Proprietary & Confidential

New York State

Development of Recommended Actuarial Assumptions for Other Post Employment Benefit Plan Actuarial Valuations

Participating Agency Version

August 2021

Empower Results®

Table of Contents

Section 1 – Executive Summary…….. 1

Section 2 – Actuarial Assumptions……3

Exhibit 2-1 Per Capita Plan Costs……8

Exhibit 2-2 Premium Used for Establishing Retiree Contributions……... 10

Exhibit 2-3 Withdrawal Rates…….. 11

Exhibit 2-4 Disability Rates……. 18

Exhibit 2-5 Retirement Rates……..20

Exhibit 2-6 Salary Scale…….. 24

Section 3 – Per Capita Plan Costs……..26

Exhibit 3-1 Development of Empire Plan Retiree Gross Per Capita Plan Cost……..27

Exhibit 3-2 Empire Plan Changes……..29

Section 4 – Health Care Trend…… 30

Section 5 – Demographic Assumptions……. 31

Section 6 – Health Care Reform Considerations……..32

Section 7 – Qualifications……33

Section 1 – Executive Summary

At the request of the New York State Department of Civil Service (DCS), Aon has developed actuarial assumptions for use by New York State, New York State Insurance Fund (NYSIF), and State University of New York System (SUNY) for the April 1, 2020 valuation of their obligation for postemployment benefits other than pension plans (OPEB) under Governmental Accounting Standard (GASB) Statement 75. The basis for the development of these assumptions is outlined in our report to New York State Department of Civil Service (DCS), ***New York State, SUNY, and NYSIF Development of Recommended Actuarial Assumptions for April 1, 2020 Other Post Employment Benefit Plans Actuarial Valuation.*** Employers who are Participating Agencies (PAs) of the New York State Health Insurance Program (NYSHIP) need to value their OPEB obligation under GASB 75. In order to assist PAs with their valuation, and at the request of DCS, Aon has prepared this separate report, which presents the excerpts of our reports that may be relevant to the PAs. The assumptions in this report are a Statement of Actuarial Opinion, prepared by Wil Ocasio, Jessica Fenske, and Betsy Hanson. Mr. Ocasio is an Associate in the Society of Actuaries. Ms. Fenske is a Fellow of the Society of Actuaries. Ms. Hanson is a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. They collectively meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The Actuarial Assumptions Section presents assumptions that we and/or DCS believe may be relevant to the PAs along with some basic rationale for many of the selections. The rest of the report provides more detail and support for development of certain major assumptions.

This report is being provided to PAs solely as guidance. Because Aon prepared assumptions strictly for use by the State, NYSIF, and SUNY in valuing their OPEB obligation, the assumptions discussed herein may or may not be appropriate for an individual PA. Each agency should assess its own demographics and health care environment in order to develop the actuarial assumptions most appropriate for its own population, in consultation with its own actuarial and financial advisors. Furthermore, because some agencies provide their retirees or other former employees with other post-employment benefits not through NYSHIP, such as dental and life insurance, each PA will need to determine its own actuarial assumptions appropriate for valuing these benefits.

Highlights of Changes since 2019:

Most key demographic assumptions are remaining the same as those used in the prior valuation. However, the discount rate and medical plan parameters are being updated to stay current with the most recent trends. Notable changes include:

- Discount rate – tied to the yield on high quality municipal general obligation bonds. The rate as of March 31, 2021 is 2.34%.
- Medical plan costs – rates shifted as actual usage by participants changed and members enrolled in different plans
- Health care inflation (Trend) – the trend rates were updated to reflect the most recent information available as outlined in Section 4 of this report.
- Health Maintenance Organization (HMO) rates were updated to reflect updated premium rates.
- Mortality Assumption – Base mortality rates were updated from Employees' Retirement System (ERS), Teacher's Retirement System (TRS), and Police & Fire Retirement System (PFRS) specific base tables to PUB 2010 Headcount-weighted for General Employees, Teachers, and Safety. The mortality improvement scale was updated from MP-2018 to MP-2020.
- Withdrawal Rates – Rates updated for ERS and PFRS to reflect a study of experience from April 1, 2015 through March 31, 2020.
- Disability Rates – Rates updated for ERS and PFRS to reflect a study of experience from April 1, 2015 through March 31, 2020.

- Retirement Rates – Rates updated for ERS and PFRS to reflect a study of experience from April 1, 2015 through March 31, 2020.
- Salary Scale – Rates updated for ERS and PFRS to reflect a study of experience from April 1, 2015 through March 31, 2020.

The 2020 valuation is being used to provide the basis for the accounting reporting under Government Accounting Standards Board Statement 75 (GASB 75).

Section 2 – Actuarial Assumptions

Actuarial assumptions are assumptions as to the occurrence of future events affecting OPEB costs. We performed the April 1, 2020 GASB 75 actuarial valuations for New York State, NYSIF, and SUNY based on the following Actuarial Assumptions:

ACTUARIAL METHOD: Entry Age Normal- Level Percentage of Payroll

VALUATION DATE: The valuation is performed as of April 1, 2020. All the cost information is as of this date.

MEASUREMENT DATE: GASB 75 provides that the expense and disclosure amounts can be computed as of a date no earlier than twelve months and one day before the fiscal year end. This approach is provided to allow employers to determine results in a timely fashion and to be prepared for the fiscal year end.

DISCOUNT RATE: Under GASB 75, the discount rate is determined as a blend of the long-term rate of return on assets set aside through a Trust fund to pay for future OPEB costs and, to the extent the long-term costs are not funded through a Trust, the current yield on high-quality municipal bonds. Since the plan is not pre-funded, New York State has elected to use the value of the Bond Buyer 20-Bond GO index closest to the measurement date. As of the March 31, 2021 measurement date, this rate is 2.34%.

PER-CAPITA PLAN COSTS: GASB 75 indicates that per capita plan costs should be based upon claim costs or age adjusted premiums. State enrollees comprise over 50% of the overall Empire Plan enrollment. Changes in the demographics of State employees and retirees more immediately affect overall Empire Plan costs than other, smaller groups. Therefore, we believe it is more appropriate to establish per capita plan costs for the State's valuation of its liability based on the underlying Empire Plan claim costs of the retiree groups being valued.

For retirees in the Empire PPO Plan, the per capita costs were based on 2019 incurred claims, paid through March 31, 2020, for the hospital, medical, mental health/substance abuse (MH/SA), and prescription drug benefit programs for retired participants in the State plan (excluding Participating Agency (PA) and Participating Entity (PE) participants), along with enrollment, split between Medicare eligible and non-Medicare eligible participants. The experience was projected to the period April 1, 2020 – March 31, 2021, and adjusted as shown in the detail in Exhibit 3-1. The age 65 rates are shown below:

Coverage	Non-Medicare Eligible	Medicare Eligible Before EGWP Revenue	Medicare Eligible Net of EGWP Revenue
Medical	$17,780	$1,353	$1,353
Drug	3,075	3,075	1,736
Total	$20,855	$4,428	$3,089

Certain individuals are enrolled in Medicare Part D Prescription Drug Plans (generally low- income individuals who qualify for various federal additional benefits). NYSHIP does not currently provide drug benefits for these individuals.

At this time, there are too many unknowns to reasonably estimate the impact of COVID-19 on claims costs for future years. We do expect the impact of COVID-19 to be short-term in nature, with claims costs returning to normal in 2022 and beyond. Therefore, we do not believe COVID-19 has a significant impact on long-term claims costs projections and plan liabilities. Given the high level of short-term uncertainty and minimal long-term impact, we have not adjusted our claims costs or healthcare trend assumptions for COVID-19.

Note for PAs: *In the past, many PAs utilized community rated premium rates. Based on ASOP 6, this is no longer appropriate. Plans should value the age-related costs.*

RETIREE CONTRIBUTIONS: The State sets retiree contributions as a percentage of premiums. Premiums are established for active employees and retirees combined. Retirees contribute varying percentages of premiums.

MEDICARE PART B PREMIUM: The State reimburses the Medicare Part B premium of Medicare eligible participants, including additional premiums for higher-income participants, the cost of which is socialized across all plan participants through plan premium rates. For Fiscal Year 2021, we project the average Medicare Part B premium to be $1,746.90 per Medicare eligible individual. This amount is based on the Part B premium rate for 2020 and 2021 for participants with income of less than $85,000. Note that fewer than 5% of enrolled individuals are expected to exceed this threshold.

MEDICARE COORDINATION: Medicare is assumed to remain the primary payor for current and future retirees and spouses who are at least age 65. Medicare can also be the primary payor for individuals under age 65 who have been eligible to receive Social Security Disability benefits for 24 months, which in turn starts after a waiting period of 5 months of disability. For valuation purposes, Medicare is assumed to be the primary payor for current retirees and spouses under age 65 if the census data indicated that Medicare is currently the primary payor.

Certain individuals who are at least age 65 as of the valuation date are not indicated as being on Medicare in the census data. For valuation purposes, we will assume individuals who have attained age 66 as of the valuation date never go onto Medicare. Individuals who are age 65 but not coded as being on Medicare will be assumed to be affected by an administrative lag and thus are assumed to enroll in Medicare immediately.

We reviewed the census data for disability retirees who have been retired long enough to qualify for Medicare. Based on that data, we have assumed that Medicare will ultimately be the primary payor for 40% of future disabled Police and Fire Retirement System (PFRS) participants and 80% of all other future disabled participants. We have assumed for valuation purposes that the average period for qualifying for disability retirement is five months, thus we assume that Medicare commences for disability retirees once they have been on disability retirement for 24 months. We have also assumed that Medicare will be the primary payor for the same proportions of those disability retirees who have been retired less than 24 months once they have been on disability retirement for 24 months. For the remaining participants who are currently disabled or who become disabled, we have assumed that Medicare is the primary payor at age 65.

AGE RELATED MORBIDITY: To reflect the differences in covered healthcare expenses due to aging, the increase in the per-capita plan costs for each age is assumed to be as follows:

Age	Medical Costs	Rx
40-44	3.0%	4.8%
45-49	3.7%	4.7%
50-54	4.2%	4.7%
55-59	4.4%	4.6%
60-64	3.7%	4.6%
65-69	2.7%	3.8%
70-74	1.8%	2.5%
75-79	2.2%	0.8%
80-84	2.8%	0.2%
85-89	1.4%	0.1%
90+	0.0%	0.0%

The age-related morbidity factors are applied to the per-capita plan costs for the Empire Plan.

Note for PAs: *In the past, many PAs utilized community rated premium rates. Based on ASOP 6, this is no longer appropriate. Plans should value the age-related costs.*

HEALTH CARE COST TREND: Per-capita retiree plan costs and premiums used to establish retiree contribution rates are assumed to increase each year in accordance with the following schedule:

		Medical			EGWP
From year	To year	<65	65+	Rx	Revenue
2020/21 ==>	2021/22	5.75%	5.00%	7.00%	3.00%
2021/22 ==>	2022/23	5.60%	4.90%	6.00%	3.00%
2022/23 ==>	2023/24	5.50%	4.80%	5.50%	3.00%
2023/24 ==>	2024/25	5.25%	4.80%	5.25%	3.00%
2024/25 ==>	2025/26	5.00%	4.75%	5.00%	3.00%
2025/26 ==>	2026/27	5.00%	4.70%	5.00%	3.00%
2026/27 ==>	2027/28	4.75%	4.60%	4.75%	3.00%
2027/28+		4.50%	4.50%	4.50%	3.00%

The drug trend shown above applies to the drug costs and premiums associated with the Empire Plan. We assume that average fiscal year Medicare Part B premiums will increase at the same underlying health care trends as for Medical benefits to Medicare retirees.

