Delaware State Judiciary Pension Plan

Actuarial Valuation as of June 30, 2018

Produced by Cheiron

January 2019

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January 15, 2019

Board of Pension Trustees
State of Delaware
McArdle Building
860 Silver Lake Boulevard, Suite 1
Dover, Delaware 19904

Dear Members of the Board:

At your request, we have conducted the annual actuarial valuation of the Delaware State Judiciary Pension Plan (Plan) as of June 30, 2018. The results of this valuation are contained in this report. The purpose of the valuation is discussed in the Foreword.

This report contains information on plan assets and liabilities, as well as analyses combining asset and liability performance and projections. It also discloses State contribution levels and certain required disclosures under the Governmental Accounting Standards Board (GASB) Statement No. 67.

In completing the valuation and preparing our report, we relied on information, some oral and some written, supplied by staff of the Office of Pensions. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

The contribution results of this report are only applicable to the State contribution for Fiscal Year (FY) 2020 and rely on future plan experience conforming to the underlying assumptions. Future experience may differ significantly from the current experience due to such factors as the following: program experience differing from that anticipated by the assumptions; changes in assumptions; and changes in program provisions or applicable law.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board, including the use of assumptions and methods for funding purposes that comply with the Actuarial Standards of Practice. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinions contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This report was prepared for the Delaware State Judiciary Pension Plan for the purposes described herein and for the use by the Plan's auditor in completing an audit related to the matters herein. Other users of this valuation report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Sincerely,
Cheiron

Fiona E. Liston, FSA, MAAA, EA
Principal Consulting Actuary

Elizabeth Wiley, FSA, FCA, MAAA, EA
Consulting Actuary

FOREWORD

Cheiron has performed the annual actuarial valuation of the Delaware State Judiciary Pension Plan (Plan) as of June 30, 2018. The purpose of this report is to:

1) **Measure and disclose**, as of the valuation date, the financial condition of the Plan,

2) **Indicate trends** in the financial condition of the Plan,

3) **Determine the contribution rate** to be paid by the State for Fiscal Year (FY) 2020, and

4) **Provide** certain accounting statement information.

An actuarial valuation establishes and analyzes plan assets and liabilities on a consistent basis and traces the progress of both from one year to the next. It includes measurement of the plan's investment performance as well as an analysis of liability gains and losses.

Section I presents a summary containing our findings and disclosing important trends experienced by the Plan in recent years.

Section II contains details on various asset measures, together with pertinent performance measurements.

Section III shows similar information on liabilities, measured for actuarial, accounting, and governmental reporting purposes.

Section IV presents the FY 2020 actuarially determined contribution.

Section V includes certain required disclosures under Governmental Accounting Standards Board (GASB) Statement No. 67 and items recommended by the Government Finance Officers Association (GFOA).

The appendices to this report contain a summary of the Plan's membership at the valuation date, a summary of the major provisions of the Plan, and a summary of the actuarial methods and assumptions used in the valuation.

The actuarial assumptions reflect our understanding of the likely future experience of the Plan, and the assumptions individually and as a whole represent our best estimate for the future experience of the Plan. The results of this report rely on future plan experience conforming to the underlying assumptions and methods outlined in this report. To the extent that the actual plan experience deviates from the underlying assumptions and methods, or there are any changes in plan provisions, the true cost of the Plan will vary from our results.

SECTION I – BOARD SUMMARY

General Comments

The actuarially determined contribution (ADC) rate was calculated to decrease from 20.62% for FY 2019 to 18.90% for FY 2020.

During the year ended June 30, 2018, the Plan's assets earned 10.4% on a market value basis. However, due to the Plan's asset smoothing method, which recognizes portions of investment gains and losses over time, the return on an actuarial value basis was 7.2%. This return was greater than the assumed investment rate of return of 7.0% for the prior year, resulting in an actuarial gain on investments of $0.1 million.

The Plan experienced an actuarial gain on plan liabilities resulting from salary increases different from those assumed and members retiring, terminating, becoming disabled, and dying at rates different from the actuarial assumptions. This liability gain decreased the actuarial liability by $2.6 million. This type of gain or loss is normal in the course of plan experience, as we cannot predict exactly how people will behave. However, this year there was an adjustment made to the coding of post-retirement death benefits that contributed $1.0 million to that gain.

During the plan year, the liabilities were increased to reflect $20,400 in one-time retiree benefits to be paid in November 2018 that will be reimbursed by the State. This liability increase has no impact on the State's ongoing contribution requirement.

This valuation report also contains certain information to be reported in the June 30, 2018 Comprehensive Annual Financial Report (CAFR) of the Delaware Public Employees' Retirement System (Delaware PERS) under GASB Statement No. 67, as well as additional disclosure information recommended by the Government Finance Officers Association (GFOA). The GASB disclosures are based on the use of update procedures to roll forward the 2017 actuarial valuation liability results. The calculation of net pension liability in Section V is shown as disclosed for the plan year ending June 30, 2018, based on the 2017 funding actuarial valuation liability results, updated to reflect the plan change cited above. We also present a projection of the June 30, 2019 disclosure in Section V, assuming all actuarial assumptions are exactly met over the coming year, which is based on the 2018 funding actuarial valuation liability results.

As of the June 30, 2018 funding actuarial valuation, the Plan reported a net surplus of $6.2 million. This is an increase over the $3.7 million surplus for the prior year.

SECTION I – BOARD SUMMARY

Trends

Asset Returns

The graph below shows measurements of the Plan's assets over the last 20 years based on both market values and actuarial values. The green bars represent the market value measurements, while the blue line shows the smoothed actuarial value measurements. The black labels above the blue line are the actuarial value of asset measurements as of the valuation date for each year in millions of dollars.
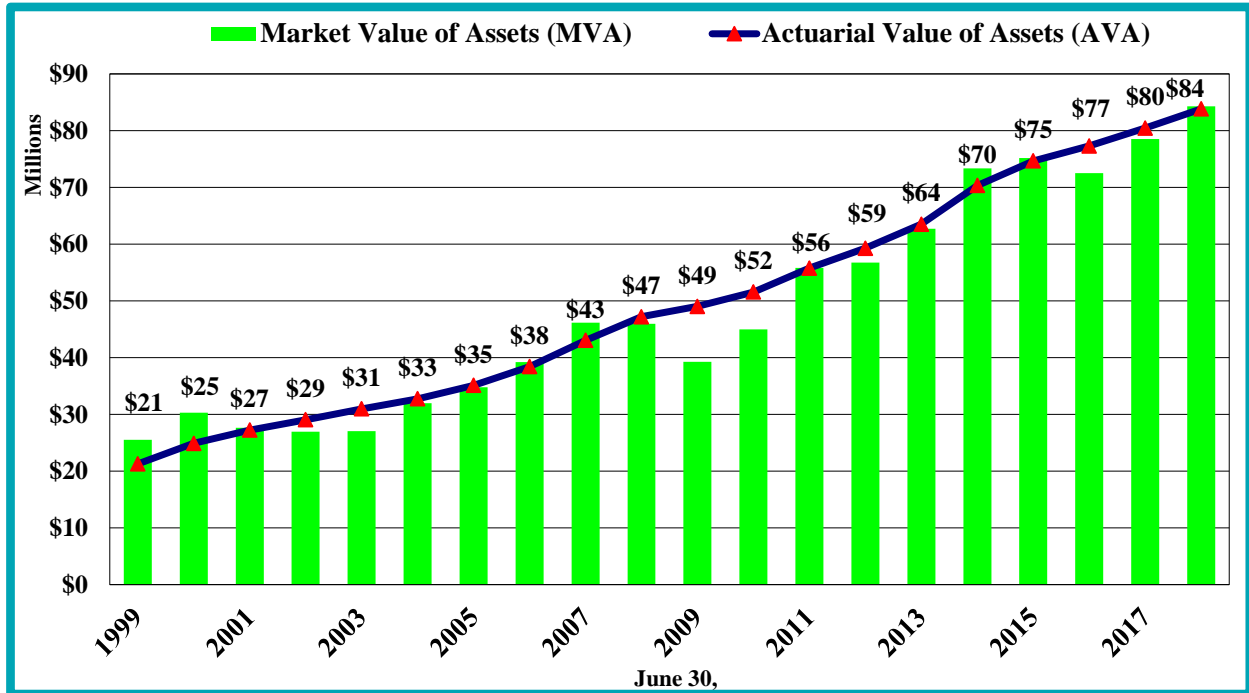
The market value of assets (MVA) returned 10.4% over the last year. The determination of the Plan's actuarial value of assets (AVA) for the current year reflects a portion of the return above the 7.0% assumed for the prior year, and continued recognition of prior years' gains and losses, and thus returned 7.2% over FY 2018.

