

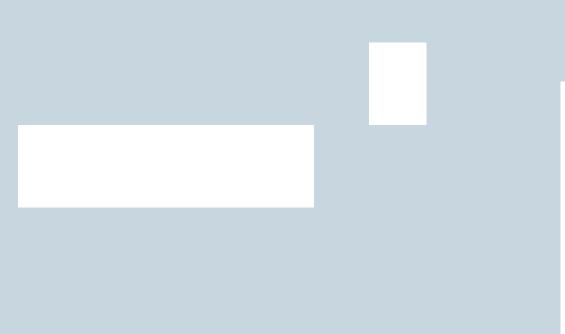
Agenda

- Key Observations
- Assumption Review
- Contribution Requirement
- GASB 68 Expense
- Appendix

Key Observations

- Plan experience from 5/1/2018 to 5/1/2019:
 - Asset performance was above expectations during 2018/2019 on a market value basis (7.7% return), BUT below expectations on an actuarial value basis (6.2% return) versus 7.0% assumed
 - Active headcount decreased 7.8%
 - Payroll decreased by 5.3%
- Required contribution for the 2019/2020 plan year is \$38.7M (11.7% of covered payroll) compared to \$37.0M (10.6% of covered payroll) for 2018/2019 plan year
 - Increase primarily due to a loss on smoothed value of assets
 - No assumption changes for the May 1, 2019 funding valuation
- GASB 68 expense for the 2019/2020 fiscal year of \$28.4M compared to \$39.5M for the 2018/2019 fiscal year
 - Decrease in expense due to impact of favorable asset return for the measurement period ending 4/30/2019 and change in mortality projection scale assumption

Economic Assumption Review



2019/2020 Financials Economic Assumptions – Valuation Interest Rate

- Funding valuation interest rate assumption is required to be the actuary's best estimate
 of the long-term expectations of plan asset returns.
 - Based primarily on the expected returns reflecting the plan's asset allocation on the valuation date and other relevant information
 - Funding valuation interest rate is 7% at May 1, 2019 and is also MHS's GASB accounting discount rate/EROA selected for the April 30, 2019 measurement date
- Expected returns developed based on the WTW April 2019 US Capital Market Assumptions Model:

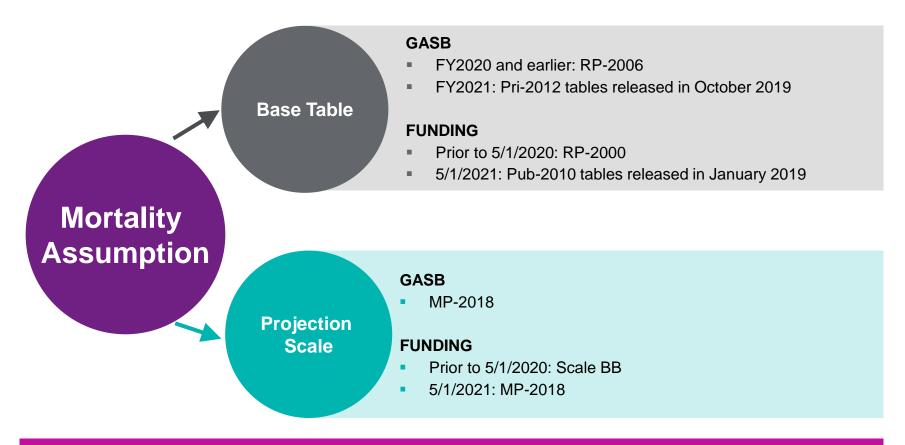
Expected gross returns are all over a 20-year period	Target	Actual at 4/30/2019
Equity/Fixed Income/Cash Allocation	65%/35%/0%	64.5%/34.5%/1%
Average return	6.7%	6.6%
25 th Percentile	5.5%	5.5%
Median (50 th Percentile)	6.7%	6.7%
75 th Percentile	7.8%	7.8%

Based on the target asset allocation and active asset management, we can support a valuation interest rate of 7.00% for the May 1, 2019 funding valuation

