

**STATE UNIVERSITIES RETIREMENT
SYSTEM OF ILLINOIS**
2010 EXPERIENCE REVIEW
FOR THE YEARS JUNE 30, 2006, TO JUNE 30, 2010



February 28, 2011

Board of Trustees
State Universities Retirement System of Illinois
1901 Fox Drive
Champaign, Illinois 61820

Subject: Experience Review for the Years June 30, 2006, to June 30, 2010

Dear Members of the Board:

At your request, we have performed a review of the actuarial assumptions used to value the State Universities Retirement System of Illinois (“SURS”). The primary purpose of the study is to determine the continued appropriateness of the current actuarial assumptions by comparing actual experience to expected experience. Our study was based on census information for the period from June 30, 2006, to June 30, 2010, as provided by SURS Staff.

Our study includes a review of the experience associated with the following actuarial assumptions:

- Investment Return
- Salary Increases
- Mortality
- Disability
- Withdrawal
- Retirement

The results of this analysis are set forth in Section II of this report. Section III contains the cost impact on the Annual Required Contribution and funded status of the plan as a result of the assumption modifications. Finally, Section IV contains a summary of all proposed rates.

The results of the experience study and recommended assumptions set forth in this report are based on the data and actuarial techniques and methods described above, and upon the provisions of SURS as of the most recent valuation date, June 30, 2010. Based on these items, we certify these results to be true and correct.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,



Leslie L. Thompson, F.S.A., F.C.A., E.A., M.A.A.A.
Senior Consultant



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Consultant

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SECTION I
SUMMARY

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EXPERIENCE REVIEW SUMMARY

Background

For any pension plan, actuarial assumptions are selected that are intended to provide reasonable estimates of future expected events, such as retirement, turnover, and mortality. These assumptions, along with an actuarial cost method, the employee census data, and the plan's provisions are used to determine the actuarial liabilities and overall actuarially determined funding requirements for the plan. The true cost to the plan over time will be the actual benefit payments and expenses required by the plan's provisions for the participant group under the plan. To the extent the actual experience deviates from the assumptions, experience gains and losses will occur. These gains (losses) then serve to reduce (increase) future actuarially determined contributions and the funded ratio. The actuarial assumptions should be individually reasonable and consistent in the aggregate, and should be reviewed periodically to ensure that they remain appropriate. The actuarial cost method, for plan sponsors that use actuarially sound funding policies, automatically adjusts contributions over time for differences between what is assumed and the true experience under the plan.

The Actuarial Standards Board ("ASB") provides guidance on measuring the costs of financing a retirement program through the following Actuarial Standards of Practices (ASOP):

- (1) ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*
- (2) ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*
- (3) ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*
- (4) ASOP No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*

The recommendations provided in this report are consistent with the preceding actuarial standards of practice. (An exposure draft with proposed revisions to ASOP No. 27 has been recently released.) The assumed investment return recommendation was based on the building block approach, defined in ASOP 27 section 3.6.2(a), which generally includes the following steps:

- (1) Determine the best estimate of real returns for each broad class of assets
- (2) Compute an average real return range based on the plan's asset allocation and the characteristics of each asset class
- (3) Combine the average real return range with the inflation expected range
- (4) Use stochastic simulation to model an explicit range of best estimate returns and likelihood of achieving those returns
- (5) Select an appropriate return within the range of results

However, the building block approach assumes that the contribution policy can support the asset allocation and liquidity requirements recognized in the simulation of projected assets. If future contributions are not expected to support the simulated portfolio of assets, an alternative methodology such as the cash flow approach, defined in ASOP 27 section 3.6.2(b), may need to be used.

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Under the cash flow approach, the best estimate range of returns is generally based on the following steps:

- (1) Project the plan's expected benefit and expenses
- (2) Identify a high quality bond portfolio with similar cash flow characteristics as the plan's projected expected benefits and expenses
- (3) Estimate the rate of return for the replicating bond portfolio
- (4) Establish a risk adjusted range of incremental returns in excess of the replicating bond portfolio return that recognizes:
 - a. uncertainties in the projected benefits and expenses,
 - b. expected returns on future contributions,
 - c. reinvestment of interest and principal payments not fully needed to pay current benefits,
 - d. any mismatches between the expected benefit disbursement stream and the high quality bond portfolio's interest and principal payment stream, and
 - e. current and expected future plan investments in equities or other asset classes other than high-quality bonds

The State of Illinois' funding policy for SURS is to annually contribute as a level percentage of pay an amount such that the funded ratio reaches 90 percent in the year 2045. The current funding policy is expected to support the building block approach as the basis to establish the plan's investment rate of return.

Assumptions Reviewed

The actuarial assumptions are usually divided into two categories:

- Economic assumptions, which include:
 - Assumed rate of price inflation (as measured by the change in the Consumer Price Index for all urban consumers)
 - Underlies all other economic assumptions
 - Basis for cost-of-living increases for members hired on or after January 1, 2011
 - Assumed long-term rate of return on investments (prescribed rate as defined in statute)
 - Rate at which projected benefits are reduced to present value
 - Basis for money purchase annuity factors
 - Assumed effective rate of interest (rate at which member contributions are accumulated to generate benefits under the Money Purchase Benefit formula – Rule 2)
 - General wage increases
 - Reflects inflationary forces on increases in pay for all members
 - Rate of payroll growth
 - Reflects expectation of growth in total payroll and affects level percent of pay statutory contribution

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The economic assumptions are generally chosen on the basis of the actuary's expectations as to the effect of future economic conditions on the operation of the plan, with input from Staff, the Board, and other investment advisors.

- Demographic assumptions, which include the following rates:
 - Mortality
 - Retirement
 - Disablement
 - Withdrawal (other termination of employment)

Demographic assumptions are generally based on the plan's own experience, taking into account emerging trends. Rates of salary increase due to promotion and longevity are also related to the plan's experience.

The accuracy and extent of the data is an important consideration in assessing demographic experience. The accuracy of the data for this study was good, but a significant amount of data is needed in reviewing mortality experience. For this reason, we do not necessarily give full credibility to the recent active mortality experience, but also factor in general experience among a wider universe of pension plans and retirement systems. A very large amount of data is required to develop a credible mortality table. The selection of a mortality table is based on trends in the plan's experience and general trends among pension plans and retirement systems.

- Other methods and assumptions include the following:
 - Cost method
 - Amortization method
 - Asset smoothing method
 - Dependent assumptions
 - Assumptions on reciprocal service and service purchases
 - Assumptions on refund of contributions vs. deferred annuity
 - Pay increase and decrement timing assumptions
 - Plan election assumptions (Traditional/Portable vs. Self-Managed Plan)

Key Findings and Recommendations

Gabriel, Roeder, Smith & Company ("GRS") has performed an experience study of the State Universities Retirement System of Illinois ("SURS") for the period from June 30, 2006, to June 30, 2010. The primary purpose of the study was to compare the demographic and economic experience against the actuarial assumptions used in the valuations. Our study was based on the information used to perform the valuations for the period from June 30, 2006, to June 30, 2010.

Following is a summary of our key findings and recommendations:

- **Price inflation:** We recommend decreasing the rate of price inflation from 3.75 percent to 2.75 percent to reflect revised expectations of future price inflation.

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- **Investment return:** The investment return assumption, net of investment expenses, compounded annually, was decreased from 8.50 percent to 7.75 percent effective with the actuarial valuation as of June 30, 2010. This reflects a change in the underlying inflation assumption from 3.75 percent to 2.75 percent. We recommend maintaining the 7.75 percent assumption and monitoring it for continued reasonability in the future.
- **Effective rate of interest:** We recommend decreasing the effective rate of interest used to project member contribution balances under the Money Purchase formula (Rule 2) and for other purposes such as refunds of excess contributions from 8.50 percent to 7.75 percent, to remain consistent with the change in the long-term investment return assumption.
- **Payroll growth assumption:** We recommend decreasing the general payroll growth assumption from 5.00 percent to 3.75 percent, which reflects an underlying general or price inflation assumption of 2.75 percent.
- **Salary increase:** We reviewed salary experience for the period from June 30, 2006, to June 30, 2010. We determined salary increases between valuations and calculated average annual salary increases. We recommend modifying the current salary increase assumptions to reflect 3.75 percent wage inflation plus a service-based component for merit, longevity and promotion, ranging from 0.50 percent to 8.25 percent based on years of service.
- **Normal retirement rates:** We recommend decreasing the overall rates and extending the assumption for 100 percent retirement from age 70 to age 80 to reflect observed experience.
- **Turnover rates:** We recommend modifications to the current service-based rates. The proposed rates produce lower expected turnover than the currently assumed rates.
- **Mortality rates:** We recommend changing from the 1994 Group Annuity Mortality table with a two-year set-back for males to the RP 2000 Mortality table projected to 2017, with the rates multiplied by 0.80 for males and 0.85 for females for the post-retirement mortality assumption. We recommend that the pre-retirement mortality assumption continue to be based on a percent of the post-retirement mortality rates to reflect that active members have lower mortality rates than retirees of the same age. The percent of the post-retirement table is 85 percent for males and 60 percent for females.
- **Disability rates:** We recommend decreasing the current disability rates to reflect observed experience.
- **Cost Method:** The actuarial cost method is Projected Unit Credit, which is required to be used by statute.
- **Amortization Method:** We recommend no change to the 30-year open level percent of pay amortization method used to calculate the Annual Required Contribution for Governmental Accounting Standards Board (GASB) accounting purposes. The funding policy is defined by statute and does not comply with GASB.
- **Asset Smoothing Method:** The asset smoothing method is defined by statute. Gains and losses (the difference between the actual investment return and the expected investment

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return) are smoothed in over a five-year period at a rate of 20 percent per year. There is currently no asset corridor. An asset corridor limits the amount that the actuarial (smoothed) value of assets can deviate from the market value of assets. Because the statutory funding policy defers contributions, we recommend that an asset corridor of 80 percent to 120 percent of market value of assets be implemented. However, our understanding is that this would take legislative action.

- **Plan Election:** We recommend maintaining the assumption of 15 percent for future hires that elect to participate in the Self-Managed Plan (SMP).
- **Dependent assumptions:** We recommend maintaining the current assumption on marital status that varies by age and sex and the assumption that males are three years older than their spouses. No dependent assumptions are made for current retirees as actual eligible spouse and dependent data is provided.
- **Load for reciprocal benefits, service purchases, and refunds of excess contributions:** We recommend including a liability load of 10 percent on the liabilities for service retirees whose benefits have not been finalized. Historically, there have been liability losses on these members due to finalized benefits that are higher than 100 percent of the preliminary estimates.

The impact of adopting the recommended assumptions is summarized in the table below. The recommended assumptions slightly decrease the actuarial liability and do not impact the funded ratio. The increase in the Annual Required Contribution (ARC) is due to the change in the payroll growth assumption, from 5.00% to 3.75%. A decreasing payroll assumption implies less funding in the future, thus the ARC will increase.

	Dollars in Millions		
	Valuation as of 6/30/10	Proposed Assumptions	Change
Actuarial Accrued Liability	\$30,120.4	\$30,117.9	(\$2.5)
Actuarial Value of Assets	13,966.6	13,966.6	0.0
Unfunded Actuarial Accrued Liability	16,153.8	16,151.3	(2.5)
Funded Ratio	46.37%	46.37%	0.00%
Illustrated Employer Contributions (FY 2011)			
Annual Required Contribution (ARC)	\$1,239.2	\$1,332.8	\$93.6
Statutory Contribution	775.8	775.8	0.0
Deficit Contribution (from ARC)	463.4	557.0	93.6

SECTION II
EXPERIENCE ANALYSIS

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These assumptions reflect the effects of economic forces on the projections of retirement benefits payable from the plan and in the discounting of those benefits to present value.