Over the period of July 1, 1999 to June 30, 2018, the Plan's assets measured using the actuarial value of asset measurements returned a compound 7.6%, compared to the current valuation assumption of 7.0%. On a market value of assets basis, the Plan returned 6.7% over the same period.
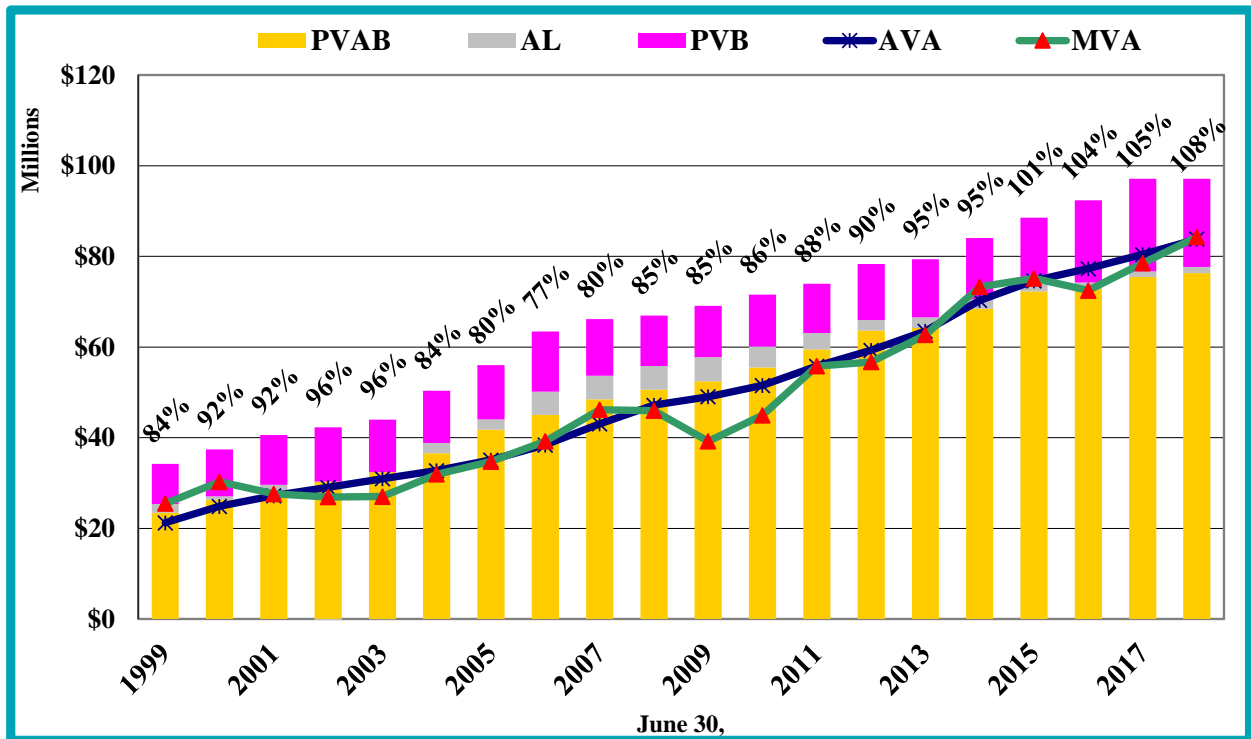
SECTION I – BOARD SUMMARY

Assets and Liabilities

The three colored bars below represent the three different measures of liability discussed in this report. The first measure is given by the yellow bars, the present value of accrued benefits (PVAB). The PVAB values represent the value of all benefits earned by current members through the valuation date. These values do not reflect any future additional service or salary increases for current members beyond the valuation dates.

The second liability measure shown is the one currently used for the Plan's funding target, the actuarial liability (AL). These target amounts are represented by the top of the gray bars. This measurement is also the basis of the liability measure used in GASB 67. The funded ratios reported by the Plan are the percentages shown above the bars and are developed by comparing these target measurements of liability to the actuarial value of assets at each valuation date.

The amount represented by the top of the pink bars, the present value of future benefits (PVB), is the amount needed as of each valuation date to provide all benefits for the current members and their beneficiaries, including reflection of assumed future service and pay increases. If the Plan had assets equal to the PVB as of a certain date, no additional contributions would, in theory, be needed to pay the benefits of the current members if all assumptions were exactly met from that point forward.

SECTION I – BOARD SUMMARY

Contribution Rates
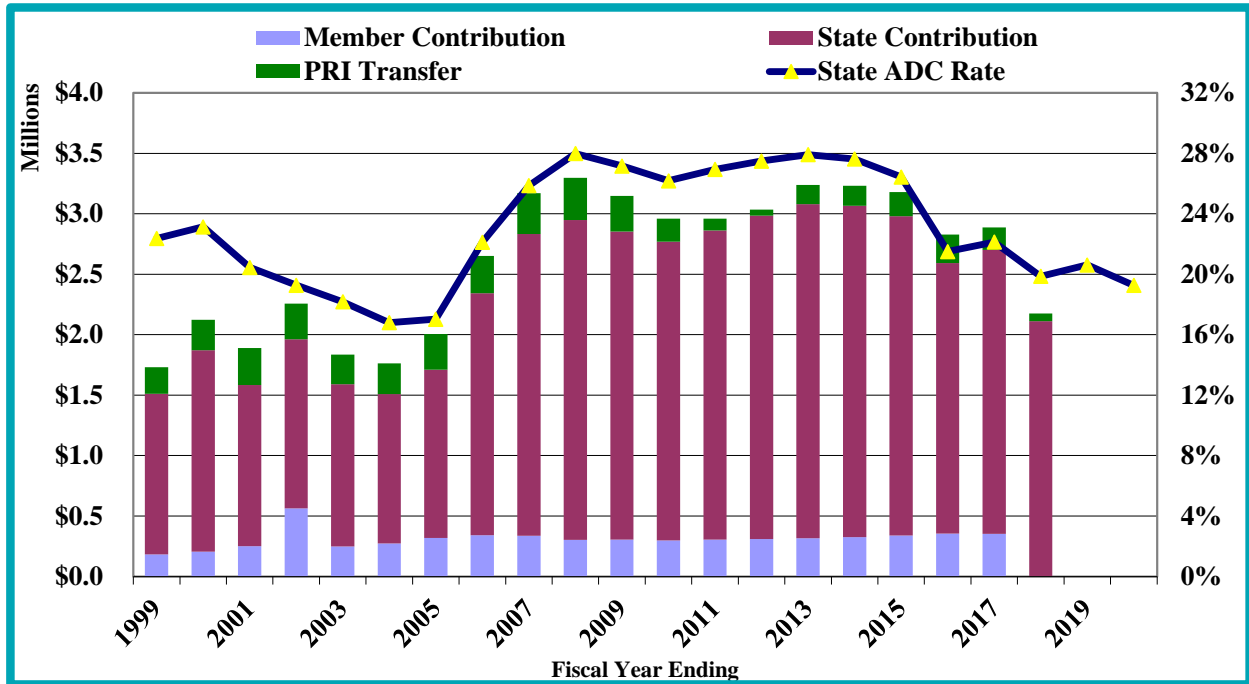
The stacked bars in the graph above show the actual dollar amounts of the contributions made by the State, the Post-Retirement Increase Fund (PRI), and the members for each fiscal year and are read using the left-hand scale. The blue line shows the State actuarially determined contribution (ADC) rate as a percentage of payroll and is read using the right-hand scale.

The member contribution rate is set by State law, based on the plan in which the member participates. The State contribution rate is set by the actuarial process, while the PRI transfer amounts depend on the increases granted by the State Legislature. Please note that there is a lag between the State contribution rates shown are calculated and when they are payable. For example, the value shown for the FY 2018 is the rate prepared by the June 30, 2016 valuation and implemented for the period July 1, 2017 to June 30, 2018. As such, there are two more years of rates shown beyond the years of actual contributions.
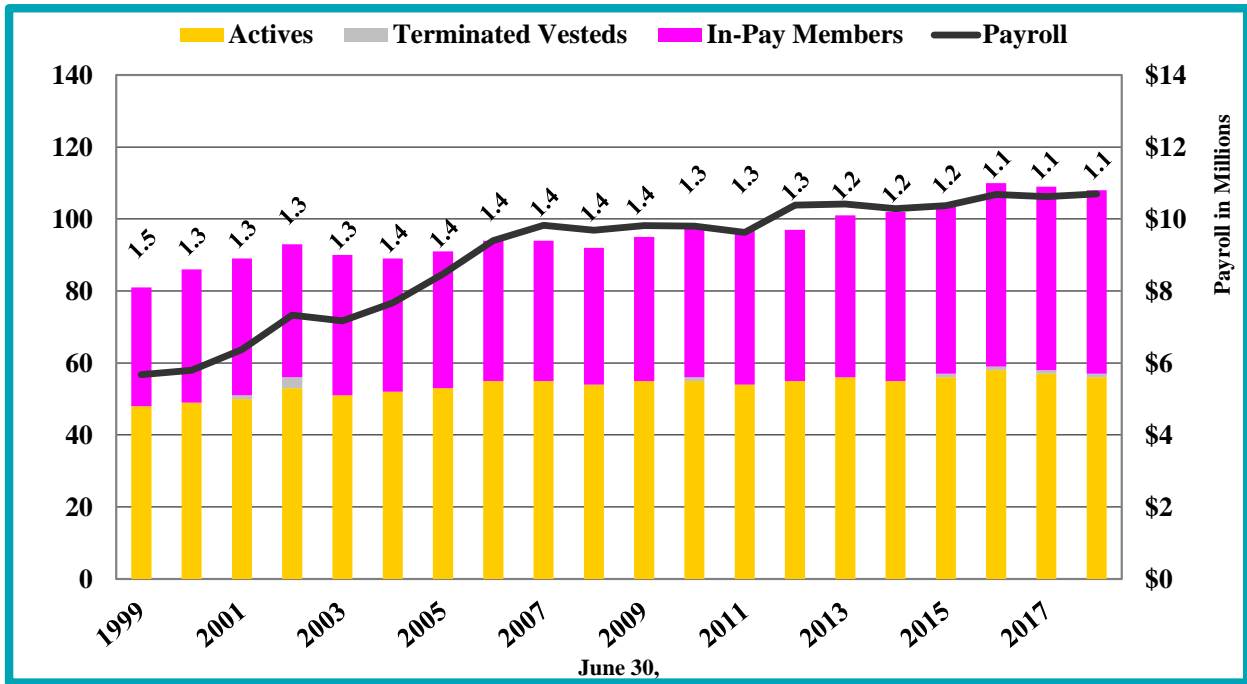
SECTION I – BOARD SUMMARY

Participant Trends

The bars below show the number of members as of each valuation date, divided between active members, terminated vested members, and retirees/beneficiaries. These bars are read using the left-hand scale. As with most maturing plans, this Plan continues to show growth in the number of inactive members. The numbers that appear above each bar represent the ratio of active members to inactive members (retirees, beneficiaries, and terminated vested members) at each valuation date. The active-to-inactive ratio has decreased from 1.5 actives for each inactive in 1999 to 1.1 actives for each inactive in 2018.