2020/2021 Projected Financials Economic Assumptions

- Funding valuation interest rate and GASB discount rate is 6.75%
 - To be used for plan year ending 4/30/2020 GASB 67 accounting, fiscal year ending 4/30/2021 GASB 68 accounting and 5/1/2020 funding valuation
 - Based on market conditions as of April 30, 2020
 - Supported by the median 10-year return from the March 31, 2020 expected return model provided by Marquette with addition of 25 basis points for an active management premium
- Salary increase assumption
 - "Indicated rates" from experience during the period from 5/1/2014 to 5/1/2019
 - Decrease in weighted average assumption from 4.0% to 3.3% using the indicated rates based on 5/1/2019 census date

2020/2021 Projected Financials Demographic Assumptions - Mortality



For funding, this assumption is prescribed by the Florida Statutes to be the mortality assumption used by the FRS in one of their two most recent valuations.

MHS has the option to use either base table for the 5/1/2020 valuation

2020/2021 Projected Financials Demographic Assumptions

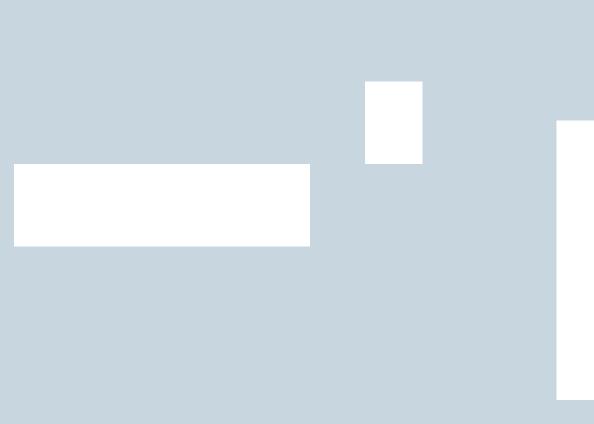
Retirement

- "Indicated rates" from experience during the period from 5/1/2014 to 5/1/2019
- Study indicates participants are retiring at later ages and at a 2% higher rate than expected under the current assumption

Termination

- "Indicated rates" from experience during the period from 5/1/2014 to 5/1/2019
- Study indicates participants are terminating at a 17% higher rate than expected under the current assumption

Contribution Requirement



2019/2020 Financials Contribution Requirements

	Contribution for the 2018/2019 Plan Year	Contribution for the 2019/2020 Plan Year	
	Actual	Projected ¹	Actual ²
Valuation Interest Rate	7.0%	7.0%	7.0%
Covered Payroll	\$ 348,296,381	\$ 330,432,000	\$ 330,008,128
a. Normal Cost (including expected expenses)	\$ 20,896,525	\$ 20,611,280	\$ 21,776,519
b. Amortization of Unfunded Actuarial Accrued Liability	13,723,507	14,865,000	14,412,967
c. Interest (a. + b.) x valuation interest rate	2,423,402	2,483,000	2,533,264
d. Total Contribution (a. + b. + c.)	\$ 37,043,434	\$ 37,959,000	\$ 38,722,750
% of Covered Payroll	10.6%	11.5%	11.7%

Determined using projected 5/1/2019 market value of assets of \$674.8M, 5/1/2018 data projected to 5/1/2019, and 5/1/2018 valuation assumptions

Determined using actual 5/1/2019 market value of assets of \$688.2M, 5/1/2019 data, and 5/1/2019 valuation assumptions (which are the same as 5/1/2018 assumptions)

2020/2021 Asset & Liability Projections – Funding

In \$ Thousands

	20	Actual 019/2020 lan Year	2	Projected 2020/2021 Plan Year ¹
Valuation Interest Rate		7.0%		6.75%
Market Value of Assets	\$	688,155	\$	684,700
Actuarial Value of Assets (AVA)	\$	681,014	\$	720,412
Actuarial Accrued Liability (AAL)	\$	752,046	\$	773,753
Unfunded AAL (AAL – AVA)	\$	71,032	\$	53,341
Funded % (AVA/AAL)		90.6%		93.1%

Asset values based on April 30, 2020 market value of \$684.7M provided by SBHD on May 6, 2020. Liability as of May 1, 2020 based on May 1, 2019 census data, adjusted to reflect the removal of 773 participants paid a lump sum during the 2019/2020 lump sum window, estimated 2019/2020 benefit payments of \$36.0M and new updated assumptions (valuation interest rate, salary scale and retirement and termination rates). Also, assumes mortality assumption is NOT updated to Pub-2010 for the May 1, 2020 valuation.