These assumptions are based, at their core, on the assumed level of price inflation. Each economic assumption is then developed from expected spreads over price inflation. Since price inflation is relatively volatile and is subject to a number of influences not based on recent history, these assumptions are less reliably based on recent past experience than are the demographic assumptions.

The key economic assumptions are:

1. Assumed Rate of Inflation – The rate of price inflation (as measured by the Consumer Price Index for all Urban consumers) which underlies the remainder of the economic assumptions.
2. Assumed Rate of Investment Return (Prescribed Rate as defined in the statute) - The rate at which projected future benefits under the system are reduced to present value.
3. Assumed Effective Rate of Interest (ERI) – The rate at which member contributions are accumulated to generate benefits under the Money Purchase Benefit formula (Rule 2).
4. Rate of General Annual Pay Increases - This reflects inflationary forces on increases in pay for individual members.

Inflation

By “inflation,” we mean price inflation, as measured by annual increases in the Consumer Price Index (CPI). This inflation assumption underlies all of the other economic assumptions we employ. It not only impacts investment return, but also salary increase rates, and the payroll growth assumption. Our current annual inflation assumption is 3.75 percent.

Over the five-year period from June 2005 through June 2010, the CPI-U has increased at an average rate of 2.31 percent. However, the assumed inflation rate is only weakly tied to past results.

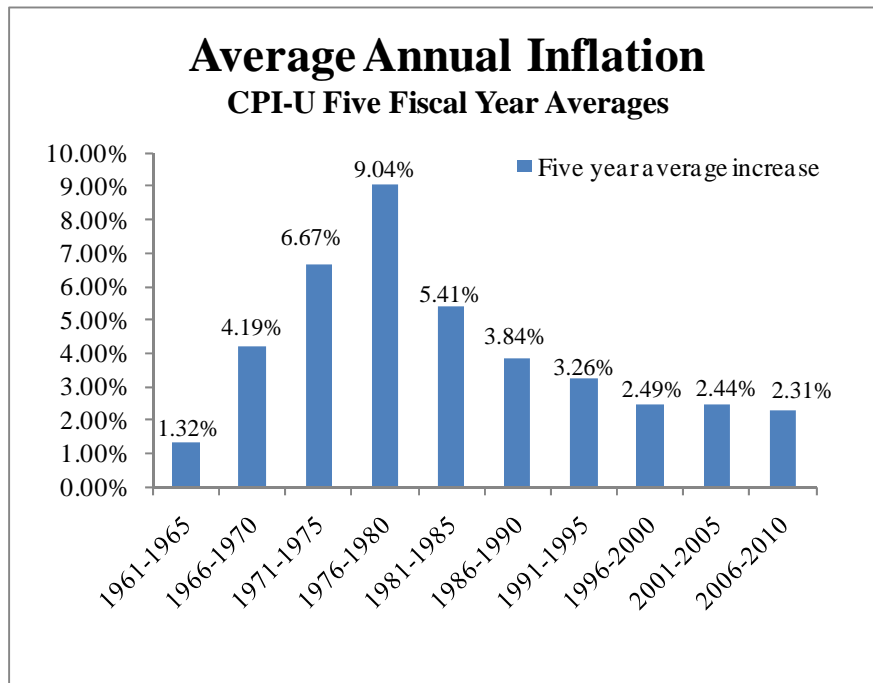
The following table shows the average inflation over various periods, ending June 2010.

Fiscal Year	Annual Increase in CPI-U
2005-06	4.33%
2006-07	2.69%
2007-08	5.02%
2008-09	-1.43%
2009-10	1.05%
3-Year Average	1.51%
5-Year Average	2.31%
10-Year Average	2.37%
20-Year Average	2.62%
25-Year Average	2.86%
30-Year Average	3.28%
40-Year Average	4.41%
50-Year Average	4.07%

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The graph below shows the average inflation over 5-year periods over the last 50 years:



We surveyed the inflation assumption used by investment consulting firms. In our sample of nine firms, the inflation assumption ranged from 2.00 percent to 3.25 percent, with an average of 2.60 percent.

In the Social Security Administration's 2010 Trustees Report, the Office of the Chief Actuary is projecting a long-term average annual inflation rate of 2.8 percent under the intermediate cost assumption. (The inflation assumption is 1.8 percent and 3.8 percent respectively in the low cost and high cost projection scenarios.)

Therefore, we believe a reasonable long-term inflation assumption will likely fall in the range of 2.25 percent to 3.00 percent, although we recognize that inflation may fall outside this range over the next few years. We are recommending the inflation assumption be decreased from 3.75 percent to 2.75 percent. This is close to the average of 2.86 percent over the last 25-years and consistent with the assumption used by the SSA Office of the Chief Actuary for the intermediate cost projections.

Investment Return

ASOP 27

Actuaries are required to comply with Actuarial Standard of Practice No. 27 (ASOP 27) in setting economic assumptions for retirement plans, including the assumed investment return rate.

In a public retirement system like SURS, it is ultimately the Retirement Board's responsibility to approve the actuarial assumptions used in the actuarial valuations. It is the actuary's duty to provide the Board with information needed to make those decisions and to make

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recommendations to the Board. Although the Board is the ultimate decision-making body, we are still bound by ASOP 27 in providing advice or recommendations to the Board.

The current standard requires the actuary to identify the components of each assumption, to evaluate relevant data, and to set a best-estimate range. Then the actuary selects a point within this best-estimate range. Alternatively, the actuary may simply set the assumption without specifying a best-estimate range. All economic assumptions are required to be individually reasonable and consistent in the aggregate.

The best-estimate range is “the narrowest range within which the actuary reasonably anticipates that the actual results, compounded over the measurement period, are more likely than not to fall.” That is, there is a 50 percent likelihood that the compound rate of return will fall within the best estimate range. This is equivalent to establishing a confidence interval that ranges from the 25th to 75th percentile.

Real Return

The allocation of assets within the universe of investment options will significantly impact the overall performance. Therefore, it is meaningful to identify the range of expected returns based on the fund’s targeted allocation of investments and an overall set of capital market assumptions.

Based on information provided by SURS’s investment consultant as of November 2010, following is a table with the plan’s current target asset allocation:

Asset Category	Current Target
US Equity	34%
Non-US Equity	18%
Global Equity	10%
Private Equity	6%
REITS	4%
Real Estate	2%
TIPS	5%
Bonds	21%
Total	100%

We reviewed capital market assumptions developed and published by nine independent investment consulting firms.

These investment consulting firms periodically issue reports that describe their capital market assumptions, that is, their estimates of expected returns, volatility, and correlations among the different asset classes. While some of these assumptions may be based upon historical analysis, many of these firms also incorporate forward looking adjustments to better reflect near-term and long-term expectations. The estimates for core investments (i.e. fixed income, equities, and real estate) are generally based on anticipated returns produced by passive index funds.

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Given the plan's current target asset allocation and the capital market assumptions from the investment consultants, the development of the average nominal return, net of investment expenses, is provided in the following table:

Investment Consultant	Date of Capital Market Assumptions	Investment Consultant Expected Nominal Return*	Investment Consultant Inflation Assumption	Expected Real Return* (3)-(4)	Actuary Inflation Assumption	Actuary Investment Expense Assumption	Expected Nominal Return** (5)+(6)-(7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	11/1/2009	7.85%	3.25%	4.60%	2.75%	0.35%	7.00%
2	1/1/2010	8.13%	3.00%	5.13%	2.75%	0.35%	7.53%
3	1/1/2010	7.67%	2.50%	5.17%	2.75%	0.35%	7.57%
4	9/30/2009	7.36%	2.00%	5.36%	2.75%	0.35%	7.76%
5	6/30/2010	7.87%	2.50%	5.37%	2.75%	0.35%	7.77%
6	1/1/2010	8.43%	3.00%	5.43%	2.75%	0.35%	7.83%
7	3/1/2010	8.54%	2.75%	5.79%	2.75%	0.35%	8.19%
8	1/1/2010	9.02%	2.30%	6.72%	2.75%	0.35%	9.12%
9	12/1/2010	9.72%	2.10%	7.62%	2.75%	0.35%	10.02%
Average		8.29%	2.60%	5.69%	2.75%	0.35%	8.09%

*Average real rate of return is 5.34% net of investment expenses.

**Based on arithmetic average.

Based on each firm's assumptions, we estimated the expected real return of SURS's portfolio (col. (5)). Next, based on the actuary's recommended inflation and investment expense assumption, we estimated the nominal return net of investment expenses (col. (8)). As the table shows, the average one-year nominal return (net of expenses) of the nine firms is 8.09 percent, which is 0.34 percent more than the current assumption of 7.75 percent.

In addition to examining the expected one-year return, it is important to review anticipated volatility of the investment portfolio and understand the range of long-term net return that could be expected to be produced by the investment portfolio. Therefore, the following table provides the 25th, 50th, and 75th percentiles of the 30-year geometric average of the expected nominal return, net of expenses, as well as the probability of exceeding the current 7.75 percent assumption.

Investment Consultant	Distribution of 30-Year Average Geometric Net Nominal Return			Probability of exceeding 7.75%
	25th	50th	75th	
(1)	(2)	(3)	(4)	(5)
1	5.04%	6.40%	7.79%	29.60%
2	5.26%	6.78%	8.32%	36.45%
3	5.66%	7.00%	8.36%	37.99%
4	6.06%	7.28%	8.52%	41.75%
5	5.36%	6.96%	8.57%	39.30%
6	5.55%	7.08%	8.63%	40.54%
7	5.82%	7.40%	8.99%	45.11%
8	7.31%	8.60%	9.90%	64.13%
9	7.35%	9.08%	10.83%	66.41%
Average	5.94%	7.40%	8.88%	44.59%

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As the analysis shows, there is a 50 percent likelihood that the 30-year average net real return will be between 5.94 percent and 8.88 percent. This becomes the best-estimate range under ASOP 27. However, only two of the capital market assumptions provided by the investment consulting firms indicate there is more than a 50 percent chance of exceeding the current assumption of 7.75 percent. Furthermore, the average results of all nine firms indicate there is about a 45 percent chance that the plan will produce an average return that exceeds 7.75 percent over the next 30 years.

Recommendation

Based on our analysis of the expected investment return and the current target asset allocation, we recommend maintaining the long-term investment return assumption of 7.75 percent that was first adopted in the valuation as of June 30, 2010. Based on the current statutory funding policy and the liquidity strain it may cause, we recommend that the assumed investment return be reviewed in a couple of years. By this time, the investment consultant would have completed the asset liability modeling study and any changes in the target asset allocation would be known at this time.

Effective Rate of Interest

The assumed effective rate of interest impacts the projected benefits for members that were hired before July 1, 2005, and are eligible for benefits calculated under the highest of three formulas – the general formula, the money purchase formula, and the minimum benefit formula.

The effective rate of interest used to credit member contributions for the money purchase formula is calculated and set by the State Comptroller's Office. The effective rate of interest for crediting member contributions for other purposes is calculated by Staff and set by the Board.

Following is the criteria for setting the effective rate of interest:

1. Past and Expected Investment Experience
2. Historical and Expected Fluctuations in the Market Value of Investments
3. Provision of Reserves for Anticipated Losses Upon Sales, Redemptions or Other Disposition of Investments and for Variations in Interest Experience
4. Minimizing the Volatility of the Effective Rate

The ERI for fiscal year 2012 set by the State Comptroller's Office is 6.75 percent. The ERI for fiscal year 2012 set by the Board is 7.50 percent.

