



Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve



Report on the Annual Valuation of the Mississippi Municipal Retirement Systems

Prepared as of June 30, 2022





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

December 11, 2022

Board of Trustees
Mississippi Municipal Retirement Systems
429 Mississippi Street
Jackson, MS 39201-1005

Ladies and Gentlemen:

Presented in this report are the results of the annual actuarial valuation covering the participation of 17 municipalities in the Mississippi Municipal Retirement Systems (MRS). MRS is a closed, defined benefit pension plan that was closed to new members beginning July 1, 1987. The purpose of the valuation is to measure the Systems' funding progress and to certify the employer contribution rates (millage rates) necessary for the period beginning October 1, 2023. The results may not be applicable for other purposes.

The date of the valuation was June 30, 2022.

The valuation was based upon data, furnished by the Executive Director and the PERS staff, concerning retired members along with pertinent financial information. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. The complete cooperation of the PERS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the presentation of certified millage rates on page 5 and the comments on page 7. The calculations of these millage rates are based on the funding policy which generates an ultimate asset reserve level equal to projected benefit payments.

Since the previous valuation, there have been no changes to assumptions but there were two changes made to the benefit provisions. The City of Tupelo granted a 1% ad-hoc benefit increase for members who were retired for at least one full fiscal year as of September 30, 2021 and the City of Meridian granted a 2% annual benefit increase for all retirees beginning in fiscal year 2022.

The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board. We have reviewed the actuarial methods, including the asset valuation method, and continue to believe they are appropriate for the purpose of determining employer contribution levels.



Board of Trustees
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In order to prepare the results in this report, we have utilized actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

This actuarial valuation was performed to determine the adequacy of statutory contributions to fund the plan. The asset values used to determine unfunded liabilities and funded ratios are not market values but less volatile market related values. A smoothing technique is applied to market values to determine the market related values. The unfunded liability amounts and funded ratios using the market value of assets would be different. The interest rate used for determining liabilities is based on the expected return on assets. Therefore, liability amounts in this report cannot be used to assess a settlement of the obligation.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the system, and on actuarial assumptions that are, in the aggregate, internally consistent and reasonably based on the actual experience of the System.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Edward J. Koebel'.

Edward J. Koebel, EA, FCA, MAAA
Chief Executive Officer

A handwritten signature in blue ink that reads 'Ben Mobley'.

Ben Mobley, ASA, FCA, MAAA
Consulting Actuary



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Section I - Summary of Principal Results

REPORT ON THE ANNUAL VALUATION OF THE MISSISSIPPI MUNICIPAL RETIREMENT SYSTEMS PREPARED AS OF JUNE 30, 2022

1. This report, prepared as of June 30, 2022, presents the results of the annual actuarial valuation of the 17 Systems. For convenience of reference, the principal aggregate results of the valuation and a comparison with the preceding year's results are summarized below. The current valuation reflects any amendments to the Systems effective through July 1, 2022. Please note that the Plan has only retired members remaining.

VALUATION DATE	June 30, 2022	June 30, 2021
Retirees		
Number	1,444	1,510
Annual allowances	\$ 29,977,629	\$ 30,845,547
Accrued Liability	\$ 265,490,137	\$ 274,425,982
Assets		
Market related actuarial value	\$ 136,245,810	\$ 140,258,345
Market value	\$ 131,677,650	\$ 159,572,184
Unfunded Accrued Liability	\$ 129,244,327	\$ 134,167,637

2. Rates of contribution payable by employers are given in Section III and comments on the valuation results are given in Section IV.



Section I - Summary of Principal Results

3. The current funding policy was adopted by the Board in February 2011. In this funding policy, an employer contribution rate, expressed as a millage rate tax applied to assessed property values, is established for each municipality that will generate an ultimate asset reserve level equal to a reasonable percentage (initially 100% - 150%) of the next year's projected benefit payment. At that point, employer contributions are set equal to the fiscal year's projected benefit payments (basically on a pay-as-you-go basis) and adjusted as necessary to maintain the assets at the established reserve level. This calculation is performed using projected cash flow analysis using the current market value of assets as of the valuation date, a 6.05% assumption on investment earnings and an assumption that assessed property values will remain level over time. The 6.05% assumption is 1.50% less than the assumption used by the Public Employees Retirement System of Mississippi (PERS). As MRS is closed to new members, we are assuming a more conservative assumption even though assets are commingled with PERS' assets. Schedule H of this report shows the projected cash flow of each municipality, including the certified millage rates, based on the funding policy.
4. Schedule A of this report presents the development of the actuarial value of assets.
5. Schedule B details the actuarial assumptions and methods employed. Since the previous valuation, there have been no assumption changes.
6. Schedule C details the summary of benefit and contribution provisions of the Plan. Since the previous valuation, the following changes were made to the benefit provisions:
 - The City of Tupelo granted a 1% ad-hoc benefit increase for members who were retired for at least one full fiscal year as of September 30, 2021.
 - The City of Meridian granted a 2% annual benefit increase for all retirees beginning in fiscal year 2022.
7. The table on the following page provides a ten-year history of some pertinent figures.