2020/2021 Contribution Projection

In \$ Thousands			Actual 119/2020 Ian Year	Projected 2020/2021 Plan Year		
Valuation Interest Rate		7.00%		6.75%		
Covered Payroll ¹		\$	330,008	\$	311,231	
a.	Normal Cost (incl. admin exp)	\$	21,777	\$	19,396	
b.	Amortization of Unfunded Actuarial Accrued Liability		14,413		13,829	
C.	Interest (a. + b.) x Val Int Rate		2,533		2,242	
d.	Total Contribution (a. + b. + c.)	\$	38,723	\$	35,467	
% (of Covered Payroll		11.7%		11.4%	

¹ Based on assumed projected payroll as of 5/1/2020 from our valuation system (based on 5/1/2019 data and application of assumptions to be used for 5/1/2020 valuation to that data in order to project it to 5/1/2020)

Projected contribution for 2020/2021 is lower than contribution for 2019/2020 due to a net gain resulting from the assumption changes.

It is assumed that SBHD will defer adoption of new prescribed mortality until 2021 (impact of deferring is a \$3.6M savings for 2020/2021 plan year).

GASB 68 Expense



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2019/2020 Financials GASB 68 Expense Background

- Liability and Normal Cost under GASB 68 are based on an actuarial cost method that differs from the one used for funding purposes
 - This results in a higher liability and lower normal cost for GASB 68 compared to funding results
- GASB 68 expense is based on a "one-year earlier Measurement Date"
 - Allows plan sponsors to determine their expense early in the fiscal year (versus not knowing it until after the year ends)
 - For example, results for the fiscal year ending 4/30/2020 are calculated as of 4/30/2019
- State required mortality assumption change that affects funding and state reporting does not impact GASB 67 reporting or GASB 68 expense

GASB 68 Reporting – Assets & Liabilities

In \$ Thousands

		Actual 4/30/2020	Projected ¹ for FYE 4/30/202		
Discount Rate/Assumed Asset Return		7.0%		6.75%	
Valuation Date	5.	/1/2018	5/1/2019		
Measurement Date	4/	30/2019	4/30/2020		
Fiduciary Net Position (FNP)	\$	688,155	\$	684,700	
Total Pension Liability (TPL)	\$	818,203	\$	837,445	
Net Pension Liability (TPL- FNP)	\$	130,048	\$	152,745	
Funded % (FNP/TPL)		84.1%		81.8%	

Asset values based on April 30, 2020 market value of \$684.7M provided by SBHD on May 6, 2020. Liability as of April 30, 2020 based on May 1, 2019 census data, adjusted to reflect the removal of 773 participants paid a lump sum during the 2019/2020 lump sum window, estimated 2019/2020 benefit payments of \$36.0M and new updated assumptions (valuation interest rate, salary scale, mortality, and retirement and termination rates).

2020/2021 GASB 68 Expense Projection

In \$ Thousands

		Actual	Projected ¹
Reporting Date (Fiscal Year Ending)	4	/30/2020	4/30/2021
Measurement Date	4	/30/2019	4/30/2020
Valuation Date	Ę	5/1/2018	5/1/2019
Discount Rate/ Expected Return on Assets		7.00%	6.75%
Service Cost (at end of year)	\$	16,385	\$ 16,436
Interest on the Total Pension Liability		54,579	56,105
Differences between expected and actual experience		(3,368)	(3,008)
Changes in assumptions		(261)	(5,533)
Projected earnings on pension plan investments		(44,274)	(48,253)
Administrative Expenses		235	218
Difference between projected and actual earnings on pension plan investments		5,080	13,839
Total Pension Expense	\$	28,376	\$ 29,804

¹ Based on data used for 5/1/2019 funding valuation adjusted to remove the 773 lump sum window participants. Assumptions reflect updates as a result of the 2020 experience study, updates to the mortality, EROA/discount rate and asset information presented on the previous page.

