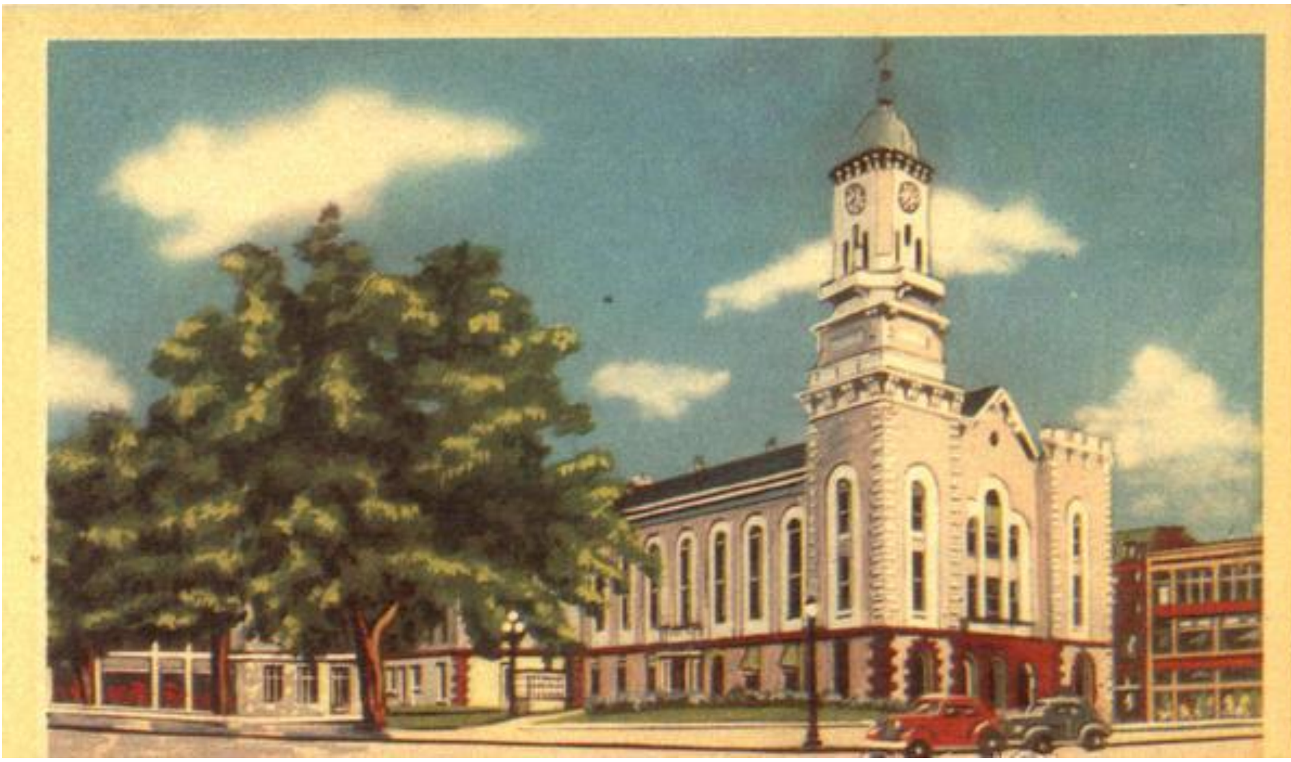


Lycoming County Employees' Retirement System

Actuarial Valuation for Funding Purposes as of January 1, 2016

Municipal Finance Partners, Inc.

Lycoming County Employees' Retirement System

Actuarial Valuation for Funding Purposes as of January 1, 2016

In this report:

This report was prepared to determine the plan's Actuarially Determined Employer Required Contribution (ADEC). The ADEC is the amount recommended to be contributed each year towards the goal of funding each plan member's benefits during his working career. The ADEC replaces the Annual Required Contribution (ARC) under current Government Accounting Standards Board Statements, which no longer address the concept of the ARC. Disclosures under current GASB Statements 67 and 68 are contained in a separate report.

Contribution Requirements: the Actuarially Determined Employer Contribution (ADEC)

Section 1 of this report shows the development of the plan's Actuarially Determined Employer Contribution, or *ADEC* for 2016. Figure 1 shows the plan's ADEC of $2,304,865 compared to the ADECs for the previous ten years. The increase from the 2015 ADEC of $2,139,753 is primarily due to changes in actuarial assumptions and methods. The increases were partially offset by a relatively small investment gain.

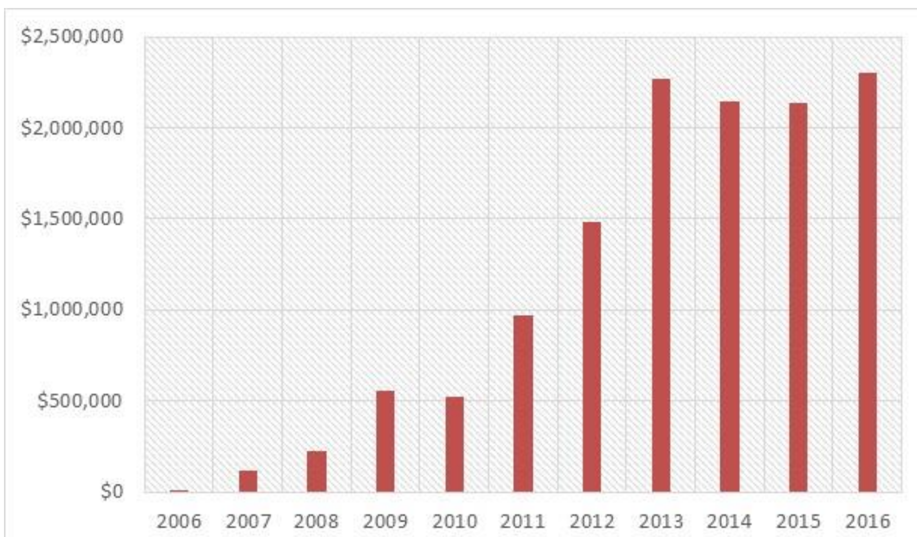


Figure 1, Actuarially Determined Employer Contribution (ADEC)