The black line shows the covered payroll for the Plan as of each valuation date and is read using the right-hand scale.
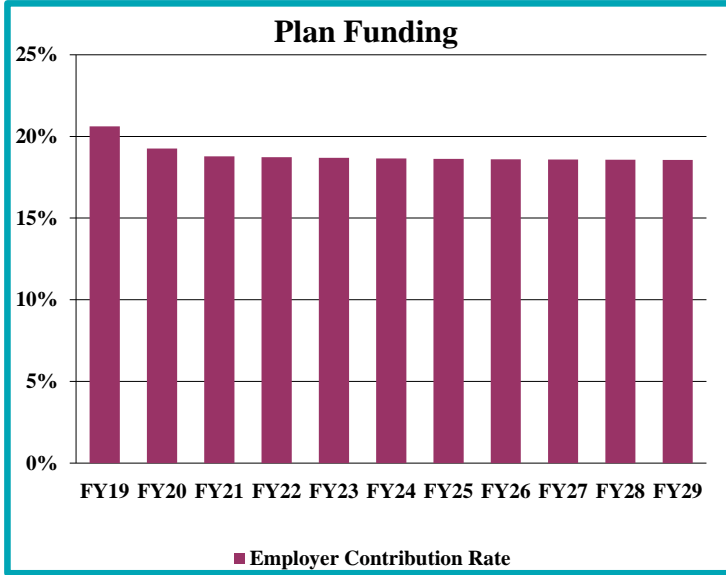
Future Outlook

Baseline Projections

Plan Funding

These graphs show the expected progress of the Plan over the next 10 years, assuming the Plan's assets earn 7.0% on a *market value* basis and assuming all other assumptions are exactly met, including that the actuarially determined contribution (ADC) amounts are made in full. The chart entitled "Plan Funding" shows the projected State ADC rate decline, dropping to 18.6% at the end of this 10-year period, absent further gains or losses.

The "Assets and Liabilities" graph shows the projected funded ratios for the Plan over the 10-year projection period. The Plan's funded status is projected to decline to from 108% to 106% over the 10-year projection period, assuming all assumptions are exactly met.
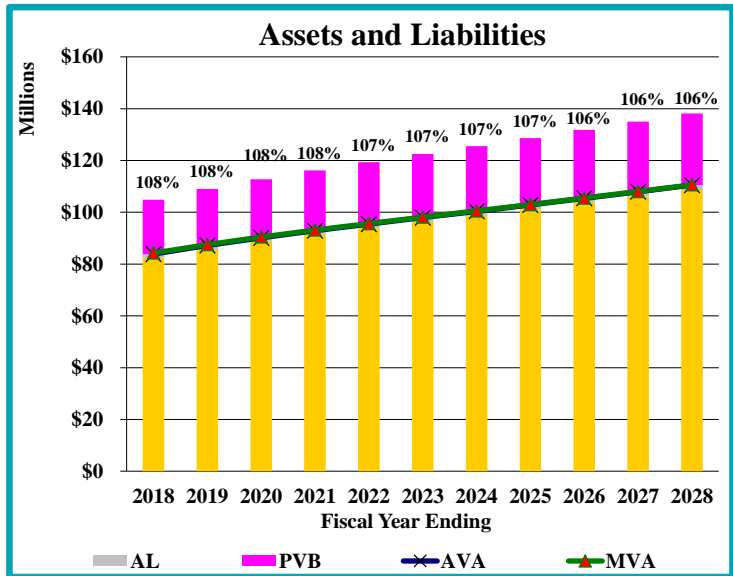
Assets and Liabilities

SECTION I – BOARD SUMMARY

Projections with Asset Returns of 8.0%

Plan Funding

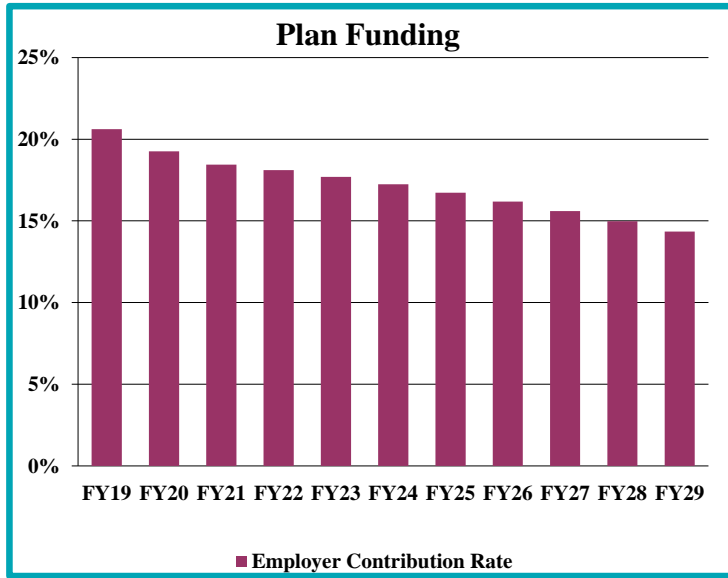The Plan's investment earnings will affect the future funding status of the Plan. The two graphs on this page show what the next 10 years are expected to look like if the Plan's investment performance is 8.0% each year, 1.0% higher than the valuation investment rate of return assumption.

These two graphs assume all other assumptions are exactly met, including State contributions made equal to the full actuarially determined amounts.

The "Plan Funding" graph shows that under this scenario, the State ADC rate would decrease more rapidly than in the baseline case. The rate declines to 14.35% of payroll at the end of the 10-year projection period.

The "Assets and Liabilities" graph shows that under this scenario, the Plan would reach a 112% funded ratio by 2028, an improvement over the baseline scenario's ultimate level of 106%.
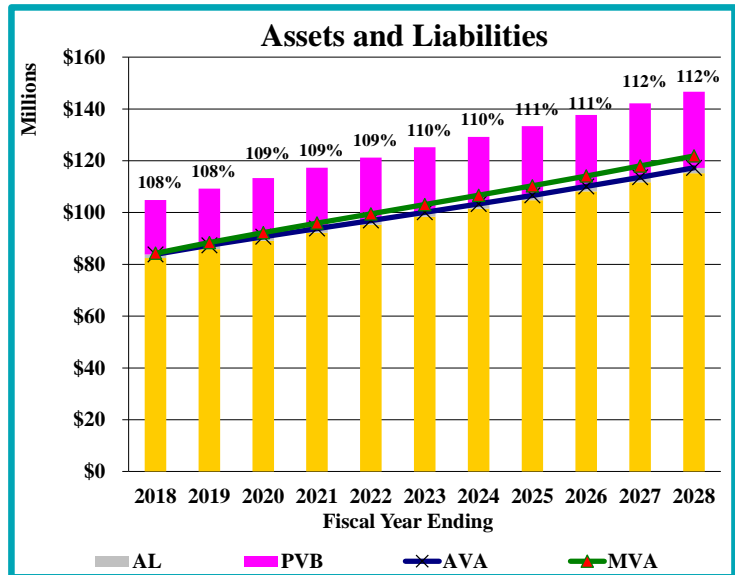
Assets and Liabilities

SECTION I – BOARD SUMMARY

Projections with Asset Returns of 6.0%

Plan Funding

Employer Contribution Rate
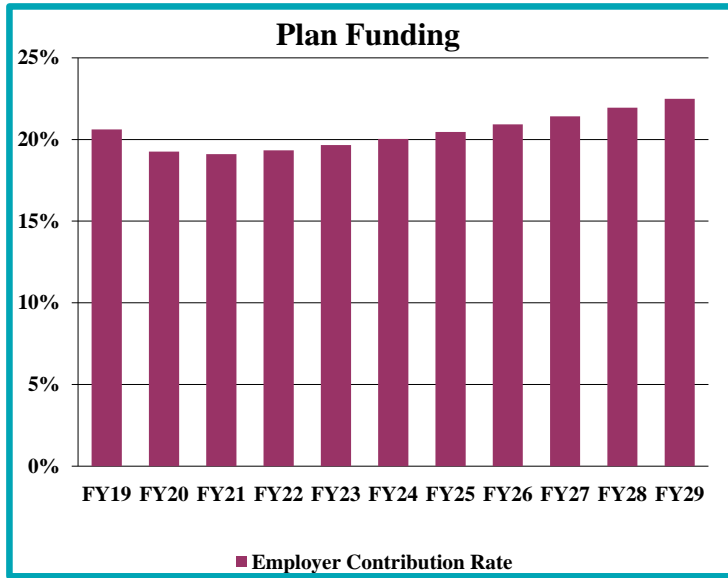
The graphs on this page show projections of the Plan's funding status and contributions assuming that the Plan's investment performance is 6.0% each year of the projection, 1.0% lower than the valuation investment rate of return assumption.

Note that these projections assume all other assumptions are exactly met, including payment of State contributions made equal to the full actuarially determined contribution.

