,397	$27,912	$422,028	$7,063,795
2034	43,908	$101,895	$508,079	$24,603	$509,527	$8,440,027
2044	12,981	$24,679	$413,946	$13,074	$561,826	$9,348,630
2054	1,979	$2,926	$170,882	$4,889	$781,040	$13,191,944
2064	145	$151	$34,353	$4,974	$1,348,175	$22,899,687
2074	7	$2	$1,999	$5,333	$1,207,882	$40,451,215

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,352,319	$16,756,680	$926,839	$48,665,887
Present Value as of June 30, 2014	$3,137,472	$5,817,098	$364,570	$7,650,232

Discount Rate Decreased by 0.5 Percent to 5.25 Percent

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years if the assumed discount rate were 5.25 percent i.e. 0.50 percent lower.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
12.31%	$415.24	111%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,731	$139,141	$119,856	$11,738	$106,991	$4,231,066
2015	131,829	$294,281	$257,337	$23,510	$222,739	$4,467,239
2016	126,893	$340,674	$281,088	$23,872	$235,671	$4,738,623
2017	121,987	$357,554	$302,489	$24,553	$250,290	$5,019,426
2018	117,105	$338,416	$320,812	$25,852	$263,987	$5,275,165
2019	112,216	$320,023	$336,170	$26,890	$276,464	$5,508,591
2020	107,309	$302,025	$351,208	$27,202	$287,830	$5,720,036
2021	102,417	$284,405	$366,921	$27,480	$298,034	$5,908,074
2022	97,568	$267,314	$382,373	$27,668	$307,026	$6,072,373
2023	92,771	$250,874	$395,989	$27,773	$314,830	$6,214,315
2024	87,999	$235,011	$407,397	$27,866	$321,539	$6,335,602
2034	43,908	$101,895	$508,079	$24,412	$323,363	$6,261,153
2044	12,981	$24,679	$413,946	$12,522	$241,227	$4,634,227
2054	1,979	$2,926	$170,882	$3,471	$204,552	$4,015,901
2064	145	$151	$34,353	$1,446	$276,167	$5,519,053
2074	7	$2	$1,999	$1,176	$221,707	$8,775,539

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,352,319	$16,756,680	$832,533	$16,895,905
Present Value as of June 30, 2014	$3,371,888	$6,673,347	$399,829	$5,258,660

Lower Morbidity (Future Claims Reduced by 10 Percent)

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years if the assumed morbidity were 10 percent lower than the best estimate.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
42.31%	$1,375.50	150%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,731	$139,141	$108,317	$11,738	$117,202	$4,252,815
2015	131,829	$294,281	$232,451	$23,512	$245,900	$4,537,034
2016	126,893	$340,674	$253,798	$23,876	$262,894	$4,862,928
2017	121,987	$357,554	$273,013	$24,560	$282,104	$5,205,014
2018	117,105	$338,416	$289,441	$25,864	$300,685	$5,528,810
2019	112,216	$320,023	$303,190	$26,907	$318,311	$5,837,047
2020	107,309	$302,025	$316,655	$27,223	$335,106	$6,130,300
2021	102,417	$284,405	$330,736	$27,508	$351,033	$6,407,495
2022	97,568	$267,314	$344,587	$27,703	$366,054	$6,668,572
2023	92,771	$250,874	$356,783	$27,816	$380,208	$6,915,056
2024	87,999	$235,011	$366,992	$27,917	$393,603	$7,148,761
2034	43,908	$101,895	$457,331	$24,627	$484,609	$8,716,422
2044	12,981	$24,679	$372,555	$13,143	$549,509	$9,924,595
2054	1,979	$2,926	$153,794	$5,008	$760,436	$13,908,119
2064	145	$151	$30,918	$5,055	$1,262,220	$23,196,232
2074	7	$2	$1,799	$5,193	$1,080,638	$39,197,313

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,352,319	$15,089,247	$928,869	$45,746,583
Present Value as of June 30, 2014	$3,250,849	$5,606,102	$385,778	$7,997,340

Higher Morbidity (Future Claims Increased by 10 Percent)

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years if the assumed morbidity were 10 percent higher than the best estimate.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
4.66%	$151.44	104%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,731	$139,141	$131,395	$11,738	$116,878	$4,229,414
2015	131,829	$294,281	$282,224	$23,510	$243,159	$4,461,121
2016	126,893	$340,674	$308,378	$23,871	$256,996	$4,726,540
2017	121,987	$357,554	$331,965	$24,552	$272,602	$5,000,180
2018	117,105	$338,416	$352,183	$25,851	$287,137	$5,247,698
2019	112,216	$320,023	$369,150	$26,889	$300,283	$5,471,965
2020	107,309	$302,025	$385,761	$27,199	$312,161	$5,673,191
2021	102,417	$284,405	$403,106	$27,477	$322,705	$5,849,718
2022	97,568	$267,314	$420,158	$27,664	$331,845	$6,001,054
2023	92,771	$250,874	$435,195	$27,768	$339,607	$6,128,572
2024	87,999	$235,011	$447,802	$27,859	$346,091	$6,234,013
2034	43,908	$101,895	$558,826	$24,379	$332,867	$5,874,597
2044	12,981	$24,679	$455,337	$12,409	$211,343	$3,664,282
2054	1,979	$2,926	$187,970	$3,188	$124,742	$2,200,910
2064	145	$151	$37,789	$828	$137,906	$2,517,464
2074	7	$2	$2,199	$549	$112,250	$4,070,569

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,352,319	$18,424,113	$816,291	$13,842,127
Present Value as of June 30, 2014	$3,250,849	$6,838,803	$377,136	$4,874,823

Lapses Increased by 0.25 Percent

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years if the assumed lapse rates were increased by 0.25 percent.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
27.54%	$877.72	127%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,558	$139,018	$119,852	$11,730	$117,038	$4,241,001
2015	131,329	$293,432	$257,258	$23,458	$244,504	$4,498,222
2016	126,091	$338,812	$280,791	$23,770	$259,856	$4,792,330
2017	120,910	$354,710	$301,833	$24,398	$277,153	$5,097,962
2018	115,778	$334,857	$319,671	$25,636	$293,576	$5,381,088
2019	110,663	$315,839	$334,433	$26,611	$308,815	$5,644,699
2020	105,556	$297,308	$348,752	$26,852	$323,005	$5,889,407
2021	100,489	$279,240	$363,615	$27,061	$336,107	$6,114,078
2022	95,490	$261,782	$378,111	$27,180	$348,079	$6,318,648
2023	90,565	$245,049	$390,708	$27,218	$358,964	$6,504,735
2024	85,690	$228,963	$401,058	$27,243	$368,876	$6,674,273
2034	41,684	$96,738	$487,987	$23,359	$412,466	$7,372,489
2044	12,013	$22,819	$387,834	$11,960	$403,315	$7,228,081
2054	1,784	$2,631	$156,240	$3,986	$498,454	$9,089,151
2064	128	$131	$30,657	$3,297	$804,355	$14,776,543
2074	6	$2	$1,742	$3,303	$686,828	$24,912,586

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,209,652	$16,044,821	$852,312	$32,483,538
Present Value as of June 30, 2014	$3,187,157	$6,053,635	$372,333	$6,640,090

Lapses Decreased by 0.25 Percent

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years if the assumed lapse rates were decreased by 0.25 percent.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
19.38%	$642.62	118%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,904	$139,264	$119,860	$11,746	$117,042	$4,241,228
2015	132,329	$295,131	$257,417	$23,564	$244,554	$4,499,932
2016	127,697	$342,540	$281,385	$23,978	$260,035	$4,797,144
2017	123,070	$360,414	$303,146	$24,716	$277,554	$5,107,250
2018	118,444	$342,004	$321,958	$26,081	$294,248	$5,395,462
2019	113,786	$324,251	$337,918	$27,188	$309,782	$5,664,388
2020	109,086	$306,805	$353,685	$27,575	$324,267	$5,914,201
2021	104,376	$289,651	$370,261	$27,930	$337,639	$6,143,300
2022	99,686	$272,946	$386,688	$28,195	$349,831	$6,351,194
2023	95,025	$256,821	$401,346	$28,378	$360,864	$6,539,154
2024	90,366	$241,201	$413,843	$28,547	$370,834	$6,708,799
2034	46,244	$107,310	$528,984	$25,702	$404,900	$7,216,173
2044	14,025	$26,685	$441,779	$13,655	$356,499	$6,340,872
2054	2,194	$3,252	$186,873	$4,230	$383,698	$6,963,583
2064	165	$172	$38,488	$2,569	$589,805	$10,827,230
2074	9	$3	$2,294	$2,414	$500,843	$18,166,060

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,500,786	$17,513,250	$893,983	$26,955,979
Present Value as of June 30, 2014	$3,316,510	$6,399,450	$390,966	$6,221,167

Higher Conversion Rates

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years if the assumed conversion rates were increased by the percentages as shown in Appendix C.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
26.96%	$823.94	125%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,785	$137,543	$119,851	$11,739	$117,014	$4,239,495
2015	131,877	$286,378	$256,979	$23,506	$244,272	$4,489,659
2016	126,940	$323,091	$280,220	$23,854	$258,970	$4,767,646
2017	122,033	$335,474	$301,092	$24,501	$275,163	$5,052,690
2018	117,150	$317,186	$318,618	$25,723	$290,458	$5,315,993
2019	112,260	$299,653	$332,956	$26,704	$304,614	$5,560,600
2020	107,352	$282,529	$346,759	$27,000	$317,767	$5,787,136
2021	102,459	$265,792	$361,023	$27,266	$329,880	$5,994,519
2022	97,609	$249,585	$374,826	$27,440	$340,913	$6,182,752
2023	92,810	$234,027	$386,628	$27,532	$350,916	$6,353,535
2024	88,038	$219,042	$396,102	$27,611	$360,004	$6,508,868
2034	43,932	$94,161	$475,566	$24,278	$398,672	$7,123,433
2044	12,990	$22,618	$379,951	$12,712	$386,042	$6,913,845
2054	1,980	$2,687	$156,269	$4,166	$470,782	$8,580,114
2064	145	$140	$31,824	$3,148	$755,221	$13,872,395
2074	7	$2	$1,894	$3,100	$644,286	$23,369,391

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,007,941	$15,804,548	$871,539	$30,921,009
Present Value as of June 30, 2014	$3,055,868	$5,969,348	$379,106	$6,433,616