Note for PAs*: The trend rates above may also be appropriate for PAs, however, PAs should reflect their own expectations of future medical plan costs.*

MORTALITY: The Society of Actuaries published public sector specific mortality experience tables, PUB 2010. This valuation will utilize the Headcount weighted version which is more applicable for a retiree medical valuation. The General table will apply for Employees' Retirement System (ERS) employees, the Teachers table will apply for Teachers' Retirement System (TRS) employees, and the Safety table will apply for PFRS employees. SUNY Campus employees who are not clearly identifiable as PFRS or TRS members are valued using ERS assumptions.

This assumption was previously based on the experience under the New York State & Local Retirement System (ERS & PFRS) and the New York State Teachers' Retirement System (TRS), but has been revised for this valuation to reflect the recent Society of Actuaries public sector tables.

In order to reflect future mortality improvement, the mortality is projected generationally using the MP-2020 projection scale.

WITHDRAWAL, DISABILITY, AND RETIREMENT: Rates of decrement as summarized in Exhibits 2-3 through 2-5. The rates are based on the experience under the New York State & Local Retirement System and the New York State Teachers' Retirement System, except as noted.

SUNY Hospital employee withdrawal rates are based on actual SUNY Hospital experience. Retirement rates for SUNY Hospital employees have been modified to reflect SUNY experience. These assumptions were updated last in the 2016 valuation.

SUNY Campus employees who are not clearly identifiable as ERS, TRS, PFRS, or Teachers Insurance and Annuity Associate of America/ College Retirement Equities Fund (TIAA/CREF) participants are valued using blended assumptions, 48% ERS and 52% Campus ORP (Other Retirement Plan). This is unchanged from the prior valuation.

Note for PAs: *Each individual PA should determine appropriate assumptions to use for its own valuation purposes. For more information on these assumptions, please see the discussion in the Demographic Assumptions Section.*

PROJECTED SALARY INCREASE ASSUMPTION: Based on the experience under the New York State & Local Retirement System and the New York State Teachers' Retirement System, as summarized in Exhibit 2-6.

GENERAL INFLATION: 2.50% assumed long-term inflation.

VESTEE COVERAGE: Vestees pay 100% of premium prior to eligibility for retiree medical benefits. Beginning at age 55, we value all vestees consistent with our valuation assumption for retirees.

For current vestees, we assume all will opt to switch from vestee status to retiree status at age 55.

For future vested terminations, we have assumed that the following percentage of terminated employees (excluding those terminated due to death, disability or retirement) will elect to remain in their current medical plan option as a vestee:

Age	Percent Electing
Under 40	0%
40-43	5%
44	20%
45-46	30%
47-48	40%
49	50%
50-51	80%
52-54	100%

PLAN ELECTIONS: 100% of future retirees who are currently participating in NYSHIP coverage are assumed to participate in the retiree medical program at retirement. 100% of Active participants in the NYSHIP opt-out program are assumed to be covered under NYSHIP in retirement. We assume that all retirees (i.e., current actives and current non-Medicare eligible retirees) will participate in their current medical plan option prior to Medicare eligibility, with the exception of active participants in the NYSHIP opt-out program. Those participants are assumed to elect coverage in the Empire Plan at retirement.

Note for PAs: *The NYSHIP opt-out program may or may not be applicable to certain PAs.*

For current non-Medicare eligible retirees and future retirees, all who currently participate in the Empire Plan are assumed to remain in the Empire Plan upon becoming eligible for Medicare. In all instances, spouses are assumed to participate in the same medical plan option as the retiree. If the retiree is deceased, the spouse is assumed to participate in the same healthcare plan as the retiree would have been assumed to participate in if he or she were alive.

Note for PAs: *This assumption was based on the experience of the State, NYSIF, and SUNY retirees. Plan elections and enrollment may differ for a different population.*

DEPENDENTS: For current retirees, actual data is used regarding dependent coverage. For future retirees, we modeled the percentage of active participants married as well as the age difference between the enrollee and spouse, based on data for older actives and recent retirees. We assume 60% of males and 35% of females will be married at retirement, and all married spouses will be covered under NYSHIP. Female spouses are assumed to be 3 years younger than their husbands, and male spouses are assumed to be 2 years older than their wives.

Note for PAs: *This assumption was based on the experience of the State, NYSIF, and SUNY retirees. Each PA should consider the demographics of its own population when developing this assumption.*

ASSETS: We assume the State will not set aside any assets to prefund its retiree medical liabilities.
CENSUS DATA: Census data was provided by New York State Department of Civil Service as of April 1, 2020. Reasonable assumptions were made if any data elements are unavailable or if any data elements are not within a reasonable range.

Note for PAs: *Individual agency census data will be provided by DCS upon request.*

SUBSEQUENT EVENTS: The assumptions in this report were developed in February 2021. We have not revised the assumptions to reflect updated Empire Plan claim experience, Empire Plan premiums, or Medicare Part B premiums, nor any other more recent event except as noted.

EXHIBIT 2-1 Per Capita Gross Plan Costs
4/1/2020-3/31/2021

	Preferred Provider Organization (PPO) claim			
Age	Medical	Rx	EGWP Revenue	Total
1	$3,876	$384	n/a	$4,260
2	$3,876	$384	n/a	$4,260
3	$3,876	$384	n/a	$4,260
4	$3,876	$384	n/a	$4,260
5	$3,876	$384	n/a	$4,260
6	$3,876	$384	n/a	$4,260
7	$3,876	$384	n/a	$4,260
8	$3,876	$384	n/a	$4,260
9	$3,876	$384	n/a	$4,260
10	$3,876	$384	n/a	$4,260
11	$3,876	$384	n/a	$4,260
12	$3,876	$384	n/a	$4,260
13	$3,876	$384	n/a	$4,260
14	$3,876	$384	n/a	$4,260
15	$3,876	$384	n/a	$4,260
16	$3,876	$384	n/a	$4,260
17	$3,876	$384	n/a	$4,260
18	$3,876	$384	n/a	$4,260
19	$3,876	$384	n/a	$4,260
20	$3,876	$384	n/a	$4,260
21	$3,992	$402	n/a	$4,394
22	$4,112	$421	n/a	$4,533
23	$4,235	$442	n/a	$4,677
24	$4,362	$463	n/a	$4,825
25	$4,493	$485	n/a	$4,978
26	$4,628	$508	n/a	$5,136
27	$4,767	$533	n/a	$5,300
28	$4,910	$558	n/a	$5,468
29	$5,057	$585	n/a	$5,642
30	$5,209	$613	n/a	$5,822
31	$5,365	$643	n/a	$6,008
32	$5,526	$674	n/a	$6,200
33	$5,692	$706	n/a	$6,398
34	$5,863	$740	n/a	$6,602
35	$6,039	$775	n/a	$6,814
36	$6,220	$812	n/a	$7,032
37	$6,406	$851	n/a	$7,258
38	$6,598	$892	n/a	$7,491
39	$6,796	$935	n/a	$7,732
40	$7,000	$980	n/a	$7,980

EXHIBIT 2-1 Per Capita Gross Plan Costs
4/1/2020-3/31/2021

	PPO claim costs			
Age	Medical	Rx	EGWP Revenue	Total
41	$7,210	$1,027	n/a	$8,237
42	$7,427	$1,076	n/a	$8,503
43	$7,649	$1,128	n/a	$8,777
44	$7,879	$1,182	n/a	$9,061
45	$8,115	$1,239	n/a	$9,354
46	$8,416	$1,297	n/a	$9,713
47	$8,727	$1,358	n/a	$10,085
48	$9,050	$1,422	n/a	$10,472
49	$9,385	$1,489	n/a	$10,873
50	$9,732	$1,559	n/a	$11,291
51	$10,141	$1,632	n/a	$11,773
52	$10,567	$1,709	n/a	$12,275
53	$11,010	$1,789	n/a	$12,799
54	$11,473	$1,873	n/a	$13,346
55	$11,955	$1,961	n/a	$13,916
56	$12,481	$2,051	n/a	$14,532
57	$13,030	$2,146	n/a	$15,176
58	$13,603	$2,245	n/a	$15,848
59	$14,202	$2,348	n/a	$16,549
60	$14,826	$2,456	n/a	$17,282
61	$15,375	$2,569	n/a	$17,944
62	$15,944	$2,687	n/a	$18,631
63	$16,534	$2,810	n/a	$19,344
64	$17,146	$2,940	n/a	$20,085
65	$1,353	$3,075	($1,339)	$3,089
66	$1,390	$3,192	($1,390)	$3,191
67	$1,427	$3,313	($1,443)	$3,297
68	$1,466	$3,439	($1,498)	$3,407
69	$1,505	$3,570	($1,554)	$3,520
70	$1,546	$3,705	($1,613)	$3,638
71	$1,574	$3,798	($1,654)	$3,718
72	$1,602	$3,893	($1,695)	$3,800
73	$1,631	$3,990	($1,738)	$3,883
74	$1,660	$4,090	($1,781)	$3,969
75	$1,690	$4,192	($1,826)	$4,057
76	$1,727	$4,226	($1,840)	$4,113
77	$1,765	$4,260	($1,855)	$4,170
78	$1,804	$4,294	($1,870)	$4,228
79	$1,844	$4,328	($1,885)	$4,287
80	$1,884	$4,363	($1,900)	$4,347

EXHIBIT 2-1 Per Capita Gross Plan Costs
4/1/2020-3/31/2021

	PPO claim costs			
Age	Medical	Rx	EGWP Revenue	Total
81	$1,937	$4,371	($1,904)	$4,405
82	$1,991	$4,380	($1,907)	$4,464
83	$2,047	$4,389	($1,911)	$4,525
84	$2,104	$4,398	($1,915)	$4,587
85	$2,163	$4,406	($1,919)	$4,651
86	$2,194	$4,411	($1,921)	$4,684
87	$2,224	$4,415	($1,923)	$4,717
88	$2,255	$4,420	($1,925)	$4,751
89	$2,287	$4,424	($1,926)	$4,785
90+	$2,319	$4,429	($1,928)	$4,819

Exhibit 2-2 Premium Used for Establishing Retiree Contributions
4/1/2020 - 3/31/2021

		Non-Medicare Eligible			Medicare Eligible		
Name	Code	NonRx	Rx	Total	NonRx	Rx	Total
Empire PPO	Retiree/SS[1]	$7,778	$2,028	$9,807	$7,778	$2,028	$9,807
	Spouse	$12,413	$2,284	$14,696	$12,413	$2,284	$14,696