Section I - Summary of Principal Results

Mississippi Municipal Retirement Systems

Comparative Schedule

Valuation Date June 30	Active Members				Retired Lives				Valuation Results (\$ thousands)		
	Number	Payroll (\$ in thousands)	Average Salary	% increase from previous year	Number	Active/ Retired Ratio	Annual Benefits (\$ in thousands)	Benefits as % of Payroll	Accrued Liability	Valuation Assets	Unfunded Accrued Liability
2013	16	\$794	\$49,615	(7.9)%	1,941	.01	\$35,105.9	4,421.4%	\$349,588	\$153,241	\$196,347
2014	14	727	51,953	4.7	1,890	.01	34,723.5	4,776.3	340,385	157,970	182,415
2015	11	579	52,661	1.4	1,849	.01	34,478.4	5,954.8	341,525	162,616	178,909
2016	8	419	52,375	(0.5)	1,798	.00	34,088.4	8,135.7	330,663	159,160	171,503
2017	6	321	53,541	2.2	1,754	.00	33,751.5	10,514.5	321,747	157,674	164,073
2018	4	200	49,936	(6.7)	1,694	.00	32,997.7	16,498.9	307,456	154,749	152,707
2019	2	95	47,436	(5.0)	1,634	.00	32,423.3	34,129.8	296,006	147,671	148,335
2020	0	0	0	N/A	1,585	.00	31,819.4	N/A	286,436	140,731	145,705
2021	0	0	0	N/A	1,510	.00	30,845.5	N/A	274,426	140,258	134,168
2022	0	0	0	N/A	1,444	.00	29,977.6	N/A	265,490	136,246	129,244



Section II - Membership Data

Data regarding the membership of the Systems for use as a basis for the valuation were furnished by the PERS office. There are no more remaining active members in the closed System. However, there is still a total of 1,444 retirees, disability retirees and survivors collecting benefits from the System as of the valuation date. The following table summarizes the retirement membership of the system as of June 30, 2022 upon which the valuation was based. Detailed tabulations of the data are given in Schedule D.

Retired Lives

Employers	Retirement	Disability	Survivor	Total	Annual Benefit
Biloxi	33	5	35	73	\$1,930,662
Clarksdale	24	1	19	44	559,348
Clinton	27	0	4	31	900,373
Columbus	33	2	28	63	1,033,627
Greenville	31	0	27	58	815,931
Greenwood	25	0	19	44	652,187
Gulfport	38	7	27	72	1,670,945
Hattiesburg	87	5	42	134	3,280,588
Jackson	270	4	200	474	10,363,266
Laurel	40	1	24	65	894,257
McComb	10	1	7	18	267,963
Meridian	82	1	52	135	2,119,964
Natchez	20	3	14	37	576,221
Pascagoula	30	3	23	56	1,194,572
Tupelo	41	0	32	73	1,503,232
Vicksburg	25	2	30	57	2,017,062
Yazoo City	8	0	2	10	197,431
Total in MRS	824	35	585	1,444	\$29,977,629



Section III - Computed Employer Contribution Rates

**Mississippi Municipal Retirement Systems
Computed Employer Contribution Rates¹
As of June 30, 2022 for the 2024 Fiscal Year End**

Municipality	Certified Rate for Fiscal Year Ending 9/30/2023	Current Millage Rate for Fiscal Year Ending 9/30/2023	Calculated Rate for Fiscal Year Ending 9/30/2024	Certified Rate ² for Fiscal Year Ending 9/30/2024
Biloxi	1.71	1.71	1.73	1.73
Clarksdale	4.72	4.72	4.77	4.77
Clinton	0.35	0.35	0.84	0.84
Columbus	5.09	5.09	5.38	5.38
Greenville	1.89	1.89	2.21	2.21
Greenwood	2.62	3.00	2.76	2.76
Gulfport	0.91	1.23	0.82	0.82
Hattiesburg ³	2.03	2.03	2.78	2.53
Jackson ³	2.65	2.65	3.24	3.15
Laurel	1.18	2.60	1.37	1.37
McComb	1.05	1.40	1.43	1.43
Meridian	1.18	2.71	2.18	2.18
Natchez	2.26	2.26	1.65	1.65
Pascagoula	1.07	1.07	1.39	1.39
Tupelo	1.24	1.61	1.42	1.42
Vicksburg ³	2.25	2.25	2.91	2.75
Yazoo City	3.43	3.43	3.03	3.03

¹ Millage rates applied to assessed property

² Calculated using cash flow projections and 6.05% investment return assumption (see Schedule H)

³ The certified rate for the 2024 fiscal year for Hattiesburg, Jackson and Vicksburg is limited to the ½ millage increase limit per plan statutes

The Systems are funded through taxes levied on assessed properties located in the Municipalities.



Section III - Computed Employer Contribution Rates

Since the millage rates are developed assuming 0% annual growth in assessed property values in the future, the following table provides the recent history of assessed values as a guide to the appropriateness of that assumption.

**Mississippi Municipal Retirement Systems
Total Assessed Property Values
Last Five Fiscal Years**

Municipality	2017	2018	2019	2020	2021	Average % Increase
Biloxi	\$592,181,786	\$579,988,410	\$585,246,074	\$593,305,051	\$639,344,542	1.9%
Clarksdale	83,414,667	84,564,374	83,760,178	82,849,209	84,031,457	0.2
Clinton	207,772,348	215,682,895	216,824,192	215,400,746	219,766,379	1.4
Columbus	208,552,785	203,048,379	207,384,299	207,520,472	212,207,682	0.4
Greenville	193,778,841	198,137,988	201,216,099	205,375,459	203,364,186	1.2
Greenwood	113,719,820	115,001,002	115,862,323	106,864,240	108,802,717	(1.1)
Gulfport	749,196,904	761,757,224	805,811,344	816,814,675	842,676,090	3.0
Hattiesburg	470,026,110	467,912,761	473,044,936	482,280,326	493,705,826	1.2
Jackson	1,201,390,327	1,207,182,951	1,252,499,510	1,251,727,960	1,240,883,060	0.8
Laurel	180,736,668	182,758,430	188,151,450	197,898,826	209,600,233	3.8
McComb	102,003,113	102,851,829	106,190,926	102,885,698	104,961,127	0.7
Meridian	341,865,756	347,111,909	355,154,627	365,967,586	356,225,680	1.0
Natchez	153,395,477	128,903,757	124,775,441	133,225,319	199,737,420	6.8
Pascagoula	235,913,098	245,159,735	228,725,988	227,131,210	244,627,789	0.9
Tupelo	497,231,537	505,969,659	520,896,796	545,794,918	557,017,501	2.9
Vicksburg	327,183,714	322,506,308	288,172,230	308,408,615	310,753,836	(1.3)
Yazoo City	49,268,781	52,021,220	54,792,825	55,250,160	54,418,371	2.5



