



**City of Lansing
Employees' Retirement System**

**Actuarial Review and Analysis
as of December 31, 2010**

January 13, 2012

EFI ACTUARIES | EFI ASSET/LIABILITY MANAGEMENT SERVICES, INC.
The nation's leader in plan-specific, interactive asset allocation optimization counseling
WASHINGTON, DC ✕ PHILADELPHIA ✕ SEATTLE ✕ SAN FRANCISCO

Contents

Executive Summary	3
Actuarial Certification.....	8
Section 1: Summary of Plan Provisions and Member Data	9
1.1: Brief Outline of Plan Provisions	10
1.2: Member Data Summary	15
1.3: Changes in Membership from Prior Valuation	16
Section 2: Actuarial Methods and Assumptions	17
2.1: Actuarial Methods	18
2.2: Actuarial Assumptions	19
2.3: Glossary of Actuarial Terms	21
Section 3: Asset Information	23
3.1: Statement of Net Plan Assets	24
3.2: Income Statement	25
3.3: Computation of Actuarial Value of Assets	26
Section 4: Actuarial Computations	27
4.1: Comparison of Prior Actuarial Calculations	28
4.2: Employer Contributions	29
Section 5: Disclosure Information.....	30
5.1: GASB Schedules	31
5.2: Summary of Valuation Information	33
Appendix: Detailed Participant Data	34

Executive Summary

This report presents the results of an actuarial review and analysis of the City of Lansing Employees' Retirement System (ERS) as of December 31, 2010.

The required Employer contribution for Fiscal Year 2012 has been determined based on actual demographic and asset information as of December 31, 2010. A summary of the current status of the ERS Plan as a whole is as follows:

	December 31, 2009	December 31, 2010	
Plan Membership			
Active	570	497	
Inactive	62	78	
Receiving Benefits	799	840	
Total	1,431	1,415	
Average Pay	\$53,687	\$55,868	
Assets (\$ millions)			
Market Value (MVA)*	\$ 162.7	\$ 172.5	
	Prior Actuary	EFI	
Valuation Results (\$ millions)			
Valuation Assets (AVA)	\$ 193.3	\$ 193.1	\$ 187.4
Actuarial Accrued Liability (AAL)	\$ 262.3	\$ 260.2	\$ 269.5
Unfunded Accrued Liability	69.0	67.1	82.0
Funding Ratio (AVA/AAL)	74%	74%	70%
Funding Ratio (MVA/AAL)	62%	63%	64%
Contributions			
Employer Normal Cost Rate (% of pay)	10.32%	10.01%	10.26%
Total Employer Contribution Rate (% of pay)	22.63%	21.99%	26.41%
Estimated Employer Contribution (millions)	\$ 7.3	\$ 6.9	\$ 7.6

* Total Fund, less Healthcare Reserve

Purpose of the Report

This Report presents the results of an actuarial review and analysis of the City of Lansing Employees' Retirement System (ERS, the Plan) as of December 31, 2010. The purposes of this Report are:

- To compute the annual contribution required to fund the Plan in accordance with actuarial principles;
- To review the experience of the Plan over the past year and to discuss reasons for changes in Plan cost;
- To discuss issues associated with the determination of Plan costs and future cost implications; and
- To present items required for disclosure under Statement No. 25 of the Governmental Accounting Standards Board (GASB).

Change in Plan Cost from December 31, 2009 to December 31, 2010

The employer contribution determined based on actual demographic and asset information has increased since the prior valuation. The narrative and table below summarize the impact of actuarial experience and other changes on Plan cost.

	Employer Contribution Rate
December 31, 2009 (Prior Actuary)	22.63%
Change in Cost Due to:	
Change in Actuary / Software / Methods	(0.64%)
Scheduled Investment Loss Recognition	3.78%
Actual Investment Experience	(0.34%)
Demographic Experience	0.42%
<u>Plan Change</u>	<u>0.58%</u>
Total Change	3.78%
December 31, 2010	26.41%
Projected 2011 Payroll	28,769,143
Projected Contribution Amount	7,596,879

The following impacted the change in cost from 12/31/2009 to 12/31/2010:

- Change in actuary and valuation system

This report represents the first time that EFI has conducted the actuarial valuation of the Plan, using EFI's own valuation systems and accompanying methods. To determine the impact of the change in

system and methods, we conducted a valuation as of December 31, 2009 using the data supplied by the prior actuary, and compared our calculations to those in the December 31, 2009 valuation report.