[1] Surviving Spouse

EXHIBIT 2-3 WITHDRAWAL RATES

	ERS Years of Service					
Age	< 2	2 - 2.99	3 - 3.99	4 - 4.99	5 - 9.99	> = 10
15-17	19.800%	12.105%	8.625%	6.565%	5.530%	2.160%
18	23.699%	12.105%	8.625%	6.565%	5.530%	2.160%
19	25.824%	12.105%	8.625%	6.565%	5.530%	2.160%
20	26.455%	12.105%	8.625%	6.565%	5.530%	2.160%
21	26.061%	12.105%	8.625%	6.565%	5.530%	2.160%
22	25.065%	12.105%	8.625%	6.565%	5.530%	2.160%
23	23.716%	12.105%	8.625%	6.565%	5.530%	2.160%
24	22.128%	13.032%	9.636%	7.120%	5.587%	2.160%
25	20.403%	13.556%	10.074%	7.480%	5.598%	2.160%
26	18.697%	13.799%	10.186%	7.686%	5.561%	2.160%
27	17.211%	13.796%	10.159%	7.820%	5.482%	2.160%
28	16.086%	13.539%	10.077%	7.949%	5.379%	2.160%
29	15.327%	13.034%	9.957%	8.098%	5.274%	2.155%
30	14.830%	12.340%	9.792%	8.243%	5.186%	2.147%
31	14.471%	11.562%	9.574%	8.331%	5.124%	2.133%
32	14.175%	10.824%	9.300%	8.305%	5.087%	2.115%
33	13.924%	10.222%	8.972%	8.131%	5.069%	2.094%
34	13.728%	9.780%	8.598%	7.814%	5.059%	2.072%
35	13.595%	9.459%	8.202%	7.401%	5.047%	2.052%
36	13.506%	9.198%	7.824%	6.962%	5.021%	2.035%
37	13.432%	8.950%	7.511%	6.567%	4.975%	2.020%
38	13.346%	8.700%	7.295%	6.259%	4.901%	2.003%
39	13.237%	8.456%	7.174%	6.044%	4.802%	1.983%
40	13.114%	8.239%	7.112%	5.897%	4.685%	1.961%
41	12.986%	8.066%	7.054%	5.786%	4.562%	1.941%
42	12.861%	7.946%	6.955%	5.687%	4.445%	1.927%
43	12.745%	7.878%	6.796%	5.592%	4.345%	1.921%
44	12.641%	7.850%	6.593%	5.506%	4.261%	1.915%
45	12.556%	7.846%	6.379%	5.430%	4.187%	1.896%
46	12.502%	7.850%	6.189%	5.360%	4.112%	1.845%
47	12.487%	7.846%	6.044%	5.290%	4.027%	1.758%
48	12.516%	7.827%	5.950%	5.214%	3.930%	1.644%
49	12.583%	7.794%	5.897%	5.134%	3.830%	1.527%
50	12.675%	7.746%	5.871%	5.060%	3.737%	1.428%
51	12.775%	7.684%	5.857%	5.007%	3.658%	1.359%
52	12.864%	7.603%	5.844%	4.987%	3.583%	1.316%
53	12.935%	7.502%	5.828%	5.005%	3.490%	1.292%
54	12.990%	7.387%	5.814%	5.063%	3.346%	1.280%
55	13.047%	7.277%	5.818%	5.166%	3.138%	1.274%
56	13.139%	7.204%	5.864%	5.322%	2.888%	1.273%
57	13.308%	7.204%	5.978%	5.550%	2.670%	1.274%
58	13.597%	7.310%	6.183%	5.865%	2.568%	1.279%
59	14.039%	7.542%	6.486%	6.276%	2.633%	1.285%
60	14.640%	7.900%	6.887%	6.781%	2.856%	1.292%
61	15.365%	8.365%	7.372%	7.366%	3.185%	1.300%
62	16.121%	8.885%	7.915%	7.994%	3.563%	1.307%
63	16.746%	9.364%	8.469%	8.600%	3.964%	1.312%
64	16.746%	9.364%	8.469%	8.600%	3.964%	1.312%
65	16.746%	9.364%	8.469%	8.600%	3.964%	1.312%
66	16.746%	9.364%	8.469%	8.600%	3.964%	1.312%
67	16.746%	9.364%	8.469%	8.600%	3.964%	1.312%
68	16.746%	9.364%	8.469%	8.600%	3.964%	1.312%
69	16.746%	9.364%	8.469%	8.600%	3.964%	1.312%
70	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%

Note: Tier-specific adjustments are applied to these blended rates. See Below

	0 ≤ Service < 2	2 ≤ Srv < 3	3 ≤ Srv < 4	4 ≤ Srv < 5	5 ≤ Srv < 10	10 ≤ Srv < 11	11 ≤ Srv
Tiers 1, 2, 3, 4	1.3	1.3	1.3	1.3	1.2	1.0	1.0
Tiers 5, 6	1.0	0.95	0.95	0.90	0.85	1.7	0.85

EXHIBIT 2-3 WITHDRAWAL RATES

	Upstate (Syracuse) Medical Center Years of Service					
Age	< 2	2 - 2.99	3 - 3.99	4 - 4.99	5 - 9.99	> = 10
15	21.00%	22.00%	26.00%	24.00%	16.00%	7.00%
16	21.00%	22.00%	26.00%	24.00%	16.00%	7.00%
17	21.00%	22.00%	26.00%	24.00%	16.00%	7.00%
18	21.00%	22.00%	26.00%	24.00%	16.00%	7.00%
19	21.00%	22.00%	26.00%	24.00%	16.00%	7.00%
20	21.00%	22.00%	26.00%	24.00%	16.00%	7.00%
21	20.00%	22.00%	26.00%	24.00%	16.00%	7.00%
22	20.00%	22.00%	26.00%	24.00%	16.00%	7.00%
23	20.00%	24.00%	40.00%	24.00%	16.00%	7.00%
24	20.00%	24.00%	40.00%	20.00%	16.00%	7.00%
25	20.00%	24.00%	40.00%	20.00%	16.00%	7.00%
26	20.00%	24.00%	40.00%	20.00%	16.00%	7.00%
27	16.00%	24.00%	40.00%	19.60%	15.00%	7.00%
28	16.00%	24.00%	40.00%	12.60%	15.00%	7.00%
29	16.00%	24.00%	40.00%	40.00%	15.00%	7.00%
30	16.00%	15.70%	40.00%	59.20%	20.00%	7.00%
31	16.00%	15.70%	40.00%	45.20%	20.00%	7.00%
32	16.00%	15.70%	40.00%	51.50%	20.00%	6.90%
33	16.00%	15.70%	40.00%	45.20%	20.00%	6.70%
34	16.50%	15.70%	40.00%	32.50%	20.00%	6.50%
35	16.50%	15.70%	40.00%	32.50%	18.00%	6.30%
36	16.50%	15.70%	40.00%	22.50%	18.00%	6.10%
37	16.50%	15.70%	40.00%	24.40%	18.00%	5.80%
38	16.50%	15.70%	40.00%	46.50%	18.00%	5.40%
39	16.50%	15.70%	40.00%	45.20%	9.00%	5.00%
40	16.50%	15.70%	40.00%	38.80%	9.00%	4.60%
41	16.50%	15.70%	40.00%	13.40%	9.00%	4.20%
42	16.50%	15.70%	27.50%	10.60%	9.00%	4.00%
43	16.50%	12.50%	35.00%	10.60%	9.00%	4.00%
44	16.50%	12.50%	24.00%	15.00%	9.00%	4.00%
45	16.50%	12.50%	24.00%	25.00%	9.00%	6.00%
46	16.50%	12.50%	24.00%	25.00%	9.00%	6.00%
47	16.50%	12.50%	24.00%	25.00%	9.00%	6.00%
48	16.50%	8.00%	24.00%	19.40%	9.00%	6.00%
49	16.50%	8.00%	15.50%	19.40%	9.00%	6.00%
50	16.50%	8.00%	15.50%	19.40%	9.00%	6.00%
51	16.50%	8.00%	15.50%	19.40%	5.00%	6.00%
52	10.00%	8.00%	15.50%	19.40%	5.00%	6.00%
53	10.00%	8.00%	15.50%	14.70%	5.00%	6.00%
54	10.00%	8.00%	15.50%	5.70%	5.00%	6.00%
55	10.00%	8.00%	15.50%	30.00%	5.00%	0.00%
56	10.00%	8.00%	15.50%	30.00%	5.00%	0.00%
57	10.00%	8.00%	17.00%	12.50%	3.50%	0.00%
58	8.00%	8.00%	17.00%	12.50%	3.50%	0.00%
59	8.00%	8.00%	17.00%	12.50%	3.50%	0.00%
60	8.00%	11.00%	17.00%	12.50%	3.50%	0.00%
61	8.00%	11.00%	17.00%	12.50%	3.50%	0.00%
62	8.00%	11.00%	17.00%	12.50%	3.50%	0.00%
63	3.90%	11.00%	17.00%	12.50%	3.50%	0.00%
64	3.90%	11.00%	17.00%	12.50%	3.50%	0.00%
65	3.90%	11.00%	4.50%	3.50%	3.50%	0.00%
66	3.90%	11.00%	4.50%	3.50%	3.50%	0.00%
67	3.90%	11.00%	4.50%	3.50%	3.50%	0.00%
68	3.90%	11.00%	4.50%	3.50%	3.50%	0.00%
69	3.90%	11.00%	4.50%	3.50%	3.50%	0.00%
70	0.00%	0.00%	4.50%	0.00%	0.00%	0.00%

EXHIBIT 2-3 WITHDRAWAL RATES

	Brooklyn Hospital & Stony Brook Hospital					
	Years of Service					
Age	< 2	2 - 2.99	3 - 3.99	4 - 4.99	5 - 9.99	> = 10
15	11.00%	28.00%	15.00%	16.00%	15.00%	7.00%
16	11.00%	28.00%	15.00%	16.00%	15.00%	7.00%
17	11.00%	28.00%	15.00%	16.00%	15.00%	7.00%
18	11.00%	28.00%	15.00%	16.00%	15.00%	7.00%
19	11.00%	28.00%	15.00%	16.00%	15.00%	7.00%
20	11.00%	28.00%	15.00%	16.00%	15.00%	7.00%
21	10.00%	30.00%	15.00%	16.00%	15.00%	7.00%
22	10.00%	30.00%	15.00%	16.00%	15.00%	7.00%
23	10.00%	30.00%	15.00%	16.00%	15.00%	7.00%
24	10.00%	30.00%	15.00%	16.00%	15.00%	7.00%
25	13.00%	30.00%	15.00%	16.00%	15.00%	7.00%
26	13.00%	40.00%	15.00%	22.00%	15.00%	7.00%
27	13.00%	40.00%	44.00%	40.00%	11.00%	7.00%
28	13.00%	40.00%	44.00%	40.00%	10.00%	7.00%
29	13.00%	38.00%	44.00%	40.00%	10.00%	7.00%
30	18.00%	40.00%	44.00%	40.00%	11.00%	6.00%
31	18.00%	50.00%	50.00%	34.00%	12.00%	5.80%
32	18.00%	50.00%	50.00%	34.00%	18.00%	5.60%
33	13.00%	36.00%	44.00%	34.00%	18.00%	5.40%
34	13.00%	36.00%	44.00%	34.00%	17.00%	4.80%
35	13.00%	36.00%	44.00%	34.00%	18.00%	4.20%
36	13.00%	26.00%	44.00%	34.00%	18.00%	3.60%
37	13.00%	26.00%	30.00%	30.00%	18.00%	3.00%
38	13.00%	24.00%	28.00%	29.00%	18.00%	3.00%
39	8.00%	24.00%	28.00%	29.00%	10.00%	3.00%
40	8.00%	24.00%	28.00%	18.00%	10.00%	3.00%
41	8.00%	24.00%	28.00%	18.00%	10.00%	3.00%
42	7.00%	24.00%	28.00%	17.00%	10.00%	3.00%
43	7.00%	24.00%	25.00%	17.00%	10.00%	3.00%
44	7.00%	24.00%	25.00%	17.00%	10.00%	3.00%
45	5.50%	20.00%	25.00%	17.00%	10.00%	3.00%
46	5.50%	20.00%	12.50%	17.00%	10.00%	3.00%
47	5.50%	20.00%	12.50%	16.00%	10.00%	3.00%
48	5.50%	20.00%	12.50%	16.00%	8.00%	3.00%
49	4.00%	18.00%	9.80%	16.00%	8.00%	3.00%
50	4.00%	15.00%	9.80%	16.00%	8.00%	3.00%
51	4.00%	14.00%	9.80%	15.00%	8.00%	3.00%
52	4.00%	14.00%	9.80%	15.00%	8.00%	3.00%
53	3.00%	14.00%	8.00%	15.00%	8.00%	3.00%
54	3.00%	16.00%	8.00%	5.70%	8.00%	3.00%
55	3.00%	16.00%	8.00%	13.40%	8.00%	0.00%
56	2.00%	20.00%	8.00%	5.00%	7.00%	0.00%
57	2.00%	20.00%	8.00%	5.00%	7.00%	0.00%
58	2.00%	20.00%	8.00%	5.00%	7.00%	0.00%
59	2.00%	20.00%	8.00%	5.00%	5.00%	0.00%
60	2.00%	20.00%	8.00%	5.00%	5.00%	0.00%
61	2.00%	4.00%	8.00%	5.00%	5.00%	0.00%
62	2.00%	4.00%	8.00%	5.00%	5.00%	0.00%
63	1.75%	4.00%	8.00%	5.00%	5.00%	0.00%
64	1.75%	4.00%	8.00%	5.00%	5.00%	0.00%
65	1.75%	4.00%	8.00%	5.00%	5.00%	0.00%
66	1.75%	4.00%	8.00%	5.00%	5.00%	0.00%
67	1.75%	4.00%	8.00%	5.00%	5.00%	0.00%
68	1.75%	4.00%	8.00%	5.00%	5.00%	0.00%
69	1.75%	4.00%	8.00%	5.00%	5.00%	0.00%
70	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