Section IV - Comments on Valuation

1. Based on the Board's funding policy, the millage rates established by the municipalities must be set at a level which will ensure actuarial soundness of the Systems. As can be seen from the table on page 5, the current millage rate for the fiscal year ending September 30, 2023 for ten of the municipalities is less than the certified rate for the fiscal year ending September 30, 2024 under the funding policy. **Therefore, Biloxi, Clarksdale, Clinton, Columbus, Greenville, Hattiesburg, Jackson, McComb, Pascagoula, and Vicksburg need to increase their millage rate to the certified millage rate for the fiscal year ending September 30, 2024.**
2. As shown in the analysis of experience on pages 30 and 31, the System had an actuarial gain for the year. The gain was primarily due to the investment return on the assets for the year being more than expected. There were additional gains due to more deaths than expected for the year.
3. From 2020 to 2021, the value of assessed property increased for thirteen and decreased for four of the seventeen municipalities. Under the funding policy, the value of assessed property is assumed to remain level. In general, if assessed property values grow, it contributes to a decrease in the millage rate.



Section V - Supplemental Disclosure Information

1. The following supplemental disclosure information is provided for informational purposes only. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED PARTICIPANTS
AS OF JUNE 30, 2022**

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	1,444
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	0
Inactive Participants	0
Active Participants	<u>0</u>
Total	1,444



Section V - Supplemental Disclosure Information

2. The actuarial accrued liability is as follows:

ACTUARIAL ACCRUED LIABILITY

Municipality	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio
Biloxi	\$20,175,090	\$8,381,441	\$11,793,649	41.54%
Clarksdale	4,755,478	998,881	3,756,597	21.00%
Clinton	9,959,756	8,922,656	1,037,100	89.59%
Columbus	8,572,667	1,318,908	7,253,759	15.39%
Greenville	6,767,722	2,435,327	4,332,395	35.98%
Greenwood	5,412,456	2,478,312	2,934,144	45.79%
Gulfport	16,221,349	8,651,128	7,570,221	53.33%
Hattiesburg	32,274,593	18,370,285	13,904,308	56.92%
Jackson	84,607,867	45,673,081	38,934,786	53.98%
Laurel	7,982,793	4,843,838	3,138,955	60.68%
McComb	2,423,045	890,012	1,533,033	36.73%
Meridian	19,707,195	11,585,469	8,121,726	58.79%
Natchez	5,061,889	1,509,052	3,552,837	29.81%
Pascagoula	9,986,854	6,927,641	3,059,213	69.37%
Tupelo	12,471,061	4,563,703	7,907,358	36.59%
Vicksburg	17,326,349	8,444,049	8,882,300	48.74%
Yazoo City	1,783,973	252,027	1,531,946	14.13%
Totals	\$265,490,137	\$136,245,810	\$129,244,327	51.32%

During the year ended June 30, 2022, the Systems experienced a net decrease of \$8,935,845 in the actuarial accrued liability.



Section V - Supplemental Disclosure Information

3. Another such item is the schedule of funding progress as shown below. As can be seen in column 3 of the table below, the funded ratio has begun to slowly improve in recent years. As this is a closed plan, the funded ratio should continue to increase to 100% when all the cities reach a pay-as-you-go status.

SCHEDULE OF FUNDING PROGRESS (\$ Thousands)

Plan Year Ended	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2) – (1)	(5) Annual Covered Payroll	(6) Unfunded AAL as a Percentage of Covered Payroll (4)/(5)
06/30/13	\$153,241	\$349,588	43.8%	\$196,347	\$794	24,728.8%
06/30/14	157,970	340,385	46.4	182,415	727	25,091.5
06/30/15	162,616	341,525	47.6	178,909	579	30,899.7
06/30/16	159,160	330,663	48.1	171,503	419	40,931.5
06/30/17	157,674	321,747	49.0	164,073	321	51,113.1
06/30/18	154,749	307,457	50.3	152,707	200	76,354.0
06/30/19	147,671	296,006	49.9	148,335	95	156,142.1
06/30/20	140,731	286,436	49.1	145,705	N/A	N/A
06/30/21	140,258	274,426	51.1	134,168	N/A	N/A
06/30/22	136,246	265,490	51.3	129,244	N/A	N/A

Numbers shown above reflect all changes in benefit provisions, actuarial assumptions, and/or actuarial methods, if any.