As shown in Section 4.1, our comparison with the results of the prior actuary was well within an acceptable range. The change in actuary caused a slight decrease in the contribution rate.

- Investment loss recognition

As part of the asset smoothing process, investment losses from prior years (specifically from 2008) are gradually recognized and cause contribution rates to increase. This caused a significant increase in the contribution rate.

More information on asset smoothing can be found in Section 3.3 herein.

- Investment experience

While prior loss recognition served to increase the contribution rate, the actual experience during 2010 represented an investment gain (12.9% return versus 8.0% expected). In accordance with the asset smoothing process, part of this gain was recognized immediately, partially offsetting the prior loss recognition. This is the intended operation of asset smoothing: gains and losses are expected to offset each other over time.

- Demographic and salary experience

Demographic experience includes movement within the population from one time period to another, in this case during the course of calendar year 2010. When experience differs from that expected (e.g., number of retirements or terminations, salary increases), then actuarial gains and losses occur, increasing or decreasing the contribution rate.

In 2010, the City offered a Retirement Incentive Program (RIP) to certain eligible members. Under the terms of the RIP, any Old Plan member with at least 25 years of service was eligible to retire immediately. As a result of the RIP, the number of retirements in 2010 was much higher than expected. This resulted in a higher City contribution rate.

- Plan changes

Effective February 2010, the benefit multiplier was increased for Teamsters groups 214 and 580, from 1.6% to 1.8%. This resulted in an increase in the liability and thus the contribution rate. The member contribution rate for Teamsters 580 was also increased from 5.50% to 6.35%, which partially offset the cost increase associated with the higher benefit multiplier.

Future Costs

There are a number of factors that can be expected to impact costs in the future:

- The liabilities and contributions determined in this Report are based on a set of actuarial assumptions. Despite the care and effort expended in determining the most accurate possible set of assumptions, the future experience of the Plan will certainly differ from what we assume. As a result, actuarial gains or losses will occur annually, and the employer contributions will fluctuate.
- Based on the assumptions and cost method, Plan assets are currently below the target level of assets; consequently, there is an unfunded actuarial accrued liability. As a result, the employer contribution consists of two components: The normal cost and the amortization of the unfunded actuarial accrued liability.

The employer normal cost represents the cost of the additional benefits earned each year by active Plan members. The balance of the employer contribution represents the amortization of the unfunded liability, which is a payment, designed to bring the Plan's assets up to the target level. Currently, the amortization represents approximately 60% of the total contribution.

- There are investment losses that are deferred by the actuarial smoothing method and not included in the actuarial value of assets used to determine the employer contribution. The current amount of unrecognized investment experience is a net loss equal to about \$15 million. This will create upward pressure on the contribution over the next few years.

Projections

The following graphs show baseline projections of contribution rates and funding progress for the Plan. These are based on only one of an infinite number of possible future outcomes – the case that all actuarial assumptions are exactly met each and every year. Even though this scenario is impossible, it is helpful to study these graphs to gain a sense of the general trend over the next two decades under current assumptions, policies, and plan provisions.

In Figure 1, the estimated funding ratio (assets as a percent of AAL) is shown on the right axis. The estimated UAAL is shown in dollars on the left axis. While gradual funding progress is possible, we can see that the UAAL is not expected to decrease at all under the current funding policies (i.e., rolling 30 year level percentage of pay amortization).

During the time that the UAAL is increasing most rapidly – over the next few years as investment losses are recognized – the contribution rate is expected to noticeably increase, as shown in Figure 2. After this, ignoring the impact of any gains or losses in the interim, a decrease in the rate is expected. Table 1 shows the dollar values of the expected future cash flows.

In other words, these projections are representations of the impact of past experience (prior to 12/31/2010) on future funding. What happens after 12/31/2010 will certainly impact contributions and funding as well.