Lycoming County Employees' Retirement System

Actuarial Valuation for Funding Purposes as of January 1, 2016

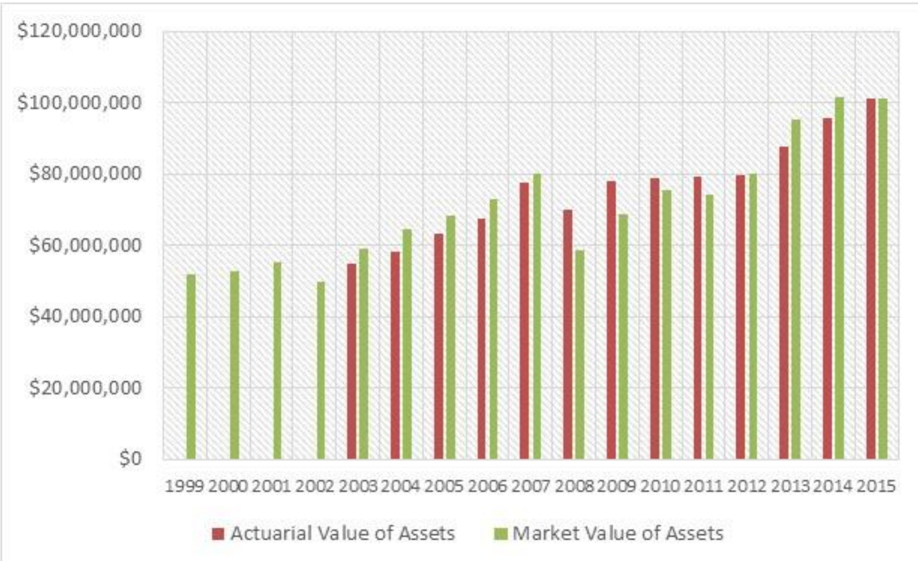


Figure 2, Plan Assets

Despite these changes, the funded status of the plan has increased since the prior actuarial valuation. As of January 1, 2016, the plan's assets, at their actuarial value, are equal to 91.8% of the plan's actuarial accrued liability, continuing the increase from 82.7% at January 1, 2013, 86.1% at January 1, 2014 and 91.5% at January 1, 2015. The unfunded actuarial accrued liability increased only slightly from $8.9 million to $9.0 million during 2015, as continued contributions to amortize the plan's unfunded liability offset much of the increase. Figure 9 shows the history of the plan's funded status.

Because of investment losses in 2016, the asset smoothing method is now adjusting the assets downward by only 0.09% or about $94,000. The prior "reserve" of $5.76 million (i.e., the amount that the assets were smoothed down by last year).

The market value of assets is equal to 91.9% of the actuarial accrued liability and the unfunded portion on this basis is about $8.91 million.

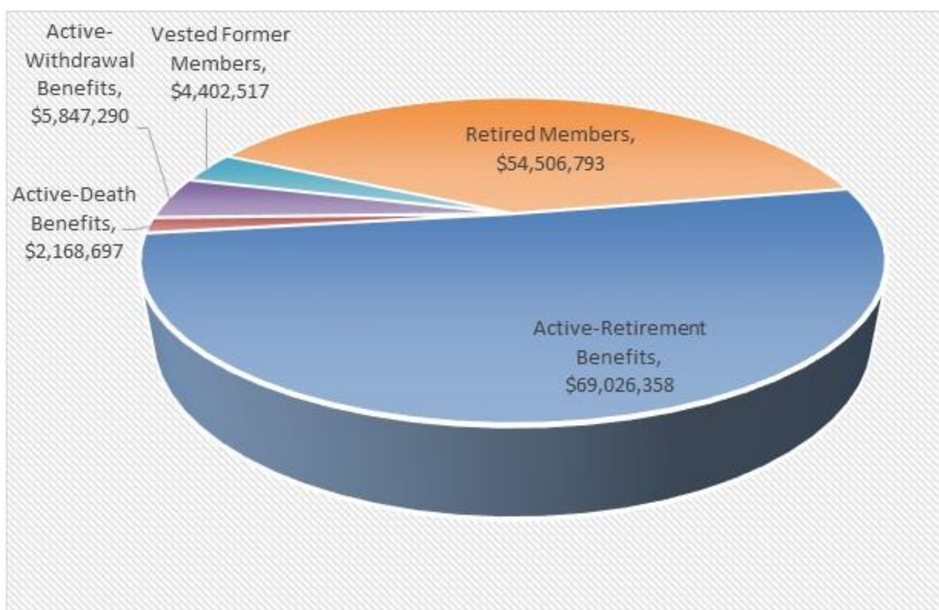


Figure 3, Actuarial Present Value of Future Benefits

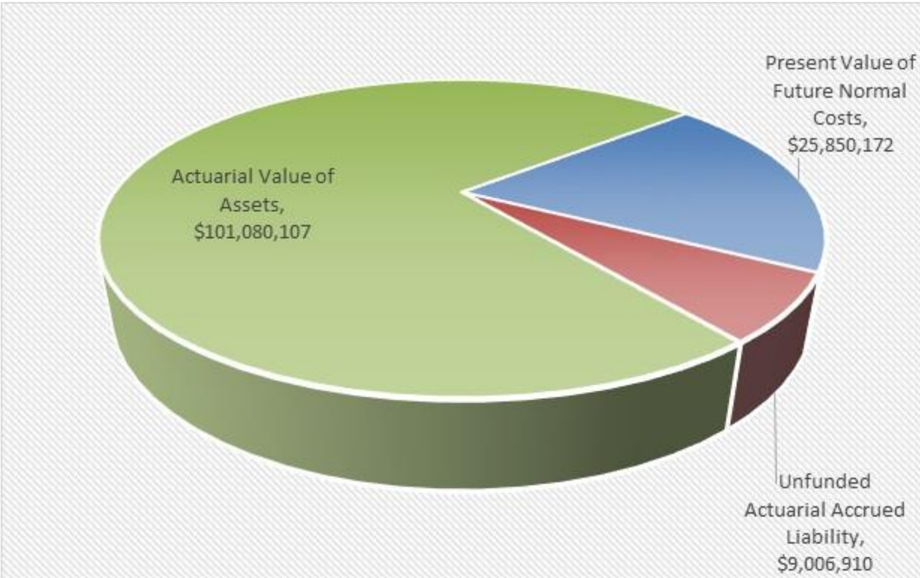


Figure 4, Actuarial Balance Sheet

Unlike plans sponsored by municipalities whose funding requirements are governed by Pennsylvania law, and corporate sponsored plans whose funding requirements are determined under Federal law, there are no Federal or State statutes governing the funding of pension funds sponsored by Pennsylvania Counties.

Prior to the implementation of GASB standards 67 and 68, the only constraints on how we determine the Annual Required Contribution (ARC), outside of Actuarial Standards of Practice, were the rules governing financial disclosures for pension plans set forth by the Government Accounting Standards Board. The determination of the ADEC is governed only by the Actuarial Standards of Practice.