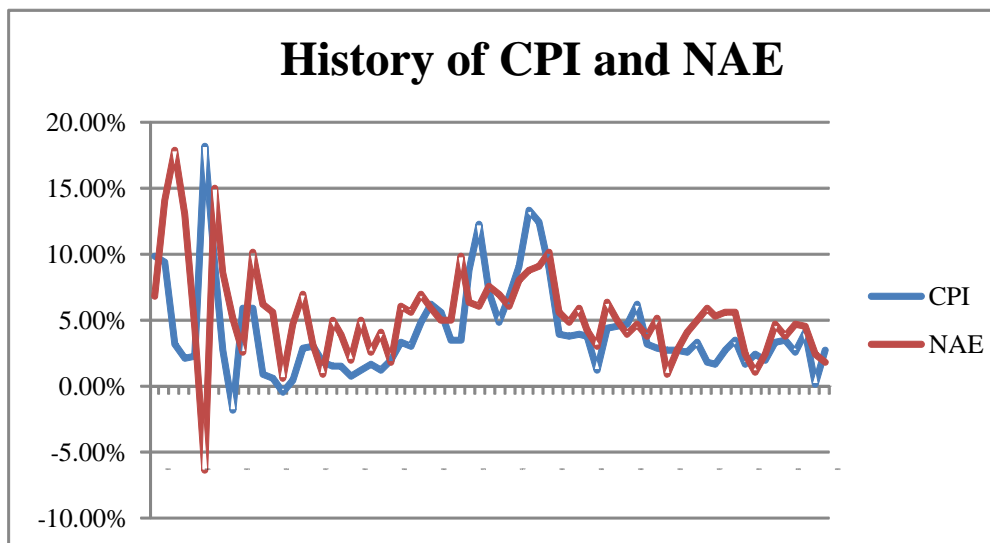
We recommend that the long-term assumed effective rate of interest be set at 7.75 percent, which is the long-term assumed rate of investment return. This represents a decrease from the previous long-term ERI assumption of 8.50 percent. We recommend monitoring this assumption and reviewing it in a couple of years. The State Comptroller's Office and the Board will continue to set the ERI for their respective purposes for each individual fiscal year.

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General Wage Increase and Payroll Growth Assumption

The SURS assumptions make a distinction between price inflation (previously assumed to be 3.75 percent) and the rate of payroll growth (assumed to be 5.00 percent). The National Average Earnings (NAE) series published in connection with the operation of the Social Security program is a useful proxy for measuring general changes in wage levels in the economy. Increases in NAE typically exceed increases in the Consumer Price Index (CPI), although there are periods where the patterns are reversed. The economic argument for wages exceeding prices in the long run is that CPI is based on the prices of a fixed basket of goods whereas wages reflect innovations, real productivity growth, labor supply and demand, and other factors in addition to pure price inflation.



Over the last 59 years, NAE has exceeded CPI 51 times and the averages over that period are 5.3% for NAE and 4.0% for CPI. The last 25 years has had fewer cases of high inflation, but the distinction between prices and wages still appears. Over the last 25 years, the average increase in NAE is 3.9% and the average increase in CPI is 2.9%.

As with the investment return assumption, past experience does not dictate future expectations. Current expectations are mixed on whether price and wage inflation will remain low in the short term, particularly due to the aftereffects of recent federal government spending. For a long term view, the 2010 Annual Report from the Trustees of the Social Security Administration (SSA) assumes an intermediate average CPI of 2.8% over the next 75 years and an intermediate growth assumption for average wages in covered employment of 4.0%. The SSA report provides alternate “Low-cost” assumptions of 1.8% CPI/3.6% wages and “High-cost” assumptions of 3.8% CPI/4.4% wages.

With ongoing pressure on the ability of states to sustain across the board increases in wages consistent with historical norms, we do not believe there is justification to increase the assumption for productivity increases; in other words, to increase the assumed gap between price increase and wage growth. The growing influence of the global economy also suggests that the roughly 1 percent historical differential between NAE and CPI may be difficult to sustain longer

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term. Therefore, we recommend decreasing the assumption for productivity increases from 1.25 percent to 1.00 percent. Combining the recommendation with a 2.75 percent inflation assumption, implies a change in the wage growth assumption from the present 5.00 percent to 3.75 percent. These assumptions are summarized below:

	Present Assumption	Recommended Assumption
Price Inflation	3.75%	2.75%
Productivity Increases	1.25%	1.00%
Total	5.00%	3.75%

Salary Increase

The components that determine the total salary increase are wage inflation, merit and longevity increases and promotion increases. We recommend a change to the merit and longevity and promotion increase portion of the salary increase assumption to better reflect actual experience.

The observed experience in Table I shows significant increases in pay for the first two years of service. We recommend that GRS work with SURS staff to refine the salary data that is provided for newer members. Currently, calculated pay that is based on the member contributions is provided. Although very low service members have a low liability, receiving an annualized pay or a salary rate would improve the valuation of liabilities for these members.

Table and Graph I compare the salary experience, current assumptions and recommended assumptions by years of service for each of the following:

- Table I – Salary Experience by Service
- Graph I – Salary Experience by Service

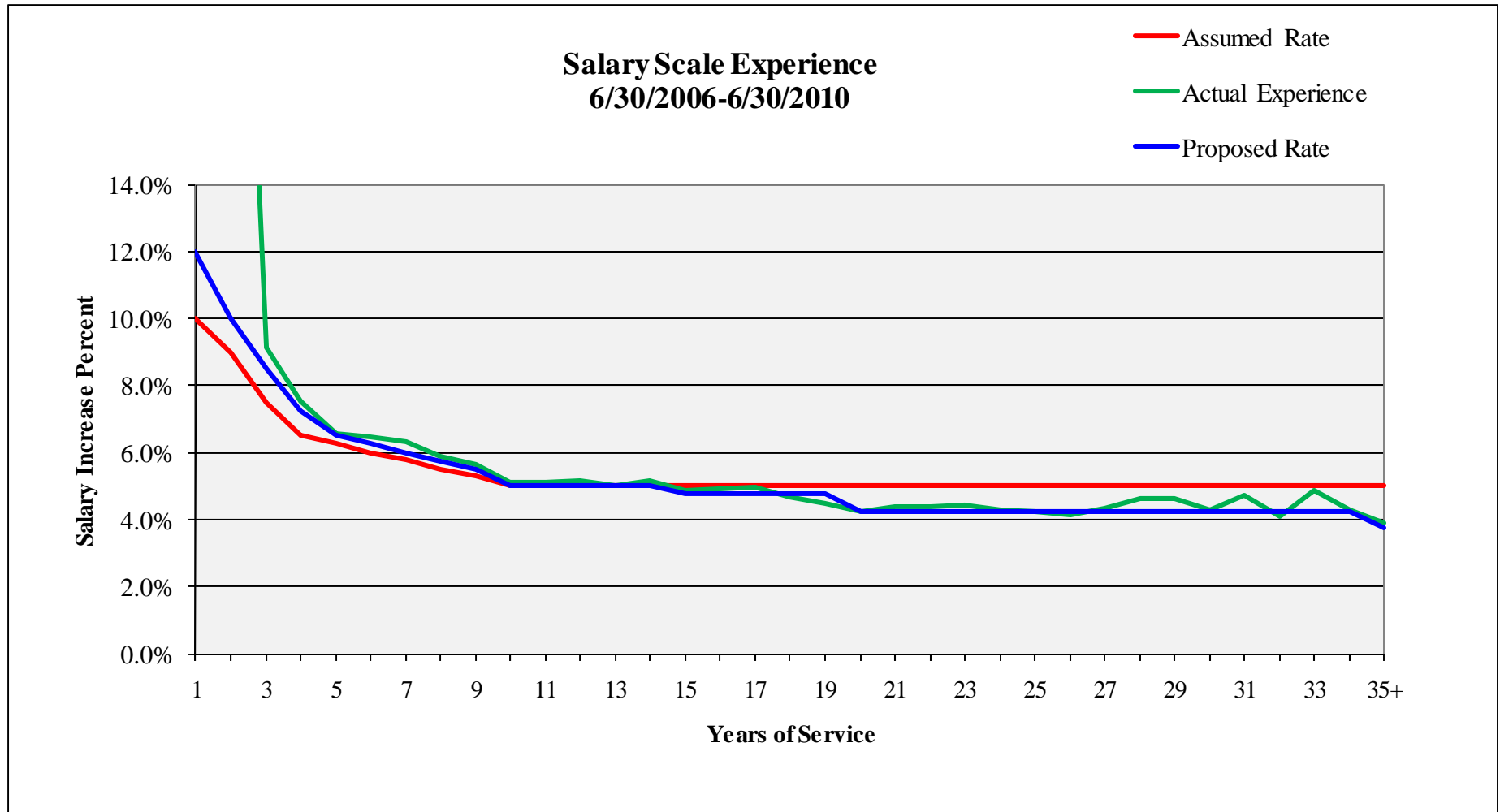
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SALARY SCALE ASSUMPTION

Table I

Service at End of Year	Number	Actual		Actual Total Increase	Expected Total Increase	Proposed Total Increase
		Prior Year	Current Year			
1	3,676	76,641,018	135,410,977	76.68%	10.00%	12.00%
2	15,412	462,017,696	612,340,799	32.54%	9.00%	10.00%
3	16,564	643,073,508	701,772,967	9.13%	7.50%	8.50%
4	16,244	601,934,884	647,408,567	7.55%	6.50%	7.25%
5	15,283	572,358,048	610,006,569	6.58%	6.25%	6.50%
6	13,860	542,004,795	577,079,472	6.47%	6.00%	6.25%
7	12,882	526,005,504	559,365,385	6.34%	5.80%	6.00%
8	12,132	513,541,350	543,690,356	5.87%	5.50%	5.75%
9	11,177	482,046,884	509,201,995	5.63%	5.30%	5.50%
10	9,966	437,434,068	459,845,664	5.12%	5.00%	5.00%
11	8,730	395,143,420	415,258,697	5.09%	5.00%	5.00%
12	7,961	372,871,692	392,163,675	5.17%	5.00%	5.00%
13	7,650	374,845,156	393,587,054	5.00%	5.00%	5.00%
14	7,264	371,261,435	390,502,501	5.18%	5.00%	5.00%
15	7,011	367,181,665	385,141,824	4.89%	5.00%	4.75%
16	7,626	392,951,478	412,231,636	4.91%	5.00%	4.75%
17	7,362	394,152,579	413,659,061	4.95%	5.00%	4.75%
18	7,004	395,206,476	413,753,642	4.69%	5.00%	4.75%
19	6,658	390,335,779	407,759,218	4.46%	5.00%	4.75%
20	5,578	353,071,697	368,029,109	4.24%	5.00%	4.25%
21	5,016	321,619,599	335,668,826	4.37%	5.00%	4.25%
22	4,759	310,734,644	324,400,783	4.40%	5.00%	4.25%
23	4,577	309,774,466	323,572,943	4.45%	5.00%	4.25%
24	4,215	292,188,638	304,712,359	4.29%	5.00%	4.25%
25	3,589	253,329,048	264,023,228	4.22%	5.00%	4.25%
26	3,096	226,250,226	235,636,245	4.15%	5.00%	4.25%
27	2,522	185,245,762	193,299,955	4.35%	5.00%	4.25%
28	2,233	165,296,904	172,930,991	4.62%	5.00%	4.25%
29	1,957	147,020,186	153,831,524	4.63%	5.00%	4.25%
30	1,508	120,769,105	125,972,198	4.31%	5.00%	4.25%
31	1,146	97,399,692	102,022,631	4.75%	5.00%	4.25%
32	871	76,798,904	79,927,698	4.07%	5.00%	4.25%
33	624	55,445,084	58,150,571	4.88%	5.00%	4.25%
34	441	39,635,913	41,326,738	4.27%	5.00%	4.25%
35+	1,773	177,926,258	184,834,585	3.88%	5.00%	3.75%
Total	238,367	11,443,513,561	12,248,520,443	7.03%	5.60%	5.54%
Total Years 3+	219,279	10,904,854,847	11,500,768,667	5.46%	5.42%	5.31%

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
SALARY SCALE ASSUMPTION

Graph I



STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS

DEMOGRAPHIC ASSUMPTIONS

The following pages present the analysis of the demographic assumptions. These assumptions include assumed rates of mortality among active and retired members, retirement patterns, disability incidence, and turnover patterns. These patterns generally take the form of tables of rates of incidence based on age and/or years of service.