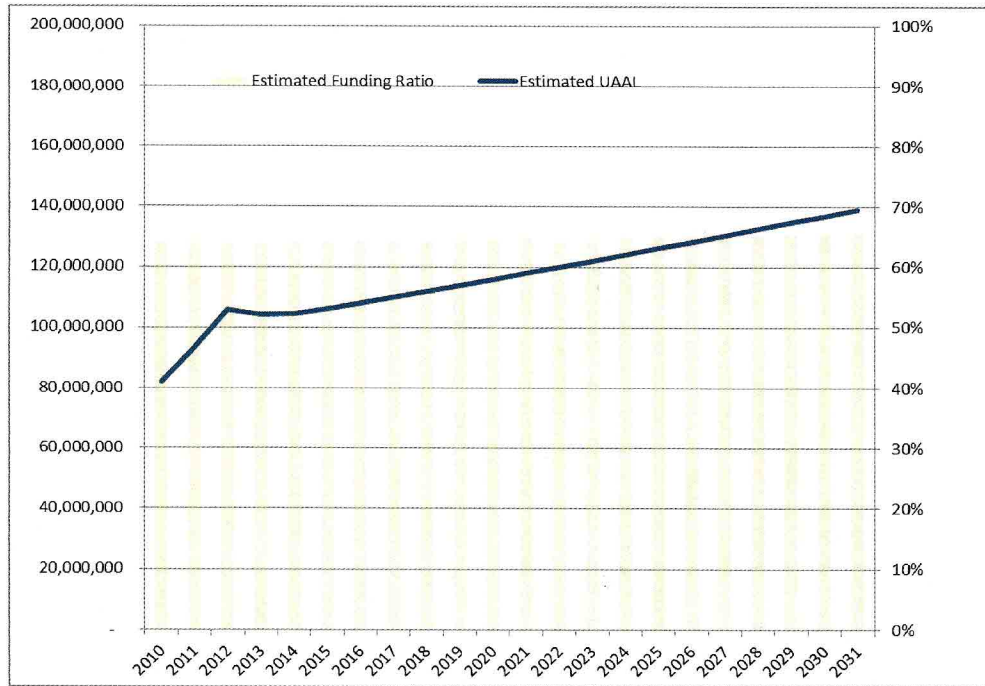


Figure 1: Estimated Future Funding Progress

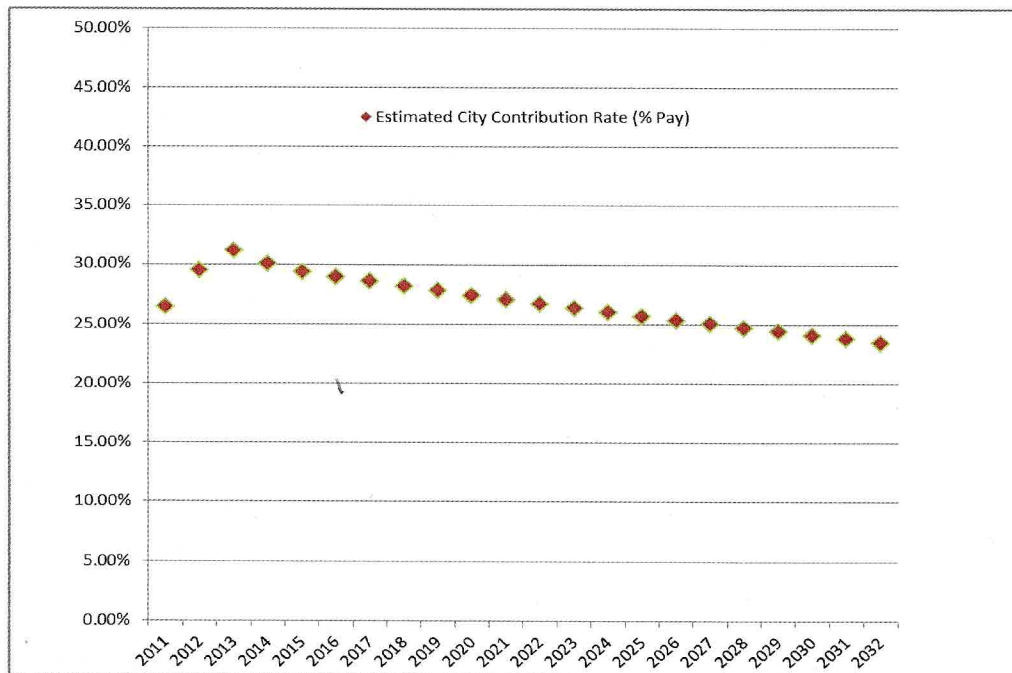


Figure 2: Estimated Future City Contribution Rates

Table 1: Estimated Future Cash Flows (\$ thousands)

Year Ending December 31	Estimated City Contribution	Estimated Member Contributions	Estimated Benefit Payments
2011	\$ 7,597	\$ 1,365	\$ 20,438
2012	8,694	1,420	20,898
2013	9,546	1,477	21,368
2014	9,579	1,536	21,849
2015	9,736	1,597	22,341
2016	9,984	1,661	22,843
2017	10,245	1,728	23,357
2018	10,514	1,797	23,883
2019	10,790	1,869	24,420
2020	11,074	1,943	24,970

Note: This is under the current amortization policy and assumptions.