What Drives Changes in the Contribution Requirements?
The actuarial valuation is basically a snapshot that compares plan assets and liabilities as of the valuation date. We can track changes in the ADEC to changes in assets and/or changes in liabilities, plus the effect of any changes in actuarial assumptions and/or benefits.

Asset and Investment Performance
Figure 2 shows the pension fund's market and actuarial values over the last several years.

The pension fund earned 1.49% in 2015 on a market value basis. The fund's market value increased from $101,418,749 at December 31, 2014 to $101,174,376 at December 31, 2015.

The actuarial value of assets, by comparison, is $101,080,107 at January 1, 2016. On an actuarial basis, the fund earned 7.56% in 2015, compared to the 7.0% investment return assumption. On an actuarial basis, the fund had a gain of about $481,000 compared to its expected returns.

Details on the pension fund investments and activity can be found in Section 2 of this report.

Plan Liabilities
Figure 3 shows the actuarial present value of all future plan benefits as of the valuation date, which totals $135,937,189. This represents all past and future funding requirements.

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Members	614	622	630	642	665	674	683	690	697	710	718	746	769	778	793	809	832	846	871	895
Retired and Terminated Former Members and Beneficiaries	230	225	219	220	221	217	211	208	217	222	222	265	274	287	296	305	322	332	352	370
Active Members	384	397	411	422	444	457	472	482	480	488	496	481	495	491	497	504	510	514	519	525

Figure 5, Plan Membership

Under the Entry Age Normal Cost Method, this present value is divided into two pieces: the amount to be funded by future normal costs and the amount that should have been funded by prior contributions (the *actuarial accrued liability*). The amount of the actuarial accrued liability that is not funded by current plan assets is called the *unfunded actuarial accrued liability*. Figure 4 shows the breakdown of the present value, or the *actuarial balance sheet*, as of January 1, 2016. The actuarial value of assets is the portion of the present value of future benefits (Figure 3) that is already funded. The present value of future normal costs is the portion that will be funded as part of the regular annual cost of the plan. The remainder is the unfunded liability that will be amortized over future years.

Figure 6 shows the pattern of normal costs under the Entry Age Actuarial Cost Method, which is the underlying funding method for this actuarial valuation.

The Actuarial Valuation process: how plan assets and liabilities are determined— As discussed above, the funding requirements of a pension plan are based on the relative values of the plan's assets and liabilities.

Plan liabilities are determined by building a model to forecast expected plan distributions over the lifetime of all plan members at the valuation date. This model is built from the following elements:

Plan Provisions

The provisions of the plan as of the valuation date are based on the Act 96 of 1971, the County Pension Law, as well as what benefits are allowed under state and federal law.

The plan's provisions are described in detail in Section 3 of this report.

There were no changes in plan benefits since the prior actuarial valuation.

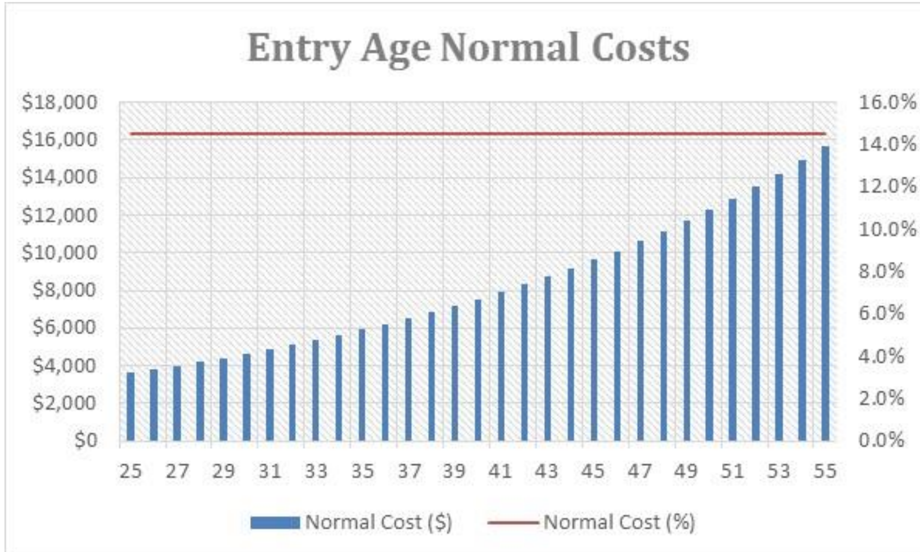
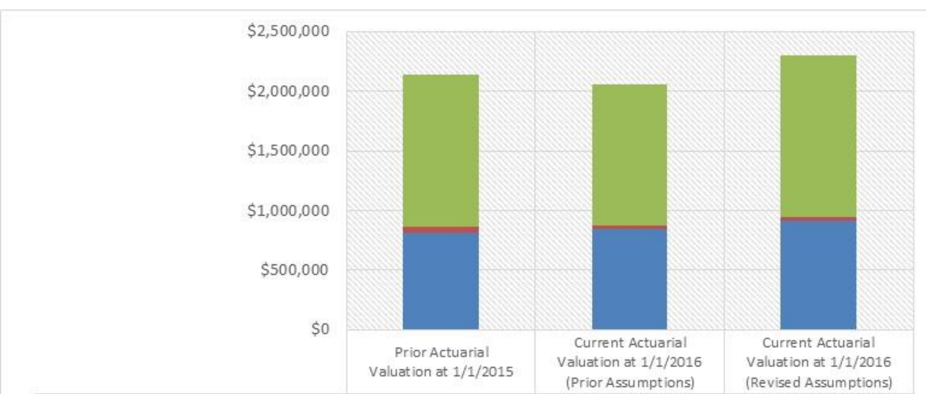


Figure 6, Entry Age Normal Cost Example

Plan Membership

Once we have established the plan provisions, our next step is to determine what benefits each plan member might be eligible to receive in the future. For each valuation, we update the census information for all active, former and retired members, taking into account changes in factors such as payroll, member contributions, newly hired employees, terminated and retired employees, and deaths and disabilities. Section 2 of the report contains a summary of the plan membership and changes in membership since January 1, 2015, the date of the prior actuarial valuation report.