Absent any significant changes in benefit provisions, these assumptions generally exhibit reasonable consistency over periods of time. As a result, each demographic assumption is normally reviewed by relating actual experience to that assumed over the recent past.

The analysis of demographic experience is conducted for each assumption using a measure known as the "Actual to Expected (A/E) Ratio." The A/E Ratio is simply the ratio of the actual number of occurrences of the event to which the assumption applies (e.g., deaths or retirements) to the number expected to occur in accordance with the assumption. An A/E Ratio of 1.00 indicates that the assumption precisely predicted the number of occurrences. An A/E Ratio exceeding 1.00 indicates that the assumption underestimated actual experience. Conversely, an A/E Ratio lower than 1.00 indicates that the assumption overestimated actual experience.

These are statistical analyses. As a result, there are several considerations we must keep in mind as we analyze these ratios:

1. An actuarial assumption is designed to reflect average experience over long periods of time (30 - 50 years). As a result:
 - a. A deviation between actual experience and that expected from our assumptions for one or two years does not necessarily mean that the assumption should be changed.
 - b. A change in actuarial assumption should result if the experience indicates a consistent pattern which is different from that assumed over a period of years.
2. The larger the amount of data available, the more reliable the statistics used in the analysis. As a result:
 - a. Events that occur with great frequency (e.g., general employment turnover) are more credibly predictable than those occurring less frequently (e.g., active member death).
 - b. In all cases, data covering the entire study period produce more credible results than data for a single year.
 - c. Year by year experience is helpful only in identifying trends and determining whether the four-year data is truly reflective of the entire period.

This analysis is based on the valuation data for the four-year period from June 30, 2006, to June 30, 2010.

Retirement

The Plan provisions establish the minimum eligibility requirements for retirement. Participants of the plan that became members before January 1, 2011¹, are eligible for immediate normal retirement benefits at the earlier of 30 years of service at any age, age 60 and 8 years of service, or age 62 and 5 years of service. (Police officers and firefighters are eligible at age 50 with 25

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS

RETIREMENT ASSUMPTION

years of service or age 55 with 20 years of service.) Participants of the plan that became members before January 1, 2011¹, are eligible for early (reduced) retirement benefits on or after the attainment of age 55 and 8 years of service.

Retirement cost, however, is determined not by the minimum eligibility requirements but by the ages at which members actually retire. The valuation does not assume that everyone retires at earliest eligibility. The assumption about the timing of retirement once eligibility has been established is a major component in cost calculations. Note that higher rates of retirement at earlier retirement ages or years of service upon attaining retirement eligibility generally result in higher actuarially determined contributions, and vice versa.

Experience during the last four years was considered in the analysis shown on the following pages. The “Exposure” column shows the number of employees eligible to retire at various years of service or ages throughout the experience period. An individual could potentially be counted up to four times if eligible each year in the period. By tabulating employees in this fashion we are able to answer the question “For all employees eligible at condition X, how many retired?”

During the experience study period, there was a significant economic downturn and great uncertainty in the financial markets. This uncertainty, in turn, affected the membership of the plan. In particular, we observed decreases in retirements in fiscal years 2009 and 2010 as shown in the table below. Our recommended rates partially reflect lower retirements than expected based on observed experience, but recognize that members may retire slightly earlier consistent with pre-2009 experience as the economy continues to recover.

Fiscal Year End	Normal Retirement			Early Retirement		
	Actual	Current Assumption	Actual/Expected	Actual	Current Assumption	Actual/Expected
2007	1,370	2,417	0.6	400	431	0.9
2008	1,463	2,571	0.6	458	433	1.1
2009	1,157	2,728	0.4	348	434	0.8
2010	1,434	2,903	0.5	349	433	0.8
Total	5,422	10,619	0.5	1,555	1,731	0.9

¹ Participants who become members of the plan on or after January 1, 2011, are eligible for retirement at age 67 with 10 years of service. Assumed retirement rates for these members will differ from current members.

Normal Retirement Experience

Current and past experience has shown that retirement rates under this plan are correlated with age. Currently, the Plan uses age-based rates with higher rates at key ages, with 100 percent retirement at age 70. We recommend the following changes:

- A decrease in rates overall to reflect the actual experience of the Plan.
- Increase the age at 100 percent assumed retirement from 70 to 80.

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS RETIREMENT ASSUMPTION

Applying the proposed rates to historical data generates the following number of retirements by age at retirement:

Nearest Age	Number of Retirements		
	<u>Actual</u>	<u>Current Assumption</u>	<u>Proposed Assumption</u>
Under 50	75	57	65
50-54	479	443	467
55-59	638	673	654
60-64	2,402	3,119	2,767
65-69	1,260	1,704	1,484
70-74	354	2,934	881
75-79	149	1,212	364
80+	65	477	477
Total	5,422	10,619	7,159

Early Retirement Experience

Early retirement experience was a good fit to the current early retirement rates. We recommend a slight decrease in the rate at age 57 and maintaining the current rates at other ages.

Retirement Experience and Recommendations

The tables and graphs on the following pages show experience for normal and early retirement.

- Table and Graph II(a) – Normal Retirement Experience
- Table and Graph II(b) – Early Retirement Experience

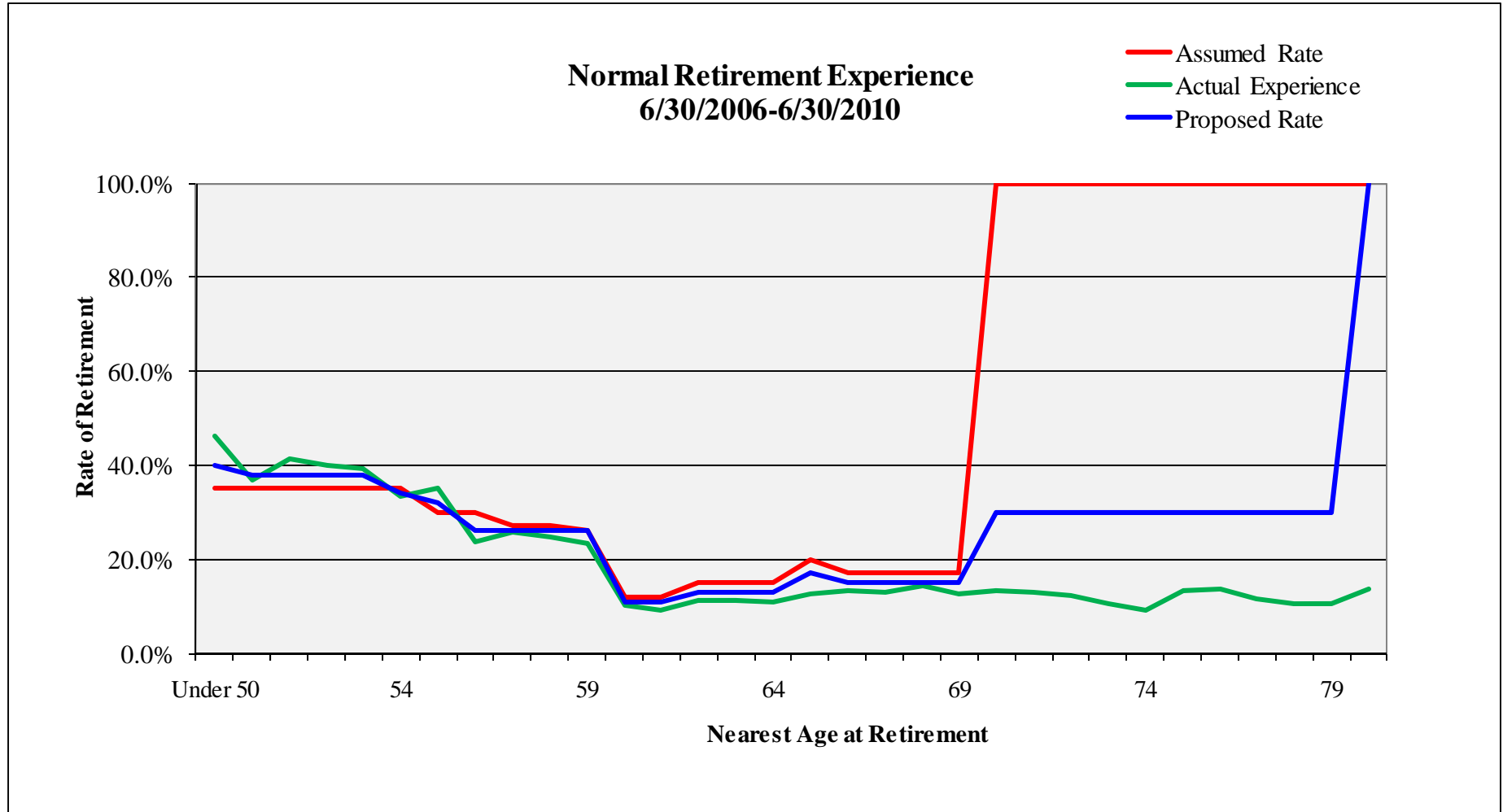
STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
NORMAL RETIREMENT ASSUMPTION

Table II(a)