EXHIBIT 2-3 WITHDRAWAL RATES

Years of Service	PRFS
0	7.328%
1	4.003%
2	2.114%
3	1.340%
4	1.142%
5	1.133%
6	1.112%
7	1.043%
8	0.937%
9	0.811%
10	0.673%
11	0.544%
12	0.432%
13	0.351%
14	0.300%
15	0.268%
16	0.230%
17	0.186%
18	0.160%
19	0.160%
20	0.160%
21	0.160%
22	0.160%
23	0.160%
24	0.160%
25	0.160%
26	0.160%
27	0.160%
28	0.160%
29	0.160%
30	0.160%
31	0.160%
32	0.160%
33	0.160%
34	0.160%
35	0.160%
36	0.160%
37	0.160%
38	0.160%
39	0.160%
41	0.160%
42	0.160%
43	0.160%
44	0.160%
45-54	0.160%
55+	0.000%

EXHIBIT 2-3 WITHDRAWAL RATES

Age	Campus - ORP										
	0 Years of Service	1 Year of Service	2 Years of Service	3 Years of Service	4 Years of Service	5 Years of Service	6 Years of Service	7 Years of Service	8 Years of Service	9 Years of Service	At least 10 Years of Service
15	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
16	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
17	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
18	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
19	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
20	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
21	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
22	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
23	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
24	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
25	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
26	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
27	32.0%	32.0%	32.0%	32.0%	32.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
28	19.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	24.0%	24.0%	22.0%	15.0%
29	19.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	24.0%	22.0%	15.0%
30	19.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	24.0%	22.0%	13.0%
31	19.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	24.0%	22.0%	13.0%
32	17.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	24.0%	22.0%	13.0%
33	17.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	24.0%	22.0%	13.0%
34	17.0%	28.0%	28.0%	28.0%	24.0%	24.0%	25.0%	26.0%	24.0%	22.0%	13.0%
35	14.0%	28.0%	28.0%	28.0%	24.0%	24.0%	25.0%	26.0%	24.0%	22.0%	13.0%
36	14.0%	28.0%	28.0%	28.0%	24.0%	24.0%	25.0%	26.0%	24.0%	17.0%	13.0%
37	14.0%	28.0%	28.0%	28.0%	24.0%	24.0%	25.0%	26.0%	24.0%	17.0%	13.0%
38	14.0%	28.0%	28.0%	28.0%	24.0%	24.0%	25.0%	26.0%	22.0%	17.0%	13.0%
39	14.0%	28.0%	28.0%	28.0%	21.0%	21.0%	25.0%	21.0%	21.0%	17.0%	13.0%
40	14.0%	28.0%	28.0%	28.0%	21.0%	21.0%	21.0%	21.0%	21.0%	17.0%	13.0%
41	14.0%	28.0%	28.0%	28.0%	21.0%	21.0%	21.0%	21.0%	21.0%	17.0%	13.0%
42	22.0%	28.0%	28.0%	28.0%	21.0%	21.0%	21.0%	21.0%	21.0%	17.0%	13.0%
43	22.0%	28.0%	28.0%	28.0%	21.0%	21.0%	21.0%	21.0%	21.0%	17.0%	13.0%
44	22.0%	28.0%	28.0%	28.0%	21.0%	21.0%	21.0%	21.0%	21.0%	17.0%	13.0%
45	22.0%	26.0%	26.0%	25.0%	21.0%	21.0%	20.0%	21.0%	19.0%	13.0%	13.0%
46	22.0%	26.0%	26.0%	25.0%	21.0%	21.0%	20.0%	21.0%	19.0%	13.0%	13.0%
47	22.0%	26.0%	26.0%	25.0%	21.0%	21.0%	20.0%	21.0%	19.0%	13.0%	13.0%
48	22.0%	26.0%	26.0%	25.0%	21.0%	22.0%	20.0%	21.0%	19.0%	13.0%	13.0%
49	22.0%	26.0%	26.0%	25.0%	21.0%	22.0%	20.0%	21.0%	19.0%	13.0%	13.0%
50	22.0%	26.0%	26.0%	25.0%	21.0%	22.0%	20.0%	21.0%	19.0%	13.0%	13.0%
51	22.0%	26.0%	26.0%	25.0%	21.0%	22.0%	20.0%	21.0%	19.0%	13.0%	13.0%
52	22.0%	26.0%	26.0%	25.0%	21.0%	22.0%	20.0%	21.0%	19.0%	10.0%	12.0%
53	22.0%	26.0%	26.0%	25.0%	21.0%	22.0%	20.0%	21.0%	19.0%	10.0%	12.0%
54	22.0%	26.0%	26.0%	26.0%	21.0%	22.0%	20.0%	23.0%	19.0%	10.0%	12.0%
55	22.0%	26.0%	26.0%	26.0%	21.0%	22.0%	20.0%	23.0%	19.0%	10.0%	0.0%
56	22.0%	26.0%	26.0%	26.0%	21.0%	22.0%	20.0%	23.0%	19.0%	10.0%	0.0%
57	21.0%	21.0%	21.0%	20.0%	21.0%	22.0%	21.0%	20.0%	19.0%	10.0%	0.0%
58	21.0%	21.0%	21.0%	20.0%	21.0%	22.0%	21.0%	20.0%	19.0%	10.0%	0.0%
59	21.0%	21.0%	21.0%	20.0%	21.0%	22.0%	21.0%	20.0%	19.0%	10.0%	0.0%
60	19.0%	21.0%	21.0%	20.0%	21.0%	22.0%	21.0%	20.0%	19.0%	10.0%	0.0%
61	19.0%	21.0%	21.0%	13.0%	21.0%	22.0%	21.0%	13.0%	13.0%	10.0%	0.0%
62	19.0%	21.0%	21.0%	13.0%	21.0%	22.0%	21.0%	13.0%	13.0%	10.0%	0.0%
63	19.0%	17.0%	17.0%	13.0%	21.0%	20.0%	21.0%	13.0%	13.0%	10.0%	0.0%
64	19.0%	17.0%	17.0%	13.0%	21.0%	20.0%	21.0%	13.0%	13.0%	10.0%	0.0%
65	19.0%	17.0%	17.0%	13.0%	21.0%	20.0%	20.0%	13.0%	13.0%	10.0%	0.0%
66	19.0%	17.0%	17.0%	13.0%	21.0%	20.0%	20.0%	13.0%	13.0%	10.0%	0.0%
67	19.0%	17.0%	17.0%	13.0%	21.0%	20.0%	20.0%	13.0%	13.0%	10.0%	0.0%
68	19.0%	17.0%	17.0%	13.0%	21.0%	20.0%	20.0%	13.0%	13.0%	10.0%	0.0%
69	19.0%	17.0%	17.0%	13.0%	21.0%	20.0%	20.0%	13.0%	13.0%	10.0%	0.0%
70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