	Prior Actuarial Valuation at 1/1/2015	Current Actuarial Valuation at 1/1/2016 (Prior Assumptions)	Current Actuarial Valuation at 1/1/2016 (Revised Assumptions)
Actuarially Determined Employer Contribution (ADEC) (not less than $0)	$2,139,753	$2,061,570	$2,304,865
Amortization of Unfunded Actuarial Accrued Liability/(Funding Adjustment)	$1,272,627	$1,189,111	$1,358,260
Administrative Expenses	$52,500	$33,500	$33,500
Normal Cost (Net of Expected Member Contributions)	$814,626	$838,959	$913,105

Figure 7, Comparison of Actuarially Determined Employer Contribution

During 2015, 69 new employees joined the plan, compared to 17 retirements and 46 terminations of employment (14 of whom were vested in their pensions), increasing the active membership from 519 to 525 members. As of January 1, 2016, the plan membership included 525 active employees, 327 retired employees and beneficiaries and 43 terminated employees.

Figure 5 shows the history of changes in the plan's year-end membership.

Actuarial Assumptions and Methods

Now that we have established the plan provisions and participant information, we project potential future events (salary increases, retirements, deaths, etc.) using a set of actuarial assumptions, as described in Section 4.

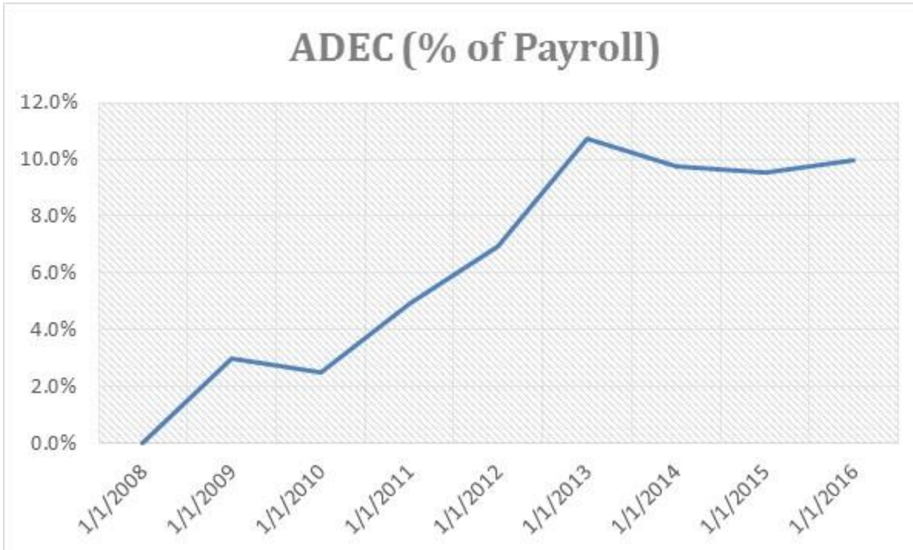


Figure 8, Actuarially Determined Employer Contribution (% of payroll)

The major assumptions include a 7.0% investment return and a 4.0% assumed annual rate of salary increase.

We have changed the method used to value the member's annuity since the prior valuation. Under this new method, we are assuming that 70% of retirees choose to annuitize their member contributions at retirement.

At this point, we have determined the actuarial present value of future benefits (Figure 3). The next step is to use the actuarial cost method to assign the present value to

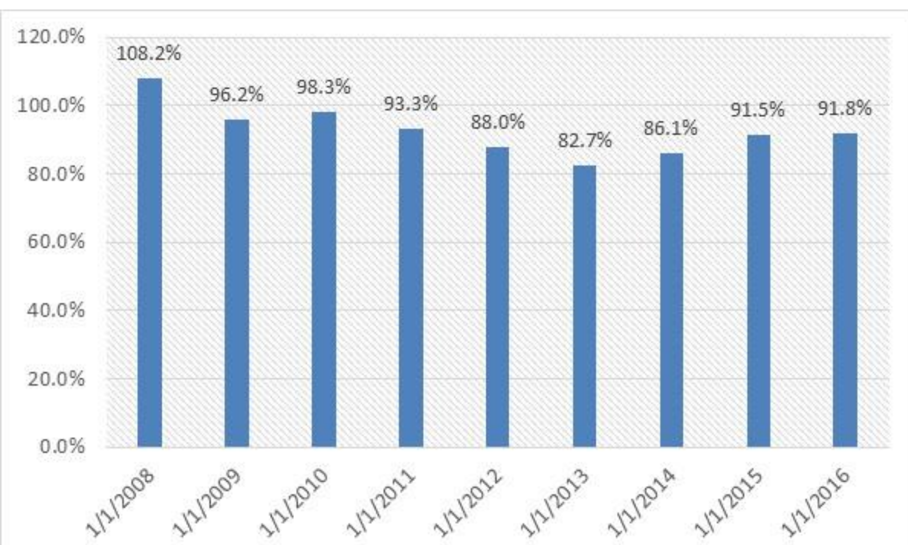


Figure 9, Percent of Actuarial Accrued Liability Funded particular time periods, such as the member's career. Under the Entry Age Actuarial Cost Method, the ADEC is the amount to fund this year's normal cost plus any amortization payment to fund the Unfunded Actuarial Accrued Liability.

Figure 7 compares the calculation of the 2016 ADEC with the 2015 amount, including the impact of the changes in actuarial assumptions and methods.

Figure 8 shows the ADEC as a percentage of payroll over recent years and Figure 9 shows how the plan's funding percentage has improved over recent years after recognizing the impact of the 2008 market downturn.

Following the actuarial certification below and the ADEC determination (Section 1), the remainder of the report contains a summary of the 2014 pension fund activity, plan investments at year-end and a summary plan membership activity (Section 2), a summary of the substantive plan provisions (Section 3), a description of the actuarial assumptions and methods used to determine the plan funding requirements (Section 4) and the allocation of Plan Reserves (Section 5).

Actuarial Certification

The calculations within this report have been prepared for the purpose of determining the plan's funding requirements on an ongoing plan basis.

Determinations for purposes other than meeting the plan determining the plan's funding requirements may differ significantly from the results in this report. Additional determinations are needed for other purposes, such as gauging benefit security upon plan termination.

The actuarial valuation is a projection of liabilities based on the plan provisions, financial information, participant data and actuarial assumptions and methods as described within the report. The actuarial valuation is not an exact statement of the Plan's ultimate benefits and liabilities.

The actuarial valuation is based on actuarial assumptions as to future economic and demographic experience. Future results may differ significantly from the results of the actuarial valuation. Analysis of the sensitivity of the valuation results to future experience was beyond the scope of this assignment.