Nearest Age @ Retirement	Actual Experience			Current Assumptions			Proposed Assumptions		
	Exposures	Retirements	Actual Rate	Expected Retirements	Assumed Rate ¹	Actual / Expected	Expected Retirements	Proposed Rate ¹	Actual / Expected
Under 50	162	75	46.3%	57	35.0%	1.3	65	40.0%	1.2
50	174	64	36.8%	61	35.0%	1.1	66	38.0%	1.0
51	200	83	41.5%	70	35.0%	1.2	76	38.0%	1.1
52	258	103	39.9%	90	35.0%	1.1	98	38.0%	1.1
53	290	114	39.3%	102	35.0%	1.1	110	38.0%	1.0
54	343	115	33.5%	120	35.0%	1.0	117	34.0%	1.0
55	451	158	35.0%	135	30.0%	1.2	144	32.0%	1.1
56	451	107	23.7%	135	30.0%	0.8	117	26.0%	0.9
57	510	131	25.7%	138	27.0%	1.0	133	26.0%	1.0
58	494	123	24.9%	133	27.0%	0.9	128	26.0%	1.0
59	506	119	23.5%	132	26.0%	0.9	132	26.0%	0.9
60	5,757	589	10.2%	691	12.0%	0.9	633	11.0%	0.9
61	4,912	457	9.3%	589	12.0%	0.8	540	11.0%	0.8
62	4,921	545	11.1%	738	15.0%	0.7	640	13.0%	0.9
63	4,067	455	11.2%	610	15.0%	0.7	529	13.0%	0.9
64	3,271	356	10.9%	491	15.0%	0.7	425	13.0%	0.8
65	2,837	361	12.7%	567	20.0%	0.6	482	17.0%	0.7
66	2,388	321	13.4%	406	17.0%	0.8	358	15.0%	0.9
67	1,863	244	13.1%	317	17.0%	0.8	279	15.0%	0.9
68	1,362	197	14.5%	232	17.0%	0.9	204	15.0%	1.0
69	1,073	137	12.8%	182	17.0%	0.8	161	15.0%	0.9
70	853	114	13.4%	853	100.0%	0.1	256	30.0%	0.4
71	692	89	12.9%	692	100.0%	0.1	208	30.0%	0.4
72	562	69	12.3%	562	100.0%	0.1	169	30.0%	0.4
73	446	47	10.5%	446	100.0%	0.1	134	30.0%	0.4
74	381	35	9.2%	381	100.0%	0.1	114	30.0%	0.3
75	347	46	13.3%	347	100.0%	0.1	104	30.0%	0.4
76	279	38	13.6%	279	100.0%	0.1	84	30.0%	0.5
77	238	28	11.8%	238	100.0%	0.1	71	30.0%	0.4
78	196	21	10.7%	196	100.0%	0.1	59	30.0%	0.4
79	152	16	10.5%	152	100.0%	0.1	46	30.0%	0.3
80+	477	65	13.6%	477	100.0%	0.1	477	100.0%	0.1
Totals:	40,913	5,422	13.3%	10,619	26.0%	0.5	7,159	17.5%	0.8
Excluding 70+:	36,290	4,854	13.4%	5,996	16.5%	0.8	5,437	15.0%	0.9

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
NORMAL RETIREMENT ASSUMPTION

Graph II(a)



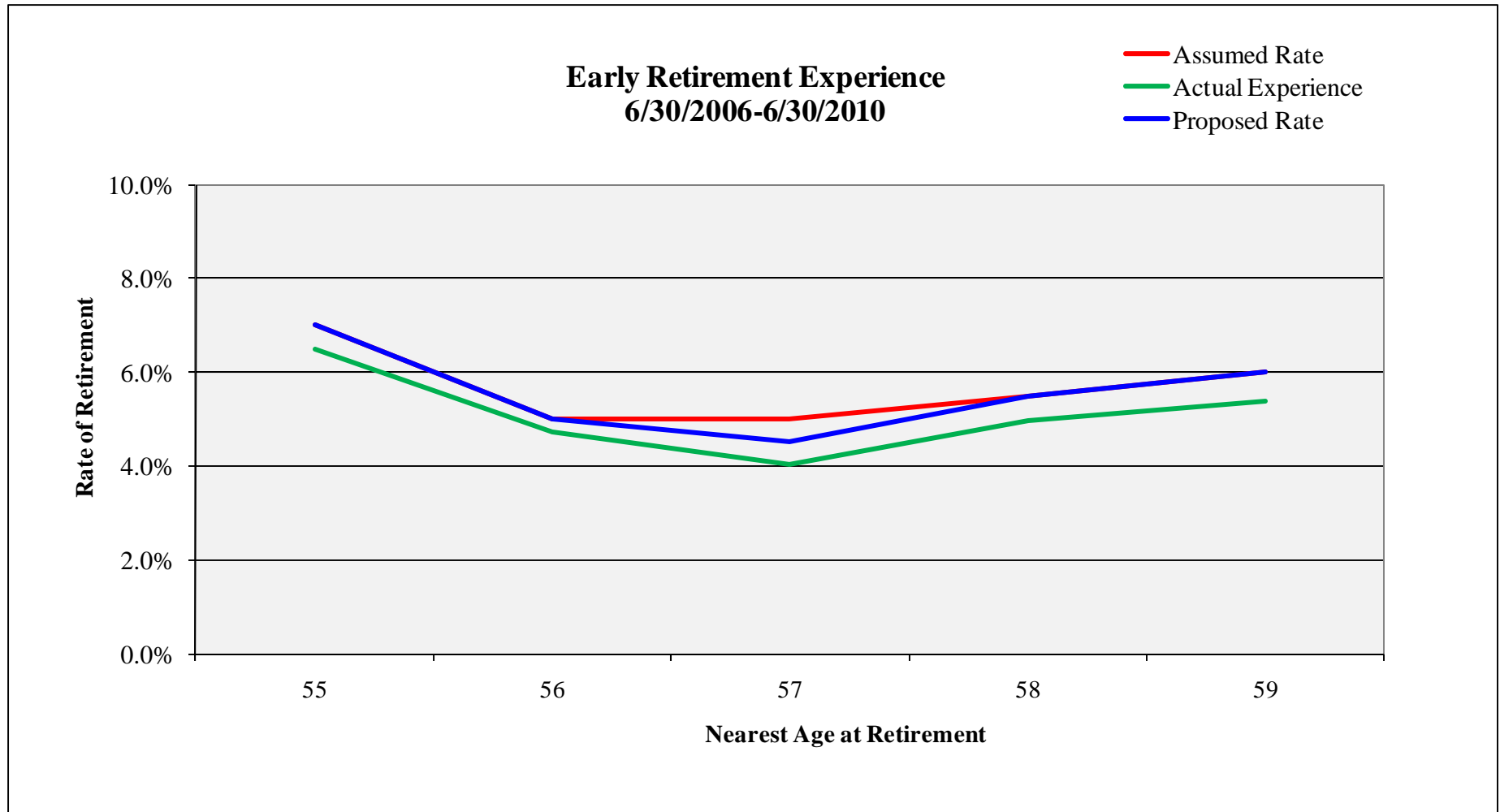
STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
EARLY RETIREMENT ASSUMPTION

Table II(b)

Nearest Age @ Retirement	Actual Experience			Current Assumptions			Proposed Assumptions		
	Exposures	Retirements	Actual Rate	Expected Retirements	Assumed Rate	Actual / Expected	Expected Retirements	Proposed Rate	Actual / Expected
55	6,582	428	6.5%	461	7.0%	0.9	461	7.0%	0.9
56	6,293	298	4.7%	315	5.0%	0.9	315	5.0%	0.9
57	6,090	245	4.0%	305	5.0%	0.8	274	4.5%	0.9
58	5,847	290	5.0%	322	5.5%	0.9	322	5.5%	0.9
59	5,466	294	5.4%	328	6.0%	0.9	328	6.0%	0.9
Totals:	30,278	1,555	5.1%	1,731	5.7%	0.9	1,700	5.6%	0.9

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
RETIREMENT ASSUMPTION

Graph II(b)



STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS

TURNOVER ASSUMPTION

Turnover

Turnover experience during the last four years was considered in the analysis shown on the following pages. The “Exposure” column shows the number of employees at various years of service throughout the experience period.

The “Turnover” column shows the number of employees at various years of service that have gone from active status for reasons other than retirement and death. This includes members moving to inactive status as well as members terminating and receiving a refund of contributions.

Typically, we would consider a status change from active to inactive a termination in developing turnover rates. However, because some of these participants return to active status and accrue additional benefits, we have considered this in our analysis of turnover experience. The “Net Turnover” column shows the number of employees by years of service that have gone from inactive to active status between the experience study period of June 30, 2006, and June 30, 2010. While these participants are not necessarily the same exact participants that went to inactive status during the experience study period, we believe that using this data helps us develop proposed net effective turnover rates.

There were less terminations than expected under the current assumptions. Based on our analysis, we recommend maintaining service-based rates and making the following changes to the turnover rates:

- Decrease rates at certain years of service;
- Maintain a pattern of termination rates that grade to 0 percent by 30 years of service.

In addition, we recommend assuming that members that are eligible for a deferred benefit elect the option that is more valuable – return of contributions or a deferred benefit. This will provide a level of conservatism in the valuation.

The table and graph on the following pages show termination experience by service, including the impact of members returning from inactive to active status.