Section V - Supplemental Disclosure Information

History of Funding Progress

Municipality	Actuarial Value of Assets as Percentage of AAL									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Biloxi	38.18%	39.49%	39.55%	40.41%	41.27%	44.17%	44.50%	42.30%	40.53%	41.54%
Clarksdale	23.82	23.18	26.51	27.32	26.80	26.10	22.74	20.74	20.67	21.00
Clinton	74.38	79.09	82.74	84.38	87.19	87.20	87.00	87.03	88.91	89.59
Columbus	11.29	13.10	10.54	9.82	9.49	9.76	10.09	11.35	13.52	15.39
Greenville	34.11	36.12	36.64	35.56	35.41	34.58	34.19	32.93	36.11	35.98
Greenwood	35.05	36.61	38.27	39.47	40.56	41.40	41.18	40.60	44.29	45.79
Gulfport	45.03	46.99	47.63	47.01	47.60	48.56	49.64	46.86	43.86	53.33
Hattiesburg	53.82	56.90	58.53	58.29	58.68	59.86	58.67	58.27	60.15	56.92
Jackson	48.35	50.83	51.49	50.95	51.24	52.25	51.17	49.89	52.98	53.98
Laurel	29.51	33.03	36.20	40.17	40.07	43.23	45.54	48.56	58.44	60.68
McComb	25.52	24.99	25.49	25.94	27.40	30.28	31.83	32.85	42.60	36.73
Meridian	33.90	38.17	42.40	48.51	55.76	59.84	62.08	61.95	65.46	58.79
Natchez	30.03	30.21	29.61	30.24	29.45	27.79	30.54	29.98	30.87	29.81
Pascagoula	52.53	57.57	59.64	60.57	62.75	66.07	67.89	68.11	68.31	69.37
Tupelo	42.51	44.96	44.31	43.82	43.26	42.41	39.79	37.49	37.82	36.59
Vicksburg	49.26	52.08	53.82	53.77	53.02	53.64	49.63	50.22	50.84	48.74
Yazoo City	21.96	16.66	20.20	18.42	17.25	19.12	17.49	16.95	10.04	14.13



Section V - Supplemental Disclosure Information

4. In determining the Actuarially Determined Employer Contribution (ADEC) for GASB purposes, the contribution is based on the anticipated employer contributions as calculated using the current funding policy. The ADEC for the plan year ending June 30, 2022 was determined in the 2020 valuation and is the contribution amount for each municipality shown in Schedule H of the 2020 valuation report.

Contributions Required and Contributions Made

Municipality	Actuarially Determined Employer Contribution	Actual 2021 – 2022 Contribution*	Percentage Contributed
Biloxi	\$1,090,021	\$1,338,542	122.8%
Clarksdale	445,814	423,001	94.9
Clinton	197,310	22,033	11.2
Columbus	1,133,874	1,069,998	94.4
Greenville	518,634	526,664	101.5
Greenwood	381,187	346,097	90.8
Gulfport	888,407	2,456,793	276.5
Hattiesburg	1,349,361	137,686	10.2
Jackson	4,756,367	5,006,437	105.3
Laurel	506,127	547,149	108.1
McComb	208,400	27,312	13.1
Meridian	760,031	848,092	111.6
Natchez	408,016	305,760	74.9
Pascagoula	339,658	405,168	119.3
Tupelo	807,390	884,001	109.5
Vicksburg	865,958	825,329	95.3
Yazoo City	169,310	256,127	151.3
Total	\$ 14,825,865	\$ 15,426,189	104.0%

* Net of administrative expenses.



Section V - Supplemental Disclosure Information

Schedule of Employer Contributions*

Fiscal Year 10/1-9/30	Valuation date	Actuarially Determined Employer Contribution	Percentage Contributed
2013-14	6/30/2013	\$19,343,836	105.4%
2014-15	6/30/2014	18,337,572	105.5
2015-16	6/30/2015	18,034,182	102.8
2016-17	6/30/2016	17,693,519	100.2
2017-18	6/30/2017	17,393,028	101.2
2018-19	6/30/2018	16,694,899	102.5
2019-20	6/30/2019	16,777,608	99.0
2020-21	6/30/2020	17,118,242	87.1
2021-22	6/30/2020	14,825,865	104.0
2022-23	6/30/2021	12,191,674	N/A
2023-24	6/30/2022	13,053,670	N/A

* Methodology for ADEC determination was changed to match cash flow projections that calculate the certified millage rates beginning with the fiscal year ending in 2022.



Section V - Supplemental Disclosure Information

Schedule of Active Member Valuation Data

Valuation Date	Number of Employers	Number	Annual Payroll	Active Members	
				Annual Average Pay	% Increase in Average Pay
6/30/13	17	16	\$793,841	\$49,615	(7.9)%
6/30/14	17	14	727,347	51,953	4.7
6/30/15	17	11	579,267	52,661	1.4
6/30/16	17	8	419,000	52,375	(0.5)
6/30/17	17	6	321,243	53,541	2.2
6/30/18	17	4	199,742	49,936	(6.7)
6/30/19	17	2	94,871	47,436	(5.0)
6/30/20	17	0	0	0	N/A
6/30/21	17	0	0	0	N/A
6/30/22	17	0	0	0	N/A

Schedule of Retirants Added to and Removed From Rolls Last Ten Fiscal Years

Item	Fiscal Year Ended September 30									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Beginning of Year	1,978	1,941	1,890	1,849	1,798	1,754	1,694	1,634	1,585	1,510
Added	40	29	40	46	34	36	37	34	34	31
Removed	(77)	(80)	(81)	(97)	(78)	(96)	(97)	(83)	(109)	(97)
End of Year	1,941	1,890	1,849	1,798	1,754	1,694	1,634	1,585	1,510	1,444

*See Schedule D for a breakdown by type of retirement.



Section V - Supplemental Disclosure Information

Schedule of Benefit Payments Added to and Removed From Rolls Last Six Fiscal Years

Year Ending	2017	2018	2019	2020	2021	2022
Beginning of Year	\$34,088,404	\$33,751,528	\$32,997,690	\$32,423,308	\$31,819,367	\$30,845,547
Added	712,490	674,428	736,820	654,407	633,039	613,357
Removed	(1,174,872)	(1,530,600)	(1,441,224)	(1,386,860)	(1,724,751)	(1,612,065)
Benefit increase due to annual COLA	125,506	102,334	130,022	128,512	117,892	130,790
Benefit increase due to plan amendments	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
End of Year	\$33,751,528	\$32,997,690	\$32,423,308	\$31,819,367	\$30,845,547	\$29,977,629



Section VI – Risk Assessment

Measuring pension obligations and actuarially determined contributions requires the use of assumptions regarding future economic and demographic experience. Whenever assumptions are made about future events, there is risk that actual experience will differ from expected. Actuarial valuations include the risk that actual future measurements will deviate from expected future measurements due to actual experience that is different than the actuarial assumptions. The primary areas of risk in this actuarial valuation are.