To the best of my knowledge, this report is complete and accurate, based upon the data furnished to us. The financial data regarding the pension fund was provided by Lycoming County and Wilmington Trust Corporation. The participant and beneficiary data were provided by Lycoming County.

The participant census and plan asset information used to prepare the January 1, 2016 actuarial valuation were as of January 1, 2016.

The actuarial assumptions and methods used to prepare the actuarial valuation were arrived at by consensus among the members of the County Retirement Board and the actuary. I certify that all costs and liabilities herein have been determined on the basis of actuarial assumptions and methods (described in Section 4), each of which is reasonable and which, in combination, offer my best estimate of anticipated experience under the plan, taking into account the plan's past experience and reasonable expectations of future events.

I, Charles B. Friedlander, am Director, Actuarial Services, for Municipal Finance Partners, Inc. I am a Member of the American Academy of Actuaries, a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries and an Enrolled Actuary under ERISA, and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I am available to discuss this report and can be contacted at:

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Charles B Friedlander

Charles B. Friedlander, F.S.A.
Director, Actuarial Services
Municipal Finance Partners, Inc.
Enrolled Actuary No. 14-04194

September 8, 2016
Date

Section 1 – Determination of the Actuarially Determined Employer Contribution (ADEC)

This section contains the development of the plan's Actuarially Determined Employer Contribution (ADEC) for the current plan year.

The valuation uses an asset smoothing method to even out the year-to-year fluctuations in the investment markets. Under the method being used for this valuation, the investment gains or losses (i.e., actual vs. expected performance) are recognized over a five-year period. The actuarial value of assets determined under this method is limited to 20% above or below the market value of assets.

	2012	**2013**	**2014**	**2015**
Market Value at January 1	$73,970,896	$80,184,306	$94,992,365	$101,418,759
Contributions	3,503,618	4,289,305	4,280,848	4,346,616
Benefit Payments and Expenses	(4,053,119)	(5,100,908)	(4,793,085)	(6,097,904)
Expected Investment Income	5,158,730	5,584,495	6,631,537	7,038,018
Expected Value at 12/31	$78,580,125	$84,957,198	$101,111,665	$106,705,489
Market Value at 12/31	$80,184,306	$94,992,365	$101,418,759	$101,174,376
Gain or (Loss)[1]	$1,604,181	$10,035,167	$307,094	($5,531,113)
Recognition Percentage Deferred	20%	40%	60%	80%
Gain or (Loss) to be Recognized in Future Years	$320,836	$4,014,067	$184,256	($4,424,890)

Market Value of Assets at 12/31/2015	$101,174,376
Total (Gain) or Loss to be Recognized in Future Years	(94,269)
Actuarial Value of Assets at 1/1/2016	$101,080,107 [2]
Investment Return on Actuarial Value of Assets	7.56%

The table below shows the development of the plan's Normal Cost, Unfunded Actuarial Accrued Liability and Actuarially Determined Employer Contribution (ADEC) under the Entry Age Normal Actuarial Cost Method.

Normal Cost		
Retirement Benefits	$2,132,860	
Death Benefits	75,106	
Withdrawal Benefits	556,210	
Total Normal Cost		$2,764,176

Present Value of Future Benefits		
Active Members		
Retirement Benefits	$69,026,358	
Death Benefits	2,168,697	
Withdrawal Benefits	5,832,824	
Total Active Members		$77,027,879
Vested Former Members		4,402,517
Retired Members		54,506,793
Total Present Value of Future Benefits		$135,937,189
Present Value of Future Normal Costs		(25,850,172)
Actuarial Accrued Liability		$110,087,017
Actuarial Value of Assets		(101,080,107)
Unfunded Actuarial Accrued Liability		$9,006,910

Actuarially Determined Employer Contribution (ADEC)	
Normal Cost	$2,764,176
Administrative Expenses	33,500
Amortization of Unfunded Actuarial Accrued Liability/(Funding Adjustment)	1,358,260
Expected Member Contributions	(1,851,071)
Actuarially Determined Employer Contribution (ADEC) (not less than $0)	$2,304,865

Changes in the unfunded actuarial accrued liability are amortized over future years based on the source of the change:

- *Changes in the unfunded liability due to actuarial gains and losses are amortized over 15 years.*
- *Changes in the unfunded liability due to changes in plan benefits are amortized periods based on the type of increase:*
  - *Changes in active member benefits are amortized over 20 years.*
  - *Changes in retired member benefits are amortized over 10 years.*
  - *Special Early Retirement Benefits are amortized over 5 years.*
- *Changes in the unfunded liability due to changes in actuarial assumptions are amortized over 20 years.*

Amortization of Unfunded Actuarial Accrued Liability

Initial Period	Date Established	Initial Amount	Current Amount	Annual Payment	Years Remaining	Source
15	1/1/2009	$2,783,418	$1,827,789	$286,071	8	Experience Loss
15	1/1/2010	(1,368,271)	(979,550)	(140,512)	9	Experience Gain
10	1/1/2011	350,350	204,526	46,619	5	Cost-of-Living
15	1/1/2011	1,423,007	1,097,354	146,017	10	Assumption Change
15	1/1/2011	2,622,036	2,021,987	269,052	10	Experience Loss
10	1/1/2012	809,775	549,552	107,751	6	Cost-of-Living
15	1/1/2012	4,551,216	3,747,080	467,008	11	Experience Loss
10	1/1/2013	645,546	495,336	85,898	7	Cost-of-Living
15	1/1/2013	5,738,442	5,004,290	588,832	12	Experience Loss
10	1/1/2014	603,654	513,214	80,324	8	Cost-of-Living
15	1/1/2014	(2,301,248)	(2,111,683)	(236,135)	13	Experience Gain
10	1/1/2015	597,270	554,041	79,475	9	Cost-of-Living
15	1/1/2015	154,791	148,631	15,883	14	Assumption Change
15	1/1/2015	(5,103,271)	(4,900,188)	(523,656)	14	Experience Gain
15	1/1/2016	1,648,432	1,648,432	169,149	15	Assumption Change
15	1/1/2016	(813,901)	(813,901)	(83,516)	15	Experience Gain
Totals		$12,341,246	$9,006,910	$1,358,260		

Aggregation of Changes in Actuarial Accrued Liability

Target Date	Date of Aggregation	Outstanding Balance	Annual Payment	Years Remaining
2023	1/1/2016	$9,006,910	$1,358,260	8

The table below shows changes in the plan's unfunded actuarial accrued liability since the prior actuarial valuation.