Appendix



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2019/2020 Financials Economic Assumptions – Actual versus Plan Experience

	Assumed	Actual 2018/2019	Comments
Market value of assets return	7.0%	7.7%	10-year average 8.3%
Actuarial value of assets return (smooths asset value by recognizing gains and losses over 5 years)	7.0%	6.2%	10-year average 6.5%
Salary Increase	Age-Graded Scale 4.0% average	3.3%	Select and Ultimate rates increasing 25 bps each year until 2020

See later slides for 10-year detail on both the asset return and salary increase assumption

2019/2020 Financials **Demographic Assumptions - Mortality**

- State of Florida requires a specific mortality table to be used for funding requirements
 - This mortality table is also required to be used for the State of Florida
 112.664 disclosures due 60 days after the valuation report is completed
 - Rules allow the use of tables used in the one of the two most recent FRS valuations
 - For example, the May 1, 2020 SBHD funding valuation can use the mortality tables used in either the July 1, 2019 or July 1, 2018 FRS valuations
- Pri-2012 Mortality Tables projected generationally using Scale MP-2018 from 2012 will be used for GASB 67 reporting for the plan year ending 4/30/2020 and will be used for GASB 68 reporting for the fiscal year ending 4/30/2021

2019/2020 Financials Historical Gains and Losses - Funding (in \$ millions)

Plan Year		estment n/(Loss)	iability n/(Loss)	Liability Gain/(Loss) <u>% of Liability</u>	<u>Ga</u>	Total in/(Loss)
	2014/2015	\$ (1.3)	\$ 0.8	(0.1)%	\$	(0.5)
	2015/2016	\$ (12.6)	\$ (2.1)	(2.6)%	\$	(14.7)
	2016/2017	\$ (6.7)	\$ (3.4)	(1.6)%	\$	(10.1)
	2017/2018	\$ (5.7)	\$ 8.1	1.2%	\$	2.4
	2018/2019	\$ (5.3)	\$ (1.6)	(0.2)%	\$	(6.9)

Investment gain/(loss) is based on actuarial value of assets and is the difference between actual and expected return during the plan year. Starting with the May 1, 2008 valuation through the May 1, 2014 valuation, the expected return was 7.5%. Updated to 7.0% for May 1, 2015 valuation.

Overview of Pension Plan Provisions

Coverage	Full-time employees hired or rehired before November 1, 2011
 Benefit Accrual Rate* Participants under Prior Plan 	{1% of first \$72,910 of final 5 avg. pay (F5) + 1.5% of F5 in excess of \$72,910 but not more than \$175,360 + 3% of F5 over \$175,360} x yrs. of svc.
- Participants under New Plan	{0.75% of final 5 avg. pay (F5) up to ½ monthly Social Security Taxable Wage Base* (SSTWB) + 1.25% of F5 in excess of ½ SSTWB but not more than SSTWB + 1.75% of F5 in excess of SSTWB} x yrs. of svc.
 Compensation 	Excludes overtime, bonuses or other special compensation
 Normal Retirement Age (NRA) 	Age 65 & 5 yrs. svc. For Prior Plan participants age 62 & 20 yrs. svc., or age 55 & 30 yrs. svc., if earlier.
Normal Form of Payment	Single life annuity. (Optional forms available.)
Vesting	"Cliff 5" – 100% after 5 years of service
Early Retirement Factors (ERFs)	Age 55 & 10 yrs. svc. For Prior Plan participants age 52 & 20 yrs. svc., if earlier. Accrued benefit reduced by 7.2%/year for first 5 years, then 3.6%/year for next 5 years preceding NRA - e.g., 46% or 56.8% for Prior Plan participants at age 55 depending on yrs. of svc. (46% for New Plan participants).
 Death Benefits 	Pre-retirement death benefit of 50% survivor annuity payable to spouse if participant was employed and age 55 & 10 yrs. svc., or had 20 yrs. svc. at death
Disability Benefits	Accrued benefit (automatic 100% vesting) payable at disability (total and permanent). Subject to reduction if payments begin prior to NRA.