Lower Conversion Rates

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years if the assumed conversion rates were decreased by the percentages as shown in Appendix C.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
20.18%	$695.67	120%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,681	$140,661	$119,861	$11,737	$117,064	$4,242,655
2015	131,783	$302,298	$258,090	$23,516	$244,776	$4,508,123
2016	126,848	$358,746	$282,745	$23,894	$260,890	$4,821,120
2017	121,943	$380,180	$304,646	$24,614	$279,498	$5,151,538
2018	117,063	$360,088	$323,721	$25,996	$297,302	$5,459,210
2019	112,174	$340,748	$340,044	$27,095	$313,897	$5,746,716
2020	107,268	$321,800	$356,267	$27,426	$329,394	$6,014,218
2021	102,377	$303,228	$373,385	$27,722	$343,727	$6,260,064
2022	97,530	$285,191	$390,450	$27,929	$356,825	$6,483,702
2023	92,733	$267,819	$405,847	$28,056	$368,706	$6,686,325
2024	87,963	$251,033	$419,165	$28,169	$379,463	$6,869,486
2034	43,885	$109,448	$541,214	$24,728	$417,951	$7,451,490
2044	12,973	$26,608	$448,396	$12,836	$372,741	$6,636,685
2054	1,977	$3,133	$185,532	$4,019	$410,539	$7,457,965
2064	145	$158	$36,863	$2,710	$638,167	$11,717,411
2074	7	$2	$2,103	$2,614	$542,809	$19,688,393

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,695,782	$17,727,771	$873,027	$28,476,883
Present Value as of June 30, 2014	$3,446,973	$6,484,033	$383,798	$6,420,251

Mortality Rates Increased by 10 Percent

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years if the assumed mortality rates were increased by 10 percent.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
29.25%	$929.98	129%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,551	$138,996	$120,295	$11,730	$117,032	$4,240,530
2015	131,331	$293,145	$257,993	$23,459	$244,448	$4,496,671
2016	126,115	$338,224	$281,149	$23,772	$259,739	$4,789,713
2017	120,964	$353,939	$301,627	$24,374	$276,984	$5,094,635
2018	115,866	$334,053	$318,812	$25,541	$293,385	$5,377,720
2019	110,783	$315,049	$332,913	$26,467	$308,643	$5,642,032
2020	105,704	$296,549	$346,580	$26,695	$322,893	$5,888,199
2021	100,662	$278,528	$360,803	$26,893	$336,099	$6,115,130
2022	95,686	$261,131	$374,706	$27,006	$348,220	$6,322,769
2023	90,781	$244,468	$386,800	$27,042	$359,299	$6,512,695
2024	85,920	$228,447	$396,761	$27,067	$369,445	$6,686,760
2034	41,768	$96,281	$482,322	$23,161	$417,197	$7,462,235
2044	11,890	$22,351	$380,997	$11,719	$415,997	$7,464,673
2054	1,737	$2,530	$152,551	$3,955	$524,801	$9,575,505
2064	122	$123	$29,530	$3,460	$852,194	$15,656,822
2074	6	$2	$1,671	$3,500	$728,174	$26,412,386

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,190,913	$15,830,751	$849,067	$33,784,764
Present Value as of June 30, 2014	$3,178,933	$5,995,276	$370,205	$6,753,479

Mortality Rates Decreased by 10 Percent

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years if the assumed mortality were decreased by 10 percent.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
17.13%	$570.31	116%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,910	$139,285	$119,417	$11,745	$117,048	$4,241,698
2015	132,330	$295,420	$256,680	$23,563	$244,610	$4,501,485
2016	127,683	$343,163	$281,030	$23,976	$260,153	$4,799,795
2017	123,036	$361,274	$303,379	$24,743	$277,727	$5,110,673
2018	118,387	$342,953	$322,892	$26,186	$294,447	$5,398,995
2019	113,708	$325,241	$339,584	$27,350	$309,965	$5,667,267
2020	108,991	$307,813	$356,094	$27,757	$324,392	$5,915,620
2021	104,266	$290,656	$373,423	$28,131	$337,658	$6,142,381
2022	99,562	$273,930	$390,569	$28,410	$349,693	$6,347,024
2023	94,888	$257,766	$405,868	$28,601	$360,520	$6,530,841
2024	90,222	$242,107	$418,893	$28,779	$370,234	$6,695,510
2034	46,292	$108,217	$537,003	$26,020	$399,279	$7,109,005
2044	14,276	$27,483	$452,762	$14,055	$340,082	$6,033,556
2054	2,283	$3,432	$193,735	$4,310	$347,868	$6,301,252
2064	177	$189	$40,728	$2,353	$523,773	$9,611,839
2074	9	$3	$2,451	$2,141	$443,638	$16,090,950

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,532,241	$17,843,511	$899,876	$25,185,569
Present Value as of June 30, 2014	$3,329,313	$6,481,435	$394,096	$6,070,942

"Best Case" Scenario

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years if the assumed interest rate were 0.50 percent higher (6.25 percent), lapse rates were increased by 0.25 percent, mortality rates were increased by 10 percent, and morbidity rates were decreased 10 percent.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
61.39%	$1,848.90	182%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,378	$138,873	$108,753	$11,723	$127,231	$4,262,155
2015	130,832	$292,299	$233,049	$23,408	$267,793	$4,565,791
2016	125,319	$336,376	$253,659	$23,673	$287,430	$4,912,265
2017	119,896	$351,123	$271,717	$24,225	$309,557	$5,277,003
2018	114,552	$330,538	$286,684	$25,334	$331,172	$5,626,695
2019	109,250	$310,929	$298,771	$26,202	$351,965	$5,964,617
2020	103,977	$291,916	$310,367	$26,366	$372,104	$6,291,904
2021	98,767	$273,469	$322,361	$26,500	$391,584	$6,608,096
2022	93,647	$255,726	$333,985	$26,551	$410,399	$6,913,687
2023	88,622	$238,791	$343,926	$26,527	$428,624	$7,210,649
2024	83,665	$222,567	$351,918	$26,494	$446,400	$7,501,204
2034	39,653	$91,406	$417,048	$22,308	$605,759	$10,118,393
2044	11,003	$20,664	$321,345	$11,662	$814,383	$13,687,452
2054	1,566	$2,275	$125,571	$5,651	$1,303,138	$22,089,393
2064	108	$107	$23,730	$8,274	$2,326,441	$39,533,696
2074	5	$1	$1,311	$9,222	$2,091,145	$70,032,238

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,054,941	$13,666,665	$949,671	$75,477,106
Present Value as of June 30, 2014	$3,011,758	$4,929,370	$350,019	$9,653,952

"Worst Case" Scenario

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years if the assumed interest rate were 0.50 percent lower (5.25 percent), lapse rates were decreased by 0.25 percent, mortality rates were decreased by 10 percent, and morbidity rates were increased by 10 percent.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
(18.85)%	$(665.14)	86%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	137,084	$139,408	$130,960	$11,753	$106,851	$4,220,074
2015	132,832	$296,273	$281,667	$23,615	$221,584	$4,432,649
2016	128,492	$345,043	$308,716	$24,077	$233,252	$4,678,152
2017	124,129	$364,162	$333,740	$24,896	$246,485	$4,930,163
2018	119,741	$346,588	$355,807	$26,402	$258,612	$5,153,154
2019	115,299	$329,536	$374,912	$27,630	$269,304	$5,349,452
2020	110,795	$312,683	$393,961	$28,108	$278,646	$5,518,712
2021	106,260	$296,016	$414,061	$28,553	$286,546	$5,658,661
2022	101,723	$279,700	$434,089	$28,902	$292,912	$5,768,283
2023	97,193	$263,874	$452,170	$29,162	$297,742	$5,848,567
2024	92,648	$248,483	$467,806	$29,409	$301,114	$5,900,948
2034	48,755	$113,966	$615,047	$27,083	$242,079	$4,581,677
2044	15,423	$29,713	$531,651	$14,427	$31,176	$365,474
2054	2,532	$3,814	$233,129	$3,648	($208,009)	($4,285,529)
2064	201	$217	$50,218	$430	($437,000)	($8,785,463)
2074	11	$4	$3,095	$15	($367,485)	($14,549,817)

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,688,790	$20,532,871	$876,169	($2,946,094)
Present Value as of June 30, 2014	$3,528,111	$7,887,047	$422,728	$3,026,172

APPENDIX B

60 Year Projection of Fund Balance for Additional Discount Rate Sensitivity Testing from New York Regulation 126

- SCENARIO 1 – BASE CASE…… B-1
- SCENARIO 2 – DISCOUNT RATE INCREASING 0.50 PERCENT FOR 10 YEARS……..…… B-2
- SCENARIO 3 – DISCOUNT RATE INCREASING 1 PERCENT FOR 5 YEARS THEN DECREASING 1 PERCENT FOR 5 YEARS…….….. B-3
- SCENARIO 4 – DISCOUNT RATE INCREASED 3 PERCENT..... B-4
- SCENARIO 5 – DISCOUNT RATE DECREASING 0.50 PERCENT FOR 10 YEARS…… B-5
- SCENARIO 6 – DISCOUNT RATE DECREASING 1 PERCENT FOR 5 YEARS THEN INCREASING 1 PERCENT FOR 5 YEARS…… B-6
- SCENARIO 7 – DISCOUNT RATE DECREASED 3 PERCENT……..…. B-7

Scenario 1 - Base Case

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years based on the actuarial assumptions used in this valuation. This is the same as the base scenario with a discount rate of 5.75 percent.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
23.49%	$763.47	123%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,731	$139,141	$119,856	$11,738	$117,040	$4,241,115
2015	131,829	$294,281	$257,337	$23,511	$244,529	$4,499,077
2016	126,893	$340,674	$281,088	$23,874	$259,945	$4,794,734
2017	121,987	$357,554	$302,489	$24,556	$277,353	$5,102,597
2018	117,105	$338,416	$320,812	$25,858	$293,911	$5,388,254
2019	112,216	$320,023	$336,170	$26,898	$309,297	$5,654,506
2020	107,309	$302,025	$351,208	$27,211	$323,633	$5,901,745
2021	102,417	$284,405	$366,921	$27,492	$336,869	$6,128,606
2022	97,568	$267,314	$382,373	$27,683	$348,949	$6,334,813
2023	92,771	$250,874	$395,989	$27,792	$359,907	$6,521,814
2024	87,999	$235,011	$407,397	$27,888	$369,847	$6,691,387
2034	43,908	$101,895	$508,079	$24,503	$408,738	$7,295,509
2044	12,981	$24,679	$413,946	$12,776	$380,426	$6,794,438
2054	1,979	$2,926	$170,882	$4,098	$442,589	$8,054,514
2064	145	$151	$34,353	$2,942	$700,063	$12,856,848
2074	7	$2	$1,999	$2,871	$596,444	$21,633,941