Unfunded Actuarial Accrued Liability at 1/1/2015			$8,910,365
Normal Cost		$2,544,117	
Administrative Expense		33,523	
Interest on Above Items		802,967	
Total			3,380,607
Employer Contributions		($2,139,753)	
Member Contributions		(2,206,863)	
Interest on Contributions		(201,436)	
Total			(4,548,052)
Adjustment for Funding Deviation			429,459
Modification to Actuarial Assumptions			1,648,432
Modification to Active Member Benefits			0
Modification to Retired Member Benefits			0
Actuarial (Gain) or Loss			
	Investment (Gain) or Loss	($480,911)	
	Experience (Gain) or Loss	96,469	
	Adjustment for Funding Deviation	(429,459)	
	Total		(813,901)
Unfunded Actuarial Accrued Liability at 1/1/2016			$9,006,910

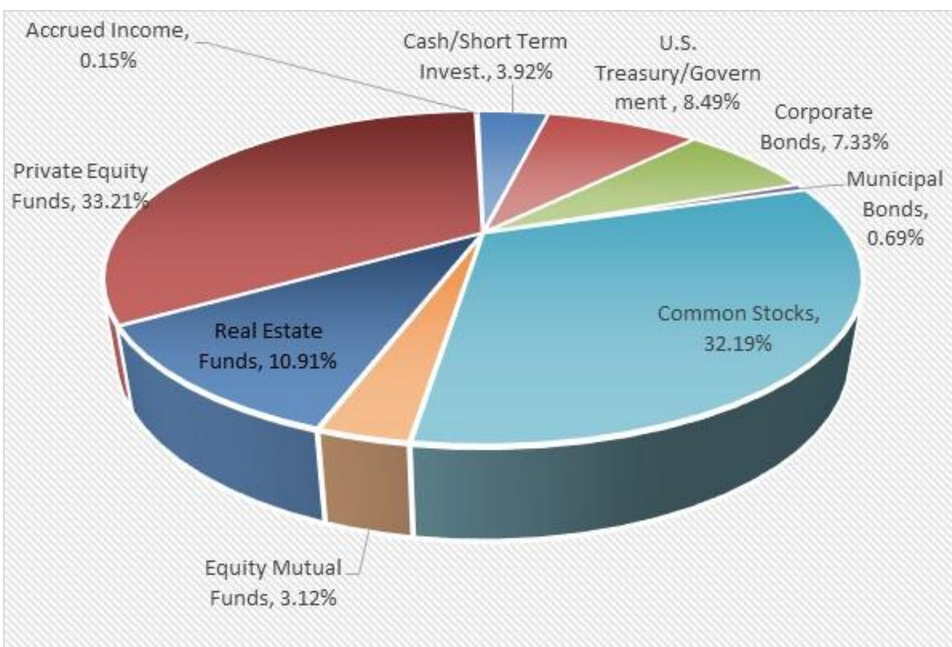
Section 2 - Pension Fund and Member Information

The table below shows the pension fund activity for 2015. The following pages show how the pension fund was invested at December 31, 2015 and plan membership activity during 2015.

Market Value of Assets as of 1/1/2015				$101,418,748.56
Employer Contributions			$2,139,753.00	
Service Purchases			73,383.69	
Member Contributions			2,133,478.90	
Interest Income				
Interest Received	$599,246.48			
Accrued Income at 1/1/2015	(119,434.03)			
Accrued Income at 12/31/2015	120,408.70			
Total Interest Income		$600,221.15		
Dividends				
Dividends Received	$1,191,464.10			
Dividends Receivable at 1/1/2015	(27,647.73)			
Dividends Receivable at 12/31/2015	31,372.31			
Total Dividends		1,195,188.68		
Gains and (Losses) on Investments				
Realized Gain or (Loss)	$2,232,916.70			
Unrealized Gain or (Loss)	(1,885,120.20)			
Net Gains and (Losses) on Investments		347,796.50		
Investment Expenses		(636,290.80)		
Net Investment Income			1,506,915.53	
Total Receipts				5,853,531.12
Monthly Benefit Payments			($5,199,976.93)	
Refund of Member Contributions			(851,898.14)	
Lump Sum Death Benefits			(12,505.46)	
Administrative Expenses			(33,523.36)	
Total Disbursements				(6,097,903.89)
Market Value of Assets at 12/31/2015				$101,174,375.79

The table below shows how the pension fund was invested as of December 31, 2015.

Cash and Short Term Investments	$3,963,196.51	
U.S. Treasury/Government	8,587,784.72	
Corporate Bonds	7,420,874.33	
Municipal Bonds	695,277.55	
Common Stocks	32,573,692.05	
Equity Mutual Funds	3,152,568.11	
Real Estate Funds	11,039,419.92	
Private Equity Funds	33,606,000.66	
Total Assets in Fund		$101,038,813.85
Funds in Transit		0.00
Employer Contributions Receivable		0.00
Accrued Income		151,781.01
Total Assets		$101,190,594.86
Benefits Payable	($16,219.07)	
Administrative Expenses Payable	0.00	
Cash Due to Brokers	0.00	
Total Liabilities		(16,219.07)
Net Assets Held in Trust for Pension Benefits		$101,174,375.79



The changes in the plan membership during 2015 are shown below.

Active Members		
Active Members as of 1/1/2015		519
New Members		69
Returned to Active		0
Members No Longer Active:		
Deceased	0	
Retired	(17)	
Terminated with Full Vesting	(14)	
Terminated without Vesting	(32)	
Total		(63)
Active Members as of 1/1/2016		525
Terminated Members		
Terminated Former Members as of 1/1/2015		36
Terminated with a Vested Pension		14
Terminated without Vesting		32
Survivor of Deceased Participant with Deferred Pension		0
Returned to Active		0
Retired		(1)
Paid Refund of Member Contributions--vested, forfeited County annuity		(5)
Paid Refund of Member Contributions--nonvested		(33)
Terminated Former Members as of 1/1/2016		43
Retired Members		
Retired Members as of 1/1/2015		316
New Retirees		18
Spouse Beneficiaries of Deceased Retirees		1
Deceased Retirees		(8)
Returned to Active		0
Retired Members as of 1/1/2016		327

Section 3 – Summary of Plan Provisions

The following is a summary of the provisions of the pension plan document; actual benefits are determined by the plan document and Act 96 of 1971, the County Pension Law.

Plan Membership

An employee enters the plan on the day he becomes a full-time employee of the County.