EXHIBIT 2-3 WITHDRAWAL RATES

Age	TRS-Male										
	0 Years of Service	1 Year of Service	2 Years of Service	3 Years of Service	4 Years of Service	5 Years of Service	6 Years of Service	7 Years of Service	8 Years of Service	9 Years of Service	At least 10 Years of Service
20	25.4275%	16.5892%	11.6327%	9.4647%	5.7858%	3.5354%	2.0319%	1.1763%	1.0924%	0.7796%	0.8873%
21	25.4275%	13.9607%	11.6327%	9.4647%	5.7858%	3.5354%	2.0319%	1.1763%	1.0924%	0.7796%	0.8873%
22	25.8777%	12.6464%	11.6327%	9.4647%	5.7858%	3.5354%	2.0319%	1.1763%	1.0924%	0.7796%	0.8873%
23	26.7780%	12.4274%	11.6327%	9.4647%	5.7858%	3.5354%	2.0319%	1.1763%	1.0924%	0.7796%	0.8873%
24	28.1285%	13.3035%	11.9082%	8.8647%	5.7858%	3.5354%	2.0319%	1.1763%	1.0924%	0.7796%	0.8873%
25	29.4790%	16.8083%	12.4171%	8.1761%	5.7858%	3.5354%	2.0319%	1.1763%	1.0924%	0.7796%	0.8873%
26	30.8295%	18.5606%	12.8845%	7.7761%	5.7858%	3.6379%	2.0319%	1.1763%	1.1922%	0.7796%	0.8873%
27	31.9549%	19.4368%	13.1962%	8.0715%	5.9296%	3.6635%	2.0319%	1.1763%	1.2975%	0.7796%	0.8873%
28	32.5176%	19.6558%	13.4039%	8.3668%	6.1071%	3.6892%	2.0319%	1.1763%	1.3931%	0.7796%	0.8873%
29	32.8927%	19.4368%	13.5424%	8.6621%	6.4622%	3.7533%	2.1368%	1.2912%	1.4537%	0.7796%	0.8873%
30	33.0803%	19.0091%	13.6168%	8.9575%	6.8227%	4.0481%	2.5825%	1.9809%	1.5106%	0.7796%	0.8873%
31	32.2070%	18.7568%	13.1286%	9.3049%	6.9540%	4.3533%	3.1397%	2.2317%	1.5955%	0.7796%	0.8873%
32	31.3337%	18.5045%	12.5654%	9.6523%	7.0854%	4.6585%	3.6969%	2.3571%	1.8078%	0.7796%	0.8873%
33	30.4605%	18.2523%	12.3777%	9.9997%	7.2167%	4.9638%	3.9754%	2.3884%	2.0201%	0.8513%	0.8873%
34	29.5872%	18.0000%	12.6812%	10.3470%	7.3481%	5.2690%	4.1147%	2.3963%	2.2323%	1.1216%	0.8873%
35	28.7140%	17.7477%	13.3047%	10.5207%	7.4794%	5.5742%	4.1993%	2.3963%	2.3738%	1.5946%	0.8508%
36	28.6690%	17.1821%	13.8075%	10.4196%	7.7092%	6.0321%	4.1209%	2.3963%	2.4021%	1.9585%	0.8299%
37	28.6241%	16.6165%	13.5561%	10.1447%	7.6326%	6.4899%	4.0425%	2.3963%	2.4163%	2.0908%	0.8091%
38	28.5791%	16.0509%	13.0616%	9.8699%	7.5560%	6.7189%	3.9641%	2.5293%	2.4233%	2.1664%	0.7882%
39	28.5342%	15.4853%	13.0202%	9.5950%	7.4219%	6.7761%	3.8857%	3.4440%	2.4269%	2.1916%	0.7673%
40	28.4892%	15.2025%	12.9787%	9.3202%	6.9959%	6.7904%	3.8073%	3.7085%	2.5711%	2.1664%	0.7464%
41	28.9068%	15.2732%	13.2358%	9.4006%	6.7933%	6.4863%	3.5133%	3.7747%	2.7438%	2.1286%	0.7534%
42	29.3244%	15.6266%	13.4928%	9.4810%	6.6920%	5.7260%	3.3664%	3.7747%	2.9166%	2.0625%	0.7638%
43	29.7420%	15.9800%	13.7499%	9.5614%	6.5907%	5.3458%	3.5133%	3.7747%	3.0893%	1.8971%	0.7795%
44	30.1596%	16.3334%	14.0070%	9.6418%	6.4894%	5.2983%	3.8073%	3.7747%	3.2620%	1.6781%	0.8147%
45	30.3684%	16.6868%	14.2640%	8.6769%	6.3881%	5.2698%	4.5610%	3.7747%	3.3484%	1.5314%	0.8659%
46	29.7917%	16.9216%	14.2902%	7.7120%	6.4110%	5.4366%	5.3147%	3.7747%	3.2404%	1.4047%	0.8915%
47	29.0062%	17.1564%	14.3164%	7.3904%	6.7541%	5.5072%	6.0684%	3.7747%	2.9166%	1.4943%	0.9043%
48	28.2207%	17.3912%	14.3426%	7.7120%	7.0973%	5.7785%	6.4453%	3.8438%	2.7546%	2.0435%	0.9106%
49	27.4352%	17.6260%	14.3687%	9.2398%	7.2689%	5.9956%	6.5709%	4.2311%	2.8356%	2.2630%	0.9170%
50	26.6497%	17.8609%	14.3949%	9.9585%	7.2689%	6.1041%	6.5709%	4.4893%	3.2404%	2.3728%	0.9227%
51	25.8643%	17.8609%	14.4211%	10.6772%	7.2689%	6.1041%	6.5709%	4.5754%	3.6452%	2.3728%	0.9227%
52	25.0788%	17.8609%	14.4211%	11.0366%	7.2689%	6.1041%	6.5709%	4.7475%	3.7465%	2.3728%	0.9227%
53	24.6860%	17.8609%	14.4211%	11.0366%	7.2689%	6.1041%	6.5709%	4.8336%	3.7754%	2.3728%	0.9227%
54+	24.6860%	17.8609%	14.4211%	11.0366%	7.2689%	6.1041%	6.5709%	5.1133%	3.7754%	2.3728%	0.9227%

EXHIBIT 2-3 WITHDRAWAL RATES

Age	TRS -Female										
	0 Years of Service	1 Year of Service	2 Years of Service	3 Years of Service	4 Years of Service	5 Years of Service	6 Years of Service	7 Years of Service	8 Years of Service	9 Years of Service	At least 10 Years of Service
20	22.1624%	11.1743%	10.0290%	5.9871%	7.9156%	5.7015%	4.1279%	3.0151%	3.7037%	2.2766%	1.9527%
21	22.2584%	10.2302%	10.0290%	5.9871%	7.9156%	5.7015%	4.1279%	3.0151%	3.7037%	2.2766%	1.9527%
22	22.7539%	10.0414%	10.0290%	5.9871%	7.9156%	5.7015%	4.1279%	3.0151%	3.7037%	2.2766%	1.9527%
23	24.1991%	10.7967%	10.0290%	5.9871%	7.9156%	5.7015%	4.1279%	3.0151%	3.7037%	2.2766%	1.9527%
24	30.6350%	13.0625%	10.0290%	5.9474%	7.9156%	5.7015%	4.1279%	3.0151%	3.7037%	2.2766%	1.9527%
25	33.2325%	17.5943%	10.2290%	6.4680%	4.2156%	5.1015%	4.0469%	3.0151%	3.7037%	2.2766%	1.9527%
26	35.3217%	18.9852%	10.6684%	7.2489%	4.8382%	4.7684%	3.9012%	3.0151%	3.7037%	2.2766%	1.9527%
27	36.0933%	19.8520%	12.7538%	8.0297%	5.1495%	3.9255%	3.7846%	3.0151%	3.7037%	2.2766%	1.9527%
28	36.0817%	20.2853%	14.1441%	8.8106%	5.4608%	4.2029%	3.7458%	3.0151%	3.5810%	2.2766%	1.9527%
29	35.4235%	20.5020%	14.1602%	9.5915%	5.7721%	4.8963%	3.9012%	3.1232%	3.2407%	2.2766%	1.9527%
30	34.6747%	20.2316%	13.9988%	9.9819%	7.3286%	5.3123%	4.2120%	3.3722%	2.9005%	2.2766%	1.9527%
31	34.3752%	19.9612%	13.6830%	10.6115%	7.6094%	6.0404%	5.1611%	3.6984%	2.9725%	2.4035%	1.9527%
32	33.5848%	19.5888%	13.3673%	10.9263%	7.8901%	6.7684%	5.6356%	4.0686%	3.2607%	2.6574%	1.9527%
33	32.7944%	19.2164%	13.0516%	11.2411%	8.1709%	7.1845%	5.8505%	4.3387%	3.5489%	2.7589%	1.9527%
34	32.0040%	18.8440%	12.7358%	11.3290%	8.4516%	7.2885%	6.0654%	4.5088%	3.8371%	3.0635%	1.9527%
35	31.2137%	18.1656%	12.4201%	11.3729%	8.7323%	7.3130%	6.1088%	4.6793%	3.9811%	3.3681%	1.8793%
36	30.4496%	17.4543%	12.2312%	11.0640%	8.6076%	7.0552%	5.8894%	4.8497%	4.0833%	3.5204%	1.7327%
37	29.6856%	16.7429%	12.0422%	10.5598%	8.4828%	6.7974%	5.6701%	4.8838%	4.0413%	3.4443%	1.5860%
38	28.9215%	16.0316%	11.8533%	10.0557%	8.2956%	6.5396%	5.4507%	4.9179%	3.9994%	3.3681%	1.4393%
39	28.1575%	15.3202%	11.6644%	9.5515%	8.0149%	6.2819%	5.2314%	4.9213%	3.9574%	3.1777%	1.2192%
40	27.3935%	14.6089%	11.4754%	9.2994%	7.3750%	6.0241%	5.0120%	4.9359%	3.9155%	3.0254%	1.1459%
41	26.9779%	14.4793%	11.1172%	9.1252%	7.4162%	5.9860%	4.8675%	4.4929%	3.7437%	3.0242%	1.1182%
42	26.5623%	14.3498%	10.7590%	9.2030%	7.4575%	5.9479%	4.7230%	4.0499%	3.5718%	3.0230%	1.0905%
43	26.1467%	14.2203%	10.4009%	9.2809%	7.4987%	5.9098%	4.5785%	3.6070%	3.4000%	3.0218%	1.0628%
44	25.7311%	14.0908%	10.0427%	9.3587%	7.5400%	5.8717%	4.4339%	3.5516%	3.2282%	3.0207%	1.0351%
45	25.3155%	14.0260%	9.8636%	9.4366%	7.5812%	5.8336%	4.3617%	3.8284%	3.0564%	3.0195%	1.0074%
46	25.7124%	14.2616%	9.9349%	9.5174%	7.4383%	5.8048%	4.4604%	3.8381%	3.0284%	2.9256%	0.9941%
47	26.7047%	14.3794%	10.1854%	9.5983%	7.2954%	5.7761%	4.6315%	3.8478%	3.0004%	2.8317%	0.9808%
48	27.6970%	14.7033%	10.4358%	9.6791%	7.1525%	5.7474%	4.8025%	3.8574%	2.9724%	2.7377%	0.9675%
49	28.6893%	15.1626%	10.6862%	9.7600%	7.0096%	5.7187%	4.9735%	3.8671%	2.9444%	2.6438%	0.9542%
50	29.6815%	15.4630%	10.9367%	9.8408%	6.8667%	5.6900%	5.1446%	3.8767%	2.9164%	2.5499%	0.9409%
51	29.9296%	15.7633%	11.1871%	9.8408%	6.7238%	5.6900%	5.1446%	3.8767%	2.9164%	2.5499%	0.9409%
52	29.9296%	16.0636%	11.1871%	9.8408%	6.7238%	5.6900%	5.1446%	3.8767%	2.9164%	2.5499%	0.9409%
53	29.9296%	16.2138%	11.1871%	9.8408%	6.7238%	5.6900%	5.1446%	3.8767%	2.9164%	2.5499%	0.9409%
54+	29.9296%	16.2138%	11.1871%	9.8408%	6.7238%	5.6900%	5.1446%	3.8767%	2.9164%	2.5499%	0.9409%

EXHIBIT 2-4 DISABILITY RATES

	ERS			PFRS		TRS	
	Accidental Disability						
Age	Tiers 1 & 2	Tiers 3, 4, 5	All Other Disability	Accidental Disability*	All Other Disability	Male Disability **	Female Disability **
15	0.020%	0.001%	0.006%	0.040%	0.001%		
16	0.020%	0.001%	0.006%	0.040%	0.001%		
17	0.020%	0.001%	0.007%	0.040%	0.001%		
18	0.020%	0.001%	0.008%	0.040%	0.002%		
19	0.020%	0.001%	0.009%	0.040%	0.002%		
20	0.020%	0.001%	0.010%	0.040%	0.002%		
21	0.020%	0.001%	0.011%	0.040%	0.002%		
22	0.020%	0.001%	0.012%	0.040%	0.002%		
23	0.020%	0.001%	0.014%	0.040%	0.003%		
24	0.020%	0.001%	0.015%	0.040%	0.003%		
25	0.020%	0.001%	0.017%	0.040%	0.003%		
26	0.020%	0.001%	0.019%	0.040%	0.004%		
27	0.020%	0.001%	0.021%	0.040%	0.004%		
28	0.020%	0.001%	0.023%	0.040%	0.005%		
29	0.020%	0.001%	0.025%	0.040%	0.005%		
30	0.020%	0.001%	0.028%	0.040%	0.006%	0.0003%	0.0005%
31	0.020%	0.001%	0.031%	0.040%	0.006%	0.0008%	0.0008%
32	0.020%	0.001%	0.035%	0.040%	0.007%	0.0015%	0.0010%
33	0.020%	0.001%	0.039%	0.040%	0.008%	0.0024%	0.0037%
34	0.020%	0.001%	0.043%	0.040%	0.009%	0.0040%	0.0076%
35	0.020%	0.001%	0.048%	0.040%	0.010%	0.0062%	0.0098%
36	0.020%	0.001%	0.053%	0.100%	0.011%	0.0091%	0.0102%
37	0.020%	0.001%	0.059%	0.160%	0.012%	0.0126%	0.0105%
38	0.020%	0.001%	0.066%	0.220%	0.013%	0.0164%	0.0126%
39	0.020%	0.001%	0.073%	0.280%	0.015%	0.0196%	0.0159%
40	0.020%	0.001%	0.081%	0.340%	0.016%	0.0226%	0.0214%
41	0.020%	0.001%	0.090%	0.400%	0.018%	0.0245%	0.0274%
42	0.020%	0.001%	0.100%	0.460%	0.020%	0.0278%	0.0310%
43	0.020%	0.004%	0.111%	0.520%	0.022%	0.0330%	0.0376%
44	0.020%	0.004%	0.124%	0.580%	0.025%	0.0398%	0.0452%
45	0.020%	0.004%	0.137%	0.640%	0.027%	0.0470%	0.0501%
46	0.020%	0.004%	0.153%	0.640%	0.031%	0.0530%	0.0522%
47	0.020%	0.004%	0.170%	0.640%	0.034%	0.0569%	0.0568%
48	0.020%	0.004%	0.189%	0.640%	0.038%	0.0611%	0.0666%
49	0.020%	0.004%	0.210%	0.640%	0.042%	0.0707%	0.0818%
50	0.020%	0.004%	0.233%	0.640%	0.047%	0.0889%	0.0986%
51	0.020%	0.004%	0.259%	0.640%	0.052%	0.1091%	0.1187%
52	0.020%	0.004%	0.288%	0.640%	0.058%	0.1190%	0.1325%
53	0.020%	0.004%	0.320%	0.640%	0.064%	0.1250%	0.1380%
54	0.020%	0.004%	0.355%	0.640%	0.071%	0.1225%	0.1375%
55	0.015%	0.004%	0.395%	0.640%	0.079%		
56	0.015%	0.004%	0.438%	0.640%	0.088%		
57	0.015%	0.004%	0.487%	0.640%	0.097%		
58	0.015%	0.004%	0.541%	0.640%	0.108%		
59	0.015%	0.004%	0.602%	0.640%	0.120%		
60	0.015%	0.004%	0.668%	0.640%	0.134%		
61	0.015%	0.004%	0.743%	0.640%	0.149%		