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,352,319	$16,756,680	$872,580	$29,794,355
Present Value as of June 30, 2014	$3,250,849	$6,222,453	$381,457	$6,436,082

Scenario 2 - Discount Rate Increasing 0.50 Percent for 10 Years

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years under scenario 2 of the NY 7 interest rates scenarios.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
83.17%	$2,328.45	230%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,731	$139,141	$119,856	$11,738	$117,040	$4,241,115
2015	131,829	$294,281	$257,337	$23,511	$255,158	$4,509,706
2016	126,893	$340,674	$281,088	$23,874	$294,551	$4,839,968
2017	121,987	$357,554	$302,489	$24,559	$340,815	$5,211,289
2018	117,105	$338,416	$320,812	$25,864	$391,494	$5,594,523
2019	112,216	$320,023	$336,170	$26,911	$446,790	$5,998,255
2020	107,309	$302,025	$351,208	$27,234	$507,583	$6,429,421
2021	102,417	$284,405	$366,921	$27,528	$574,703	$6,894,080
2022	97,568	$267,314	$382,373	$27,737	$649,176	$7,400,461
2023	92,771	$250,874	$395,989	$27,868	$732,419	$7,959,897
2024	87,999	$235,011	$407,397	$27,994	$826,301	$8,585,818
2034	43,908	$101,895	$508,079	$25,422	$1,794,219	$18,260,780
2044	12,981	$24,679	$413,946	$16,841	$4,183,354	$42,892,506
2054	1,979	$2,926	$170,882	$19,804	$11,055,879	$113,807,094
2064	145	$151	$34,353	$61,644	$30,455,743	$313,715,814
2074	7	$2	$1,999	$104,209	$41,086,531	$825,452,563

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,352,319	$16,756,680	$2,517,809	$835,258,206
Present Value as of June 30, 2014	$2,799,553	$4,282,733	$304,901	$16,418,464

Scenario 3 - Discount Rate Increasing 1 Percent for 5 Years and then Decreasing 1 Percent for 5 Years

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years under scenario 3 of the NY 7 interest rates scenarios.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
50.58%	$1,454.75	155%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,731	$139,141	$119,856	$11,738	$117,040	$4,241,115
2015	131,829	$294,281	$257,337	$23,511	$265,761	$4,520,309
2016	126,893	$340,674	$281,088	$23,875	$329,287	$4,885,307
2017	121,987	$357,554	$302,489	$24,562	$405,387	$5,321,198
2018	117,105	$338,416	$320,812	$25,871	$492,964	$5,805,895
2019	112,216	$320,023	$336,170	$26,925	$594,059	$6,356,882
2020	107,309	$302,025	$351,208	$27,258	$648,949	$6,929,390
2021	102,417	$284,405	$366,921	$27,562	$637,054	$7,456,367
2022	97,568	$267,314	$382,373	$27,775	$610,312	$7,923,845
2023	92,771	$250,874	$395,989	$27,905	$569,129	$8,319,954
2024	87,999	$235,011	$407,397	$28,020	$514,539	$8,634,087
2034	43,908	$101,895	$508,079	$24,810	$593,349	$10,690,593
2044	12,981	$24,679	$413,946	$13,481	$702,976	$12,726,194
2054	1,979	$2,926	$170,882	$5,713	$1,005,956	$18,414,741
2064	145	$151	$34,353	$6,640	$1,683,612	$30,943,687
2074	7	$2	$1,999	$6,928	$1,442,577	$52,325,918

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,352,319	$16,756,680	$973,476	$60,587,227
Present Value as of June 30, 2014	$2,876,365	$5,206,040	$332,103	$8,916,073

Scenario 4 – Discount Rate Increased 3 Percent

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years under scenario 4 of the NY 7 interest rates scenarios.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
81.86%	$2,181.59	213%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,731	$139,141	$119,856	$11,739	$176,841	$4,300,915
2015	131,829	$294,281	$257,337	$23,517	$377,339	$4,691,681
2016	126,893	$340,674	$281,088	$23,885	$412,413	$5,139,794
2017	121,987	$357,554	$302,489	$24,577	$452,244	$5,622,527
2018	117,105	$338,416	$320,812	$25,890	$492,750	$6,106,990
2019	112,216	$320,023	$336,170	$26,944	$533,565	$6,597,464
2020	107,309	$302,025	$351,208	$27,273	$575,007	$7,096,015
2021	102,417	$284,405	$366,921	$27,573	$617,144	$7,603,071
2022	97,568	$267,314	$382,373	$27,786	$660,050	$8,120,276
2023	92,771	$250,874	$395,989	$27,919	$703,943	$8,651,185
2024	87,999	$235,011	$407,397	$28,044	$749,165	$9,199,919
2034	43,908	$101,895	$508,079	$25,270	$1,322,345	$16,211,750
2044	12,981	$24,679	$413,946	$15,495	$2,470,410	$30,499,230
2054	1,979	$2,926	$170,882	$12,843	$5,311,573	$65,925,040
2064	145	$151	$34,353	$30,318	$12,135,163	$150,790,170
2074	7	$2	$1,999	$42,891	$13,701,445	$333,561,845

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,352,319	$16,756,680	$1,614,692	$342,464,370
Present Value as of June 30, 2014	$2,665,051	$4,302,326	$297,660	$14,012,458

Scenario 5 – Discount Rate Decreasing 0.50 Percent for 10 Years

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years under scenario 5 of the NY 7 interest rates scenarios.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
(89.24)%	$(3,599.57)	53%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,731	$139,141	$119,856	$11,738	$117,040	$4,241,115
2015	131,829	$294,281	$257,337	$23,511	$233,876	$4,488,423
2016	126,893	$340,674	$281,088	$23,873	$225,471	$4,749,607
2017	121,987	$357,554	$302,489	$24,553	$214,997	$4,995,116
2018	117,105	$338,416	$320,812	$25,851	$200,151	$5,187,020
2019	112,216	$320,023	$336,170	$26,885	$181,233	$5,325,221
2020	107,309	$302,025	$351,208	$27,189	$159,000	$5,407,849
2021	102,417	$284,405	$366,921	$27,459	$134,163	$5,432,037
2022	97,568	$267,314	$382,373	$27,635	$107,506	$5,396,849
2023	92,771	$250,874	$395,989	$27,725	$79,902	$5,303,911
2024	87,999	$235,011	$407,397	$27,799	$52,244	$5,155,970
2034	43,908	$101,895	$508,079	$24,037	$16,853	$2,044,176
2044	12,981	$24,679	$413,946	$11,920	($16,358)	($2,397,424)
2054	1,979	$2,926	$170,882	$2,815	($39,891)	($5,442,586)
2064	145	$151	$34,353	$305	($50,088)	($6,745,267)
2074	7	$2	$1,999	$10	($27,500)	($7,375,546)

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,352,319	$16,756,680	$793,378	$705,666
Present Value as of June 30, 2014	$4,033,756	$11,191,566	$558,290	$930,043

Scenario 6 - Discount Rate Decreasing 1 Percent for 5 Years then Increasing 1 Percent for 5 Years

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years under scenario 6 of the NY 7 interest rates scenarios.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
(3.73)%	$(138.84)	97%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,731	$139,141	$119,856	$11,738	$117,040	$4,241,115
2015	131,829	$294,281	$257,337	$23,511	$223,196	$4,477,744
2016	126,893	$340,674	$281,088	$23,872	$191,127	$4,704,585
2017	121,987	$357,554	$302,489	$24,551	$153,743	$4,888,843
2018	117,105	$338,416	$320,812	$25,844	$110,150	$4,990,752
2019	112,216	$320,023	$336,170	$26,872	$62,260	$5,009,993
2020	107,309	$302,025	$351,208	$27,169	$62,138	$4,995,780
2021	102,417	$284,405	$366,921	$27,431	$111,231	$4,997,064
2022	97,568	$267,314	$382,373	$27,605	$160,213	$5,014,613
2023	92,771	$250,874	$395,989	$27,698	$209,632	$5,051,432
2024	87,999	$235,011	$407,397	$27,781	$260,187	$5,111,452
2034	43,908	$101,895	$508,079	$24,252	$258,600	$4,534,398
2044	12,981	$24,679	$413,946	$12,203	$118,107	$1,970,335
2054	1,979	$2,926	$170,882	$2,815	($15,581)	($371,159)
2064	145	$151	$34,353	$305	($99,962)	($1,855,297)
2074	7	$2	$1,999	$10	($92,018)	($3,338,983)

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074.

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,352,319	$16,756,680	$798,595	$4,747,445
Present Value as of June 30, 2014	$3,723,486	$7,533,712	$445,146	$3,465,012

Scenario 7 - Discount Rate Decreased 3 Percent

The tables below contain information about the margin, funded status and expected cash flows for the next 60 years under scenario 7 of the NY 7 interest rates scenarios.

Main Results

Margin as Percentage of the Present Value of Premiums	Margin ($ in millions)	Funded Status
(52.87)%	$(2,178.64)	65%

Projected Cash Flows and Fund Balance Over Next 60 years ($ in thousands)

Calendar Year[1]	Lives	Expected Premiums	Expected Claims	Expenses	Investment Earnings	Fund Balance[2]
						$4,116,527
2014	136,731	$139,141	$119,856	$11,737	$56,384	$4,180,460
2015	131,829	$294,281	$257,337	$23,505	$115,282	$4,309,181
2016	126,893	$340,674	$281,088	$23,862	$119,102	$4,464,006
2017	121,987	$357,554	$302,489	$24,536	$123,554	$4,618,090
2018	117,105	$338,416	$320,812	$25,827	$127,242	$4,737,109
2019	112,216	$320,023	$336,170	$26,856	$130,016	$4,824,122
2020	107,309	$302,025	$351,208	$27,157	$131,941	$4,879,724
2021	102,417	$284,405	$366,921	$27,423	$133,000	$4,902,784
2022	97,568	$267,314	$382,373	$27,598	$133,171	$4,893,297
2023	92,771	$250,874	$395,989	$27,689	$132,478	$4,852,971
2024	87,999	$235,011	$407,397	$27,766	$130,979	$4,783,797
2034	43,908	$101,895	$508,079	$24,069	$71,027	$2,433,369
2044	12,981	$24,679	$413,946	$11,920	($45,634)	($1,905,742)
2054	1,979	$2,926	$170,882	$2,815	($150,493)	($5,707,159)
2064	145	$151	$34,353	$305	($226,623)	($8,484,259)
2074	7	$2	$1,999	$10	($149,945)	($11,130,465)

Note:

1- Cash flows for 2014 and 2074 are for 6 months only.