Under this scenario, the State ADC quickly increases to approximately 22.5% of payroll by the end of the 10-year projection period, significantly greater than the 18.6% ultimate rate in the baseline scenario. Additionally, the funded ratio is projected to be lower in this scenario, reaching 100% at the end of the 10-year projection period, compared to the 106% ultimate ratio in the baseline scenario.
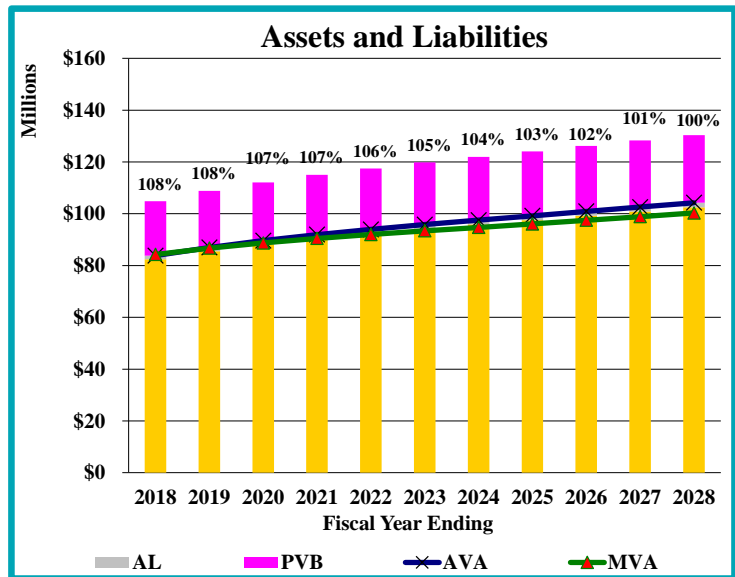
Assets and Liabilities

AL   PVB   AVA   MVA

SECTION I – BOARD SUMMARY

Table I-1 Summary of Principal Plan Results			
Valuation as of:	**June 30, 2017**	**June 30, 2018**	**% Change**
Member Counts			
Active Members	57	56	(1.75)%
Disabled Members	1	0	(100.00)%
Retirees and Beneficiaries	50	51	2.00%
Terminated Vested Members	1	1	0.00%
Terminated Non-Vested Members	0	0	N/A
Total Member Counts	**109**	**108**	**(0.92)%**
Covered Payroll of Active Members*	$ 10,621,800	$ 10,693,900	0.68%
Annual Benefit Payments for Retirees, Disabled Members, and Beneficiaries	$ 4,759,600	$ 4,870,200	2.32%
Assets and Liabilities			
Actuarial Liability (AL)	$ 76,739,600	$ 77,659,900	1.20%
Actuarial Value of Assets (AVA)	80,444,500	83,833,800	4.21%
Unfunded AL (UAL)	$ (3,704,900)	$ (6,173,900)	(66.64)%
Funded Ratio on AVA Basis (AVA/AL)	104.8%	107.9%	
Funded Ratio on MVA Basis (MVA/AL)	102.3%	108.5%	
Present Value of Accrued Benefits (PVAB)	$ 75,496,200	$ 76,331,400	1.11%
Market Value of Assets (MVA)	78,522,500	84,296,000	7.35%
Unfunded PVAB	$ (3,026,300)	$ (7,964,600)	(163.18)%
Accrued Benefit Funded Ratio (MVA/PVAB)	104.0%	110.4%	
State Contribution Rate	**Fiscal Year 2019**	**Fiscal Year 2020**	
Entry Age Normal Cost	23.84%	23.24%	
UAL Amortization Payment	(3.32)%	(4.44)%	
Administrative Expense	0.10%	0.10%	
Actuarially Determined Contribution (ADC)	20.62%	18.90%	

*Assumes one year of payroll increase projection, so represents payroll beginning on each valuation date.

SECTION II – ASSETS

Pension plan assets play a key role in the financial operation of the Plan and in the decisions that the Board of Trustees may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely affect benefit levels, State actuarially determined contributions, and the ultimate security of members' benefits.

In this section, we present detailed information on the Plan's assets including:

- **Disclosure** of the Plan's assets at June 30, 2017 and June 30, 2018,
- Statement of the **changes** in market values during FY 2018,
- Development of the **actuarial value of assets**,
- An assessment of **investment performance**, and
- A projection of the Plan's expected **cash flows** for the next 10 years.

Market Value of Assets Disclosure

The market values of assets represent "snap-shot or cash-out" values that provide the principal basis for measuring financial performance from one year to the next. However, market values can fluctuate widely with swings in the marketplace, and as such, are usually not suitable for budgeting and long-range planning.

Table II-1 below shows the market values as of June 30, 2017 and June 30, 2018, along with the changes between the two.

Table II-1 Changes in Market Value of Assets		
Market Value of Assets – June 30, 2017		**$ 78,522,500**
Additions		
Member Contributions	$ 353,800	
State Contributions	2,112,000	
PRI Transfers	64,100	
Investment Returns	8,051,200	
Total Additions	$ 10,581,100	
Deductions		
Benefit Payments	$ 4,794,800	
Administrative Expenses	12,800	
Total Deductions	$ 4,807,600	
Market Value of Assets – June 30, 2018		**$ 84,296,000**

SECTION II – ASSETS

Actuarial Value of Assets

The actuarial value of assets represents a "smoothed" value developed by the actuary to reduce, or eliminate, erratic results that could develop from short-term fluctuations in the market value of assets. The actuarial value for this Plan equals the expected actuarial value of assets, developed from the immediately prior valuation, plus 20% of the difference between the actual market value of assets and that expected actuarial value of assets at the valuation date. The table below illustrates the calculation of the actuarial value of assets as of June 30, 2018.

	Table II-2 Development of Actuarial Value of Assets		
1.	Actuarial Value of Assets at June 30, 2017	$	80,444,500
2.	Amount in (1) with interest to June 30, 2018 at 7.0% per year		86,075,600
3.	State, PRI and member contributions for FY 2018		2,529,900
4.	Interest on contributions assuming payments made uniformly throughout the year to June 30, 2018 at 7.0% per year		88,500
5.	Disbursements from Trust except investment expenses, July 1, 2017 through June 30, 2018		4,807,600
6.	Interest on disbursements to June 30, 2018 at 7.0% per year		168,200
7.	Expected Actuarial Value of Assets at June 30, 2018 = (2) + (3) + (4) − (5) − (6)	$	83,718,200
8.	Actual Market Value of Assets at June 30, 2018	$	84,296,000
9.	Excess of (8) over (7)	$	577,800
10.	Actuarial Value of Assets at June 30, 2018 = (7) + 20% of (9)	$	83,833,800

SECTION II – ASSETS

Investment Performance

The market value of assets (MVA) returned 10.4% during 2018, which is more than the assumed 7.0% investment rate of return. The actuarial value of assets (AVA) returned 7.2% over this same year, reflecting the asset smoothing methodology being utilized by the Plan for the measurement of the actuarial value of assets. Since a maximum of 20% of the gain or loss from the performance of the Plan is recognized in a given year under the adopted asset smoothing method, in periods of very good performance, the AVA can lag significantly behind the MVA, and in a period of negative returns, the AVA does not decline as rapidly as the MVA.

Projection of Cash Flows

Table II-3 Cash Flow Projections		
Year Beginning July 1,	**Expected Benefit Payments**	**Expected Contributions***
2018	$ 5,214,000	$ 2,654,000
2019	5,618,000	2,498,000
2020	5,980,000	2,523,000
2021	6,411,000	2,587,000
2022	6,643,000	2,651,000
2023	6,954,000	2,717,000
2024	7,113,000	2,785,000
2025	7,258,000	2,855,000
2026	7,483,000	2,926,000
2027	7,700,000	3,000,000

* Expected contributions include State contributions, member contributions, and PRI transfers. For illustration purposes, we have assumed the State contribution rate will remain level at 18.90% and that payroll will increase at the actuarially assumed rate of 2.50% per year.

Expected benefit payments are projected for the closed group valued at June 30, 2018. Projecting any further than 10 years using a closed group would not yield reliable projections due to the omission of new hires in the benefit payments, compounded by their inclusion in the expected contributions.

SECTION III – LIABILITIES

In this section, we present detailed information on the Plan's liabilities for funding purposes, including:

- **Disclosure** of the Plan's liabilities at June 30, 2017 and June 30, 2018, and
- Statement of **changes** in these liabilities during the year.

Disclosure

Three liability measurements are calculated and presented in this report. Each type is distinguished by the purpose, or purposes, for which they are used.

- **Present Value of Benefits (PVB):** Used for analyzing the financial outlook of the plans, this represents the amount of money needed today to fund all future benefits and expenses of a plan, assuming current members continue to accrue benefits and there are no new entrants, and that all actuarial assumptions are met.

- **Actuarial Liability (AL):** Used for funding calculations for a plan and GASB disclosures, this liability is calculated by taking the present value of benefits (PVB) and subtracting the present value of future member contributions (PVFEEC) and the present value of future State normal costs (PVFNC) under an acceptable actuarial funding method. The Plan uses the **Entry Age Normal** funding method.

- **Present Value of Accrued Benefits (PVAB):** Used for communicating the current level of liabilities, this liability represents the total amount of money needed today to fully fund the current accrued obligations of a plan, assuming no future accruals of benefits or salary increases. These liabilities are also required for some accounting purposes of some plans (Topic No. 960). This Plan is not subject to this requirement, but this information is provided for informational purposes, as it is sometimes used as part of assessing whether a plan can meet its current benefit commitments. However, it is not intended as a settlement liability value. Note that the development of this amount also assumes that all actuarial assumptions are met, including the assets earning 7.0% per year.

None of the liability amounts disclosed in this report is appropriate for measuring a settlement of the Plan's liabilities.

The following table discloses each of these liabilities for the current and immediately prior funding valuations. With respect to each disclosure, a subtraction of an appropriate value of plan assets yields, for each respective type, either a net surplus or an unfunded amount.