EXHIBIT 2-4 DISABILITY RATES

	ERS			PFRS	
	Accidental Disability				
Age	Tiers 1 & 2	Tiers 3, 4, 5	All Other Disability	Accidental Disability*	All Other Disability
66	0.015%	0.004%	1.233%	0.640%	0.247%
67	0.015%	0.004%	1.356%	0.640%	0.271%
68	0.015%	0.004%	1.492%	0.640%	0.298%
69	0.015%	0.004%	1.641%	0.640%	0.328%
70	0.000%	0.000%	0.000%	0.000%	0.000%

* Includes performance of duty
** Assumes all disabilities are non-coincidental

EXHIBIT 2-5 RETIREMENT RATES

	ERS – Tier 1 Years of Service				ERS Tiers 2, 3 & 4 Years of Service		
Age	<20	20-29.99	> = 30	Age	<20	20-29.99	> = 30
55	16.985%	34.977%	77.499%	55	5.895%	8.590%	47.092%
56	9.286%	13.929%	26.808%	56	3.780%	4.952%	18.857%
57	7.541%	11.619%	23.320%	57	3.780%	5.216%	17.845%
58	9.055%	12.956%	21.587%	58	3.960%	5.491%	17.183%
59	10.371%	15.469%	21.164%	59	4.386%	6.162%	18.384%
60	10.331%	17.394%	21.365%	60	4.829%	7.343%	19.365%
61	13.785%	21.229%	24.184%	61	7.578%	16.592%	23.334%
62	19.152%	34.528%	35.390%	62	13.825%	35.571%	29.639%
63	15.155%	25.017%	23.024%	63	10.753%	22.081%	21.538%
64	17.236%	29.052%	23.115%	64	11.760%	21.617%	20.854%
65	22.845%	29.262%	26.254%	65	16.671%	28.793%	24.495%
66	23.898%	31.788%	26.292%	66	19.340%	31.970%	29.280%
67	19.844%	28.362%	22.238%	67	16.763%	27.857%	24.846%
68	15.865%	31.095%	20.547%	68	15.500%	25.117%	21.412%
69	19.512%	26.244%	18.605%	69	16.490%	26.427%	21.208%
70	100.000%	100.000%	100.000%	70	100.000%	100.000%	100.000%

	ERS – Tier 5 Years of Service				ERS-Tier 6 Years of Service		
Age	<20	20-29.99	> = 30	Age	<20	20-29.99	> = 30
55	4.716%	6.872%	8.590%	55	4.716%	6.872%	8.590%
56	3.024%	3.962%	4.952%	56	3.024%	3.962%	4.952%
57	3.024%	4.173%	5.216%	57	3.024%	4.173%	5.216%
58	3.168%	4.393%	5.491%	58	3.168%	4.393%	5.491%
59	3.509%	4.930%	6.162%	59	3.509%	4.930%	6.162%
60	3.863%	5.874%	7.343%	60	3.863%	5.874%	7.343%
61	6.062%	13.274%	16.592%	61	6.062%	13.274%	16.592%
62	18.825%	45.571%	100.000%	62	8.825%	15.571%	25.571%
63	10.753%	22.081%	21.538%	63	20.753%	52.081%	100.00%
64	11.760%	21.617%	20.854%	64	11.760%	21.617%	20.854%
65	16.671%	28.793%	24.495%	65	16.671%	28.793%	24.495%
66	19.340%	31.970%	29.280%	66	19.340%	31.970%	29.280%
67	16.763%	27.857%	24.846%	67	16.763%	27.857%	24.846%
68	15.500%	25.117%	21.412%	68	15.500%	25.117%	21.412%
69	16.490%	26.427%	21.208%	69	16.490%	26.427%	21.208%
70	100.000%	100.000%	100.000%	70	100.000%	100.000%	100.000%

EXHIBIT 2-5 RETIREMENT RATES

	PFRS – Tier 1 Years of Service				PFRS Tiers 2-5 Years of Service		
Age	<20	20-29.99	> = 30	Age	<20	20-29.99	> = 30
55	16.985%	34.977%	77.499%	55	5.895%	8.590%	8.590%
56	9.286%	13.929%	26.808%	56	3.780%	4.952%	4.952%
57	7.541%	11.619%	23.320%	57	3.780%	5.216%	5.216%
58	9.055%	12.956%	21.587%	58	3.960%	5.491%	5.491%
59	10.371%	15.469%	21.164%	59	4.386%	6.162%	6.162%
60	10.331%	17.394%	21.365%	60	4.829%	7.343%	7.343%
61	13.785%	21.229%	24.184%	61	7.578%	16.592%	16.592%
62	19.152%	34.528%	35.390%	62	13.825%	35.571%	35.571%
63	15.155%	25.017%	23.024%	63	10.753%	22.081%	22.081%
64	17.236%	29.052%	23.115%	64	11.760%	21.617%	21.617%
65	22.845%	29.262%	26.254%	65	16.671%	28.793%	28.793%
66	23.898%	31.788%	26.292%	66	19.340%	31.970%	31.970%
67	19.844%	28.362%	22.238%	67	16.763%	27.857%	27.857%
68	15.865%	31.095%	20.547%	68	15.500%	25.117%	25.117%
69	19.512%	26.244%	18.605%	69	16.490%	26.427%	26.427%
70	100.000%	100.000%	100.000%	70	100.000%	100.000%	100.000%

	PFRS – Tier 6 Years of Service				Campus – ORP Gender	
Age	<20	20-29.99	> = 30	Age	Male	Female
55	4.716%	6.872%	8.590%	55	14.9660%	42.3520%
56	3.024%	3.962%	4.952%	56	15.6730%	6.8110%
57	3.024%	4.173%	5.216%	57	13.7650%	11.3590%
58	3.168%	4.393%	5.491%	58	14.1260%	15.3500%
59	3.509%	4.930%	6.162%	59	8.7310%	14.7200%
60	3.863%	5.874%	7.343%	60	15.9830%	32.1530%
61	6.062%	13.274%	16.592%	61	9.1370%	7.2390%
62	8.825%	15.571%	25.571%	62	23.2370%	45.4750%
63	35.753%	52.081%	100.000%	63	30.2020%	33.5850%
64	11.760%	21.617%	20.854%	64	25.3080%	23.1600%
65	16.671%	28.793%	24.495%	65	37.7420%	53.2100%
66	19.340%	31.970%	29.280%	66	80.4840%	74.4940%
67	16.763%	27.857%	24.846%	67	71.5000%	78.2187%
68	15.500%	25.117%	21.412%	68	45.7670%	82.1296%
69	16.490%	26.427%	21.208%	69	53.2900%	86.2361%
70	100.000%	100.000%	100.000%	70	100.0000%	100.0000%

EXHIBIT 2-5 RETIREMENT RATES

Age	Stony Brook Hospital and Brooklyn Hospital Years of Service <20	20-29.99	> = 30	Age	Syracuse Hospital Years of Service <20	20-29.99	> = 30
55	3.638%	6.021%	11.535%	55	3.280%	8.177%	45.994%
56	2.598%	3.479%	7.116%	56	2.667%	6.296%	20.528%
57	0.749%	2.088%	16.905%	57	5.452%	11.468%	23.624%
58	3.227%	4.447%	10.315%	58	6.580%	14.904%	10.557%
59	1.988%	3.078%	9.547%	59	4.765%	4.257%	16.795%
60	3.316%	4.060%	7.418%	60	6.750%	15.016%	18.350%
61	3.506%	1.826%	15.485%	61	17.361%	1.192%	16.334%
62	16.651%	27.625%	19.936%	62	35.591%	37.295%	57.204%
63	10.340%	5.067%	17.625%	63	22.540%	19.553%	42.265%
64	16.173%	11.397%	25.838%	64	29.289%	23.624%	42.265%
65	17.935%	16.318%	33.333%	65	47.777%	29.289%	13.397%
66	19.936%	52.860%	51.962%	66	47.777%	62.204%	39.706%
67	35.242%	8.974%	15.485%	67	13.397%	42.265%	29.289%
68	18.350%	57.360%	46.548%	68	29.289%	21.250%	20.472%
69	24.407%	10.557%	45.870%	69	29.289%	21.250%	20.472%
70	100.000%	100.000%	100.000%	70	100.000%	100.000%	100.000%

Years of Service	ERS (Corrections) Tiers 1 & 2	ERS (Corrections) Tier 3
25	20.915%	35.143%
26	22.135%	20.590%
27	22.418%	17.710%
28	21.834%	17.526%
29	20.314%	18.232%
30	18.023%	25.008%
31	15.638%	24.101%
32	15.787%	22.845%
33	18.173%	19.237%
34	20.559%	21.389%
35	23.067%	23.796%
36	27.093%	29.235%
37	33.205%	33.040%
38	38.247%	33.040%
39	39.053%	33.040%
40	39.053%	33.040%
41	39.053%	33.040%
42	39.053%	33.040%
43	39.053%	33.040%
44	39.053%	33.040%
45-54	39.053%	33.040%
55+	100.00%	100.00%