2- Fund balances are as of the end of the Calendar Year, except for the opening balance which is as of June 30, 2014 and the last projected fund balance which is as of June 30, 2074

Total Sum of all cash Flows and Present Values ($ in thousands)

	Expected Premiums	Expected Claims	Expenses	Investment Earnings
Total Sum of Cash Flows	$5,352,319	$16,756,680	$793,426	($3,049,206)
Present Value as of June 30, 2014	$4,120,480	$9,883,457	$532,192	$392,925

DRAFT

APPENDIX C

Long-Term Care Model and Assumptions

- MODEL
- ASSUMPTIONS

Long-Term Care Model and Assumptions

Model

Projection results are based on a projection of 139,947 inforce members as of June 30, 2014. CalPERS LTC business consists of facility-only and comprehensive coverages and includes a variety of elimination periods, benefit periods, and inflation coverage combinations. A summary of the model cells we used for projection purposes has been included as Appendix D. Projection results for each cell reflect output from two different models. The first model calculates the disabled life reserves and incurred but not reported claim liabilities. The second model generates base plan projections, premium waiver projections, and return-of-premium benefit projections.

Assumptions

Morbidity:

Claim Cost: The claim cost assumption is derived using the expected claim costs developed by LTCG based on industry morbidity assumptions in 2005, adjusted to the extent credible by the aggregate experience of the CalPERS Long-Term Care Program. The following table includes sample claim costs used for this valuation.

Annual Claim Costs per $1 of Daily Befit Allowance for an Issue Age 50, Long Form Underwriting, Issued from 1995-1998, and Uni-sex with 50% Male and Female				
Attained Age	Comprehensive Automatic Inflation		Facility-Only Automatic Inflation	
	Unlimited	3-Year	Unlimited	3-Year
60	1.62	0.74	0.96	0.45
65	2.86	1.20	1.48	0.77
70	6.20	2.20	2.94	1.42
75	12.38	5.64	7.51	3.57
80	25.31	13.81	17.49	8.58
85	43.51	24.71	31.17	16.49
90	50.16	38.83	39.86	26.10
95	75.83	49.60	51.01	34.52

The valuation claim cost development process is described as below:

- Step 1: Develop complete inception-to-date exposure and claims.
- Step 2: Create a set of experience select-and-ultimate factors that vary by issue-age band, duration, issue year, and underwriting type. Manual claim costs and selection factors are used to calculate expected claim costs. Then the actual claim costs are compared to the expected claim costs in aggregate by underwriting types and duration. We apply scalar adjustment factors to the manual selection factors until the expected claim costs are close to the actual claim costs. The resulting scalar adjustment factors are applied to the manual selection factors to get the experience selection factors.

- Step 3: Use the experience selection factors developed in Step 2 to adjust the actual incurred claims in Step 1 to estimate the ultimate levels. Create the ultimate experience claim cost tables by using the adjusted incurred claims divided by the exposure in Step 1. The ultimate claim costs vary by plan option, gender and attained age.
- Step 4: Develop the final valuation claim cost tables by credibility weighting the experience claim cost developed in Step 3 and the manual claim costs for attained ages between 38 and 97. Use manual claim costs for attained ages 37 and younger and 98 and older.

Claim Payment Distribution: These vary by age at claim incurral, gender, plan, benefit period, and claim duration. They were updated for this valuation to reflect emerging experience and were developed to be consistent with current liability/reserve levels.

Morbidity Improvement: Consistent with population experience and relevant actuarial documentation and practice, we assumed that future morbidity would improve for 20 years from the valuation date. Because of the relationship between mortality and morbidity improvement, we assumed the amount of morbidity improvement would be the same as the mortality improvement but we set the maximum morbidity improvement at 1.25%.

Inflation Adjustment: Appropriate morbidity adjustments are made for policies with inflation protection.

Adjustments to Reflect Individuals Already on Claim: These vary by benefit period, inflation coverage, gender, issue age and duration. They are used to adjust the assumed claim costs to be on an exposure basis consistent with that used in the projection model.

Mortality

The following description is a summary of the process we utilized to determine the appropriate mortality assumption.

Generally, deaths are not consistently reported in LTC insurance, and therefore it is customary to compare the historical inforce file to a Social Security Database to properly identify those that have died rather than those that have voluntarily lapsed coverage. Accurate mortality assumptions are important when projecting future terminations within a LTC block because, as the block ages, mortality constitutes a greater proportion of total terminations.

Using the May 2014 Social Security Database, LTCG identified deaths within the CalPERS LTC Program by matching social security numbers, names, and birthdates. In total, over 27,000 deaths were confirmed or identified through this process, which includes nearly 1,200 deaths added to the previous study completed in 2012. Any inconsistencies, such as those reported as deaths in the Social Security Database but still active in the CalPERS Program, were reported to the LTCG's administrative staff.

Using the identified deaths, we compared the actual mortality experience to what was expected using last year's valuation assumptions. Overall, the previous assumptions were reasonable, but we identified several refinements. In addition, actual experience showed that members who were

on claim had mortality rates that were over two times higher than those who were not on claim. Because of the significant difference between these two cohorts, we developed two separate mortality assumptions; one for members not on claim, and one for those on claim.

The 1994 GAM industry table was used as the assumed industry level mortality assumption, and we developed selection factors based on CalPERS actual experience. The revised selection factors are shown in the following table.

Policy Year	Mortality Selection Factor
1	0.35
2	0.46
3	0.55
4	0.60
5	0.62
6	0.66
7	0.72
8	0.72
9	0.72
10+	0.72

We then compared actual mortality experience to the expected assumption based on the 94 GAM and CalPERS selection factors to determine more refined experienced based adjustment factors that vary by attained-age for both active members and members on claim. These experience adjustment factors combined with the 94 GAM mortality table and CalPERS selection factors resulted in the CalPERS experienced based mortality assumption.

We also reviewed the mortality improvement assumption although measuring mortality improvement can be challenging and often relies on a very large population base to complete a credible study. Therefore, it is common in the LTC industry to rely on industry mortality improvement scales rather than independently calculate this assumption.

CalPERS actuarial staff recently completed a review of the mortality assumptions used for its pension plans, including mortality improvements. Based on the results of this review, the CalPERS Board adopted the use of twenty years of mortality improvements using the recently developed mortality improvement projection Scale BB.

Because a large portion of CalPERS LTC program members are employees or retirees of CalPERS, we compared the Pension Scale BB to our past mortality improvement assumption. In addition, we compared Scale BB to the 2012 IAM mortality Scale G2, which is a recent mortality and mortality improvement life insurance table. The two more recent scales, Pension Scale BB and Life Scale G2, had similar improvement levels by age.

Because many of the CalPERS LTC members are also CalPERS Pension members and the Pension scale is consistent with a more recent life study, we adopted the Pension Scale BB as the mortality improvement assumption for CalPERS LTC. Note that contrary to the static twenty

years of mortality improvements that was used for the pension mortality table, for the LTC mortality tables, generational mortality improvements were applied using Scale BB.

Lapse

Using actual total termination experience and the mortality assumptions described above, the lapse assumptions were developed. The analysis performed started with the actual total termination experience including both voluntary lapses and deaths, and we then backed out the revised assumed mortality to derive actual voluntary lapse rates. The revised lapse assumptions were then developed to correspond to the observed actual lapses.

The following assumed voluntary lapse rates were used for all projection cells:

Policy Year	Age Group					
	< 40	40 - 49	50 - 59	60 - 69	70 - 79	80 +
1	4.7%	3.3%	2.7%	2.1%	2.2%	2.8%
2	3.6%	2.3%	1.9%	1.3%	1.3%	2.8%
3	3.5%	1.9%	1.5%	1.1%	1.3%	2.3%
4	2.8%	1.7%	1.3%	0.9%	1.3%	1.7%
5	2.8%	1.7%	1.2%	0.9%	1.3%	1.7%
6	2.8%	1.6%	1.2%	0.9%	1.3%	1.7%
7	2.8%	1.6%	1.2%	0.9%	1.3%	1.7%
8	2.8%	1.6%	1.2%	0.9%	1.3%	1.7%
9	2.4%	1.6%	1.0%	0.9%	1.3%	1.7%
10	2.4%	1.6%	0.9%	0.9%	1.3%	1.7%
11	2.3%	1.4%	0.9%	0.9%	1.1%	1.7%
12	2.3%	1.4%	0.8%	0.9%	1.1%	1.7%
13	2.3%	1.4%	0.8%	0.9%	1.1%	1.7%
14+	2.3%	1.2%	0.8%	0.9%	1.1%	1.7%

In addition to the above lapse rates, we apply shock lapse rates which are consistent with the assumptions relating to the development of the recommended rate increase in 2014, 2015 and 2016.

Expenses

We used the following expense assumptions:

- The Third Party Administration (TPA) costs reflect the new 5 year contract with LTCG which was effective in 2013. For expenses after the five year contract, we increased all non-claim expense items using an annual inflation of 2.75 percent.
- The administration cost in the new administration contract with LTCG is based on per member per month. After the five year period, the administration fees are switched back to claim adjudication costs which are consistent with past valuation costs associated with claims.
- Starting in January 2019, we reduced the inflated fixed dollar fees by the ratio of current premium to the prior year premium. The intent of this is to adjust for the fact that if the Program volume declines, expenses will need to decline as well.
- We assumed CalPERS non-TPA expenses would be $302,950 per month through December of 2014 and increase 2.75 percent for inflation each January thereafter.
- A new option for members allowing one-time premium payments using credit cards will be available later this year, and as a result a new expense item has been added to cover related credit card fees. This fee assumes that each year 5 percent of members will use a credit card to pay their premiums at a cost of 3 percent of premium resulting in a total 0.15 percent of premium annual expense fee for credit cards.

Discount Rate

We assumed 5.75 percent for all projection years.

Rate Increase Related Assumptions:

There are four assumptions that are related to the rate increase, the rate increase percentage, the conversion rates, the anti-selection factors, and the shock lapse rates.

1. Rate increase percentages:

- 5 percent rate increase in 2014 for LTC1 policies with Lifetime Benefit Period and Inflation Protection ; and
- 36 percent rate increase in each of 2015 and 2016 for LTC1 and LTC2 policies with either Lifetime Benefit Period or Inflation Protection or both.