Normal Retirement Benefit

In a defined benefit pension plan, the normal retirement benefit is the basis of all plan benefits. The normal retirement benefit is the sum of two pieces: the member annuity, which is based on the member's accumulated deductions; and the county annuity, which is calculated based on the member's compensation and service. The pension that a member earns under the benefit formula is payable monthly beginning on his normal retirement date and continuing for the remainder of his lifetime. At the member's death, any excess of the member's accumulated deductions at retirement over the total benefit payments received will be refunded to the member's beneficiary(ies). This is the Normal Form of Payment under the plan. Additional payment options, as described below, will be available at retirement.

A member's Normal Retirement Date is the first day of the month after a member turns age 55 and completes 20 years of service, or age 60, if earlier.

The member's Normal Retirement Benefit is the sum of the County Annuity plus the Member Annuity.

The County Annuity portion of the member's Normal Retirement Benefit is calculated as percentage of the member's average compensation multiplied by the member's years of service. The percentage is generally determined by the year of employment according to the table below; however, some members have elected to join a higher class by making contributions at the higher level.

Class	Percentage	Effective Date
1/100	1.000%	1/1/1950
1/80	1.250%	1/1/1968
1/70	1.429%	1/1/1983

Average compensation is calculated as the average of total compensation over the 3 year period that produces the highest average.

Compensation consists of total earnings, including pick-up contributions and excluding refunds for expenses, contingency and accountable expense allowances, severance payments and payments for unused sick or vacation leave.

The Member Annuity portion of the member's Normal Retirement Benefit is calculated as the amount of monthly pension that can be purchased by the member's accumulated deductions. The conversion of the accumulated deduction to a monthly annuity is based upon factors contained in the Summary Plan Description.

Accrued Pension

A member's earned or accrued pension prior to his normal retirement date is equal to the County Annuity calculated under the normal retirement benefit formula, using compensation and service to the date of determination, plus the Member Annuity based upon the member's accumulated deductions at the date of the determination.

Early Retirement Benefit

If a member retires after voluntary termination after completion of 20 years of service, or after involuntary termination after 8 years of service, he will be eligible for a reduced pension consisting of his accrued County Annuity, reduced actuarially for payment prior to retirement, plus his Member Annuity, equal to his accumulated deductions at the date of retirement, converted to a monthly pension based upon factors contained in the Summary Plan Description.

Pensions payable prior to normal retirement age are reduced actuarially to reflect the value of the additional benefit payments before normal retirement.

Special Early Retirement Benefits

The retirement board may allow members who have reached age 55 and have 10 or more years of service, or who have 30 or more years of service, regardless of age, to retire under a special early retirement provision, if they elect to do so within a specified period not to exceed 12 months. Members retiring under this provision will receive their Member Annuity plus their accrued County Annuity. The County Annuity will be based upon the member's compensation to their early retirement date and service to their early retirement date, plus additional service of 10% to 30% of the service they earned, with the total service rounded to the next highest full year.

No more than one special early retirement period may be offered by the Retirement Board within a five-year period.

Late Retirement Benefit

If a member continues to work beyond his normal retirement date, he will be eligible to receive his accrued pension payable at his late retirement date.

Optional Forms of Benefit Payment

At retirement, members can elect to receive their pension in the following different payment forms:

- "No Option" or Normal Form – A monthly pension payable for the member's lifetime, with a refund payable to the member's beneficiary(ies) after his death equal to the excess, if any, of the member's accumulated deductions over the total retirement benefits paid.
- Option One – A monthly pension payable for the member's lifetime, with a refund payable to the member's beneficiary(ies) after his death equal to the excess, if any, of the actuarial present value of the member's pension over the total retirement benefits paid.
- Option Two – A monthly pension payable for the member's lifetime, with payments equal to the member's original retirement pension (i.e., net of any cost-of-living increases) continuing to the member's primary beneficiary for the remainder of the primary beneficiary's life.
- Option Three – A monthly pension payable for the member's lifetime, with

payments equal to 50% of the member's original retirement pension (i.e., net of any cost-of-living increases) continuing to the member's primary beneficiary for the remainder of the primary beneficiary's life.

- Option Four – A refund of the member's accumulated deductions, plus a monthly pension based on the member's County Annuity under one of the options described above.

Benefits payable in a form of payment other than the Normal Form will be actuarially adjusted, based on factors in the Summary Plan Description, to reflect the potential additional payments.

Cost-of-Living Increases

The Retirement Board shall consider granting cost-of-living increases to current retirees at least once every three years. Cost-of-living increases will be based on the increase in the Consumer Price Index since the member's retirement. Cost-of-living increases were granted 14 times between January 1972 and January 1989. More recent history of cost-of-living increases is as follows:

Effective Date of Increase	Percentage Change in CPI
January 1, 1998	80%
January 1, 1999	80%
January 1, 2000	80%
January 1, 2001	80%
January 1, 2002	80%
January 1, 2003	80%
January 1, 2004	80%
January 1, 2005	80%
January 1, 2006	80%
January 1, 2007	80%
January 1, 2008	80%
January 1, 2009	80%
January 1, 2010	No Increase
January 1, 2011	80%
January 1, 2012	80%
January 1, 2013	80%
January 1, 2014	80%
January 1, 2015	80%

Disability Benefit

If a member is disabled prior to retirement and after completion of 5 or more years of service, he will receive a disability retirement pension equal to 25% of his average compensation at the time of disability.

The disability pension includes the member's accumulated contributions. If the participant dies before receiving benefit payments equal to his accumulated deductions at retirement, the excess will be paid to his beneficiary(ies). Disability benefits will end if the member recovers from the disability.

Death Benefit

If a member dies after the earlier of age 60 or completion of 10 years of service, his beneficiary(ies) will receive a lump sum payment equal to the member's accumulated deductions, plus the actuarial equivalent of the accrued County Annuity at the time of death, based upon the factors in the Summary Plan Description. Members may elect instead to have any death benefits paid to a designated beneficiary as a lifetime annuity.

If a member dies and is not eligible for a monthly death benefit described above, his beneficiary(ies) will receive a refund of his accumulated deductions.

Termination of Employment Benefits

If a member terminates employment prior to retirement eligibility, but after completing 5 or more years of service, he will be eligible for a benefit from the plan equal to his accrued pension at the date of his termination if he elects to leave his accumulated deductions in the plan. The benefit will be payable at age 60, or age 55 if the member has completed 20 or more years of service. Any vested benefit will be forfeited upon the withdrawal of accumulated contributions from the plan.

If a member terminates employment prior to completing 5 years of service, he will receive a refund of his accumulated deductions.