EXHIBIT 2-5 RETIREMENT RATES

Age	Tier 1		TRS Tiers 2, 3, 4, SVC<30		Tiers 2, 3, 4, SVC=30+	
	Males	Females	Males	Females	Males	Females
55	30.6695%	31.3992%	3.1965%	3.4565%	30.6695%	31.3992%
56	28.0779%	28.8116%	3.1782%	3.5761%	28.0779%	28.8116%
57	25.2448%	26.9473%	3.6262%	4.1750%	25.2448%	26.9473%
58	25.9437%	26.1016%	4.3899%	4.6349%	25.9437%	26.1016%
59	28.6545%	26.8785%	5.6398%	6.0339%	28.6545%	26.8785%
60	31.1011%	27.9410%	6.3578%	7.0415%	31.1011%	27.9410%
61	32.0232%	27.7166%	7.2217%	8.2590%	32.0232%	27.7166%
62	27.0303%	25.7157%	27.0303%	25.7157%	27.0303%	25.7157%
63	22.9352%	23.2947%	22.9352%	23.2947%	22.9352%	23.2947%
64	20.6863%	21.9224%	20.6863%	21.9224%	20.6863%	21.9224%
65	20.9678%	23.8272%	20.9678%	23.8272%	20.9678%	23.8272%
66	21.7437%	24.4523%	21.7437%	24.4523%	21.7437%	24.4523%
67	21.6934%	23.6791%	21.6934%	23.6791%	21.6934%	23.6791%
68	20.8294%	22.0367%	20.8294%	22.0367%	20.8294%	22.0367%
69	18.7086%	23.0935%	18.7086%	23.0935%	18.7086%	23.0935%
70	16.3555%	22.9295%	16.3555%	22.9295%	16.3555%	22.9295%
71	14.6721%	21.2056%	14.6721%	21.2056%	14.6721%	21.2056%
72	16.9602%	18.0451%	16.9602%	18.0451%	16.9602%	18.0451%
73	16.7377%	18.3107%	16.7377%	18.3107%	16.7377%	18.3107%
74	16.4226%	19.2125%	16.4226%	19.2125%	16.4226%	19.2125%
75	13.3890%	19.0633%	13.3890%	19.0633%	13.3890%	19.0633%
76	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%

Age	Tier 5, SVC<30		TRS Tier 5, SVC=30+		Tier 6	
	Males	Females	Males	Females	Males	Females
55	1.5983%	1.7283%	1.5983%	1.7283%	1.5983%	1.7283%
56	1.5891%	1.7881%	1.5891%	1.7881%	1.5891%	1.7881%
57	1.8131%	2.0875%	30.6695%	31.3992%	1.8131%	2.0875%
58	2.1950%	2.3175%	28.0779%	28.8116%	2.1950%	2.3175%
59	2.8199%	3.0170%	25.2448%	26.9473%	2.8199%	3.0170%
60	3.1789%	3.5208%	25.9437%	26.1016%	3.1789%	3.5208%
61	3.6109%	4.1295%	28.6545%	26.8785%	3.6109%	4.1295%
62	27.0303%	25.7157%	27.0303%	25.7157%	3.9942%	4.6683%
63	22.9352%	23.2947%	22.9352%	23.2947%	30.6695%	31.3992%
64	20.6863%	21.9224%	20.6863%	21.9224%	28.0779%	28.8116%
65	20.9678%	23.8272%	20.9678%	23.8272%	25.2448%	26.9473%
66	21.7437%	24.4523%	21.7437%	24.4523%	25.9437%	26.1016%
67	21.6934%	23.6791%	21.6934%	23.6791%	28.6545%	26.8785%
68	20.8294%	22.0367%	20.8294%	22.0367%	31.1011%	27.9410%
69	18.7086%	23.0935%	18.7086%	23.0935%	32.0232%	27.7166%
70	16.3555%	22.9295%	16.3555%	22.9295%	27.0303%	25.7157%
71	14.6721%	21.2056%	14.6721%	21.2056%	22.9352%	23.2947%
72	16.9602%	18.0451%	16.9602%	18.0451%	20.6863%	21.9224%
73	16.7377%	18.3107%	16.7377%	18.3107%	20.9678%	23.8272%
74	16.4226%	19.2125%	16.4226%	19.2125%	21.7437%	24.4523%
75	13.3890%	19.0633%	13.3890%	19.0633%	21.6934%	23.6791%
76	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%

EXHIBIT 2-6 SALARY SCALE

Service	ERS	PFRS
0	8.80%	29.70%
1	8.80%	29.70%
2	7.70%	14.85%
3	6.60%	12.65%
4	5.50%	10.45%
5	4.95%	8.25%
6	4.62%	5.83%
7	4.51%	4.84%
8	4.40%	4.73%
9	4.29%	4.62%
10	4.18%	4.51%
11	4.07%	4.40%
12	3.96%	4.29%
13	3.85%	4.18%
14	3.74%	4.07%
15	3.63%	3.96%
16	3.52%	3.85%
17	3.41%	3.74%
18	3.30%	3.63%
19	3.30%	3.63%
20+	3.30%	3.63%

EXHIBIT 2-6 SALARY SCALE

Duration	TRS Rate
1	10.00%
2	7.00%
3	6.06%
4	5.22%
5	4.72%
6	4.45%
7	4.31%
8	4.22%
9	4.15%
10	4.07%
11	3.98%
12	3.87%
13	3.75%
14	3.61%
15	3.46%
16	3.31%
17	3.17%
18	3.04%
19	2.93%
20	2.82%
21	2.72%
22	2.63%
23	2.54%
24	2.45%
25	2.37%
26	2.29%
27	2.22%
28	2.15%
29	2.10%
30	2.06%
31	2.02%
32	2.00%
33	1.95%
34	1.93%
35	1.90%
36	1.86%
37	1.80%
38	1.76%
39	1.76%

Section 3 – Per Capita Plan Costs

Exhibit 3-1 provides support for the development of the recommended Empire Plan per capita plan costs. We developed the FY2021 costs by:

- Calculating claims incurred for 2019 separately by program and for non-Medicare vs. Medicare eligible retirees for State retirees by completing the 2019 claim lag triangles provided with claims incurred in 2019 and paid through March 31, 2020.
  - Effective January 1, 2019 there were collectively bargained pan changes to the prescription drug program which improved the pricing terms thereby lowering the claims and increasing the rebates.
  - The EGWP revenue was developed using a database that contains detailed pharmacy data with one record per claim. The model develops results using a seriatim re-pricing calculation of the claims data within the Access database based on the New York State (NYS) prescription drug plan designs and calibrated to actual NYS allowed charges. The methodology for calculating the EGWP revenue was updated in order to reflect law changes that result in higher revenue amounts which are not evident in historic paid revenue.
- In the case of Medical Program claims, adjusting claims for the impact of credits (primarily claims paid outside the claim system) and Basic Medical network access fees;
- Increasing the claim costs for administrative expenses and risk charges;
- Increasing the claim costs for New York State indigent care and Graduate Medical Education (GME) surcharges;
- Lowering the drug claim costs for manufacturer rebates; and
- Trending the results 15 months to FY2021

Using the aging factors, we adjusted the resulting costs to age 65 for valuation purposes. Drug costs for non-Medicare and Medicare eligibles were blended for age adjustment to keep values consistent.

Models are used to estimate underlying per capita medical and prescription drug claim costs, and EGWP revenues, subsequently utilized as assumption inputs for valuation models used to develop the liabilities for the FY2021 and future valuations. The Aon consulting team leveraged expertise of Health experts within Aon as it relates to reviewing the models used for development of the per capita claims costs and EGWP revenues.

Exhibit 3-1 Development of Empire Plan Retiree Gross Per Capita Plan Cost
States -- 4/1/2020 - 3/31/2021

Step				Non-Medicare	Medicare	Total
1.	**2019 Claims Incurred**		Hospital	$311,385,612	$80,893,087	$392,278,699
	Before Adjustments		Medical	273,128,602	101,634,114	374,762,715
			MH/SA	16,013,240	1,939,751	17,952,991
			Total Medical	$600,527,453	$184,466,952	$784,994,406
			Rx	174,977,964	684,730,553	859,708,517
			Total Medical & Rx	$775,505,418	$869,197,505	$1,644,702,923
2.	**Basic Medical Fee**		Medical	$2,282,962	$0	$2,282,962
3.	**2019 Claims Incurred**		Hospital	$311,385,612	$80,893,087	$392,278,699
	After Adjustments		Medical	275,411,563	101,634,114	377,045,677
	Step 1. + Step 2. (Medical Only)		MH/SA	16,013,240	1,939,751	17,952,991
			Total Medical	$602,810,415	$184,466,952	$787,277,367
			Rx	174,977,964	684,730,553	859,708,517
			Total Medical & Rx	$777,788,379	$869,197,505	$1,646,985,885
4.	**2019 Average**		Hospital	47,333	149,312	196,645
	Adult Members Enrolled		Medical	46,250	149,215	195,465
			MH/SA	47,103	142,806	189,909
			Rx	47,233	148,408	195,641
5.	**2019 Claims PMPM**		Hospital	$ 548.22	$ 45.15	$ 166.24
	Step 3. / Step 4.		Medical	496.24	56.76	160.75
			MH/SA	28.33	1.13	7.88
			Total Medical	$ 1,072.79	$ 103.04	$ 334.86
			Rx	308.71	384.49	366.19
			Total Medical & Rx	$ 1,381.50	$ 487.53	$ 701.06
6.		Annual Trend[1]				
	4/1/2020 - 3/31/2021	6.40% 6.40%	Hospital	$ 592.42	$ 48.79	$ 179.64
	PMPM	5.50% 5.50%	Medical	530.59	60.69	171.87
	Step 5. x (1 + 15 Mos. Trend)	10.90% 10.90%	MH/SA	32.24	1.29	8.96
	Converts experience period		Total Medical	$ 1,155.25	$ 110.77	$ 360.48
	per capita to valuation year 1	7.00% 7.00%	Rx	335.95	418.42	398.51
			Total Medical & Rx	$ 1,491.21	$ 529.19	$ 758.99
7.		Adjustment %				
	4/1/2020 - 3/31/2021	0.00% 0.00%	Hospital	$592.42	$48.79	$179.64
	PMPM After Plan Changes	0.07% 0.07%	Medical	$530.97	$60.73	172.00
	Step 6. x (1 + Plan Change)	0.00% 0.00%	MH/SA	32.24	1.29	8.96
			Total Medical	$1,155.63	$110.81	$360.61
		0.00% 0.00%	Rx	335.95	418.42	398.51
			Total Medical & Rx	$1,491.59	$529.23	$759.12
8.	**Retention** [2]		Hospital	$6.02	$9.61	$8.75
			Medical	13.74	21.95	20.01
			MH/SA	1.01	1.61	1.46
			Total Medical	$20.77	$33.18	$30.22
			Rx	1.23	4.29	3.55
			Total Medical & Rx	$22.00	$37.47	$33.77
9.	**Indigent Care Surcharge** [2]		Hospital	$30.13	$0.00	$7.25
			Medical	2.97	0.00	0.70
			MH/SA	0.48	0.00	0.12
			Total Medical	$33.58	$0.00	$8.07
			Rx	0.00	0.00	0.00
			Total Medical & Rx	$33.58	$0.00	$8.07
10.	**Graduate Medical**		Hospital	$5.72	$0.00	$1.38
	Expense Assessment [2]		Medical	0.00	0.00	0.00
			MH/SA	0.00	0.00	0.00
			Total Medical	$5.72	$0.00	$1.38
			Rx	0.00	0.00	0.00
			Total Medical & Rx	$5.72	$0.00	$1.38
11.	**Rx Rebates** [2]		Rx	($76.45)	($112.80)	($104.02)

[1] Based on "Review of 2021 Empire Plan Rate Renewal for New York State Health Insurance Program (NYSHIP)" report dated 9/30/2020