2. Conversion rates:

The conversion assumptions are based on the actual conversion rates of those policies subject to the 5 percent rate increase in 2013 and 2014. The conversion rates vary by attained age for the larger conversion percentages. We used the distribution of inforce policies to weight them together and the weighted averages are shown in the table below for the base case (scenario 1) and the sensitivity testing scenarios for conversion rates.

	Eligible Plans for Conversion by Calendar Year	Base Case	Lower Conversion	Higher Conversion
1	LTC1 Lifetime Inflation (those receiving 5% ongoing rate increase) in 2014:			
	· converting to 10-yr with BIO:	15%	12%	18%
2	LTC1 Lifetime Inflation (those receiving 5% ongoing rate increase) in 2015:			
	· converting to 10-yr with BIO:	10%	0%	20%
3	LTC2 Lifetime Inflation (those not receiving 5% ongoing rate increase in 2014):			
	· converting to 10-yr with BIO:	18%	9%	27%
	· converting to 6-yr with BIO:	7%	0%	14%
	· converting to 6-yr with inflation:	3%	0%	6%
4	LTC2 Lifetime Inflation (those not receiving 5% ongoing rate increase in 2015):			
	· converting to 10-yr with BIO:	3%	0%	6%
5	LTC1 and LTC2 6-yr and 3-yr inflation plans converting to non-inflation in 2014:	20%	10%	30%
6	LTC1 and LTC2 6-yr and 3-yr inflation plans converting to non-inflation in 2015:	5%	0%	10%
7	LTC1 and LTC2 lifetime non-inflation plans converting to 6-yr non-inflation in 2014:	20%	10%	30%
8	LTC1 and LTC2 lifetime non-inflation plans converting to 6-yr non-inflation in 2015:	5%	0%	10%

3. Anti-selection factors:

A rate increase may prompt a disproportionate number of healthier members to lapse or reduce benefits to lower the impact of rate increase. Therefore, the total risk pool will be less healthy after a rate increase.

Anti-selection is difficult to measure, and we have not attempted to determine the actual anti-selection experienced by CalPERS. As a result, the suggested anti-selection factor is an estimate. The anti-selection factors are 2 times the shock lapse grading down to 0 percent over 10 years. This anti-selection factor development is consistent with the 2013 assumed rates.

Anti-selection factors vary by benefit plan and are applied to the 2013, 2014, and 2015 conversions. See below the table for the groups that received or will receive the anti-selection factors.

For those policies accepting the rate increase, the following anti-selection factors are applied to increase the future morbidity risk.

LTC1, Lifetime, Inflation Receiving the 85% Premium Rate Increase Anti-Selection Factors Related to Shock Lapse and Conversions				
Selection Period	Fiscal Year Starting	Base Scenario	Lower Conversion	Higher Conversion
1	2014	1.170	1.158	1.182
2	2015	1.187	1.141	1.246
3	2016	1.164	1.123	1.217
4	2017	1.142	1.106	1.188
5	2018	1.119	1.089	1.159
6	2019	1.097	1.072	1.130
7	2020	1.075	1.055	1.102
8	2021	1.054	1.038	1.074
9	2022	1.032	1.021	1.045
10	2023	1.010	1.005	1.018
11	2024	1.002	1.000	1.005
12+	2025+	1.000	1.000	1.000

All Other Plans Receiving the 85% Premium Rate Increase Anti-Selection Factors Related to Shock Lapse				
Selection Period	Calendar Year	Base Scenario	Lower Conversion	Higher Conversion
1	2014	1.038	1.038	1.038
2	2015	1.034	1.034	1.034
3	2016	1.030	1.030	1.030
4	2017	1.026	1.026	1.026
5	2018	1.022	1.022	1.022
6	2019	1.018	1.018	1.018
7	2020	1.014	1.014	1.014
8	2021	1.010	1.010	1.010
9	2022	1.006	1.006	1.006
10	2023	1.002	1.002	1.002
11+	2024+	1.000	1.000	1.000

LTC2, Lifetime, Inflation Receiving the 85% Premium Rate Increase Anti-Selection Factors Related to Shock Lapse and Conversions				
Selection Period	Calendar Year	Base Scenario	Lower Conversion	Higher Conversion
1	2014	1.084	1.059	1.115
2	2015	1.075	1.053	1.103
3	2016	1.066	1.047	1.091
4	2017	1.058	1.040	1.079
5	2018	1.049	1.034	1.067
6	2019	1.040	1.028	1.056
7	2020	1.032	1.022	1.044
8	2021	1.023	1.016	1.032
9	2022	1.015	1.010	1.021
10	2023	1.006	1.004	1.009
11+	2024+	1.000	1.000	1.000

For those policies converting to 10 year Benefit Increase Option, the following anti-selection factors are applied to decrease the future morbidity risk because it is assumed healthier members are more likely to lower their benefits to pay lower premium when there is a rate increase.

LTC1, 10-year BIO Selection factors				
Selection Period	Calendar Year	Base Scenario	Lower Conversion	Higher Conversion
1	2014	0.815	0.816	0.814
2	2015	0.830	0.836	0.827
3	2016	0.850	0.856	0.847
4	2017	0.870	0.876	0.867
5	2018	0.890	0.896	0.887
6	2019	0.910	0.916	0.907
7	2020	0.930	0.936	0.927
8	2021	0.950	0.956	0.947
9	2022	0.970	0.976	0.967
10	2023	0.990	0.996	0.987
11	2024	0.997	1.000	0.996
12+	2025+	1.000	1.000	1.000

LTC2, 10-year BIO Selection factors				
Selection Period	Calendar Year	Base Scenario	Lower Conversion	Higher Conversion
1	2014	0.800	0.800	0.800
2	2015	0.820	0.820	0.820
3	2016	0.840	0.840	0.840
4	2017	0.860	0.860	0.860
5	2018	0.880	0.880	0.880
6	2019	0.900	0.900	0.900
7	2020	0.920	0.920	0.920
8	2021	0.940	0.940	0.940
9	2022	0.960	0.960	0.960
10	2023	0.980	0.980	0.980
11+	2024+	1.000	1.000	1.000

4. Shock lapse rates:

The shock lapses shown below were applied to all members that will receive the 85% premium increase spread over two years starting in 2015. Given that members were informed of the rate increase last year and this year, we assumed half the shock lapses occurred in 2013 and modeled the other half this year.

Attained Age Groups	<60	60-69	70-79	80+
2014 Shock Lapse Assumptions	2.00%	1.25%	0.50%	0.00%

APPENDIX D

Summary of Model Cells

CalPERS LTC Program
Summary of Model Cells Included in June 30, 2014 Projection

Product Series	Plan Type	HHC	ALF	Benefit Period	Elimination Period	Inflation	Underwriting Type	Policy Count	Expected Annual Premium
LTC1	Comprehensive	50% HHC	50% ALF	3 Year	90 Day EP	No Inflation	LF	4,559	8,339,921
LTC1	Comprehensive	50% HHC	50% ALF	3 Year	90 Day EP	No Inflation	MGI	1,325	1,492,686
LTC1	Comprehensive	50% HHC	50% ALF	3 Year	90 Day EP	No Inflation	SF	1,043	1,145,821
LTC1	Comprehensive	50% HHC	50% ALF	3 Year	90 Day EP	Inflation	LF	6,213	12,381,773
LTC1	Comprehensive	50% HHC	50% ALF	3 Year	90 Day EP	Inflation	MGI	1,824	2,553,386
LTC1	Comprehensive	50% HHC	50% ALF	3 Year	90 Day EP	Inflation	SF	1,704	2,545,792
LTC1	Comprehensive	50% HHC	50% ALF	6 Year	90 Day EP	No Inflation	LF	2,703	4,302,252
LTC1	Comprehensive	50% HHC	50% ALF	6 Year	90 Day EP	No Inflation	MGI	1,429	1,793,606
LTC1	Comprehensive	50% HHC	50% ALF	6 Year	90 Day EP	No Inflation	SF	1,313	1,648,773
LTC1	Comprehensive	50% HHC	50% ALF	6 Year	90 Day EP	Inflation	LF	3,850	8,963,697
LTC1	Comprehensive	50% HHC	50% ALF	6 Year	90 Day EP	Inflation	MGI	1,627	2,750,786
LTC1	Comprehensive	50% HHC	50% ALF	6 Year	90 Day EP	Inflation	SF	1,523	2,797,991
LTC1	Comprehensive	50% HHC	50% ALF	10 Year	90 Day EP	No Inflation	LF	6,536	17,120,488
LTC1	Comprehensive	50% HHC	50% ALF	10 Year	90 Day EP	No Inflation	MGI	2,871	6,427,625
LTC1	Comprehensive	50% HHC	50% ALF	10 Year	90 Day EP	No Inflation	SF	2,471	5,299,193
LTC1	Comprehensive	50% HHC	50% ALF	Lifetime	90 Day EP	No Inflation	LF	6,671	16,952,731
LTC1	Comprehensive	50% HHC	50% ALF	Lifetime	90 Day EP	No Inflation	MGI	4,230	6,676,024
LTC1	Comprehensive	50% HHC	50% ALF	Lifetime	90 Day EP	No Inflation	SF	2,995	4,652,603
LTC1	Comprehensive	50% HHC	50% ALF	Lifetime	90 Day EP	Inflation	LF	14,744	48,527,282
LTC1	Comprehensive	50% HHC	50% ALF	Lifetime	90 Day EP	Inflation	MGI	9,940	23,469,586
LTC1	Comprehensive	50% HHC	50% ALF	Lifetime	90 Day EP	Inflation	SF	7,186	18,025,459
LTC1	Facilities Only		50% ALF	3 Year	90 Day EP	No Inflation	LF	2,749	3,826,049
LTC1	Facilities Only		50% ALF	3 Year	90 Day EP	No Inflation	MGI	446	371,457
LTC1	Facilities Only		50% ALF	3 Year	90 Day EP	No Inflation	SF	354	299,137
LTC1	Facilities Only		50% ALF	3 Year	90 Day EP	Inflation	LF	2,948	4,863,517
LTC1	Facilities Only		50% ALF	3 Year	90 Day EP	Inflation	MGI	682	747,845
LTC1	Facilities Only		50% ALF	3 Year	90 Day EP	Inflation	SF	750	899,811
LTC1	Facilities Only		50% ALF	6 Year	90 Day EP	No Inflation	LF	1,134	1,785,553
LTC1	Facilities Only		50% ALF	6 Year	90 Day EP	No Inflation	MGI	229	252,509
LTC1	Facilities Only		50% ALF	6 Year	90 Day EP	No Inflation	SF	268	297,428
LTC1	Facilities Only		50% ALF	6 Year	90 Day EP	Inflation	LF	1,301	2,754,480
LTC1	Facilities Only		50% ALF	6 Year	90 Day EP	Inflation	MGI	275	404,972
LTC1	Facilities Only		50% ALF	6 Year	90 Day EP	Inflation	SF	347	536,352
LTC1	Facilities Only		50% ALF	10 Year	90 Day EP	No Inflation	LF	2,106	4,982,312
LTC1	Facilities Only		50% ALF	10 Year	90 Day EP	No Inflation	MGI	487	830,438
LTC1	Facilities Only		50% ALF	10 Year	90 Day EP	No Inflation	SF	575	967,755
LTC1	Facilities Only		50% ALF	Lifetime	90 Day EP	No Inflation	LF	2,807	5,848,864
LTC1	Facilities Only		50% ALF	Lifetime	90 Day EP	No Inflation	MGI	559	702,514
LTC1	Facilities Only		50% ALF	Lifetime	90 Day EP	No Inflation	SF	555	706,443
LTC1	Facilities Only		50% ALF	Lifetime	90 Day EP	Inflation	LF	3,361	9,688,097
LTC1	Facilities Only		50% ALF	Lifetime	90 Day EP	Inflation	MGI	1,047	2,041,908
LTC1	Facilities Only		50% ALF	Lifetime	90 Day EP	Inflation	SF	1,093	2,165,303
LTC1	Partnership	50% HHC	50% ALF	1 Year	30 Day EP	Inflation	LF	1,199	1,458,972
LTC1	Partnership	50% HHC	50% ALF	1 Year	30 Day EP	Inflation	MGI	311	225,798
LTC1	Partnership	50% HHC	50% ALF	1 Year	30 Day EP	Inflation	SF	271	190,128
LTC1	Partnership	50% HHC	50% ALF	2 Year	30 Day EP	Inflation	LF	1,901	3,513,642
LTC1	Partnership	50% HHC	50% ALF	2 Year	30 Day EP	Inflation	MGI	540	636,574
LTC1	Partnership	50% HHC	50% ALF	2 Year	30 Day EP	Inflation	SF	586	652,433
LTC1	Partnership	50% HHC	50% ALF	6 Mo	30 Day EP	Inflation	LF	115	110,638
LTC1	Partnership	50% HHC	50% ALF	6 Mo	30 Day EP	Inflation	MGI	18	9,527
LTC1	Partnership	50% HHC	50% ALF	6 Mo	30 Day EP	Inflation	SF	9	5,306
LTC1 Subtotal								**115,780**	**249,643,239**