^{*} The \$72,910 and \$175,360 integration levels apply for the 2019/2020 plan year and increase by 3% per year. Effective for new hires as of 5/1/2010, the accrual rate changed to the New Plan formula shown above. SSTWB for 2019/2020 plan year is \$132,250.

2019/2020 Financials Economic Assumptions – Actual Return on Market Value and Actuarial Value of Assets

Period	Actual	Return	Assumed Return
	Market Value	Actuarial Value	
2009/2010	25.5%	16.3%	7.5%
2010/2011	10.4%	3.0%	7.5%
2011/2012	0.3%	2.4%	7.5%
2012/2013	10.8%	4.6%	7.5%
2013/2014	9.2%	9.4%	7.5%
2014/2015	4.6%	7.2%	7.5%
2015/2016	(2.0%)	4.4%	7.0%
2016/2017	10.7%	5.7%	7.0%
2017/2018	8.5%	6.0%	7.0%
2018/2019	7.7%	6.2%	7.0%

Average market value annual return over last 10 years is 8.3%, but only 6.5% on an actuarial value basis

2019/2020 Financials Economic Assumptions – Salary Increases

Period	Annual Rate	Assumed Rate
2009/2010	2.9%	5.2%
2010/2011	2.9%	5.2%
2011/2012	2.8%	5.2%
2012/2013	2.1%	5.2%
2013/2014	3.7%	5.2%
2014/2015	2.9%	3.1%
2015/2016	4.3%	3.3%
2016/2017	3.3%	3.5%
2017/2018	2.7%	3.7%
2019/2020	3.3%	4.0%

Age-graded salary increase assumption at 5/1/2019 is based on "select and ultimate" rates starting at 5.25% to 3.50% and grading up 25 bps to the ultimate rates of 5.50% to 4.00% in 2020.

2019/2020 Financials Contribution History (in \$ millions)

	2015/2016	2016/2017	2016/2017 2017/2018 2018		2019/2020
Valuation Interest Rate	7.0%	7.0%	7.0%	7.0%	7.0%
Covered Payroll	\$ 405.3	\$ 387.4	\$ 369.6	\$ 348.3	\$ 330.0
Contribution as % of covered payroll	\$ 37.6 9.3%	\$ 37.3 9.6%	\$ 38.3 10.4%	\$ 37.0 10.6%	\$ 38.7 11.7%

2019/2020 Financials GASB 68 Expense

Reporting Date (Fiscal Year Ending)	04/30/2020	
Measurement Date	04/30/2019	
Valuation Date	05/01/2018	
Discount Rate/ Expected Return on Assets	7.00%	
Service Cost (at end of year)	\$16,385,513	
Interest on the Total Pension Liability	54,578,556	
Differences between expected and actual experience	(3,368,392)	
Changes in assumptions	(261,120)	
Projected earnings on pension plan investments	(44,273,681)	
Administrative Expenses	235,053	
Difference between projected and actual earnings		
on pension plan investments	5,080,333	
Total Pension Expense	\$28,376,262	

Expense results based on data and assumptions (except mortality) used for the May 1, 2018 funding valuation

Experience study results – Salary increase

- Experience from 2014 to 2019 supports the continued use of an assumption varying by age
 - Note MHS provides a salary "correction" every few years, which is reflected in the experience
 - Population impacted by "corrections" is shrinking each year as the plan is closed to new entrants
- Experience shows the current assumption has higher increases for participants under 40 (# = 375 at 5/1/2019) and lower increases for participants age 40+ (# = 3,775 at 5/1/2019)
- Average of actual annual salary increases over the 5-year period is 3.29%; the assumption used in each valuation from 2014 through 2019 applied to the plan population produces a 3.52% expected average annual increase:

Age	Ultimate Rates (2020+)	Expected *	Actual	Indicated Assumption
<35	5.50%	4.31%	5.86%	6.00%
35-39	5.25%	4.17%	5.37%	5.25%
40-44	5.00%	3.93%	4.07%	4.00%
45-49	4.75%	3.69%	3.44%	3.50%
50-54	4.50%	3.47%	3.00%	3.00%
55-59	4.25%	3.24%	2.60%	2.50%
>= 60	4.00%	2.99%	2.17%	2.25%