SECTION III – LIABILITIES

Table III-1 Liabilities and Net (Surplus)/Unfunded Amounts				
	June 30, 2017		**June 30, 2018**	
Present Value of Benefits				
Active Member Benefits	$	52,093,200	$	51,206,900
Retiree, Beneficiary, Disabled, and Terminated Member Benefits		45,022,800		45,932,000
Present Value of Benefits (PVB)	**$**	**97,116,000**	**$**	**97,138,900**
Market Value of Assets (MVA)	$	78,522,500	$	84,296,000
Future Member Contributions		2,710,400		2,637,500
Future State Contributions & PRI Fund Transfers		15,883,100		10,205,400
Total Resources	**$**	**97,116,000**	**$**	**97,138,900**
Actuarial Liability				
Present Value of Benefits (PVB)	$	97,116,000	$	97,138,900
Present Value of Future State Normal Costs (PVFNC)		17,666,000		16,841,500
Present Value of Future Member Contributions (PVFEEC)		2,710,400		2,637,500
Actuarial Liability (AL=PVB–PVFNC–PVFEEC)	**$**	**76,739,600**	**$**	**77,659,900**
Actuarial Value of Assets (AVA)		80,444,500		83,833,800
Net (Surplus)/Unfunded AL (AL – AVA)	**$**	**(3,704,900)**	**$**	**(6,173,900)**
Present Value of Accrued Benefits				
Present Value of Benefits (PVB)	$	97,116,000	$	97,138,900
Present Value of Future Benefit Accruals (PVFBA)		21,619,800		20,807,500
Present Value of Accrued Benefits (PVAB=PVB–PVFBA)	**$**	**75,496,200**	**$**	**76,331,400**
Market Value of Assets (MVA)	$	78,522,500	$	84,296,000
Net (Surplus)/Unfunded PVAB (PVAB – MVA)	**$**	**(3,026,300)**	**$**	**(7,964,600)**

SECTION III – LIABILITIES

Changes in Liabilities

Each of the liabilities disclosed in the prior table are expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New entrants since the last valuation
- Benefits accrued since the last valuation
- Plan amendments increasing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method

Unfunded liabilities (or surpluses), developed from subtraction of an appropriate value of plan assets from these liability measures, will change because of all of the above as well as due to changes in plan asset measures resulting from:

- State contributions different than expected
- Investment earnings different than expected
- A change in the methodology used to measure plan assets

In each valuation, we report on those elements of change that are of particular significance, potentially affecting the long-term financial outlook of the Plan. Below we present key changes in the liabilities since the last valuation, in thousands.

	Table III-2 Liability Changes		
(In Thousands)	**Present Value of Benefits**	**Actuarial Liability**	**Present Value of Accrued Benefits**
Liabilities June 30, 2017	$ 97,116	$ 76,740	$ 75,496
Liabilities June 30, 2018	97,139	77,660	76,331
Liability Increase/(Decrease)	23	920	835
Change Due to:			
PRI	0	0	0
Actuarial (Gain)/Loss	NC*	(2,625)	NC*
Benefit Changes	20	20	20
Assumption Changes	0	0	0
Benefits Accumulated and Other (Gain)/Loss	3	3,525	815

* NC = not calculated

SECTION III – LIABILITIES

Table III-3 below provides additional information about the liability measurements for funding purposes as of both the current and the immediately prior valuations.

Table III-3 Actuarial Liabilities for Funding	June 30, 2017	June 30, 2018
1. Actuarial Liabilities		
Retiree, Beneficiary, Disabled, and Terminated Members	$ 45,022,800	$ 45,932,000
Active Members	31,716,800	31,727,900
Total Actuarial Liability (AL)	**$ 76,739,600**	**$ 77,659,900**
2. Actuarial Value of Assets (AVA)	$ 80,444,500	$ 83,833,800
3. Unfunded Actuarial Liability (UAL) [AL – AVA]	$ (3,704,900)	$ (6,173,900)
4. Present Value of Outstanding PRI Transfers	$ 350,600	$ 95,100
5. One-time Retiree Payout to be Reimbursed by State	N/A	$ 20,400
6. **Net Base for 15/20-Year UAL Amortization (3-4-5)***	**$ (3,354,300)**	**$ (6,289,400)**

*Amortization was 15 years in 2017, whether a surplus or a deficit, but was changed to 20 years in 2018 for periods in which the Plan is in a surplus condition (the actuarial value of assets exceeds the actuarial liability).

SECTION IV – CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level, if any, of contributions are needed to properly maintain the funding status of the plan. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both fairly stable and predictable.

For this Plan, the funding method employed is the **Entry Age** actuarial funding method. Under this method, there are three components to the total contribution: the **normal cost contribution**, the **unfunded actuarial liability contribution** (UAL contribution), and the **administrative expense contribution**.

The State normal cost contribution rate is determined in the following steps. First, for each active member, an individual total normal cost rate is determined by taking the value, as of entry age into the Plan, of that member's projected future benefits and dividing it by the value, also at entry age, of the member's expected future salary. Then, this individual total normal cost rate is reduced by the member's contribution rate to produce the State normal cost rate for each member. This State normal cost rate times payroll for each active member equals the State normal cost. The sum of the State normal cost amounts for all active members is then divided by the covered payroll for all active members to produce the State normal cost contribution rate.

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future State normal cost contributions or future member contributions. The difference between this liability and the funds accumulated as of the same date is referred to as the unfunded actuarial liability (UAL).

The UAL amortization payment rate is calculated by amortizing all UAL, after subtracting the present value of scheduled PRI transfers and the reimbursement for one-time retiree benefits, over an open 20-year period. All payments are determined assuming total pay increases by the current annual inflation assumption of 2.50%.

The current assumed administrative expense rate is 0.10% of payroll. This rate, when applied to payroll, is intended to provide an allowance above the cost of funding the benefits to pay for the expense of operating the Plan.

The table below presents and compares the State contribution rates for the Plan based on this funding valuation and the immediately prior one.

Table IV-1 State Contribution Rate		
Valuation Date	**June 30, 2017**	**June 30, 2018**
FY Contribution Rate Payable	**FY 2019**	**FY 2020**
State Entry Age Normal Cost Rate	23.84%	23.24%
UAL Amortization Payment Rate	(3.32)%	(4.44)%
Administrative Expense Rate	0.10%	0.10%
Actuarially Determined Contributions	20.62%	18.90%

SECTION IV – CONTRIBUTIONS

Table IV-2 below provides additional detail about the development of the actuarially determined State contribution rate as well as the expected dollar amounts these rates will result in for FY 2020.

Table IV-2 Expected FY 2020 State Contributions		
	In Dollars	**As % of Payroll**
1. Present Value of Projected Benefits Attributable to:		
a. Total Normal Cost	$ 2,866,000	26.80%
b. Expected Member Contributions	380,700	3.56%
c. State Paid Normal Cost (a) – (b)	$ 2,485,300	23.24%
2. Amortization of Unfunded Liability/(Surplus)	$ (474,600)	(4.44)%
3. Allowance for Administrative Expense	$ 10,700	0.10%
4. Total State Actuarially Determined Contributions (1) + (2) + (3)	$ 2,021,400	18.90%

SECTION V – ACCOUNTING STATEMENT INFORMATION

ASC Topic No. 960 of the Financial Accounting Standards Board (FASB) requires plans subject to it to disclose certain information regarding their funded status. This Plan is not subject to this requirement, but this information is provided for informational purposes. Statement No. 67 of the Governmental Accounting Standards Board (GASB) establishes standards for disclosure of pension information by public employee retirement systems (PERS) and governmental employers in notes to financial statements and supplementary information.

Disclosures based on FASB ASC Topic No. 960 provide a quasi "snap shot" view of how the Plan's assets compare to its liabilities if contributions stopped and accrued benefit claims had to be satisfied. However, due to potential legal requirements and the possibility that alternative interest rates would have to be used to determine the liabilities, these values may not be a good indication of the amount of money it would take to buy the benefits for all members if the Plan were to terminate and should not be considered a settlement value.

FASB ASC Topic No. 960 specifies that a comparison of the present value of accrued (accumulated) benefits, with the market value of the assets as of the valuation date, must be provided. Again, this Plan is not subject to this requirement, but the relevant amounts as of June 30, 2017 and June 30, 2018 are provided for informational purposes and are exhibited in Table V-1, which also includes a reconciliation of liabilities determined as of the prior valuation, July 1, 2017, to the liabilities as of June 30, 2018. These values are based on the funding liability results.

This valuation contains information reported in the June 30, 2018 Comprehensive Annual Financial Report (CAFR) of Delaware PERS under GASB Statement No. 67. Disclosures are based on the use of updated procedures to roll forward the 2017 funding valuation results. The calculation of Net Pension Liability in Table V-2 shows the amounts to be disclosed for FY 2018, based on the liabilities of the roll forward of the 2017 funding valuation, as well as a projection of the anticipated FY 2019 disclosures, based on liabilities from the 2018 funding valuation, assuming all actuarial assumptions are met over the coming year. The actual disclosures for FY 2019 will be developed once the asset measure for GASB as of June 30, 2019 is known.

Tables V-3 through V-5 are exhibits to be used for the State's CAFR. Table V-3 is the Note to Required Supplementary Information, Table V-4 is a history of gains and losses in accrued liability, and Table V-5 is the Schedule of Funded Liabilities by Type, which shows the portion of accrued liability covered by the actuarial value of assets. The Government Finance Officers Association (GFOA) has named this exhibit the Schedule of Funded Liabilities by Type. None of the liabilities or assets shown are appropriate for settlement purposes. Furthermore, the Schedule of Funded Liabilities by Type does not accurately depict a plan's future financial condition but rather is a test developed by the GFOA to assess the level of funding that relies on the payroll for future hires to pay for the benefits that have already been accrued by the current population. This valuation does not contain the additional disclosures required by GASB Statement No. 68 only for the State's CAFR.