- Table and Graph III – Termination Experience by Service

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
TURNOVER ASSUMPTION

Table III

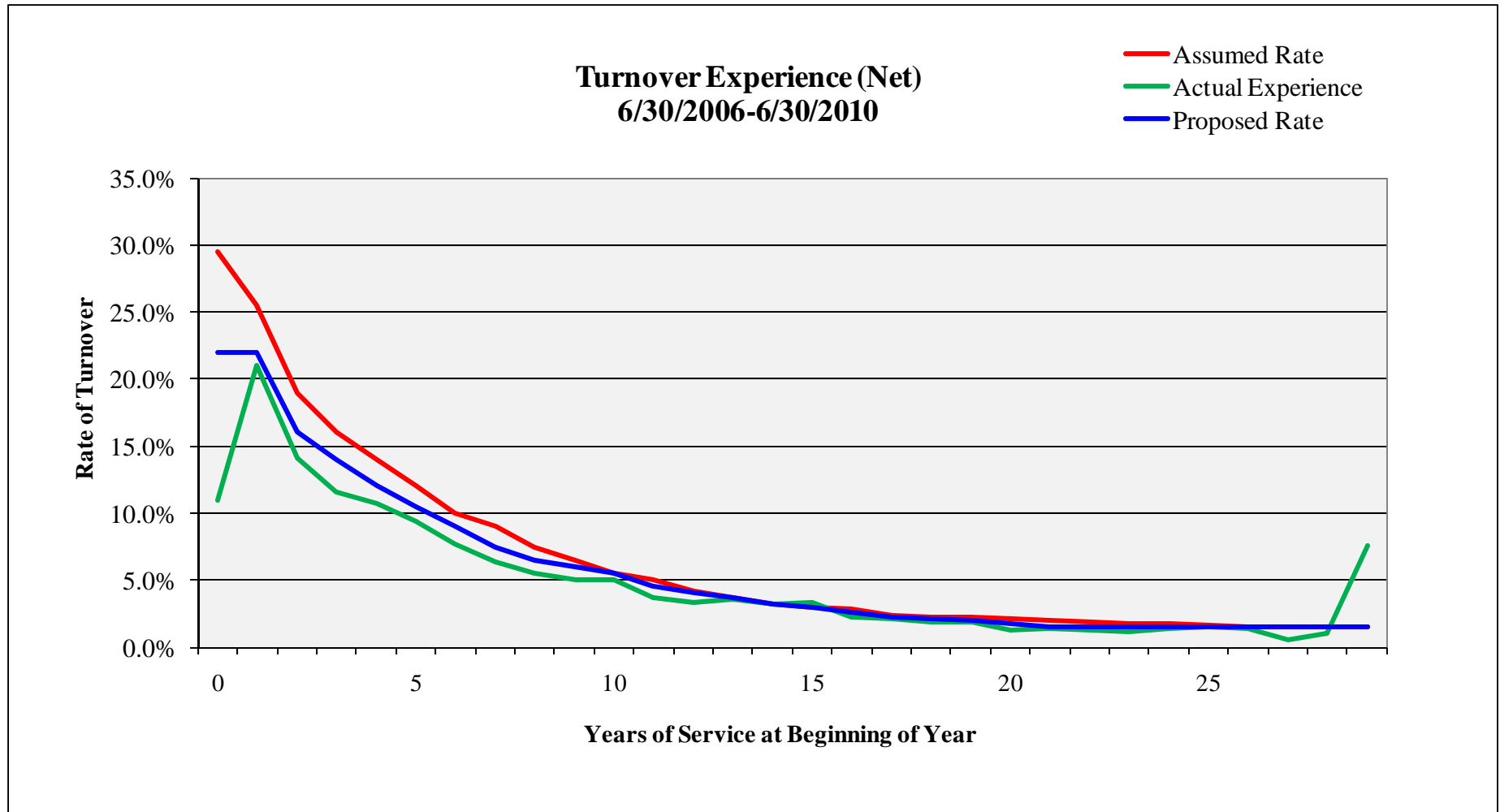
Service BOY	Actual Experience					Current Assumptions			Proposed Assumptions		
	Exposures	Turnover	Actual Rate	Net Turnover ¹	Actual Rate	Expected Turnover	Assumed Rate	Actual / Expected ¹	Expected Turnover	Proposed Rate	Actual / Expected ²
0	5,188	1,514	29.18%	571	11.01%	1,530	29.50%	0.4	1,141	22.00%	0.5
1	20,139	4,726	23.47%	4,222	20.96%	5,135	25.50%	0.8	4,431	22.00%	1.0
2	19,976	3,396	17.00%	2,820	14.12%	3,795	19.00%	0.7	3,196	16.00%	0.9
3	19,003	2,735	14.39%	2,203	11.59%	3,040	16.00%	0.7	2,660	14.00%	0.8
4	16,541	2,154	13.02%	1,766	10.68%	2,316	14.00%	0.8	1,985	12.00%	0.9
5	14,330	1,650	11.51%	1,342	9.36%	1,720	12.00%	0.8	1,505	10.50%	0.9
6	12,982	1,267	9.76%	996	7.67%	1,298	10.00%	0.8	1,168	9.00%	0.9
7	11,583	951	8.21%	734	6.34%	1,042	9.00%	0.7	869	7.50%	0.8
8	10,376	743	7.16%	578	5.57%	778	7.50%	0.7	674	6.50%	0.9
9	9,128	589	6.45%	456	5.00%	593	6.50%	0.8	548	6.00%	0.8
10	7,905	509	6.44%	397	5.02%	435	5.50%	0.9	435	5.50%	0.9
11	7,068	372	5.26%	263	3.72%	353	5.00%	0.7	318	4.50%	0.8
12	6,674	315	4.72%	222	3.33%	280	4.20%	0.8	267	4.00%	0.8
13	6,275	308	4.91%	227	3.62%	232	3.70%	1.0	232	3.70%	1.0
14	5,960	283	4.75%	191	3.20%	191	3.20%	1.0	191	3.20%	1.0
15	6,276	275	4.38%	209	3.33%	188	3.00%	1.1	188	3.00%	1.1
16	5,972	196	3.28%	137	2.29%	167	2.80%	0.8	155	2.60%	0.9
17	5,612	168	2.99%	119	2.12%	135	2.40%	0.9	129	2.30%	0.9
18	5,367	143	2.66%	98	1.83%	123	2.30%	0.8	113	2.10%	0.9
19	4,663	113	2.42%	86	1.84%	103	2.20%	0.8	93	2.00%	0.9
20	4,244	80	1.89%	53	1.25%	89	2.10%	0.6	72	1.70%	0.7
21	4,000	82	2.05%	58	1.45%	80	2.00%	0.7	60	1.50%	1.0
22	3,836	74	1.93%	49	1.28%	73	1.90%	0.7	58	1.50%	0.8
23	3,493	55	1.57%	40	1.15%	63	1.80%	0.6	52	1.50%	0.8
24	2,938	50	1.70%	41	1.40%	50	1.70%	0.8	44	1.50%	0.9
25	2,554	50	1.96%	40	1.57%	41	1.60%	1.0	38	1.50%	1.1
26	2,098	39	1.86%	30	1.43%	31	1.50%	1.0	31	1.50%	1.0
27	1,862	22	1.18%	10	0.54%	28	1.50%	0.4	28	1.50%	0.4
28	1,706	25	1.47%	18	1.06%	26	1.50%	0.7	26	1.50%	0.7
29	399	37	9.27%	30	7.52%	6	1.50%	5.0	6	1.50%	5.0
Totals:	228,148	22,921	10.05%	18,006	7.89%	23,941	10.49%	0.8	20,713	9.08%	0.9

¹ Reflects actual turnover net of inactive members who returned to active service.

² Actual to expected ratio based on net turnover.

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
TURNOVER ASSUMPTION

Graph III



STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS

DISABILITY ASSUMPTION

Disability

Disability experience during the last four years was considered in the analysis shown on the following pages. The “Exposure” column shows the number of employees in five-year age-bands throughout the experience period.

There were less disabilities than expected under the current actuarial assumptions. We recommend decreasing the current disability rates.

The tables and graphs on the following pages show experience for disability.

- Table and Graph IV – Disability Experience

The disability experience included on the following pages does not include disability experience for the SMP. The SMP disability assumption will be separately studied at a later date outside of this experience study report.

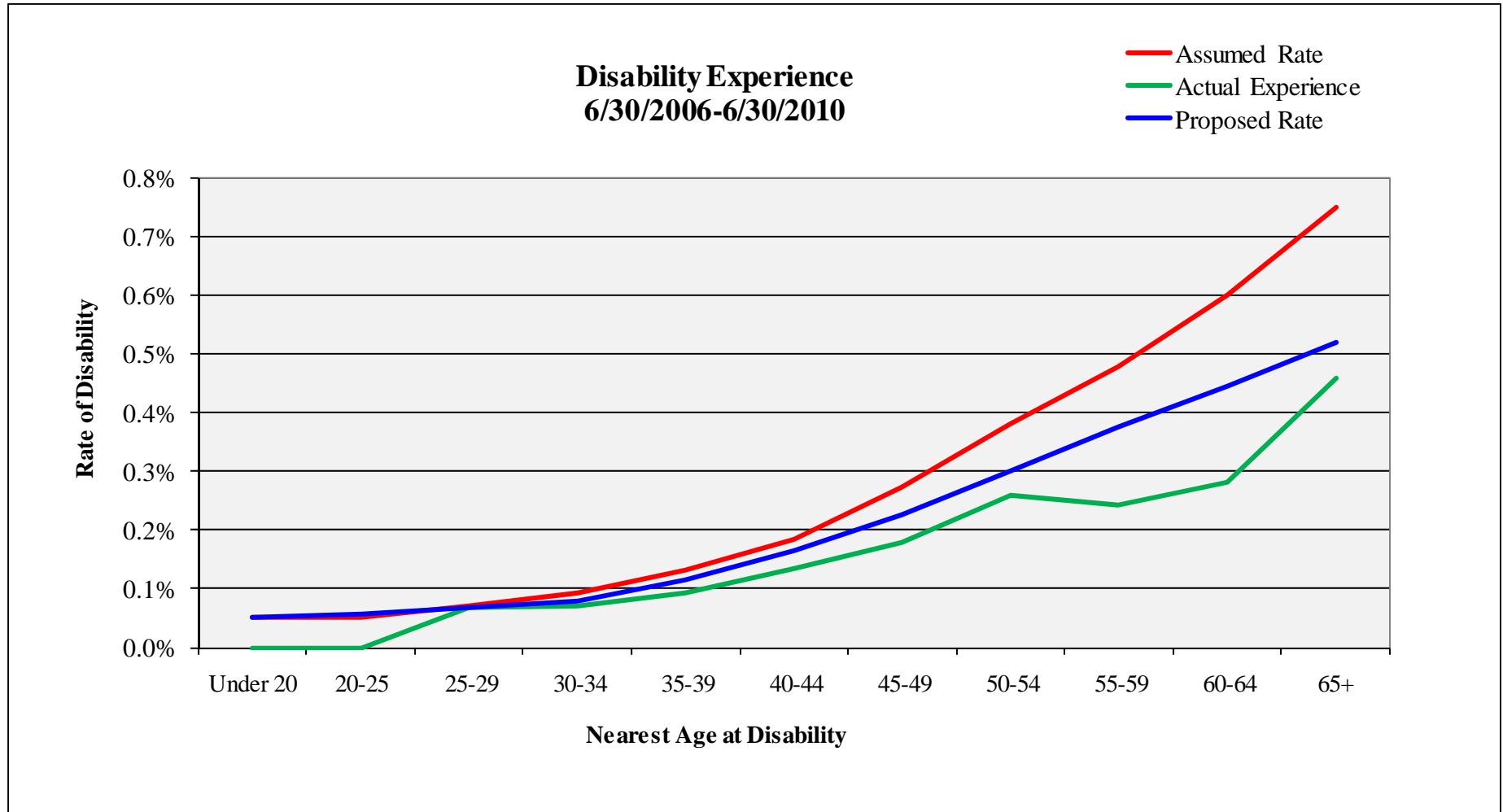
STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
DISABILITY ASSUMPTION

Table IV

Age @ Disablement	Actual Experience			Current Assumptions			Proposed Assumptions		
	Exposures	Disabilities	Actual Rate	Expected Disabilities	Assumed Rate	Actual / Expected	Expected Disabilities	Proposed Rate	Actual / Expected
Under 20	31	0	0.00%	0	0.05%	0.0	0	0.05%	0.0
20-25	2,126	0	0.00%	1	0.05%	0.0	1	0.06%	0.0
25-29	13,103	9	0.07%	9	0.07%	1.0	9	0.07%	1.0
30-34	21,426	15	0.07%	20	0.09%	0.8	17	0.08%	0.9
35-39	25,744	24	0.09%	34	0.13%	0.7	30	0.12%	0.8
40-44	29,318	39	0.13%	54	0.18%	0.7	49	0.17%	0.8
45-49	37,229	66	0.18%	101	0.27%	0.7	84	0.23%	0.8
50-54	43,405	112	0.26%	165	0.38%	0.7	130	0.30%	0.9
55-59	42,807	104	0.24%	205	0.48%	0.5	160	0.37%	0.7
60-64	27,410	77	0.28%	164	0.60%	0.5	122	0.44%	0.6
65+	10,719	49	0.46%	80	0.75%	0.6	56	0.52%	0.9
Totals:	253,318	495	0.20%	833	0.33%	0.6	658	0.26%	0.8

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
DISABILITY ASSUMPTION

Graph IV



STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS

MORTALITY ASSUMPTIONS

Mortality

Post-retirement mortality is an important component in cost calculations and should be updated from time to time to reflect current and expected future longevity improvements. Pre-retirement mortality is a relatively minor component in cost calculations. The frequency of pre-retirement deaths is so low that mortality assumptions based on actual experience can only be produced for very large retirement systems.

The trend of mortality improvement has been a long and relatively constant one in the United States over the past century. While, most experts agree that overall mortality will improve in the near future, there are differing opinions on the long-term trend in mortality improvement. In order to allow for expected future mortality improvements, we recommend adopting an assumption that would assume less deaths than actually occurred based on historical data. We believe that 10 percent is a reasonable margin for future mortality improvement.

Retirees

We reviewed the mortality experience separately for active members and service retirees during the four-year study period. The results shown on the following pages indicate that there were fewer deaths than expected under the current assumption.

We recommend changing from the 1994 Group Annuity Mortality table (1994 GAM), sex distinct with a two-year setback for males, to the RP2000 mortality table, sex distinct, with rates projected to 2017, and rates multiplied by 0.80 for males and 0.85 for females. We believe this table provides a margin for near-term mortality improvements.

Active Participants

We recommend maintaining the pre-retirement mortality assumption to be based on a percentage of post-retirement mortality to reflect that experience shows active members having lower mortality rates than retirees of the same age. We recommend decreasing the percentage from 75 percent to 85 percent for males and 60 percent for females.