- Investment Risk – the potential that actual investment returns will be different than expected.
- Longevity Risks – the potential that mortality will be different than expected.
- Contribution Risk – The potential that actual contributions are different than the actuarially determined contribution rates based on different assessed property rates

The table on the next page shows the sensitivity that the millage rates could have each year based on the risk measures listed above.



Section VI – Risk Assessment

Municipality	Baseline Millage Rate for Fiscal Year Ending 9/30/2024	Investment Risk (5.05% Returns) Millage Rate for Fiscal Year Ending 9/30/2024	Longevity Risk (10% Reduction in Mortality Rates) Millage Rate for Fiscal Year Ending 9/30/2024	Contribution Risk (Assessed Property Drops 5%) Millage Rate for Fiscal Year Ending 9/30/2024
Biloxi	1.73	1.81	1.80	1.82
Clarksdale	4.77	4.86	4.85	5.02
Clinton	0.84	1.10	0.91	0.89
Columbus	5.38	5.38	5.38	5.38
Greenville	2.21	2.28	2.28	2.33
Greenwood	2.76	2.89	2.88	2.91
Gulfport	0.82	0.88	0.85	0.86
Hattiesburg	2.78	3.00	2.90	2.94
Jackson	3.24	3.45	3.44	3.43
Laurel	1.37	1.50	1.46	1.44
McComb	1.43	1.48	1.47	1.51
Meridian	2.18	2.36	2.34	2.30
Natchez	1.65	1.70	1.70	1.73
Pascagoula	1.39	1.53	1.50	1.46
Tupelo	1.42	1.47	1.47	1.49
Vicksburg	2.91	3.07	3.10	3.08
Yazoo City	3.03	3.07	3.05	3.18



Schedule A - Development of Actuarial Value of Assets

	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025	6/30/2026
A. Actuarial Value Beginning of Year	\$140,731,034	\$140,258,345				
B. Market Value End of Year	159,572,184	131,677,650				
C. Market Value Beginning of Year	136,780,881	159,572,184				
D. Cash Flow						
D1. Contributions	14,906,920	15,741,008				
D2. Other Revenue	0	0				
D3. Benefit Payments	(31,335,975)	(30,509,021)				
D4. Administrative Expenses	(298,991)	(314,820)				
D5. Net	(16,728,046)	(15,082,833)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	39,519,349	(12,811,701)				
E2. Assumed Rate	7.75%	7.55%				
E3. Amount for Immediate Recognition	9,952,306	11,478,323				
E4. Amount for Phased-In Recognition	29,567,043	(24,290,024)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	5,913,409	(4,858,005)	0	0	0	0
F2. First Prior Year	(1,338,564)	5,913,409	(4,858,005)	0	0	0
F3. Second Prior Year	(199,247)	(1,338,564)	5,913,409	(4,858,005)	0	0
F4. Third Prior Year	74,382	(199,247)	(1,338,564)	5,913,409	(4,858,005)	0
F5. Fourth Prior Year	<u>1,853,071</u>	<u>74,382</u>	<u>(199,247)</u>	<u>(1,338,564)</u>	<u>5,913,409</u>	<u>(4,858,005)</u>
F6. Total Recognized Investment Gain	6,303,051	(408,025)	(482,407)	(283,160)	1,055,404	(4,858,005)
G. Adjustment:	0	0				
H. Actuarial Value End of Year:						
A.+D5.+E3.+F6.+G.	\$140,258,345	\$136,245,810				
I. Difference Between Market & Actuarial Values	19,313,839	(4,568,160)	(4,085,753)	(3,802,593)	(4,857,997)	8

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.



Schedule B - Statement of Actuarial Assumptions and Methods

The assumptions and methods used in the valuation are based on the results of the experience investigation for the four-year period ending June 30, 2020, dated April 20, 2021, and adopted by the Board in August 2021.

INTEREST RATE: 7.55% per annum, compounded annually (net after investment expenses) for liabilities.

6.05% per annum, compounded annually (net after investment expenses) for employer contribution rate determination.

PRICE INFLATION: 2.40% per annum, compounded annually.

ASSET VALUATION METHOD: Actuarial value, as developed in Schedule A. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected market value. Actuarial assets were allocated to individual cities in the same proportion that their market value of assets was to the total market value of assets for all cities.



Schedule B - Statement of Actuarial Assumptions and Methods

DEATH AFTER RETIREMENT:

Service Retirees*

<u>Membership Table</u>	<u>Adjustment to Rates</u>	<u>Projection Scale</u>
PubS.H-2010(B) Retiree	Male: 95% up to age 60, 110% for ages 61 to 75, and 101% for ages above 77 Female: 84% up to age 72, 100% for ages above 76	MP-2020

Contingent Annuitants*

<u>Membership Table</u>	<u>Adjustment to Rates</u>	<u>Projection Scale</u>
PubS.H-2010(B) Contingent Annuitant	Male: 97% for all ages Female: 110% for all ages	MP-2020

Disabled Retirees*

<u>Membership Table</u>	<u>Adjustment to Rates</u>	<u>Projection Scale</u>
PubG.H-2010 Disabled	Male: 134% for all ages Female: 121% for all ages	MP-2020

* Please note that none of the recommended tables have any setbacks or setforwards.