SECTION V – ACCOUNTING STATEMENT INFORMATION

Table V-1 Accounting Statement Disclosure and Reconciliation of Present Value of Accrued Benefits		
	June 30, 2017	**June 30, 2018**
FASB ASC Topic No. 960 Basis		
1. Present Value of Accrued Benefits (PVAB)		
a. Members Currently Receiving Payments	$ 44,074,500	$ 44,917,800
b. Former Vested Members	948,300	1,014,200
c. Active Members	30,473,400	30,399,400
2. Total PVAB [1(a) + 1(b) + 1(c)]	$ 75,496,200	$ 76,331,400
3. Market Value of Assets (MVA)	78,522,500	84,296,000
4. Unfunded PVAB [2 – 3]	$ (3,026,300)	$ (7,964,600)
5. Ratio of MVA to PVAB [3 / 2]	104.0%	110.4%
Reconciliation of PVAB		
PVAB at June 30, 2017		$ 75,496,200
Increase/(Decrease) During Year Attributable to:		
Passage of Time		5,116,900
Benefits Paid – FY 2018		(4,794,800)
Benefit Changes		20,400
Assumption Changes		0
PRI		0
Benefits Accrued, Other Gains/Losses		492,700
Net Increase/(Decrease)		835,200
PVAB at June 30, 2018		$ 76,331,400

SECTION V – ACCOUNTING STATEMENT INFORMATION

	June 30, 2018	Estimated June 30, 2019
Table V-2 **GASB No. 67 Disclosures**		
Total Pension Liability (TPL)		
Service cost	$ 2,909,000	$ 2,866,000
Interest	5,410,000	5,457,000
Changes in benefit terms	20,000	0
Differences between expected and actual experience	(2,254,000)	(2,625,000)
Changes in assumptions	0	0
Benefit payments, including refunds of member contributions	(4,794,000)	(5,214,000)
Net change in TPL	$ 1,291,000	$ 485,000
TPL - beginning	$ 78,993,000	$ 80,285,000
TPL - ending (a)	$ 80,285,000	$ 80,769,000
Fiduciary Net Position (FNP)		
Contributions - State	$ 2,112,000	$ 2,205,000
Contributions - Non-employer	64,000	68,000
Contributions - Member	354,000	381,000
Net investment income	8,051,000	5,812,000
Benefit payments, including refunds of member contributions	(4,795,000)	(5,214,000)
Administrative expenses	(13,000)	(11,000)
Net change in FNP	$ 5,774,000	$ 3,242,000
FNP - beginning	$ 78,522,000	$ 84,296,000
FNP - ending (b)	$ 84,296,000	$ 87,538,000
Net Pension Liability/(Asset) - ending [(a)-(b)]	$ (4,011,000)	$ (6,768,000)

Items printed in red will be replaced with actual amounts once known at the end of FY 2019.

SECTION V – ACCOUNTING STATEMENT INFORMATION

Table V-3
Note to Required Supplementary Information

The June 30, 2018 total pension liability presented in Table V-4 was determined as part of the measurement at the date indicated. Additional information as of the latest measurement date follows:

Measurement date:	July 1, 2018
Valuation date:	July 1, 2017
Actuarial cost method:	Entry age normal
Actuarial assumptions:	
Investment rate of return*	7.0%
Projected salary increases*	2.5% plus merit component based on service
Cost-of-living adjustments	ad hoc
* Includes inflation at	2.50%

The actuarially determined contribution for fiscal year 2020 will use the contribution rate developed in section IV of this valuation. It was determined using the measurement date and key assumptions that follow:

Measurement date:	July 1, 2018
Valuation date:	July 1, 2018
Actuarial cost method:	Entry age normal
Amortization method:	Percentage of pay – open
	Pay increases at 2.5% per year
Amortization period:	20 years
Asset valuation method:	Smoothed market, 20% annual market weight
Actuarial assumptions:	
Investment rate of return*	7.0%
Projected salary increases*	2.5% plus merit component based on service
Cost-of-living adjustments	ad hoc
* Includes inflation at	2.50%

The actuarial assumptions used have been recommended by the actuary and adopted by the Plan's Board of Trustees based on the most recent review of the Plan's experience completed in 2016. The economic assumptions were updated first effective with the 2017 valuation based on the Board's annual review of these assumptions.

The total rate of State contributions to the Plan is composed of the State normal cost rate, the unfunded actuarial liability amortization payment rate, and the administrative expenses rate. The State normal cost rate is a level percent of payroll cost that, along with member contributions, will pay for projected benefits at retirement for each active member. The actuarial liability is that portion of the present value of projected benefits that will not be paid by future State normal costs or future member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial liability. The allowance for administrative expenses is based upon the Plan's actual administrative expenses.

SECTION V – ACCOUNTING STATEMENT INFORMATION

Table V-4
Analysis of Financial Experience

Gain and Loss in Accrued Liability during Years Ended June 30
Resulting from Differences between Assumed Experience and Actual Experience

Type of Activity	*Gain (or Loss) for Year Ending June 30,* *(expressed in thousands)*					
	2013	**2014**	**2015**	**2016**	**2017**	**2018**
Investment Income on Actuarial Assets	$ (172)	$ 1,068	$ 123	$ (1,201)	$ (481)	$ 116
Combined Liability Experience	2,889	1,361	451	2,017	2,254	2,625
(Loss)/Gain during Year from Financial Experience	2,717	2,429	574	816	1,773	2,741
Non-Recurring Items	589	(410)	(263)	1,953	(1,344)	(20)
Composite Gain (or Loss) during Year	$ 3,306	$ 2,019	$ 311	$ 2,769	$ 429	$ 2,721

Table V-5
Schedule of Funded Liabilities by Type
Aggregate Accrued Liabilities for
(expressed in thousands)

Valuation Date June 30,	Active Member Contributions (1)	Retirees & Beneficiaries (2)	Active Member State-Financed Contributions (3)	Actuarial Value of Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets		
					(1)	**(2)**	**(3)**
2018	$ 5,446	$ 44,918	$ 27,296	$ 83,834	100%	100%	123%
2017	5,193	44,075	27,472	80,445	100	100	113
2016	5,834	39,411	28,976	77,302	100	100	111
2015	5,804	35,262	33,082	74,659	100	100	102
2014	5,841	32,803	31,963	70,335	100	100	99
2013	5,896	28,458	32,213	63,512	100	100	91

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APPENDIX A – MEMBERSHIP INFORMATION

		A	P-TDV	P-RET	P-DIS	P-SR	P-SURV	Total
**Delaware State Judiciary Pension Plan  ** **Data Reconciliation**

		A	P-TDV	P-RET	P-DIS	P-SR	P-SURV	Total
1.	June 30, 2017 valuation	**57**	**1**	**36**	**1**	**0**	**14**	**109**
2.	Additions							
	(a) New entrants	1						1
	(b) New Beneficiary/QDRO						1	1
	(c) Total	1					1	2
3.	Reductions							
	(a) Terminated - not vested							
	(b) Paid Out/Expired/Death				(1)		(2)	(3)
	(c) Total				(1)		(2)	(3)
4.	Changes in status							
	(a) P-TDV							
	(b) P-SUPP							
	(c) Returned to work							
	(d) P-RET	(2)		2				
	(e) PRET25							
	(f) P-DIS							
	(g) P-LTD							
	(h) P-SURV							
	(i) PSUR25							
	(j) P-SR							
	(k) Data corrections							
	(l) Total	(2)		2				
5.	June 30, 2018 valuation	**56**	**1**	**38**	**0**	**0**	**13**	**108**

A=Active, P-TDV=Terminated Deferred Vested, P-SUPP=Terminated Deferred Vested, P-RET=Retired, PRET25=Retired, P-DIS=Disabled, P-LTD=Long-Term Disabled, P-SURV=Surviving Beneficiary, PSUR25=Surviving Beneficiary, P-SR=Disabled
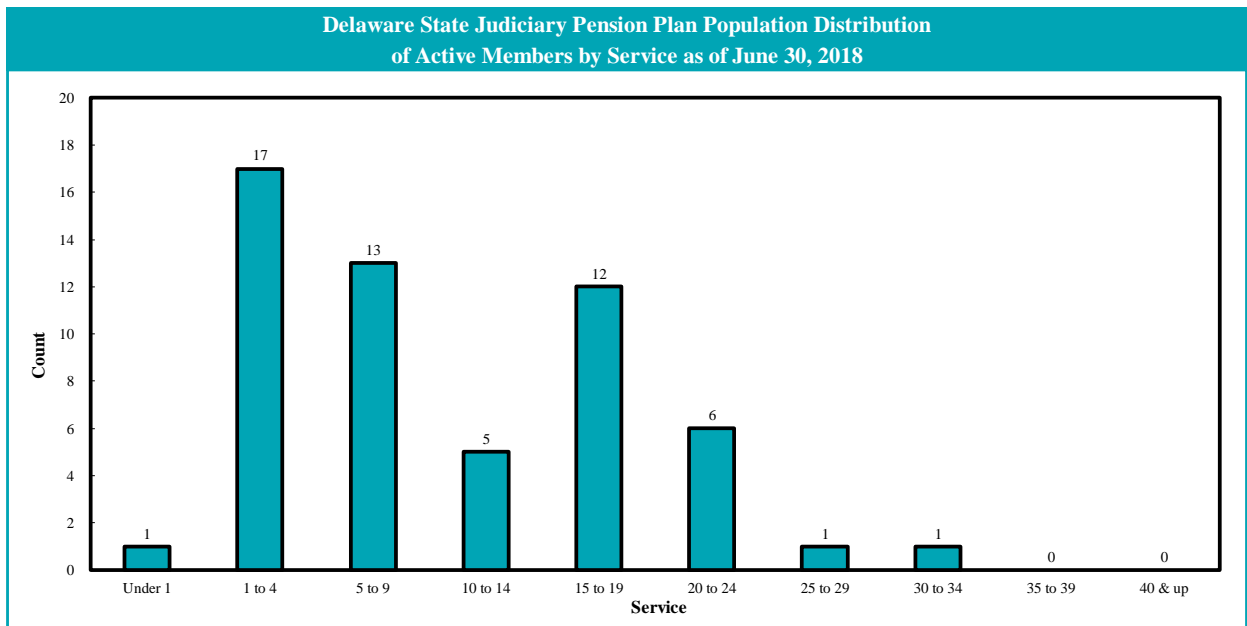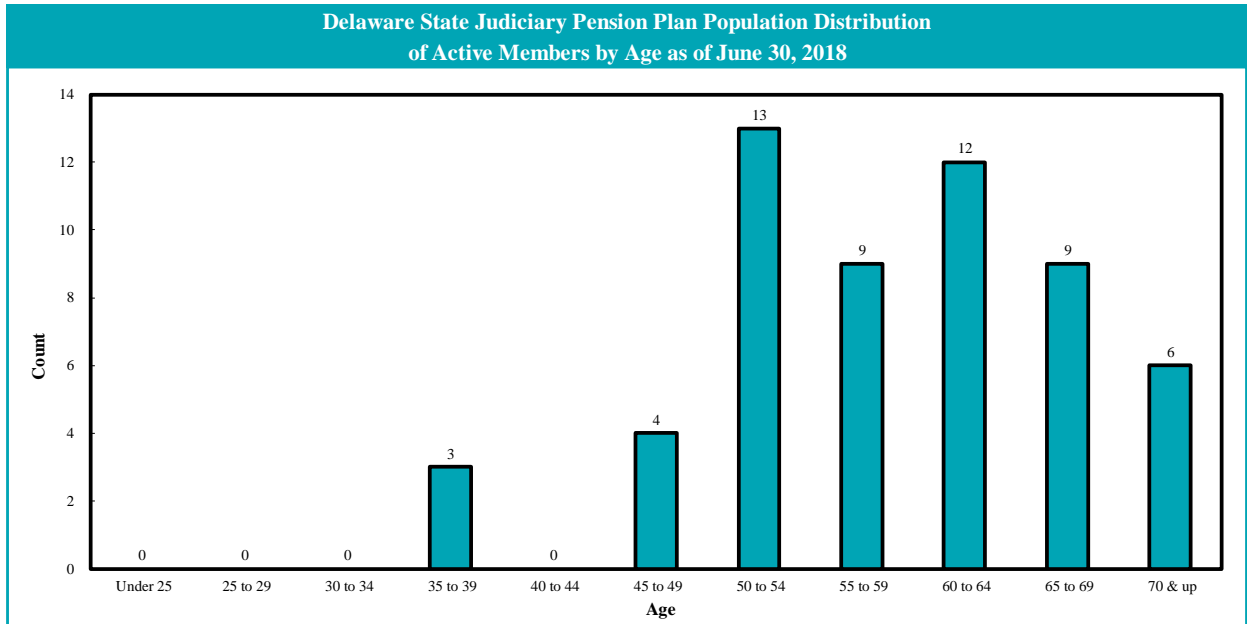
APPENDIX A – MEMBERSHIP INFORMATION