Actuarial Certification

In this study, we conducted an examination of all participant data for reasonableness and consistency. Actuarial funding is based on the Entry Age Normal Cost Method. Under this method, the employer contribution provides for current cost (normal cost) plus an amount to amortize the unfunded actuarial accrued liability (UAAL). As of the valuation date, the amortization period is 30 years.

For actuarial valuation purposes, Plan assets are valued at Actuarial Value, using a method that gradually recognizes investment gains and losses. The assumptions and plan provisions are the same as those used in the prior valuation.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. In particular, the assumptions and methods used for funding purposes meet the parameters of the Governmental Accounting Standards Board Statement No. 25.

The undersigned are members of and meet the qualification standards of the American Academy of Actuaries, and are qualified to render the actuarial opinions presented herein.

Respectfully Submitted,



Gregory M. Stump, FSA, MAAA



Karen T. Earley, FSA, MAAA

Section 1:

Summary of Plan Provisions and Member Data

1.1: Brief Outline of Plan Provisions

Membership

The Plan covers employees of the City in the following groups: Teamsters, UAW, Exempt, District Court (except Judges), Executive Pay Plan and Police 911. Newly hired elected officials do not become members of the retirement plan.

Definitions

Compensation

Compensation is defined as a member's salary, wages, and longevity bonus. In addition, Compensation may include up to 80 hours of compensatory time for members not eligible for overtime pay.

Final Average Compensation

Final Average Compensation is determined as the average of the highest annual compensation paid a member during a period of two consecutive years of credited service contained within the member's ten years of credited service immediately preceding the date when the member's employment with the City has terminated.

Retirement - Old Plan

Eligibility (UAW)

UAW Members are eligible for Normal Retirement at age 50 with 25 years of service, or at age 58 with 8 years of service.

Eligibility (All Others)

Members are eligible for Normal Retirement after 8 years of service and the attainment of the earlier of:

- age 58, or
- The age at which age plus service equals or exceeds 65.

Benefit Amount (UAW and Elected Officials)

Benefit is determined as 2.75% of Final Average Compensation for the first 35 years of credited service, plus 1.5% of Final Average Compensation for the next 5 years of service, plus 1.0% of Final Average Compensation for service in excess of 40 years, with a maximum of 100% of Final Average Compensation.

Benefit Amount (District Court Teamsters)

Benefit is determined as 2.3% of Final Average Compensation times years of credited service.

Benefit Amount (All Others)

Benefit is determined as 2.80% of Final Average Compensation for each of the first 35 years of credited service, plus 1.5% of Final Average Compensation for the next 5 years of service, plus 1.0% of Final Average Compensation for service in excess of 40 years, with a maximum of 100% of Final Average Compensation.

Retirement – New Plan

Eligibility (All)

Members are eligible for Normal Retirement at age 50 with 25 years of service, or at age 58 with 8 years of service.

Benefit Amount (UAW)

Benefit is determined as 2.75% of Final Average Compensation times years of credited service.

Benefit Amount (Teamsters 214 and 580)

Benefit is determined as 1.8% of Final Average Compensation times years of credited service. (Effective 2/1/2010 – previously the benefit multiplier was 1.6%)

Benefit Amount (All Others)

Benefit is determined as 1.6% of Final Average Compensation times years of credited service.

Form of Benefit

The Retirement Benefit will be paid monthly beginning at retirement and for the life of the member. Optional benefit forms are also available, as described below. If the member selects a Joint and Survivor Option, in the event of the member's death a percentage of the benefit will continue for the life of the member's beneficiary.

Duty Disability

Eligibility

Members are eligible for Duty Disability Retirement benefits immediately upon employment.

Benefit Amount

The Duty Disability Retirement Benefit payable to members is equal to the accrued Retirement benefit, with additional service credit granted to age 60. During the workers' compensation period, the disability benefit may not exceed the difference between the member's final compensation and the workers' compensation amount.