Representative values of the assumed rates of death after retirement are as follows:

AGE	Rates of Death After Retirement*					
	Service Retirees		Contingent Annuitants		Disabled Retirees	
	Male	Female	Male	Female	Male	Female
45	0.2983%	0.0983%	0.7692%	0.5104%	1.4660%	1.1919%
50	0.4190%	0.1638%	0.8837%	0.6556%	2.2780%	1.7956%
55	0.5197%	0.2738%	1.0156%	0.7843%	2.9855%	2.1078%
60	0.7771%	0.4578%	1.2397%	1.0131%	3.6475%	2.4684%
65	1.3211%	0.7652%	1.6286%	1.4157%	4.5426%	2.9730%
70	2.1758%	1.2785%	2.4153%	1.9998%	5.8129%	3.8127%
75	3.8566%	2.3659%	3.7209%	3.0052%	7.6661%	5.2683%
80	6.2640%	4.2530%	5.7734%	4.7289%	10.8125%	7.7779%
85	11.0605%	7.3240%	9.2228%	7.8562%	15.7785%	11.9947%
90	17.6902%	12.6470%	14.6577%	13.4530%	22.7224%	17.5353%

*Adjusted Base Rates



Schedule C - Summary of Benefit Provisions Evaluated

The following summary presents the main provisions of the Systems in effect June 30, 2022, as interpreted in preparing the actuarial valuation. As used in the summary, “average compensation” means the average compensation of a member during the six month period prior to receipt of an allowance.

BENEFITS

Service Retirement

Condition for Retirement

A retirement allowance is payable to any member who retires and has completed at least 20 years of creditable service, regardless of age.

Any general employee member who has attained age 70 and any fireman or policeman who has attained age 65 shall be retired forthwith.

Amount of Allowance

The annual retirement allowance payable to a retired member is equal to:

1. 50% of average compensation, plus
2. 1.7% of average compensation for each year of credited service over 20.

The aggregate amount of (1) and (2) above shall not exceed 66-2/3% (87% for Clinton) of average compensation, regardless of service.

Disability Retirement

Condition for Retirement

A retirement allowance is payable to any member who is not eligible for a service retirement benefit but who becomes totally and permanently disabled, either physically or mentally, regardless of creditable service, if the disability is due to causes in the performance of duty. If the disability is not in the performance of duty, the member must have completed at least 5 years of creditable service to be eligible for retirement.



Schedule C - Summary of Benefit Provisions Evaluated

Amount of Allowance	<p>The annual disability retirement allowance payable is equal to 50% of his salary at the time of retirement, if the disability is due to causes in the performance of duty.</p> <p>If the disability is not in the performance of duty, the allowance is equal to 2.5% times credited service, not in excess of 20, times his salary at the time of retirement for firemen and policemen, and average compensation for general employees.</p>
Death Benefit	
Conditions for Benefit	<p>A benefit is payable upon the death of a member under the following conditions:</p> <ul style="list-style-type: none">(a) the member has retired,(b) the member is eligible to retire,(c) the death is in the line of duty, or(d) the death is not in the line of duty, but occurs after the member has 5 years of credited service. <p>The benefit is payable to the surviving spouse until remarriage and to children under age 18, to dependent children through age 23 when full time students, and to dependent children of any age if handicapped. For Clarksdale, Columbus, Gulfport, Hattiesburg, Jackson, McComb, Meridian, Vicksburg and Yazoo City, benefits payable to spouses do not cease upon remarriage.</p>
Amount of Benefit	<p>The annual benefit payable under all conditions in the case of firemen and policemen and under other than condition (c) in the case of general employees is equal to 2.5% of average compensation for each year of credited service up to 20 and 1.7% of average compensation for each year over 20, with a maximum benefit of 66-2/3% (87% for Clinton) of average compensation.</p> <p>For general employee members under condition (c), the annual benefit payable is equal to 50% of salary at the time of death.</p>
Return of Contributions	<p>Upon a member's termination of employment for any reason before retirement, his accumulated contributions are refunded. Upon the death of a member who is not eligible for any other death benefit, his accumulated contributions are paid to his beneficiary.</p>



Schedule C - Summary of Benefit Provisions Evaluated

Minimum Allowances

The minimum monthly allowance paid to members from the following municipalities, for all retirement and death benefits, are:

Biloxi:	\$600
Columbus:	\$500
Gulfport:	\$500
Hattiesburg:	\$750
Jackson:	\$500
Meridian:	\$600
Tupelo:	\$750
Vicksburg:	\$1,515

Post-Retirement Adjustments In Allowances

The allowances of certain retired members are adjusted annually by a cost-of-living adjustment (COLA) on the basis of the annual percentage change in each fiscal year of the Consumer Price Index.

Those adjustments are limited as follows:

Biloxi: 3% per year for each full fiscal year of retirement after June 30, 2000 for all retirees and beneficiaries with the COLA being compounded beginning with the state fiscal year in which the retired member turns age 55. This is in addition to the previously granted maximum of 3% per year (not to exceed 9%) for all members who retired on or before December 31, 1995.

Clarksdale: Maximum of 2-1/2% per year for all retirees and beneficiaries.

Clinton: Maximum of 2-1/2% per year (not to exceed 10%) for service retirements only.

Columbus: Maximum of 2-1/2% per year (not to exceed 25%) for all retirees and beneficiaries.

Greenville: Maximum of 2-1/2% per year (not to exceed 25%) for all retirees and beneficiaries.