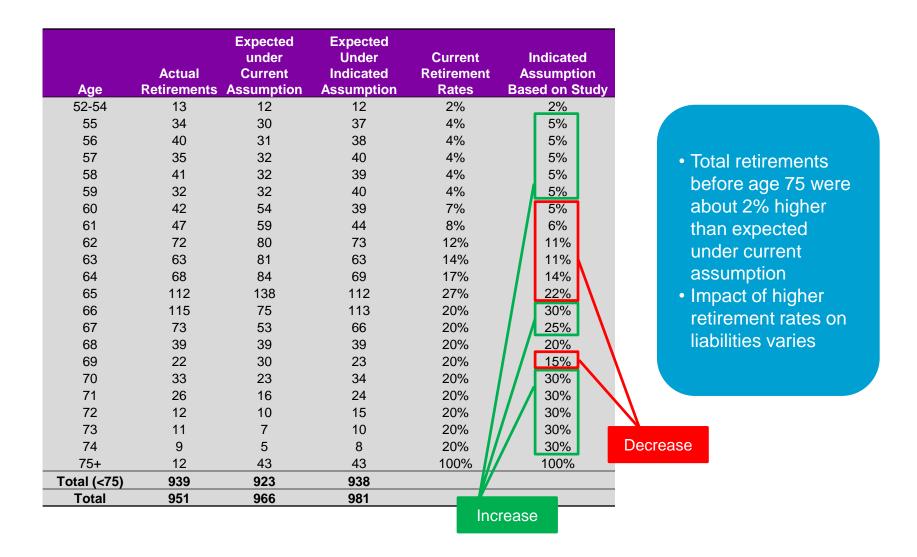
^{*} Headcount-weighted average based on assumption in effect for each valuation year

Experience study results – Termination rates

Age	Actual Terminations	Expected under Current Assumption	Expected Under Indicated Assumption	Current Termination Rates	Indicated Assumption Based on Study
20-24	1	2	2	19%	19%
25-29	69	67	67	19%	19%
30-34	210	164	205	12%	15%
35-39	201	175	196	8%	9%
40-44	213	178	208	6%	7%
45-49	240	206	248	5%	6%
50-54	231	175	263	4%	6%
55-59	88	110	82	8%	6%
60-64	84	71	80	8%	9%
65+	10	0	0	0%	0%
Total	1,347	1,148	1,350		

Actual terminations were over 17% higher than expected under the current assumption; increasing termination rates typically produce lower liabilities under funding cost method and higher liabilities under accounting cost method

Experience study results – Retirement rates



Administrative Overview

- Plan amended and restated effective May 1, 2015
 - Plan received IRS favorable determination letter in April 2017
 - Plan amended effective May 1, 2017 clarifications only
- Plan summaries for participants updated as of April 2017
- Individual benefit calculations and plan administration now performed by TransAmerica
- SBHD implemented a lump sum window for current terminated vested participants to lessen the administrative burden of participants no longer employed by the District during 2019/2020 and paid out 773 participants

Actuarial certification

The results included in this presentation are based upon census data, asset data and plan provisions provided by South Broward Hospital District for the May 1, 2018 and May 1, 2019 valuations. We have reviewed this information for overall reasonableness and consistency, but have neither audited nor independently verified this information. The accuracy of the results in this presentation is dependent upon the accuracy and completeness of the underlying information.

Actuarial assumptions and methods were selected by South Broward Hospital District with the concurrence of Willis Towers Watson. More detailed valuation results, summaries of actuarial methods and assumptions, summaries of plan provisions and description of data sources used in developing these results can be found in the May 1, 2019 valuation report dated April 2020.

The consulting actuaries meet their "General Qualification Standard for Prescribed Statements of Actuarial Opinion" relating to pension plans.

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Note: This presentation was developed for the internal use of South Broward Hospital District in connection with its May 1, 2019 funding valuation and 2020/2021 funding and GASB expense projections. It is not intended nor necessarily suitable for other purposes. Further distribution or use of all or part of this material is prohibited without prior written consent.

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The above consulting actuaries meet the "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States" relating to pension plans. Our objectivity is not impaired by any relationship between SBHD and Willis Towers Watson US LLC.