[2] Based on projected figures for 2020 and 2021

Exhibit 3-1 Development of Empire Plan Retiree Gross Per Capita Plan Cost
4/1/2020 – 3/31/2021 NYS

				Non-Medicare	Medicare	Total
12.	**4/1/2020 - 3/31/2021 Gross**		Hospital	$634.30	$58.40	$197.02
	Cost PMPM		Medical	547.68	82.68	192.71
	Before Civil Service Admin		MH/SA	33.73	2.90	10.55
	Sum of Steps 7. - 11.		Total Medical	$1,215.70	$143.99	$400.28
			Rx	260.73	309.91	298.04
			Total Medical & Rx	$1,476.43	$453.90	$698.32
13.	**Civil Service Admin Fee**		Total Medical	($0.01)	($0.01)	($0.01)
14.	**4/1/2020 - 3/31/2021 Gross**	*Step 12. + Step 13.*	Total Medical	$1,215.69	$143.97	$400.26
	Cost PMPM		Rx	260.73	309.91	298.04
	After Civil Service Admin		Total Medical & Rx	$1,476.42	$453.89	$698.30
15.	**Aging Factor (to age 65) - medical**					
	Medical			0.82051	1.27693	
	Rx - applied on combined basis					1.16317
16.	**4/1/2020 - 3/31/2021 Gross**	*Step 14. / Step 15.*	Total Medical	$1,481.63	$112.75	
	Cost PMPM @ age 65		Rx			$256.23

				Non-Medicare	Medicare
17.	**@ Age 65**		Total Medical	$17,780	$1,353
	PMPY Before EGWP Revenue		Rx	3,075	3,075
	Step 16. x 12 Months		Total Medical & Rx	$20,855	$4,428
			% Drug	15%	69%
18.	**EGWP Revenue @ Average Age**				
	Medicare Only		Direct Subsidy		($72)
			Coverage Gap		(780)
			Catastrophic		(868)
			Total EGWP Revenue		($1,721)
19.	**Aging Factor**	*Step 18. / Aging Factor*			1.28475
	EGWP @ Age 65	*Medicare Only*			($1,339)
20.	**@ Age 65**		Total Medical	$17,780	$1,353
	For Valuation (PMPY)		Rx	3,075	1,736
	Step 17. + Step 19.		Total Medical & Rx	$20,855	$3,089
	Medicare Rx Only		% Drug	15%	56%

Exhibit 3-2 Empire Plan Changes effective 1/1/2020

	Effective 1-1-20	Prior to 1-1-20
In-Network Out-of-Pocket Limit	$8,150/$16,300	$7,900/$15,800
Hospital, Medical/Surgical and Mental Health/Substance Abuse	$5,300/$10,600	$5,150/$10,300
Prescription Drugs	$2,850/$5,700	$2,750/$5,500

2020 Empire Plan Advanced Flexible Formulary Drug List – The 2020 Advanced Flexible Formulary lists the most commonly prescribed generic and brand-name drugs along with any newly excluded drugs with formulary alternatives.

Hospice Care Coverage – Effective July 1, 2019, enrollees are eligible for hospice care if the doctor and hospice medical director certify that the covered patient is terminally ill and likely has less than 12 months to live.

HPV Vaccine Coverage – Effective October 1, 2019, enrollees age nine through 45 are covered for the human papillomavirus (HPV) 9 immunization at no cost when the vaccine is received from a participating provider. Other forms of HPV vaccines continue to be covered through age 26.

Infertility Benefits – Effective January 1, 2020, Empire Plan infertility benefits will cover enrollees for a minimum of three in virto fertilization (IVF) cycles per lifetime. Additionally, standard fertility preservation services are covered when a medical treatment, such as treatment for cancer (radiation therapy or chemotherapy), will directly or indirectly lead to infertility.

PrEP HIV-Prevention Medication Coverage –Effective January 1, 2020, HIV-prevention medication for Pre-Exposure Prophylaxis (PrEP) will be covered with no copayment, deductible or any other out-of-pocket costs for enrollees who do not have HIV but are at high risk of acquiring it. Screening for HIV continues to be covered with no out-of-pocket costs when using a network provider.

Modified Solid Food Products Coverage – Effective January 1, 2020, modified solid food products (MSFPs) are no longer subject to a $2,500 total maximum reimbursement per covered person, per year. Modified solid food products are covered when prescribed by a physician or provider. This benefit is not subject to deductible or coinsurance

Section 4 – Health Care Trend

The Health Care Cost Trend assumption is used to project the current year per capita plan costs, premium rates, and Medicare Part B premiums into the future. These costs are applied to the surviving covered population to determine the stream of future payments.

Increases in medical costs can be volatile, as a result, this assumption is subject to wide variation and there can be a wide range of acceptable assumptions. In addition, our experience has shown that past cost increases are not necessarily indicative of future cost increases. Therefore, judgment is required in developing this assumption.

Based on a detailed analysis of the trend assumption, which considered the Actuarial Standard of Practice No. 6 (ASOP #6) - *Measuring Retiree Group Benefit Obligations*, research published by the Society of Actuaries entitled *Modeling Long Term Healthcare Cost Trends*, and other publications by actuaries and health care professionals regarding short-term medical cost increases and expected long-term health care spending, we believe that an appropriate trend assumption for valuing retiree health care liabilities should:

- Consider separate short-term trend rates for major cost components such as medical and prescription drug services;
- Be based primarily on the "core" trend components - medical inflation, utilization, and intensity of services, and exclude the impact of the aging of the covered population;
- Include short-term rates established with an emphasis towards the influences of the health care marketplace as a whole, while also considering the cost characteristics of the plan;
- Assume that over the long-term, health care costs ultimately will be constrained by the public's ability and willingness to pay the higher cost of medical services; and
- Reflect the effect of future technology improvements on the long-term health care costs.

A typical retiree medical valuation uses health care trend rates that initially reflect recent experience in conjunction with the overall health care marketplace. Estimated marketplace trends are developed using a consistent series of market-wide data including: S&P Healthcare Economic Index, Carrier Surveys, CMS National Health Expenditures, Client Experience Monitoring Reports, CMS Trustees Report, Healthcare Components of CPI-W, and Pharmacy Benefit Manager Trend Reports. A separate trend assumption has been added to estimate the growth in expected EGWP revenue.

Initial trend rates are then assumed to grade down to an ultimate level that implies the National Health Expenditure (NHE) stabilizes as a percentage of Gross Domestic Product (GDP). In other words, the ultimate trend rate is equal to price inflation plus real GDP growth plus any allowances for leveraging of plan design variables, Medicare integration, and other cost drivers. The length of the select period — the period of time before the ultimate trend rate is reached — and the trend rate pattern during the select period have been developed by taking into account reasonable expectations for the ultimate portion of GDP consumed by the Health Care sector.

Section 5 – Demographic Assumptions

Demographic assumptions are rates of mortality, disability, withdrawal, and retirement. With the exception of SUNY Campus employees, most State employees are covered by the ERS and, to a lesser extent, by the PFRS. We reviewed the demographic assumptions adopted for use by the New York State & Local Retirement System to value participants in ERS and PFRS and concluded that these assumptions generally form a reasonable basis for our valuation. These assumptions have been updated since the last valuation, reflecting a study of the experience from April 1, 2015 through March 31, 2020.

Note for PAs: *New York State applied mortality improvement by projecting the rates using Scale MP 2020 generationally for the mortality of current retirees. Each individual PA should determine the assumption about mortality improvement after consulting with their actuary.*

We did not examine the detailed experience underlying the development of those assumptions. The assumptions were based on the experience of ERS and PFRS as a whole, and do not reflect any potential differences in termination rates between State employees and employees of PAs and PEs. No adjustments were made for the possibility that an employee could terminate from the State but remain covered under ERS or PFRS with a different employer.

The New York State & Local Retirement System values ERS and PFRS beneficiaries using a separate mortality table. However, because the beneficiary population is not fully credible and because beneficiaries under a retirement plan can be other than the retiree's spouse, we did not use the beneficiary mortality table but rather used the retiree table.

At the request of SUNY, for the 2016 valuation, the plan performed a study of the withdrawal and retirement rates for the three SUNY hospitals. The hospitals proved to have significantly higher withdrawal rates than would have been expected based on the overall experience under the New York State & Local Retirement System, even after adjusting for the anticipated numbers of terminations due to death or disability. The overall number of terminations for each hospital was credible, although the various age and service cells were not necessarily credible on their own. Based on the separate data provided, but with consideration of the experience at the other hospitals and of NYS ERS rates used in 2016, the plan developed three separate withdrawal assumption tables. SUNY Hospital specific tables are included in Exhibit 2-3. We will continue using separate assumptions for these populations for the April 1, 2020 valuation.

Given the relative smaller number of SUNY hospital employees who terminated with age and service that would qualify them for retirement benefits, the plan has not developed a complete set of retirement rates for each of the three hospitals for each tier level. The rates developed combine Brooklyn Hospital and Stony Brook Hospital. The rates for Syracuse Hospital remain separate since they differ enough from the other hospitals

While some SUNY campus employees – primarily staff and not the professors – are in ERS, many are in the New York State Teachers' Retirement System (TRS), with the majority purchasing an annuity from TIAA-CREF. The plan completed an experience study of the withdrawal and retirement rates for SUNY Campus-ORP members who participate in TIAA/CREF and has developed separate tables for this population for the 2016 valuation. These group specific tables will be used for participants who are specifically noted as TIAA/CREF in the data. SUNY Campus employees who are not clearly identified as ERS, PFRS, or TIAA/CREF are assumed to follow blended assumptions, 48% ERS and 52% SUNY Campus-ORP.

Note for PAs: *The SUNY Hospital and SUNY Campus-ORP assumptions are based on the experience of these particular employers and are not likely to be representative of the experience of any other particular PA.*

Section 6 – Health Care Reform Considerations

The Patient Protection and Affordable Care Act (PPACA), was signed March 23, 2010, with further changes enacted by the Health Care and Education Reconciliation Act (HCERA), signed March 30, 2010. This report has discussed various assumptions that were modified based on considerations under health care reform legislation. This section discusses particular legislative changes that were reflected in our assumptions. We have not identified any other specific provision of healthcare reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will continue to monitor any potential impacts.

Expansion of Child Coverage to Age 26 — Health reform mandates that coverage be offered to any child, dependent or not, through age 26, consistent with coverage for any other dependent. New York State insurance law mandates coverage to age 29, but on a fully contributory basis. We have assumed that the impact of this increase is reflected in the underlying rates and the claims experience.

High Cost Plan Excise Tax — The Excise Tax was repealed for all plan years beginning after December 31,2019.

Section 7 – Qualifications

Aon has developed these recommended actuarial assumptions solely for the purpose of enabling New York State to value its obligation under GASB 75. Use of this report for any other purpose may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. No one may make any representations or warranties based on any statements or conclusions contained in this report without the written consent of Aon.

Our projections are based on plan provisions, premium, claim and enrollment data provided to us by the Department of Civil Service and the four Empire Plan insurers. In selecting the demographic assumptions, we relied upon analyses of historic experience and recommendations for assumptions under the New York State Employees Retirement System and the New York State Teachers' Retirement System prepared by the actuaries for those Systems, as well as census information provided to us by SUNY.

The recommendations in this report are a Statement of Actuarial Opinion, prepared by Wil Ocasio, Jessica Fenske, and Betsy Hanson. Mr. Ocasio is an Associate in the Society of Actuaries. Ms. Fenske is a Fellow of the Society of Actuaries. Ms. Hanson is a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. They collectively meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.