	Delaware State Judiciary Pension Plan Population Distribution of Active Members by Age and Service as of June 30, 2018										
	Counts By Age/Service										
	Service										
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	**Total**
Under 25	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0	0
35 to 39	0	3	0	0	0	0	0	0	0	0	3
40 to 44	0	0	0	0	0	0	0	0	0	0	0
45 to 49	0	2	2	0	0	0	0	0	0	0	4
50 to 54	0	5	5	2	1	0	0	0	0	0	13
55 to 59	0	4	2	0	3	0	0	0	0	0	9
60 to 64	1	2	1	2	5	1	0	0	0	0	12
65 to 69	0	1	2	1	2	3	0	0	0	0	9
70 & up	0	0	1	0	1	2	1	1	0	0	6
Total	1	17	13	5	12	6	1	1	0	0	56

APPENDIX A – MEMBERSHIP INFORMATION

Delaware State Judiciary Pension Plan Population Distribution
of Active Members by Age as of June 30, 2018

Delaware State Judiciary Pension Plan Population Distribution
of Active Members by Service as of June 30, 2018

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APPENDIX A – MEMBERSHIP INFORMATION

	Delaware State Judiciary Pension Plan Salary Distribution of Active Members by Age and Service as of June 30, 2018										
	Average Salary by Age/Service										
	Service										
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	**Total**
Under 25	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
25 to 29	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0	0
35 to 39	0	189,910	0	0	0	0	0	0	0	0	189,910
40 to 44	0	0	0	0	0	0	0	0	0	0	0
45 to 49	0	158,475	189,910	0	0	0	0	0	0	0	174,193
50 to 54	0	193,107	187,269	189,910	211,344	0	0	0	0	0	191,773
55 to 59	0	199,883	186,609	0	191,607	0	0	0	0	0	194,175
60 to 64	207,341	204,010	189,910	189,910	187,269	189,910	0	0	0	0	192,612
65 to 69	0	189,910	189,910	201,602	196,019	190,849	0	0	0	0	192,880
70 & up	0	0	189,910	0	189,910	189,910	189,910	189,910	0	0	189,910
Total	$ 207,341	$ 191,157	$ 188,386	$ 192,248	$ 192,038	$ 190,380	$ 189,910	$ 189,910	$ 0	$ 0	$ 190,961

APPENDIX A – MEMBERSHIP INFORMATION

Delaware State Judiciary Pension Plan Salary Distribution of Active Members by Age as of June 30, 2018

Delaware State Judiciary Pension Plan Salary Distribution of Active Members by Service as of June 30, 2018
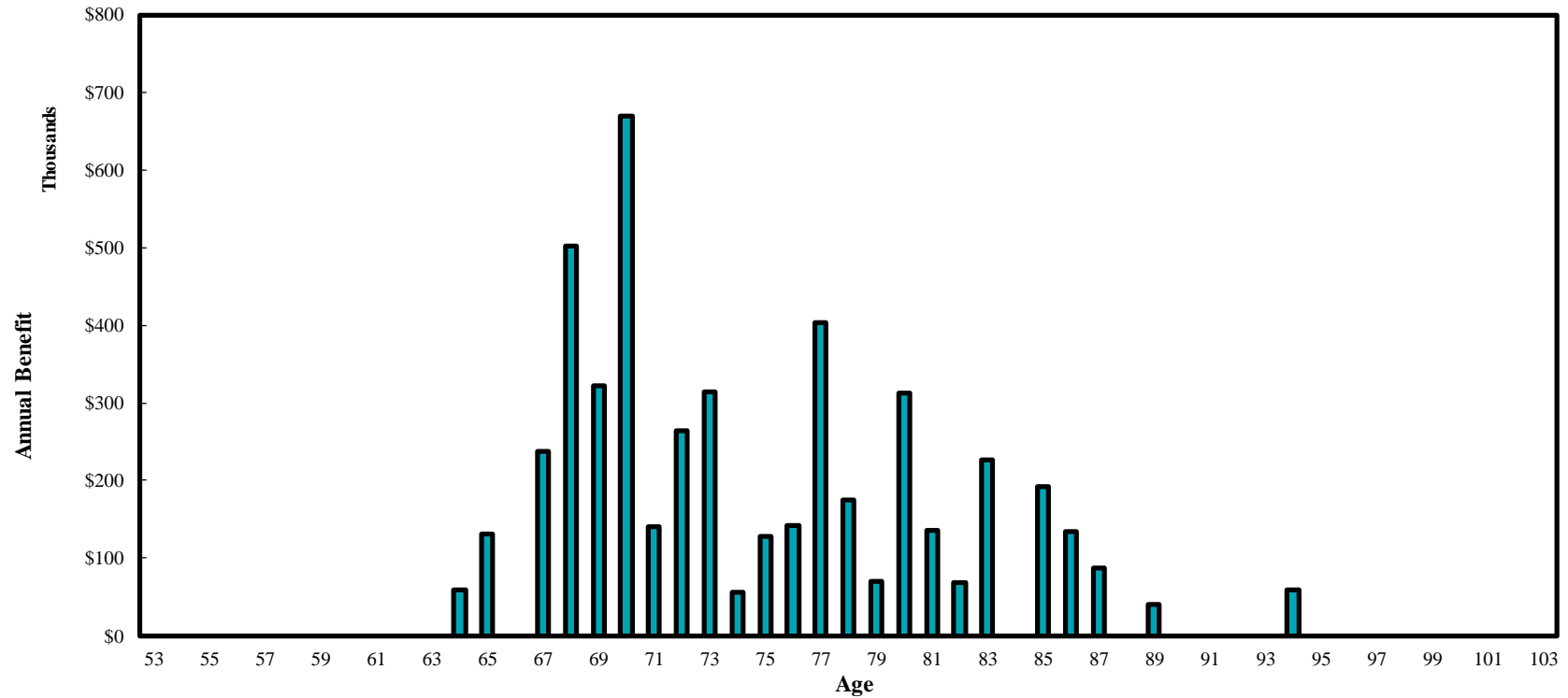
APPENDIX A – MEMBERSHIP INFORMATION

Delaware State Judiciary Pension Plan Distribution by Age of Retired Members, Beneficiaries, and Disabled Members as of June 30, 2018

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	$ -	73	3	$ 313,504
25	0	-	74	1	56,461
26	0	-	75	2	127,982
27	0	-	76	1	142,520
28	0	-	77	3	404,114
29	0	-	78	2	174,454
30	0	-	79	1	69,399
31	0	-	80	3	312,991
32	0	-	81	1	134,969
33	0	-	82	1	69,100
34	0	-	83	4	226,707
35	0	-	84	0	-
36	0	-	85	3	192,573
37	0	-	86	1	133,716
38	0	-	87	1	86,532
39	0	-	88	0	-
40	0	-	89	1	40,508
41	0	-	90	0	-
42	0	-	91	0	-
43	0	-	92	0	-
44	0	-	93	0	-
45	0	-	94	1	59,176
46	0	-	95	0	-
47	0	-	96	0	-
48	0	-	97	0	-
49	0	-	98	0	-
50	0	-	99	0	-
51	0	-	100	0	-
52	0	-	101	0	-
53	0	-	102	0	-
54	0	-	103	0	-
55	0	-	104	0	-
56	0	-	105	0	-
57	0	-	106	0	-
58	0	-	107	0	-
59	0	-	108	0	-
60	0	-	109	0	-
61	0	-	110	0	-
62	0	-	111	0	-
63	0	-	112	0	-
64	1	59,378	113	0	-
65	1	131,040	114	0	-
66	0	-	115	0	-
67	2	237,245	116	0	-
68	4	501,692	117	0	-
69	3	321,524	118	0	-
70	7	670,378	119	0	-
71	1	140,532	120	0	-
72	3	263,753			
			Totals	51	$ 4,870,247