Gulfport: Maximum of 3% per year (not to exceed 27%) for each fiscal year of retirement after June 30, 2002 for all retirees and beneficiaries. This is in addition to the previously granted COLA of 2% per year (not to exceed 6%) for those retired before July 1, 2001. All Gulfport retirees and beneficiaries who were receiving a retirement allowance as of June 30, 2002 were granted a monthly ad-hoc benefit increase of \$2 per month for each year of service plus \$2 per month for each full fiscal year retired.



Schedule C - Summary of Benefit Provisions Evaluated

Hattiesburg: 2-1/2% per year for all retirees and beneficiaries (not to exceed 32%).

Jackson: Maximum aggregate increase of 19.5% for service and disability retirements only.

Laurel: 2% per year, compounded annually (maximum of 3 years) for each fiscal year of retirement after June 30, 2002 for all retirees and beneficiaries. COLA increases begin at the later of age 60 or after one full fiscal year of retirement.

McComb: Maximum of 2-1/2% per year for all retirees and beneficiaries (not to exceed 10%).

Meridian: All retirees and beneficiaries who were receiving a retirement allowance as of June 30, 1999 were granted a 3.9% ad-hoc benefit increase. 2% per year for all retirees beginning in fiscal year 2022.

Pascagoula: Maximum of 2-1/2% per year for all retirees and beneficiaries (not to exceed 15%).

Tupelo: All retirees and beneficiaries received an increase of 5% in allowances effective December 1, 1991. Additional 3% ad-hoc benefit increases were granted to members who were retired for at least one full fiscal year as of September 30, 1995, as of September 30, 1997, as of September 30, 1998, and as of September 30, 2000. Furthermore, a 2% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 1999 and a 2.34% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2001. Furthermore, a 2% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2010. Furthermore, a 2% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2014. Furthermore, a 3% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2015. Furthermore, a 3% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2016. Furthermore, a 2% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2017. Furthermore, a 3% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2018. Furthermore, a 3% ad-hoc benefit



Schedule C - Summary of Benefit Provisions Evaluated

increase was granted to members who were retired for at least one full fiscal year as of September 30, 2019. Furthermore, a 1% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2020. Furthermore, a 1% ad-hoc benefit increase was granted to members who were retired for at least one full fiscal year as of September 30, 2021.

Vicksburg: 3% per year for all retirees and beneficiaries.

Yazoo City: Maximum of 2-1/2% per year (not to exceed 25%) for all retirees and beneficiaries.

Post-retirement adjustments are included in System liabilities for future increases for Biloxi, Clinton, Columbus, Greenville, Gulfport, Hattiesburg, Jackson, Laurel, McComb, Meridian, Pascagoula, Vicksburg, and Yazoo City.



Schedule D - Detailed Tabulations of Data

RECONCILIATION OF DATA RECEIVED FROM PERS

Reconciliation of Data received from PERS	Pensioner File			Total
	Retirees	Disableds	Survivors	
From PERS	868	38	629	1,535
Refunded				
Deceased	(46)	(3)	(44)	(93)
Retired				
Added	2			2
For Valuation	824	35	585	1,444

STATUS RECONCILIATION FROM 2021 TO 2022

	Retirees	Disability	Survivor	Total
As of June 30, 2021	870	38	602	1,510
Retirements				
Disabilities				
Death with Survivors	(25)	(1)	31	5
Deaths with no Survivors	(21)	(2)	(48)	(71)
Benefits Expired				
Data Corrections				
As of June 30, 2022	824	35	585	1,444



Schedule D - Detailed Tabulations of Data

Retirants & Beneficiaries as of June 30, 2022

Tabulated by Year of Retirement

Year of Retirement	No.	Annual Benefits excluding COLA	COLA	Total Annual Benefits	Average Monthly Benefit
2022	0	\$ 0	\$ 0	\$ 0	\$ 0
2021	0	0	0	0	0
2020	2	72,566	264	72,830	3,035
2019	3	96,451	3,545	99,996	2,778
2018	1	43,396	0	43,396	3,616
2017	2	76,266	4,514	80,780	3,366
2016	4	153,667	11,418	165,085	3,439
2015	1	25,335	0	25,335	2,111
2014	3	111,086	10,775	121,861	3,385
2013	9	364,151	54,306	418,457	3,875
2012	4	164,423	35,636	200,059	4,168
2011	0	0	0	0	0
2010	5	156,183	39,245	195,428	3,257
2009	3	79,418	6,048	85,466	2,374
2008	5	132,896	20,353	153,249	2,554
2007	7	224,464	67,526	291,990	3,476
2006	14	371,190	71,996	443,186	2,638
2005	27	708,241	138,081	846,322	2,612
2004	19	440,730	100,861	541,591	2,375
2003	30	785,707	201,320	987,027	2,742
2002	40	1,115,573	286,073	1,401,646	2,920
2001	23	658,626	146,953	805,579	2,919
2000	32	813,324	216,811	1,030,135	2,683
1999	34	815,989	194,438	1,010,427	2,477
1998	36	853,267	186,889	1,040,156	2,408
1997	49	1,070,972	200,803	1,271,775	2,163
1996	53	1,029,375	174,686	1,204,061	1,893
1995	96	1,662,914	269,154	1,932,068	1,677
1994	124	2,134,751	443,259	2,578,010	1,733
1993	87	1,464,510	312,299	1,776,809	1,702
1992	79	1,339,373	264,896	1,604,269	1,692
1991	69	1,168,602	199,717	1,368,319	1,653
1990	56	838,139	132,299	970,438	1,444
1989	40	554,147	127,929	682,076	1,421
1988 & Prior	487	5,217,965	1,311,838	6,529,803	1,117
Totals	1,444	\$ 24,743,697	\$ 5,233,932	\$ 29,977,629	\$ 1,730