A Note about Mortality Rates

The recommended post-retirement mortality assumption is the RP2000 mortality table projected to 2017, sex-distinct, with a multiplier for male and female rates. We are recommending the use of RP2000 as a static table, which means that the probability of a 60-year-old retired male dying in any particular year is 0.4103 percent, whether the 60-year-old was born in 1948 or 1988.

The use of generational mortality tables is an emerging trend in the actuarial industry, and is based on the assumption that life expectancy increases from generation to generation. Simply put, this means that the life expectancy of someone born in 1988 is greater than that of someone born in 1948. Adopting a generational mortality table tends to increase liabilities, as future increases in life expectancy imply longer payment of retirement benefits. Should the assumption of increased life expectancy prove true, actuarial valuations that continue to use static mortality

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS MORTALITY ASSUMPTIONS

tables may be required to update their tables to reflect the improved life expectancy, resulting in liability increases in the future. To the extent that future mortality improvements can be reflected in a current valuation, retirement systems can begin to fund the increased liabilities, thereby reducing (or eliminating) future contribution rate increases that would eventually occur with the use of static tables.

Critics of generational mortality tables point to recent trends in declining health in the United States, such as increases in the incidence of childhood obesity and diabetes, as evidence against the premise of continued mortality improvements in the future.

We believe that the recommended mortality tables contain a sufficient level of conservatism to cover any increases in life expectancy in the near future. We will continue to monitor the use and acceptance of generational mortality tables by public retirement systems and keep the Board apprised of emerging trends.

The following tables and graphs contain the mortality experience for the experience study period:

- Table and Graph V(a) – Post-Retirement Mortality Experience
- Table and Graph V(b) – Pre-Retirement Mortality Experience

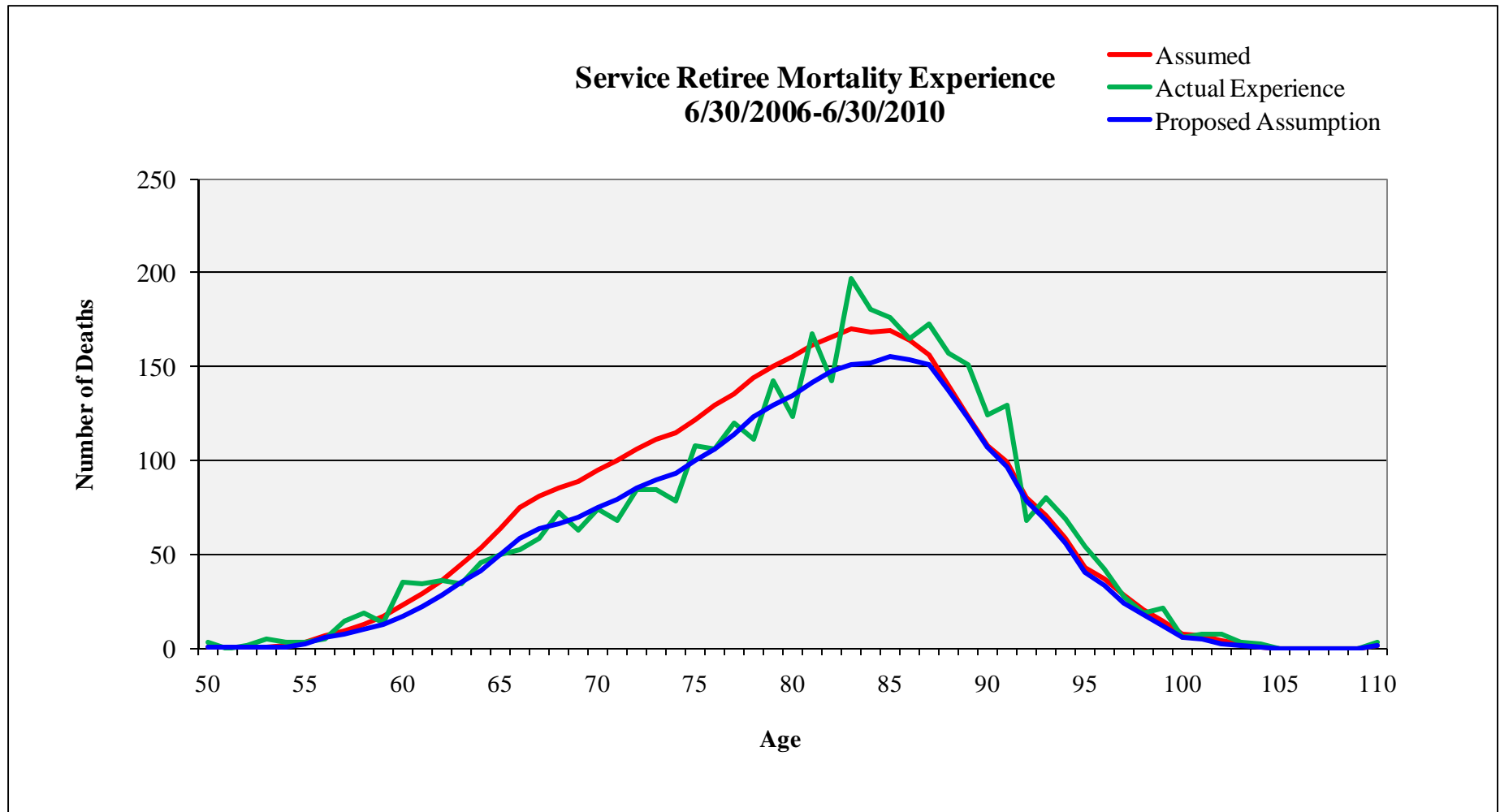
STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
MORTALITY ASSUMPTIONS

Table V(a)

Male Service Retiree Mortality Experience									
	Actual Experience			Current Assumptions			Proposed Assumptions		
Age	Exposures	Deaths	Actual Rate	Expected Deaths	Assumed Rate	Actual / Expected	Expected Deaths	Proposed Rate	Actual / Expected
Under 50	39	10	25.641%	0	0.000%		0	0.000%	
50-54	526	2	0.380%	1	0.190%	2.00	1	0.190%	2.00
55-59	5,352	31	0.579%	25	0.467%	1.24	16	0.299%	1.94
60-64	12,172	105	0.863%	101	0.830%	1.04	69	0.567%	1.52
65-69	15,558	167	1.073%	227	1.459%	0.74	159	1.022%	1.05
70-74	13,939	240	1.722%	332	2.382%	0.72	237	1.700%	1.01
75-79	11,597	378	3.259%	433	3.734%	0.87	350	3.018%	1.08
80-84	7,887	478	6.061%	483	6.124%	0.99	436	5.528%	1.10
85-89	4,263	441	10.345%	406	9.524%	1.09	407	9.547%	1.08
90-94	1,258	215	17.091%	184	14.626%	1.17	196	15.580%	1.10
95-99	218	62	28.440%	48	22.018%	1.29	49	22.477%	1.27
100+	13	5	38.462%	4	30.769%	1.25	4	30.769%	1.25
Totals:	72,822	2,134	2.930%	2,244	3.081%	0.95	1,924	2.642%	1.11
Female Service Retiree Mortality Experience									
Under 50	69	26	37.681%	0	0.000%		0	0.000%	
50-54	816	10	1.225%	2	0.245%	5.00	1	0.123%	10.00
55-59	7,313	23	0.315%	23	0.315%	1.00	21	0.287%	1.10
60-64	13,919	79	0.568%	84	0.603%	0.94	75	0.539%	1.05
65-69	15,647	128	0.818%	167	1.067%	0.77	148	0.946%	0.86
70-74	11,726	148	1.262%	194	1.654%	0.76	184	1.569%	0.80
75-79	8,680	209	2.408%	247	2.846%	0.85	223	2.569%	0.94
80-84	6,874	331	4.815%	336	4.888%	0.99	291	4.233%	1.14
85-89	4,213	381	9.043%	346	8.213%	1.10	312	7.406%	1.22
90-94	1,689	255	15.098%	232	13.736%	1.10	209	12.374%	1.22
95-99	450	101	22.444%	95	21.111%	1.06	78	17.333%	1.29
100+	57	23	40.351%	17	29.825%	1.35	12	21.053%	1.92
Totals:	71,453	1,714	2.399%	1,743	2.439%	0.98	1,554	2.175%	1.10
Grand Totals:	144,275	3,848	2.667%	3,987	2.763%	0.97	3,478	2.411%	1.11

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS MORTALITY ASSUMPTIONS

Graph V(a)



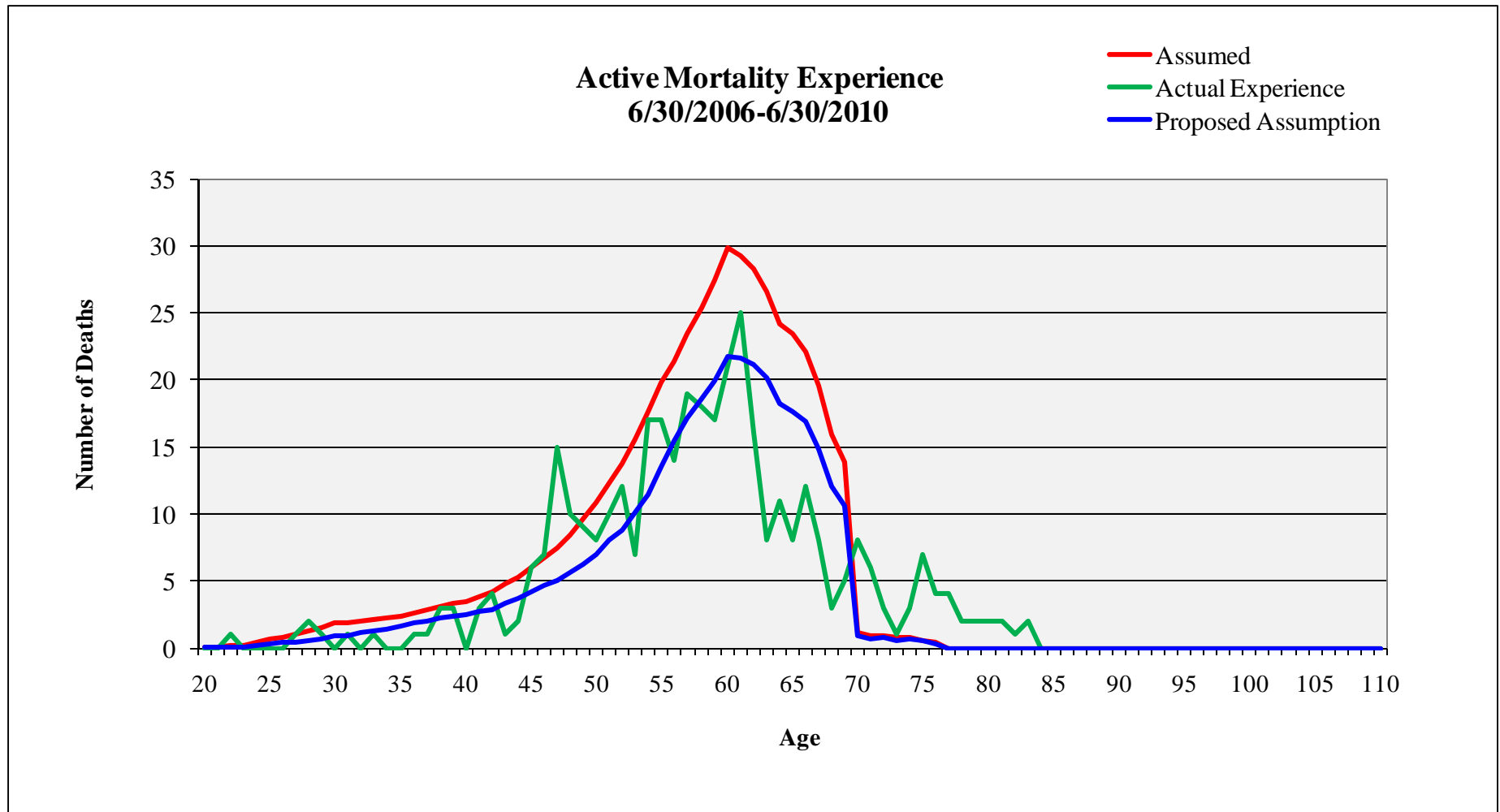
STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
MORTALITY ASSUMPTIONS