APPENDIX A – MEMBERSHIP INFORMATION

Delaware State Judiciary Pension Plan Distribution by Age of Retired Members, Beneficiaries, and Disabled Members as of June 30, 2018

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

A. Long-Term Assumptions Used to Determine Plan Costs and Liabilities

1. **Demographic Assumptions**

   a. **Rates of Mortality**

   Mortality rates are based on the sex-distinct employee, healthy annuitant, and disabled annuitant mortality tables described below, including adjustment factors applied to the published tables for each group. Future mortality improvements are reflected by applying a custom projection scale on a generational basis to adjusted base tables from the base year shown below.

   i. **Sample Rates of Mortality for Active Healthy Lives at Selected Ages (number of deaths per 10,000 members):**

(2018 Values Shown)		
Age	**Male**	**Female**
25	5	2
30	5	2
35	5	3
40	6	4
45	10	6
50	18	10
55	30	16
60	50	24
65	88	36
70	150	63
75	256	108
80	432	187

   Rates are based on 110% and 100% of the RP-2014 Total Dataset Employee Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Healthy Annuitant Mortality Table rates after the end of the Employee Mortality Table, both projected from the 2006 base rates using the RPEC-2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0% for ages 115-120, and convergence to the ultimate rate in the year 2020. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

ii. **Sample Rates of Mortality for Healthy Annuitant Lives at Selected Ages (number of deaths per 10,000 members):**

(2018 Values Shown)		
Age	**Male**	**Female**
50	43	26
55	61	36
60	83	52
65	117	79
70	182	128
75	296	209
80	498	354
85	869	628
90	1,537	1,126
95	2,434	1,859
100	3,486	2,785

Rates are based on 110% and 100% of the RP-2014 Total Dataset Healthy Annuitant Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Employee Mortality Table for ages prior to start of the Healthy Annuitant Mortality Table, both projected from the 2006 base rates using the RPEC-2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0% for ages 115-120, and convergence to the ultimate rate in the year 2020. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

iii. Sample Rates of Mortality for Disabled Annuitant Lives at Selected Ages (number of deaths per 10,000 members):

(2018 Values Shown)		
Age	**Male**	**Female**
25	91	27
30	87	34
35	103	48
40	124	66
45	192	103
50	235	136
55	271	171
60	308	203
65	369	247
70	477	336
75	653	492
80	931	743
85	1,387	1,126
90	2,135	1,673
95	3,003	2,440
100	3,957	3,432

Rates are based on 120% of the RP-2014 Total Dataset Disabled Annuitant Mortality Table, projected from the 2006 base rates using the RPEC-2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0% for ages 115-120, and convergence to the ultimate rate in the year 2020. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

b. Sample Rates of Active Disabilities

45% of 1946 Railroad Retirement Board Disability Rates

Rates of Active Disability	
Age	Current
20	0.0877%
25	0.1008
30	0.1080
35	0.1148
40	0.1323
45	0.1777
50	0.3208
55	0.6129
60	1.2420

c. Termination of Employment (Prior to Normal Retirement Eligibility)

None assumed

d. Rates of Retirement

Normal Retirement: 25% for all years the member is retirement eligible upon attaining the earliest of:

i.   age 62 with 12 years of credited service
ii. 24 years of credited service

100% probability of retirement once reaching age 75. Rates only applicable if member meets eligibility.

e. Salary Increase Rates

Service-based table includes an annual inflation rate of 2.50%.

Salary Increase	
Service (Years)	Increase
0	12.24%
1 or more	3.53

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

f. Family Composition

Female spouses are assumed to be three years younger than males. 80% are assumed married for both male and female employees. Actual marital characteristics are used for pensioners.

2. Economic Assumptions

a.	Investment Rate of Return:	7.00%
b.	General Wage Increase Rate:	2.50%
c.	Annual Assumed Cost-of-Living Increase Rate for Retirees:	0.00%
d.	Total Payroll Increase Rate (for Amortization):	2.50%
e.	Administrative Expenses as a Percentage of Covered Payroll:	0.10%

3. Rationale for Assumptions

The assumptions were adopted by the Board of Trustees upon the recommendation of the actuary, based on an experience study review performed in 2016 and covering the period July 1, 2010 through June 30, 2015. The Board continually reviews the investment rate of return assumption and adopted a reduced rate of 7.0% at the advice of its investment consultants, first effective for funding with the 2017 valuation.

4. Changes since Last Valuation

None.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Funding Method

The Entry Age Normal funding method is used to determine costs. Under this funding method, a normal cost rate is determined as a level percent of pay for each active member. The normal cost rate times payroll equals the normal cost for each active member. The normal cost plus member contributions will pay for projected benefits at retirement for each active plan participant.

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future State normal costs or member contributions. The difference between this liability and funds accumulated as of the same date is referred to as the unfunded actuarial liability.

The portion of the actuarial liability in excess of plan assets is amortized to develop an additional cost or savings that is added to each year's employer normal cost. Under this cost method, actuarial gains and losses are directly reflected in the size of the unfunded actuarial liability.

The portion of unfunded liability not expected to be paid through PRI transfers is amortized over a rolling 20-year period as a percentage of payroll. PRI transfers are made to pay for each PRI as granted over a five-year period. These transfers are treated as a receivable for purposes of developing the State rate. All payments are determined assuming total pay increased by the annual inflation rate. Use of a rolling amortization period means that the UAL amount is never anticipated to be fully paid off. This method was chosen to provide for a more level contribution rate over time.

2. Actuarial Value of Assets

For purposes of determining the State Judiciary employer contribution rate to the Plan, we use an actuarial value of assets. This asset smoothing method dampens the volatility in asset values that could occur because of fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process.

The actuarial value of assets is a weighted average giving 20% weight to the current market value and 80% weight to the prior year's actuarial value increased by expected interest and contributions and decreased by benefit payments and expenses. This is mathematically equivalent to recognizing 100% of the actuarially assumed interest rate, plus contributions, fewer payments each year, and 20% of the portion of each year's returns that have not already been reflected in asset values.

3. Changes since Last Valuation

The open period for the rolling amortization was changed to 20 years in order that the surplus be preserved for a longer period of time.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

This appendix provides a summary of the plan provisions. Where the Plan, as determined by the State Code and the Plan Rules and Regulations, and this summary differ, the Plan governs.

1. Membership

The Plan covers individuals while members of the State Judiciary.

2. Member Contributions

3% of compensation, which exceeds $6,000 per annum plus an additional
2% of compensation in excess of the Social Security wage base

3. Credited Service

All service as a member

After accruing 12 years of Judicial service, previous State service may be credited for purposes of retirement eligibility.

4. Final Average Compensation

Final Average Compensation is the average over the highest three consecutive years (or shorter period of service) of compensation paid to the judge.

5. Normal Retirement

Eligibility: (i) age 62 with 12 years of service as a judge, or (ii) any age with 24 years of service, or (iii) involuntarily retired after 22 years of service as a judge

Benefit: 1/24 of final average compensation for each of the first 12 years of service as a judge plus 1/48 of final average compensation for each of the next 12 years of service as a judge

6. Disability Benefit

Eligibility: Permanently disabled while active

Benefit: Normal retirement benefit with the following revisions: For judges appointed after June 30, 1980, a minimum of 12 years of service as a judge and a maximum of 24 years of service as a judge is used in the benefit determination.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

7. Survivor's Benefit

A pension is payable to the surviving spouse of a judge who dies in office regardless of his or her number of years of service at the time of death. A pension is also payable to the surviving spouse of a former judge with a vested right to a pension or a retired judge. If a judge is not survived by a spouse, a pension is payable to surviving eligible dependent children, if any, in equal shares until the youngest unmarried child attains age 18 (or age 22 if attending school or child's death if permanently disabled), as follows:

Eligibility: Death while in office

Benefit: For eligible survivors of members who die in office: 66 ⅔% of the member's accrued pension based on not less than 12 years of service, deferred to age 50, or reduced if paid prior to age 50, with a 3% reduction for form of payment

8. Vesting

Eligibility: 12 or more years of service as a judge

Benefit: Normal Retirement based on final average compensation and service at date of termination. In lieu of a pension, a member may receive a refund of accumulated contributions (with interest for judges appointed after June 30, 1980). Upon application for a refund of contributions, a member's vested right to a monthly benefit shall be forfeited.

9. Withdrawal

Eligibility: Terminated service

Benefit: Accumulated employee contributions with interest for judges appointed prior to July 1, 1980. Accumulated employee contributions with interest for judges appointed after June 30, 1980

10. Form of Payment

The normal form of payment is a 50% joint and survivor annuity.

As an alternative to the normal form, a member may elect one of the following optional forms of payment upon service retirement or disability:

- 66 2/3% joint and survivor form with a 2% reduction in benefits,
- 75% joint and survivor form with a 3% reduction in benefits, or
- 100% joint and survivor form with a 6% reduction in benefits.

The 66 2/3% and 100% options are only available for retirement on or after January 1, 2015.

11. Cost-of-Living Adjustment

Cost-of-living adjustments are made only on an ad hoc basis.

12. Changes since Last Valuation

Senate Bill 236 provided for a one-time payment of $400 to all who are retired as of July 8, 2018. The cost of this supplemental payment will be reimbursed by the State.