Schedule D - Detailed Tabulations of Data

Schedule of Retired Members by Type of Benefit

Benefits Payable June 30, 2022

Amount of Monthly Benefit	Number of Rets.	Ret. Type 1*	Ret. Type 2*	Ret. Type 3*
\$1 - \$300	9	1	1	7
301 - 600	49	6	2	41
601 - 900	149	50	8	91
901 - 1,200	279	125	16	138
1,201 - 1,500	182	109	6	67
1,501 - 1,800	219	137	0	82
1,801 - 2,100	140	96	0	44
2,101 - 2,400	133	93	0	40
2,401 - 2,700	71	52	0	19
Over 2,700	213	155	2	56
Totals	1,444	824	35	585

*Type of Retirement

- 1 – Retirement for Age & Service
- 2 – Disability Retirement
- 3 – Survivor Payment



Schedule D - Detailed Tabulations of Data

Retirant and Beneficiary Information June 30, 2022

Tabulated by Attained Ages

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45								
45 – 49					1	22,130	1	22,130
50 – 54					3	65,313	3	65,313
55 – 59	6	218,500			2	45,050	8	263,550
60 – 64	32	931,427			23	449,444	55	1,380,871
65 – 69	73	2,046,081	2	23,706	45	893,094	120	2,962,881
70 – 74	260	6,468,063	10	145,911	94	1,941,598	364	8,555,572
75 – 79	199	4,426,055	6	87,300	130	2,239,544	335	6,752,899
80 – 84	122	2,662,952	11	126,037	146	2,632,040	279	5,421,029
85 – 89	95	1,783,174	4	48,830	92	1,418,638	191	3,250,642
90 – 94	33	606,504	1	6,376	43	600,117	77	1,212,997
95	2	25,403			1	5,064	3	30,467
96					2	13,746	2	13,746
97	1	2,826					1	2,826
98	1	11,248			1	6,402	2	17,650
99					1	7,500	1	7,500
100 & Over			1	10,777	1	6,779	2	17,556
Totals	824	\$19,182,233	35	\$448,937	585	\$10,346,459	1,444	\$29,977,629



Schedule E - Analysis of Financial Experience

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain/(loss) for the year ended June 30, 2022 is shown below.

		\$ Thousands
(1)	UAAL * as of beginning of year	\$ 134,167.6
(2)	Total normal cost from last valuation	0.0
(3)	Total contributions**	15,426.2
(4)	Interest accrual: $\{[(1) + (2)] \times .0755\} - [(3) \times .03706]$	<u>9,557.9</u>
(5)	Expected UAAL before changes: (1) + (2) – (3) + (4)	\$ 128,299.3
(6)	Change due to plan amendments	2,678.8
(7)	Change due to new actuarial assumptions or methods	<u>0.0</u>
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 130,978.1
(9)	Actual UAAL as of end of year	\$ 129,244.3
(10)	Gain/(loss): (8) – (9)	\$ 1,733.8

*Unfunded actuarial accrued liability.

**Net of administrative expenses.



Schedule E - Analysis of Financial Experience

Gains & Losses in Liabilities Resulting from Differences Between Assumed Experience & Actual Experience (\$ Thousands)

Type of Activity	\$ Gain (or Loss) For Year Ending 6/30/2022	\$ Gain (or Loss) For Year Ending 6/30/2021
Investment Income. If there is greater investment income than assumed, there is a gain. If less income, a loss.	1,039.8	5,984.8
Death After Retirement. If retirants live longer than assumed, there is a loss. If not as long, a gain.	1,013.3	3,928.4
Other. Miscellaneous gains and losses resulting from data adjustments, software programming, COLAs, etc.	<u>(319.3)</u>	<u>(5,183.7)</u>
Gain (or Loss) During Year From Financial Experience	\$1,733.8	\$4,729.5
Non-Recurring Items. Adjustments for plan amendments, assumption changes, or method changes.	<u>(2,678.8)</u>	<u>2,937.1</u>
Composite Gain (or Loss) During Year	\$(945.0)	\$7,666.6



Schedule F - Glossary

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as “accrued liability” or “past service liability”.

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future plan benefits” between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method”.

Actuarial Equivalent. A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost”. Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability”.

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on a market-related smoothing method.



Schedule G - The Nature of Actuarial Projections

Regular actuarial valuations measure the Retirement System's present financial position and contributions adequacy by calculating and financing the liabilities created by the present benefit program. This process involves discounting to present values the future benefit payments on behalf of present active and retired members and their survivors. However, valuations do not produce information regarding future changes in the makeup of the covered group or the amounts of benefits to be paid or investment income to be received – actuarial projections do.

Whereas valuations provide a snapshot of the retirement system as of a given date, projections provide a moving picture. Projected active and retired groups are developed from year to year by the application of assumptions regarding pre-retirement withdrawal from service, retirement, deaths and disabilities. Projected information regarding the retired life group leads to assumed future benefit payout. Combining future benefit payments with assumed contributions and expected investment earnings produces the net cash flow of the System each year, and thus end of year asset levels.

Projections are used for many purposes. Among them are (i) developing cash flow patterns for investment policy and asset mix consideration, (ii) exploring the effect of alternative assumptions about future experience, (iii) analyzing the impact on system funding progress of changes in the workforce, and (iv) examining the potential effect of changes in benefits on system financial activity.

Projection results are useful in demonstrating changing relationships among key elements affecting system financial activity. For example: how benefits payable and system assets will grow in future decades. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. For instance, cash flow projected to occur 10 years in the future will not be exact (except by coincidence), but understanding the changed relationships between future benefit payout and future investment income can be very useful.



Schedule H - Cash Flow Projections Based on Funding Policy