Table V(b)

Male Active Mortality Experience									
	Actual Experience			Current Assumptions			Proposed Assumptions		
Age	Exposures	Deaths	Actual Rate	Expected Deaths	Assumed Rate	Actual / Expected	Expected Deaths	Proposed Rate	Actual / Expected
Under 30	7,217	4	0.055%	3	0.048%	1.15	2	0.023%	2.39
30-39	21,892	7	0.032%	14	0.062%	0.51	10	0.046%	0.69
40-49	28,468	31	0.109%	29	0.103%	1.06	23	0.082%	1.33
50-59	36,470	72	0.197%	98	0.268%	0.74	68	0.186%	1.06
60-69	18,253	75	0.411%	131	0.718%	0.57	102	0.560%	0.73
Totals:	112,300	189	0.168%	275	0.245%	0.69	205	0.183%	0.92
Less than 60:	94,047	114	0.121%	144	0.153%	0.79	103	0.110%	1.11
Female Active Mortality Experience									
Age	Exposures	Deaths	Actual Rate	Expected Deaths	Assumed Rate	Actual / Expected	Expected Deaths	Proposed Rate	Actual / Expected
Under 30	11,107	1	0.009%	3	0.023%	0.39	1	0.009%	0.98
30-39	28,939	3	0.010%	11	0.036%	0.28	6	0.019%	0.54
40-49	40,406	26	0.064%	30	0.075%	0.86	18	0.043%	1.48
50-59	51,371	67	0.130%	90	0.175%	0.74	62	0.121%	1.08
60-69	19,969	42	0.210%	102	0.512%	0.41	73	0.364%	0.58
Totals:	151,792	139	0.092%	236	0.155%	0.59	160	0.106%	0.87
Less than 60:	131,823	97	0.074%	133	0.101%	0.73	88	0.067%	1.11
Grand Totals:	264,092	328	0.124%	511	0.193%	0.64	366	0.138%	0.90
Less than 60:	225,870	211	0.093%	278	0.123%	0.76	191	0.084%	1.11

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
MORTALITY ASSUMPTIONS

Graph V(a)



STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS OTHER VALUATION ASSUMPTIONS

Plan Election Percentage

Historically, members have been able to elect to participate in one of the two defined benefit plans, the Traditional Plan and the Portable Plan, or a defined contribution plan, the Self-Managed Plan (SMP).

Below is a summary of the election percentage for the SMP over the experience study period for all new members.

Fiscal Year			SMP % of	Total with	SMP % of
End	SMP Election	Total	Total	Elections	Total Elections
2007	1,086	6,869	16%	5,496	20%
2008	915	6,599	14%	5,282	17%
2009	532	5,613	9%	4,671	11%
2010	437	4,661	9%	3,841	11%
Total	2,970	23,742	13%	19,290	15%

Below is a summary of the election percentage for the SMP over the experience study period for new members with salaries greater than or equal to \$100,000.

Fiscal Year			SMP % of	Total with	SMP % of
End	SMP Election	Total	Total	Elections	Total Elections
2007	58	117	50%	108	54%
2008	53	123	43%	117	45%
2009	38	123	31%	115	33%
2010	34	113	30%	101	34%
Total	183	476	38%	441	41%

However, members hired on or after January 1, 2011, are subject to a different benefit package than members hired before January 1, 2011. This benefit package includes a cap on pay of \$106,800, which increases by the lesser of one-half of the percentage increase in the Consumer Price Index and 3 percent. As a result of the change to the defined benefit plan, it is possible that historical experience will not be indicative of future plan elections.

The current SMP election percentage assumption for future hires is 15 percent. As a result of the changes in benefit provisions to the defined benefit plans under Public Act 96-0889, which provides a less valuable benefit for future hires than is provided to current members, participation in the SMP may increase. However, the portable benefit package also contains features that may be viewed as a favorable option.

Due to future uncertainty in plan election and extremely limited experience, we are recommending that the SMP election percentage remain at 15 percent.

SECTION III
COST IMPACT

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
COST IMPACT OF RECOMMENDED CHANGES

The impact of adopting the recommended assumptions is summarized in the table below and on the following pages. The recommended assumptions slightly decrease the actuarial liability and do not impact the funded ratio. The increase in the Annual Required Contribution (ARC) is due to the change in the payroll growth assumption, from 5.00% to 3.75%. A decreasing payroll assumption implies less funding in the future, thus the ARC will increase.

	Dollars in Millions		
	Valuation as of 6/30/10	Proposed Assumptions	Change
Actuarial Accrued Liability	\$30,120.4	\$30,117.9	(\$2.5)
Actuarial Value of Assets	13,966.6	13,966.6	0.0
Unfunded Actuarial Accrued Liability	16,153.8	16,151.3	(2.5)
Funded Ratio	46.37%	46.37%	0.00%
Illustrated Employer Contributions (FY 2011)			
Annual Required Contribution (ARC)	\$1,239.2	\$1,332.8	\$93.6
Statutory Contribution	775.8	775.8	0.0
Deficit Contribution (from ARC)	463.4	557.0	93.6

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
COST IMPACT OF RECOMMENDED CHANGES

Dollars in Millions

	Actuarial Accrued Liability			Normal Cost		
	Valuation as of 6/30/10	Proposed Assumptions	Change	Valuation as of 6/30/10	Proposed Assumptions	Change
1. Active Members						
a. Retirement	\$ 9,351.6	\$ 8,814.5	(\$537.1)	\$534.8	\$ 519.2	(\$15.6)
b. Death	198.4	200.1	1.7	13.0	12.6	(0.4)
c. Disability	472.6	406.0	(66.6)	41.0	36.0	(5.0)
d. Termination	1,116.2	1,074.7	(41.5)	121.9	125.1	3.2
Total - Active Members	\$11,138.8	\$10,495.3	(\$643.5)	\$710.7	\$ 692.9	(\$17.8)
2. Benefit Recipients						
a. Retirement	\$15,673.6	\$16,222.8	\$549.2			
b. Survivor	859.7	898.9	39.2			
c. Disability	301.1	309.5	8.4			
Total - Benefit Recipients	\$16,834.4	\$17,431.3	\$596.9			
3. Other Inactive	\$ 2,147.2	\$ 2,191.3	\$ 44.1			
4. Operating Expense				\$ 13.1	\$ 13.1	\$ 0.0
5. Grand Total	\$30,120.4	\$30,117.9	(\$2.5)	\$723.8	\$ 692.9	(\$30.9)
	Actuarial Results					
Actuarial Value of Assets	\$13,966.6	\$13,966.6	\$ 0.0			
Unfunded Actuarial Accrued Liability	\$16,153.8	\$16,151.3	(\$2.5)			
Funded Ratio	46.37%	46.37%	0.00%			

SECTION IV
RECOMMENDED ASSUMPTIONS

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS RECOMMENDED ACTUARIAL ASSUMPTIONS

Rate of Investment Return. For all purposes under the system the rate of investment return is assumed to be 7.75% per annum beginning with the **June 30, 2010**, valuation. The most recent assumption was 8.50%.

Effective Rate of Interest: The assumed rate credited to member accounts is 7.75% per annum.

Annual Compensation Increases. Each member's compensation is assumed to increase by 3.75% each year, 2.75% reflecting salary inflation and 1.00% reflecting standard of living increases. That rate is increased for members with less than 9 years of service, as follows:

<u>Service Beg. of Year</u>	<u>Additional Increase</u>
0	12.00%
1	10.00%
2	8.50%
3	7.25%
4	6.50%
5	6.25%
6	6.00%
7	5.75%
8	5.50%
9-13	5.00%
14-18	4.75%
19-33	4.25%
34+	3.75%

Mortality. The mortality assumption for retirees, beneficiaries and disabilities is based on the RP2000 Combined Mortality table, projected to 2017, sex-distinct, with rates multiplied by 0.80 for males and 0.85 for females. The assumed mortality rates for active members are 85 percent of the postretirement assumption for males and 60 percent for females.

Disability. A table of disability incidence with sample rates follows:

<u>Age</u>	<u>Male/Female</u>
20	0.050%
25	0.063%
30	0.075%
35	0.095%
40	0.145%
45	0.195%
50	0.270%
55	0.345%
60	0.420%
65	0.495%
70	0.570%
75	0.570%

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
RECOMMENDED ACTUARIAL ASSUMPTIONS

Retirement. Upon eligibility, active members are assumed to retire as follows:

Age	Members Hired Before January 1, 2011 and Eligible for		Members Hired on or after January 1, 2011 and Eligible for	
	Normal Retirement	Early Retirement	Normal Retirement	Early Retirement
Under 50	40.0%			
50	38.0%			
51	38.0%			
52	38.0%			
53	38.0%			
54	34.0%			
55	32.0%	7.0%		
56	26.0%	5.0%		
57	26.0%	4.5%		
58	26.0%	5.5%		
59	26.0%	6.0%		
60	11.0%			
61	11.0%			
62	13.0%			35.0%
63	13.0%			15.0%
64	13.0%			15.0%
65	17.0%			15.0%
66	15.0%			15.0%
67	15.0%		50.0%	
68	15.0%		35.0%	
69	15.0%		30.0%	
70-79	30.0%		30.0%	
80+	100.0%		100.0%	

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS RECOMMENDED ACTUARIAL ASSUMPTIONS

General Turnover. A table of termination rates based on experience in the 2006-2010 period. The assumption is a table of turnover rates by years of service. A sample of these rates follows:

<u>Service Beg. of Year</u>	<u>Termination Rates</u>
0	22.00%
1	22.00%
2	16.00%
3	14.00%
4	12.00%
5	10.50%
6	9.00%
7	7.50%
8	6.50%
9	6.00%
10	5.50%
11	4.50%
12	4.00%
13	3.70%
14	3.20%
15	3.00%
16	2.60%
17	2.30%
18	2.10%
19	2.00%
20	1.70%
21	1.50%
22	1.50%
23	1.50%
24	1.50%
25	1.50%
26	1.50%
27	1.50%
28	1.50%
29	1.50%

Part time members with less than 3 years of service are assumed to terminate at the valuation date.

Members that terminate with at least 5 years of service are assumed to elect the most valuable option on a present value basis – refund of contributions or a deferred benefit.

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS RECOMMENDED ACTUARIAL ASSUMPTIONS

Operational Expenses. The amount of operational expenses incurred in the latest fiscal year are supplied by SURS staff and incorporated in the Normal Cost.

Marital Status. Members are assumed to be married in the following proportions:

<u>Age</u>	<u>Males</u>	<u>Females</u>
20	25 %	40 %
30	70	75
40	80	80
50	85	80
60	85	70

Spouse Age. The female spouse is assumed to be 3 years younger than the male spouse.

Load on Final Average Salary. No load is assumed to account for higher than assumed pay increases in final years of employment before retirement

Valuation of Inactives. An annuity benefit is estimated based on information provided by staff for members with five or more years of service.

Self Managed Plan Election Percentage: 15%