Abbreviation	Description
ALF	Assisted Living Facility
HHC	Home Health Care
LF U/W	Long From Underwriting
MGI U/W	Modified Guaranteed Issue Underwriting

CalPERS LTC Program
Summary of Model Cells Included in June 30, 2014 Projection

Product Series	Plan Type	HHC	ALF	Benefit Period	Elimination Period	Inflation	Underwriting Type	Policy Count	Expected Annual Premium
LTC2	Comprehensive	50% HHC	70% ALF	3 Year	90 Day EP	No Inflation	LF	629	996,825
LTC2	Comprehensive	50% HHC	70% ALF	3 Year	90 Day EP	No Inflation	MGI - Conversions	8	13,806
LTC2	Comprehensive	50% HHC	70% ALF	3 Year	90 Day EP	No Inflation	SF - Conversions	6	9,482
LTC2	Comprehensive	50% HHC	70% ALF	3 Year	90 Day EP	Inflation	LF	916	2,024,257
LTC2	Comprehensive	50% HHC	70% ALF	3 Year	90 Day EP	Inflation	LF - Conversions	4	8,596
LTC2	Comprehensive	50% HHC	70% ALF	3 Year	90 Day EP	Inflation	MGI - Conversions	5	12,755
LTC2	Comprehensive	50% HHC	70% ALF	6 Year	90 Day EP	No Inflation	LF	96	179,366
LTC2	Comprehensive	50% HHC	70% ALF	6 Year	90 Day EP	No Inflation	MGI	2	2,415
LTC2	Comprehensive	50% HHC	70% ALF	6 Year	90 Day EP	Inflation	LF	130	368,647
LTC2	Comprehensive	50% HHC	70% ALF	6 Year	90 Day EP	Inflation	MGI	1	3,680
LTC2	Comprehensive	50% HHC	70% ALF	6 Year	90 Day EP	Inflation	SF	1	3,071
LTC2	Comprehensive	50% HHC	70% ALF	10 Year	90 Day EP	No Inflation	LF	7	15,957
LTC2	Comprehensive	50% HHC	70% ALF	Lifetime	90 Day EP	No Inflation	LF	1,717	3,204,052
LTC2	Comprehensive	50% HHC	70% ALF	Lifetime	90 Day EP	No Inflation	MGI - Conversions	20	45,480
LTC2	Comprehensive	50% HHC	70% ALF	Lifetime	90 Day EP	No Inflation	SF - Conversions	19	36,411
LTC2	Comprehensive	50% HHC	70% ALF	Lifetime	90 Day EP	Inflation	LF	3,396	10,604,814
LTC2	Comprehensive	50% HHC	70% ALF	Lifetime	90 Day EP	Inflation	MGI - Conversions	21	76,232
LTC2	Comprehensive	50% HHC	70% ALF	Lifetime	90 Day EP	Inflation	SF - Conversions	26	91,255
LTC2	Facilities Only		70% ALF	3 Year	90 Day EP	No Inflation	LF	165	210,376
LTC2	Facilities Only		70% ALF	3 Year	90 Day EP	Inflation	LF	149	270,763
LTC2	Facilities Only		70% ALF	6 Year	90 Day EP	No Inflation	LF	34	48,026
LTC2	Facilities Only		70% ALF	6 Year	90 Day EP	Inflation	LF	35	85,894
LTC2	Facilities Only		70% ALF	10 Year	90 Day EP	No Inflation	LF	1	900
LTC2	Facilities Only		70% ALF	Lifetime	90 Day EP	No Inflation	LF	229	385,420
LTC2	Facilities Only		70% ALF	Lifetime	90 Day EP	Inflation	LF	508	1,178,987
LTC2	Facilities Only		70% ALF	Lifetime	90 Day EP	Inflation	MGI - Conversions	2	8,173
LTC2	Facilities Only		70% ALF	Lifetime	90 Day EP	Inflation	SF - Conversions	1	2,281
LTC2	Partnership	50% HHC	70% ALF	1 Year	30 Day EP	Inflation	LF	82	102,963
LTC2	Partnership	50% HHC	70% ALF	2 Year	30 Day EP	Inflation	LF	161	330,420
LTC2	Partnership	50% HHC	70% ALF	6 Mo	30 Day EP	Inflation	LF	10	9,607
LTC2 Subtotal								**8,381**	**20,330,912**

Abbreviation	Description
ALF	Assisted Living Facility
HHC	Home Health Care
LF U/W	Long From Underwriting
MGI U/W	Modified Guaranteed Issue Underwriting
SF U/W	Short Form Underwriting

CalPERS LTC Program
Summary of Model Cells Included in June 30, 2014 Projection

Product Series	Plan Type	HHC	ALF	Benefit Period	Elimination Period	Inflation	Underwriting Type	Policy Count	Expected Annual Premium
LTC3	Comprehensive	70% HHC	70% ALF	3 Year	90 Day EP	No Inflation	LF	786	1,119,172
LTC3	Comprehensive	70% HHC	70% ALF	3 Year	90 Day EP	No Inflation	MGI - Conversions	64	62,560
LTC3	Comprehensive	70% HHC	70% ALF	3 Year	90 Day EP	No Inflation	SF - Conversions	47	34,733
LTC3	Comprehensive	70% HHC	70% ALF	3 Year	90 Day EP	Inflation	LF	2,158	4,364,400
LTC3	Comprehensive	70% HHC	70% ALF	3 Year	90 Day EP	Inflation	MGI - Conversions	347	476,626
LTC3	Comprehensive	70% HHC	70% ALF	3 Year	90 Day EP	Inflation	SF - Conversions	370	546,558
LTC3	Comprehensive	70% HHC	70% ALF	6 Year	90 Day EP	No Inflation	LF	2,587	4,467,800
LTC3	Comprehensive	70% HHC	70% ALF	6 Year	90 Day EP	No Inflation	MGI - Conversions	594	657,408
LTC3	Comprehensive	70% HHC	70% ALF	6 Year	90 Day EP	No Inflation	SF - Conversions	458	541,602
LTC3	Comprehensive	70% HHC	70% ALF	6 Year	90 Day EP	Inflation	LF	2,428	6,472,452
LTC3	Comprehensive	70% HHC	70% ALF	6 Year	90 Day EP	Inflation	MGI - Conversions	464	923,126
LTC3	Comprehensive	70% HHC	70% ALF	6 Year	90 Day EP	Inflation	SF - Conversions	415	884,114
LTC3	Comprehensive	70% HHC	70% ALF	10 Year	90 Day EP	No Inflation	LF	4	6,898
LTC3	Comprehensive	70% HHC	70% ALF	Lifetime	90 Day EP	No Inflation	LF	1,050	2,203,354
LTC3	Comprehensive	70% HHC	70% ALF	Lifetime	90 Day EP	No Inflation	MGI - Conversions	20	50,966
LTC3	Comprehensive	70% HHC	70% ALF	Lifetime	90 Day EP	No Inflation	SF - Conversions	14	27,986
LTC3	Comprehensive	70% HHC	70% ALF	Lifetime	90 Day EP	Inflation	LF	1,144	4,222,943
LTC3	Comprehensive	70% HHC	70% ALF	Lifetime	90 Day EP	Inflation	MGI - Conversions	8	45,812
LTC3	Comprehensive	70% HHC	70% ALF	Lifetime	90 Day EP	Inflation	SF - Conversions	6	21,633
LTC3	Facilities Only		70% ALF	3 Year	90 Day EP	No Inflation	LF	283	376,929
LTC3	Facilities Only		70% ALF	3 Year	90 Day EP	No Inflation	MGI - Conversions	17	13,060
LTC3	Facilities Only		70% ALF	3 Year	90 Day EP	No Inflation	SF - Conversions	20	12,226
LTC3	Facilities Only		70% ALF	3 Year	90 Day EP	Inflation	LF	501	893,131
LTC3	Facilities Only		70% ALF	3 Year	90 Day EP	Inflation	MGI - Conversions	68	82,545
LTC3	Facilities Only		70% ALF	3 Year	90 Day EP	Inflation	SF - Conversions	117	154,806
LTC3	Facilities Only		70% ALF	6 Year	90 Day EP	No Inflation	LF	727	1,137,426
LTC3	Facilities Only		70% ALF	6 Year	90 Day EP	No Inflation	MGI - Conversions	68	62,299
LTC3	Facilities Only		70% ALF	6 Year	90 Day EP	No Inflation	SF - Conversions	90	83,044
LTC3	Facilities Only		70% ALF	6 Year	90 Day EP	Inflation	LF	190	453,592
LTC3	Facilities Only		70% ALF	6 Year	90 Day EP	Inflation	MGI - Conversions	17	34,077
LTC3	Facilities Only		70% ALF	6 Year	90 Day EP	Inflation	SF - Conversions	24	47,223
LTC3	Facilities Only		70% ALF	Lifetime	90 Day EP	No Inflation	LF	149	241,220
LTC3	Facilities Only		70% ALF	Lifetime	90 Day EP	No Inflation	MGI - Conversions	1	4,259
LTC3	Facilities Only		70% ALF	Lifetime	90 Day EP	Inflation	LF	182	462,300
LTC3	Facilities Only		70% ALF	Lifetime	90 Day EP	Inflation	MGI - Conversions	1	1,521
LTC3	Partnership		70% ALF	1 Year	30 Day EP	Inflation	LF	37	53,375
LTC3	Partnership		70% ALF	2 Year	30 Day EP	Inflation	LF	65	150,476
LTC3	Partnership		70% ALF	6 Mo	30 Day EP	Inflation	LF	1	2,065
LTC3 Subtotal								**15,522**	**31,395,717**
LTC4	Comprehensive	100% HHC	100% ALF	3 Year	90 Day EP	No Inflation	LF	11	20,887
LTC4	Comprehensive	100% HHC	100% ALF	3 Year	90 Day EP	Inflation	LF	102	240,441
LTC4	Comprehensive	100% HHC	100% ALF	6 Year	90 Day EP	No Inflation	LF	9	34,754
LTC4	Comprehensive	100% HHC	100% ALF	6 Year	90 Day EP	Inflation	LF	90	265,336
LTC4	Comprehensive	100% HHC	100% ALF	10 Year	90 Day EP	No Inflation	LF	14	4,571
LTC4	Comprehensive	100% HHC	100% ALF	10 Year	90 Day EP	Inflation	LF	33	12,616
LTC4	Comprehensive	100% HHC	100% ALF	1 Year	30 Day EP	Inflation	LF	2	36,913
LTC4	Comprehensive	100% HHC	100% ALF	2 Year	30 Day EP	Inflation	LF	3	100,891
LTC4 Subtotal								**264**	**716,408**
Grand Total								**139,947**	**302,086,276**