Contributions

Members in the 1/70th class are required to contribute 8.0% of compensation to the plan as pick-up (pre-tax) contributions; members in the 1/80th class are required to contribute 7.0% of compensation to the plan as pick-up (pre-tax) contributions. In addition, members may make voluntary, after-tax contributions up to an additional 10.0% of compensation. The member's accumulated deductions are equal to the member's contributions plus interest credited annually at a rate of between 4.0% and 5.5%, as specified annually by the Retirement Board.

Service

Service is credited for all years, months and days worked for the County, plus additional periods of military service and part-time service purchased by the member.

Lycoming County Employees' Retirement System

Actuarial Valuation for Funding Purposes as of January 1, 2016

Section 4 - Actuarial Assumptions and Methods

The following is a summary of the actuarial assumptions and methods used for this actuarial valuation.

Interest Rate
7.0% per year

The valuation interest rate represents the expected long-term investment return on pension fund assets. This rate is used to discount expected future benefit payments to the valuation date to determine the present value of plan liabilities and to calculate required plan funding levels

Salary Increases
4.0% per year

Mortality
Assumed rates of employee mortality are based on the RP-2000 table, projected using Scale AA.

Turnover
Select and Ultimate (i.e., service based) Withdrawal is assumed. The Ultimate Rates, for members with 6 or more years of service are from Table T-4 of the *Actuary's Pension Handbook*. The following is a list of the annual rates of withdrawal (employee turnover) at selected ages under the Ultimate table:

Age	Rate of Turnover
20	*10.0000%*
25	*9.7500%*
30	*9.4022%*
35	*8.8436%*
40	*7.9543%*
45	*6.7120%*
50	*4,8722%*
55	*1.7020%*

For members with less than 7 years of service, the rate of withdrawal is a percentage of the ultimate rate, as specified in the table below:

Years of Service	*Percentage of Ultimate Rate*
0-1	*300%*
1-2	*275%*
2-3	*250%*
3-4	*225%*
4-5	*200%*
5-6	*175%*
6 or more	*100%*

Disability
None assumed.

Retirement
Rates of retirement for members eligible for early or normal retirement are as follows:

Age	*Rate of Retirement*
55-59	7%
60-61	8%
62-64	15%
65	34%
66-69	23%
70	100%

Member Elections
A percentage of terminating plan members is assumed to elect to receive a refund of their accumulated deductions, forfeiting their County Annuity. 100% of members under age 30 are assumed to elect a refund. For members age 30 or over, the percentage of members assumed to elect a refund is 100% less 3 1/3% of their age at termination minus 30. Sample percentages are shown below:

Age	*% Electing Refund*
30	100.0%
35	83.3%
40	66.7%
45	50.0%
50	33.3%
55	16.7%

Section 4 - Actuarial Assumptions and Methods (Continued)

Member Elections (Continued)

70% of retiring members are assumed to elect to annuitize their member contributions, 30% are assumed to elect a refund of member contributions at retirement.

Administrative Expenses

Expected administrative (non-investment) expenses are assumed to be paid from the County's general fund and not from plan assets; however, administrative expense may from year to year be paid from the pension fund unless it is determined by the actuary that such payment will impair the actuarial soundness of the fund. Investment expenses are assumed to be funded by earnings in excess of the valuation interest rate.

Actuarial Value of Assets

The valuation uses an asset smoothing method to even out the year-to-year fluctuations in the investment markets. Under the method being used for this valuation, the investment gains or losses (i.e., actual vs. expected performance) are recognized over a five-year period. The actuarial value of assets determined under this method is limited to 20% above or below the market value of assets.

Funding Method

The actuarial cost method is the way that unfunded plan costs are allocated over future years, including the current year. This actuarial valuation uses the Entry Age Normal Actuarial Cost Method. Under this method, the normal cost and actuarial accrued liability are determined on an individual basis. The unfunded actuarial accrued liability is determined as the excess of the actuarial accrued liability over the actuarial value of assets. If the actuarial accrued liability exceeds the actuarial value of plan assets, the unfunded actuarial accrued liability is amortized over future years as part of the annual contribution requirement. The amortization amounts are determined based on the source of each piece of the unfunded actuarial accrued liability (e.g., actuarial gains and losses, plan amendments, changes in assumptions, etc.). If the actuarial value of assets exceeds the actuarial accrued liability, 10% of this excess is used to reduce the plan's financial requirement.

Changes in Actuarial Assumptions

Percentage of retiring members assumed elect a refund of member contributions changed from 100% to 30%.

Section 5 – Plan Reserves

Under the Plan's reserving method, the market value of assets is allocated among the Member Annuity Reserve Account, the County Annuity Reserve Account and the Retired Members Reserve Account. The Retired Members Reserve Account is equal to the Actuarial Present Value of Retiree Benefits as of the Valuation Date. The Member Annuity Reserve Account is equal to the Accumulated Member Deductions with interest as of the Valuation Date. The County Annuity Reserve Account, which is used to fund the County-Provided benefits for active and vested former members, is set equal to the Total Reserves, less the Member Annuity and Retired Member reserves.

	Reserve Account			
	Member Annuity	County Annuity	Retired Members	Total
Market Value of Assets at 1/1/2015	$25,773,697.36	$24,287,381.20	$51,357,670.00	$101,418,748.56
Member Contributions	2,133,478.90	73,383.69		2,206,862.59
County Contributions		2,139,753.00		2,139,753.00
Net Investment Income		2,143,206.33		2,143,206.33
Investment Expenses		(636,290.80)		(636,290.80)
Member Contributions Refunded	(851,898.14)			(851,898.14)
Retirement and Death Benefit Payments	(12,505.46)		(5,199,976.93)	(5,212,482.39)
Retiree and Death Benefit Transfers	(1,491,836.61)	(2,243,338.08)	3,735,174.69	0.00
Cost-of-Living Funding Adjustment		0.00	0.00	0.00
Change in Actuarial Assumptions		0.00	0.00	0.00
Administrative Expenses		(33,523.36)		(33,523.36)
Balance Before Interest	$25,550,936.05	$25,730,571.98	$49,892,867.76	$101,174,375.79
Interest Allocated in 2015	738,502.57	(2,763,513.33)	2,025,010.76	0.00
Balance Before Actuarial Adjustments	$26,289,438.62	$22,967,058.65	$51,917,878.52	$101,174,375.79
Actuarial Adjustments	0.00	(2,588,914.48)	2,588,914.48	0.00
Market Value of Assets at 12/31/2015	$26,289,438.62	$20,378,144.17	$54,506,793.00	$101,174,375.79