Abbreviation	Description
ALF	Assisted Living Facility
HHC	Home Health Care
LF U/W	Long From Underwriting
MGI U/W	Modified Guaranteed Issue Underwriting
SF U/W	Short Form Underwriting

APPENDIX E

Demographic Information

Data

We relied on the inforce data and claim information supplied by the third party administrator LTCG. We have evaluated that data for reasonableness and consistency. The principal materials relied upon that were provided by LTCG and internal financial reports include:

1. Data extracts from LTCG administrative system.
2. Financial statements.
3. Plan descriptions.

The Actuarial Valuation considers the number and demographic characteristics of covered members, including active members and on claim members. This section presents a summary of significant statistical data on these member groups.

Future plan costs are affected by attained age, years in plan and benefits chosen. In this year's valuation, there were 139,947 inforce members with an average attained age of 70.2 and average duration of 15.48.

Inforce Members as of June 30, 2014 - Demographics and Selected Benefit Options as of July 31, 2014

The following distributions for all inforce members as of June 30, 2014 with updated benefits through July 31, 2014 are included in Appendix E:

- By benefit period and elimination period
- By issue-age and attained-age
- By coverage
- By inflation option
- By gender
- By premium mode
- By underwriting type
- By product series

CalPERS LTC Program
Distributions of Business Inforce as of June 30, 2014
with Adjustments Reflecting Conversions as of July 31, 2014

By Benefit Period and Elimination Period

Benefit Period	Elimination Period	Policy Count	Percent	Expected Annual Premium	Percent
6 Month	30 Day	153	0%	137,142	0%
1 Year	30 Day	1,902	1%	2,035,808	1%
2 Year	30 Day	3,256	2%	5,296,162	2%
3 Year	90 Day	31,370	22%	51,412,129	17%
6 Year	90 Day	24,459	17%	45,043,751	15%
10 Year	90 Day	15,105	11%	35,789,370	12%
Lifetime	90 Day	63,702	46%	162,371,915	54%
Total		**139,947**	**100%**	**302,086,276**	**100%**

By Issue-Age Band and Gender

	Policy Count				Expected Annual Premium			
Issue-Age Band	Females	Males	Total	Percent	Females	Males	Total	Percent
< 30	420	232	652	0%	334,860	183,416	518,276	0%
30-39	4,197	2,513	6,710	5%	4,286,943	2,570,024	6,856,967	2%
40-44	5,761	3,157	8,918	6%	7,343,689	4,090,894	11,434,583	4%
45-49	10,916	5,960	16,876	12%	16,648,696	9,098,406	25,747,102	9%
50-54	16,479	9,800	26,279	19%	29,700,159	17,823,242	47,523,401	16%
55-59	18,107	11,892	29,999	21%	38,554,380	25,839,837	64,394,217	21%
60-64	14,461	10,960	25,421	18%	35,826,562	27,737,707	63,564,268	21%
65-69	8,956	6,634	15,590	11%	26,281,445	19,725,945	46,007,390	15%
70-74	4,516	2,607	7,123	5%	15,961,686	9,205,720	25,167,406	8%
75-79	1,440	625	2,065	1%	6,356,968	2,697,289	9,054,257	3%
80-84	227	71	298	0%	1,295,783	398,288	1,694,071	1%
85-89	14	2	16	0%	105,959	18,379	124,338	0%
90-94	0	0	0	0%	0	0	0	0%
95+	0	0	0	0%	0	0	0	0%
Total	**85,494**	**54,453**	**139,947**	**100%**	**182,697,129**	**119,389,147**	**302,086,276**	**100%**

By Attained Age and Gender

	Policy Count				Expected Annual Premium			
Attained Age	**Females**	**Males**	**Total**	**Percent**	**Females**	**Males**	**Total**	**Percent**
27	10	3	13	0%	8,468	2,483	10,951	0%
32	7	0	7	0%	8,904	0	8,904	0%
33	7	3	10	0%	9,159	2,355	11,514	0%
34	8	5	13	0%	6,758	6,575	13,333	0%
35	12	6	18	0%	11,871	6,022	17,893	0%
36	22	16	38	0%	21,467	14,460	35,927	0%
37	24	12	36	0%	22,806	11,592	34,399	0%
38	55	32	87	0%	41,760	22,399	64,159	0%
39	47	30	77	0%	35,984	24,207	60,191	0%
40	50	29	79	0%	39,636	20,455	60,091	0%
41	79	36	115	0%	89,381	37,349	126,730	0%
42	88	59	147	0%	98,329	66,141	164,470	0%
43	81	54	135	0%	86,930	59,321	146,251	0%
44	114	73	187	0%	111,190	74,697	185,886	0%
45	144	73	217	0%	169,386	86,796	256,181	0%
46	206	146	352	0%	266,929	173,324	440,253	0%
47	422	267	689	0%	448,157	286,720	734,877	0%
48	493	308	801	1%	537,217	335,890	873,107	0%
49	448	270	718	1%	479,797	295,762	775,559	0%
50	422	252	674	0%	452,299	273,417	725,716	0%
51	410	280	690	0%	489,332	326,632	815,964	0%
52	940	560	1500	1%	1,162,093	708,520	1,870,612	1%
53	1470	793	2263	2%	1,630,377	916,077	2,546,455	1%
54	1,061	616	1677	1%	1,244,674	734,231	1,978,905	1%
55	710	412	1122	1%	953,946	547,495	1,501,441	0%
56	723	376	1099	1%	1,019,045	551,957	1,571,002	1%
57	1060	586	1646	1%	1,739,198	990,420	2,729,617	1%
58	1,976	1075	3051	2%	2,803,626	1,480,888	4,284,513	1%
59	2,327	1247	3574	3%	3,198,624	1,710,919	4,909,542	2%
60	1,936	1040	2976	2%	2,887,886	1,609,450	4,497,336	1%
61	1,369	734	2103	2%	2,296,322	1,234,318	3,530,640	1%
62	1,808	1029	2837	2%	3,324,943	1,956,795	5,281,738	2%
63	3,181	1869	5050	4%	5,213,163	3,151,204	8,364,368	3%
64	4,217	2450	6667	5%	6,966,919	4,028,890	10,995,809	4%
65	3,131	1984	5115	4%	5,510,892	3,578,810	9,089,701	3%
66	2,041	1283	3324	2%	3,967,681	2,527,705	6,495,386	2%
67	2,376	1507	3883	3%	4,834,236	3,207,747	8,041,983	3%
68	4,471	2742	7213	5%	8,447,103	5,395,199	13,842,303	5%
69	4,485	2874	7359	5%	8,619,286	5,591,358	14,210,643	5%
70	3,395	2200	5595	4%	6,985,397	4,658,900	11,644,298	4%
71	1,889	1342	3231	2%	4,249,805	3,040,290	7,290,095	2%
72	2,204	1556	3760	3%	5,131,073	3,710,287	8,841,360	3%
73	3,709	2535	6244	4%	8,088,262	5,691,961	13,780,223	5%
74	4,516	2844	7360	5%	9,860,903	6,497,472	16,358,376	5%
75	2,887	1940	4827	3%	6,664,164	4,669,385	11,333,549	4%
76	1,188	991	2179	2%	3,011,794	2,569,979	5,581,773	2%
77	1,564	1224	2788	2%	4,019,613	3,174,529	7,194,142	2%
78	2,784	2083	4867	3%	6,825,790	5,199,856	12,025,646	4%
79	3,526	2590	6116	4%	8,827,832	6,581,345	15,409,177	5%
80	2,608	1879	4487	3%	7,094,834	5,114,802	12,209,637	4%
81	631	503	1134	1%	1,892,034	1,518,949	3,410,983	1%
82	1042	809	1851	1%	3,150,829	2,404,275	5,555,104	2%
83	1,931	1365	3296	2%	5,606,104	3,993,614	9,599,718	3%
84	2,203	1535	3738	3%	6,625,959	4,650,104	11,276,063	4%
85	1,960	1305	3265	2%	6,091,811	4,129,624	10,221,435	3%
86	351	202	553	0%	1,328,595	716,623	2,045,218	1%
87	616	318	934	1%	2,194,568	1,124,832	3,319,400	1%
88	1016	532	1548	1%	3,537,663	1,811,754	5,349,417	2%
89	1,117	591	1708	1%	4,009,850	2,140,620	6,150,470	2%
90	833	504	1337	1%	3,217,321	1,840,289	5,057,611	2%
91	168	71	239	0%	766,713	343,631	1,110,344	0%
92	184	76	260	0%	834,092	333,050	1,167,142	0%
93	265	125	390	0%	1,164,879	512,303	1,677,182	1%
94	237	103	340	0%	1,042,578	439,364	1,481,942	0%
95	142	74	216	0%	680,018	325,522	1,005,540	0%
96	30	3	33	0%	176,551	14,998	191,549	0%
97	24	10	34	0%	124,252	42,967	167,218	0%
98	21	5	26	0%	103,776	34,844	138,620	0%
99+	22	7	29	0%	134,297	54,396	188,693	0%
Total	**85494**	**54,453**	**139,947**	**100%**	**182,697,129**	**119,389,147**	**302,086,276**	**100%**

By Plan Type

Plan Type	Policy Count	Percent	Expected Annual Premium	Percent
Partnership (Comprehensive)	5,311	4%	7,469,112	2%
Comprehensive	106,984	76%	243,393,940	81%
Facilities Only	27,652	20%	51,223,224	17%
Total	**139,947**	**100%**	**302,086,276**	**100%**

By Inflation

Inflation	Policy Count	Percent	Expected Annual Premium	Percent
No Inflation	60,361	43%	113,066,197	37%
Inflation	79,586	57%	189,020,079	63%
Total	**139,947**	**100%**	**302,086,276**	**100%**

By Marital Status at time of Issue

Marital Status	Gender	Policy Count	Percent	Expected Annual Premium	Percent
Married	F	52,343	37%	106,576,109	35%
Married	M	43,249	31%	94,391,108	31%
Other	F	33,151	24%	76,121,020	25%
Other	M	11,204	8%	24,998,039	8%
Total		**139,947**	**100%**	**302,086,276**	**100%**

By Premium Mode

Premium Mode	Policy Count	Percent	Expected Annual Premium	Percent
Monthly	106,825	76%	234,359,122	78%
Quarterly	25,565	18%	51,132,324	17%
Semi-Annually	4,442	3%	9,620,006	3%
Annually	3,115	2%	6,974,823	2%
Total	**139,947**	**100%**	**302,086,276**	**100%**

By Underwriting Type

Underwriting Type	Policy Count	Percent	Expected Annual Premium	Percent
LF	85,718	61%	202,781,488	67%
MGI	29,567	21%	53,959,878	18%
SF	24,662	18%	45,344,909	15%
Total	**139,947**	**100%**	**302,086,276**	**100%**

By Product Series

Product Series	Policy Count	Percent	Expected Annual Premium	Percent
LTC 1	115,780	83%	249,643,239	83%
LTC 2	8,381	6%	20,330,912	7%
LTC 3	15,522	11%	31,395,717	10%
LTC 4	264	0%	716,408	0%
Total	**139,947**	**100%**	**302,086,276**	**100%**

APPENDIX F

Glossary of Terms

Glossary of Terms

Anti-Selection - Individuals who let their policies lapse because of special events (see "Shock Lapses") are usually in better health. Members do not normally drop their coverage if they anticipate that they will soon have a claim. As a result of this member decision process, individuals who retain their policies are often, on average, in worse health than those who lapse them. This phenomenon is called Anti-selection.

Base Case - The results of a projection using the "best estimate" assumptions in the LTC valuation. All sensitivity projections are done relative to this Base Case.

Benefit Period - This is the period of time that an insured would receive benefits if the full maximum daily benefit amount is paid each day an insured is on claim. If less than the maximum daily benefit amount is paid, the length of time that a claimant would receive benefits would be greater than this time period.

Claim Costs - Product of the expected claims frequency (incidence) and the expected average claim (severity) based on assumed continuance.

Comprehensive Plan - A plan that covers home health care (HHC) in addition to care in a nursing home and/or an assisted living facility.

Continuance - Refers to the period of time that a member continues to be on claim after a claim has begun.

Conversion - The voluntary election to switch/reduce coverage, sometimes as a result of a specific event such as a premium rate increase.

Credible - A statistical measure of the degree to which data is considered reliable for predictive purposes. Credibility increases as a block of business grows and over time as more data accumulates.

Credibility-Weighted Claim Costs - When actual claim costs from a block of business are not fully credible, data from outside inputs (such as national data sources) are used to supplement the block's experience. A percentage of each source of claim costs is used such that the two percentages add to 100 percent. The percentage of actual block experience used is based on the credibility of that block, and the remaining percentage would be attributed to the outside input. For CalPERS, the percentages are split between experience claim costs and manual claim costs (i.e., LTC insurance industry data).

Deficit - A calculation that determines the degree to which the current fund value is insufficient to pay future benefits expressed as a percentage of the present value of future premiums. This number is an estimate of what one-time immediate rate increase would be needed to bring the Program back to the target margin level. If the current fund value is more than enough to pay future benefits, a positive number represents a surplus. In formula terms:

{Current Fund Balance + Present Value of Premiums - Present Value of Benefits and Expenses} / Present Value of Premiums

Disabled Life Reserve - The present value of future claim payments for those members currently on claim.

Discount Rate - An interest rate used to determine present values. For CalPERS, the discount rate is set equal to the expected investment earnings rate.

Duration - The amount of time, typically measured in years, since the issue date of the policy. Duration is sometimes referred to as policy year.

Elimination Period - This is the period of time that the member pays for care before the benefits are paid from insurance proceeds.

Facility-Only Plan - This type of plan pays for care in a nursing home or assisted living facility, but not for care at home or in the community.

Funded Ratio - Method of expressing the current financial status of the Program, which is consistent with the CalPERS pension and health plan financial status measurements. In general, the funded ratio is the assets divided by the accrued liability, or reserves. For long-term care insurance, the accrued liability is equal to the present value of future benefits and expenses less the present value of member premiums. This definition is consistent with a statutory gross premium valuation reserve for LTC insurance. In this context, a breakeven position is a ratio of 100 percent. In formula terms:

Fund Balance / {Present Value of Benefits and Expenses - Present Value of Premiums}

Incidence - The number of members that start a claim as a percentage of members that could start a claim over a specified time period (i.e., frequency of claim).

Incurred Claims - Incurred claims are made up of paid claims plus a reserve representing the assumed continuance of claims on known claimants which have yet to be paid as well as claims that have begun on unknown claimants but have not yet been reported. The amount of the latter unpaid claims is referred to as the IBNR (Incurred But Not Reported) Reserve.

Inflation Coverage - An optional feature that increases the amount of available benefits over time in order to protect a member against rising health care costs. The CalPERS inflation coverage feature increases the amount of benefits by 5 percent per year. This compounding of

available benefits in combination with the higher than expected (i.e., priced for) persistency is one of the primary causes of Program deficits.

LTC1, LTC2, LTC3, LTC4 - Four different long-term care insurance plans sold to CalPERS members. Main differences between the plans are the percentages of daily benefit for the Home Health Care (HHC) and Assisted Living Facility (ALF) care that are available at the time of claim in comparison to the Nursing Home (NH) coverage for comprehensive policies. A summary of those benefits and the initial issue year is shown below.

LTC1 (1995) - NH (100%) / ALF (50%) / 50% HHC
LTC2 (2003) - NH (100%) / ALF (70%) / 50% HHC
LTC3 (2005) - NH (100%) / ALF (70%) / 70% HHC
LTC4 (2014) - NH (100%) / ALF (100%) / 100% HHC

Model - An actuarial tool used to project future cash flows including premiums, claims, investment returns, and expenses.

Morbidity - The overall term for the various assumptions underlying the expected/projected claims of a block of business.

Mortality - The rate of incidence of death.

Partnership Plan - A Partnership Program is a collaboration or "partnership" between state government, insurance companies, and state residents who buy long-term care Partnership policies. The purpose of the Partnership Program is to encourage individuals to purchase LTC coverage and save the state money by increasing private funding of LTC services and thereby reducing Medicaid payments for LTC. The advantage of the partnership plan for a member is that once his/her insurance coverage is exhausted, his/her assets in an amount equal to the amount of insurance coverage used is protected when qualifying for Medicaid payments for LTC.

Persistency - The number of members that remain active relative to the total number that started from one time period to another. Historically, LTC persistency has been higher than what was originally expected for CalPERS and the LTC industry as a whole.
Because of the stronger than expected persistency, more members are ultimately expected to submit claims than were originally priced for, which puts additional financial strain on a LTC Program.

Present value - A calculation that expresses future cash flows in a current cash equivalent amount based on assumed future interest rates (the Discount Rate).

Return of Premium or ROP - Returns some or all of a member's premiums less any benefits paid to the spouse or estate if the member dies before age 75. This is a built-in option for some of CalPERS plans.

Selection Factors - Factors used to adjust attained age or ultimate claim costs to levels reflecting recent underwriting/issue, therefore reducing (in general) claim costs associated with those policies. Different selection factors are also used for the mortality assumption.

Shock Lapses - An insurance phenomenon where individuals allow their policies to lapse/terminate at a higher rate than usual due to a specific event such as a premium rate increase.

Terminations - The policies that are no longer active due to death, voluntary lapse, or any other reason.

Ultimate Claim Costs (Factors) - Also referred to as attained-age claim costs; it represents the claim costs after underwriting selection wears off.

Underwriting Type - Underwriting is the process of evaluating and selecting risks to be insured. Three types of underwriting were utilized at various times by CalPERS:

- MGI - Modified Guaranteed Issue; limited underwriting for younger applicants actively at work.
- SF - Short Form; simplified application process with limited medical evaluation for younger applicants.
- LF - Long Form; considered "full underwriting" due to the comprehensive nature of medical questions asked and the associated underwriting process.

Currently, CalPERS only uses the long form of application for underwriting and has done so since 2002.

Voluntary Lapsation - When a member chooses to terminate his/her policy of his/her own volition - not due to death or other limitation on renewing contained within the policy.

Waiver of Premium or WOP - A benefit provision in a policy that allows the insured to stop making premium payments during the time when they meet specified disabling conditions such as being eligible to be on LTC claim.