Form of Benefit

The Duty Disability Retirement Benefit will be paid monthly beginning at the effective date of disability retirement and for the life of the member. Upon the attainment of age 60, disabled retirees are transferred to service retirement status.

Non-Duty Disability

Eligibility

Members are eligible for Non-Duty Disability Retirement benefits after completing ten years of service.

Benefit Amount

The Non-Duty Disability Retirement Benefit payable to members is equal to the accrued Retirement benefit, with a minimum benefit equal to 25% of final average compensation.

Form of Benefit

The Non-Duty Disability Retirement Benefit will be paid monthly beginning at the effective date of disability retirement and for the life of the member.

Death Incurred in the Line of Duty

Eligibility

The Death in Line of Duty Benefit is payable to the survivors of a member who died as a result of an injury or disease arising out of and in the course of duty.

Benefit Amount

The benefit payable to the survivors is equal to the survivors' weekly workers' compensation, converted to an annual basis.

Form of Benefit

The benefit described above shall begin upon termination of the survivors' workers' compensation period, payable as a life annuity. Children's benefits shall terminate upon attainment of the age of 21 years, or death, or marriage, whichever comes first.

Non-Duty Pre-Retirement Death

Eligibility

The Non-Duty Pre-Retirement Death Benefit is payable upon the death of a member after earning eight years of credited service.

Benefit Amount

The Non-Duty Pre-Retirement Death Benefit is computed in the same manner as the Normal Retirement Benefit.

Form of Benefit

The benefit described above is payable as a 100% Joint and Survivor benefit to the surviving spouse.

Deferred Vested Benefit

Eligibility

A member is eligible for a Deferred Vested Benefit upon termination of employment after earning eight years of credited service.

Benefit Amount

The Deferred Vested Benefit is computed in the same manner as the Normal Retirement Benefit, but it is based on credited service and Final Average Compensation on the date of termination.

Form of Benefit

The Deferred Vested Benefit will be paid monthly beginning at age 58 for New Plan members, and for the life of the member. For Old Plan members (except UAW), the Deferred Vested Benefit is payable at the age at which age plus service equals 65.

Optional Benefit Forms

Prior to retirement, a member may elect to convert his retirement allowance into a benefit of equivalent actuarial value in accordance with one of the optional forms described below.

- Cash Refund Annuity – If a member dies before receiving the total value of accumulated member contributions, the remaining member contributions are payable to designated beneficiary(ies) at the time of death.
- 50% or 100% Joint and Survivor annuity
- Social Security Level Income ("Equating Pension") - Any member who retires prior to age 65 may elect to have his retirement allowance actuarially equated to provide an increased retirement allowance to age 65, and a reduced retirement allowance payable thereafter. The increased retirement allowance shall approximate the sum of the member's reduced retirement allowance payable after age 65 and the member's estimated Social Security primary insurance amount.

Member Contributions

Each member contributes a percentage of Compensation to the Plan. The percentages contributed are as follows:

Contribution Rates (% of Pay)

Member Group	Old Plan	New Plan
Police 911	7.25%	5.50%
UAW	1.70%	N/A
Teamsters 214	3.75%	6.50%
Teamsters 580*	3.50%	6.35%
District Court Teamsters	3.50%	5.50%
District Court Exempt	4.50%	5.50%
Exempt	3.75%	6.50%
Executive Pay Plan	3.75%	6.50%
Elected Officials	3.25%	N/A

* Member contribution rate for Teamsters 580 was increased in 2010 as a result of negotiated benefit increases. Previously, this rate was 5.50%.

Post-Retirement Benefit Adjustments

One-time post-retirement benefit increases were granted in 1984, 1987 and 1998.

Effective January 1, 1999, and each January 1 thereafter, eligible retirees and beneficiaries receive annual benefit increases financed by the Members' Benefit Fund. Retirees/Beneficiaries must meet both of the following conditions:

- 1) Has been retired at least 6 months as of the January 1 increase date
- 2) Age 60 as of the January 1 increase date

In general, the amount of the annual increase in retirement allowance shall be 3% of the annual retirement allowance. However, the maximum annual increase is as follows:

- For a retiree/beneficiary who elected a 50% or 100% Joint and Survivor Annuity, the maximum annual increase is equal to \$200 (\$100 for the beneficiary if 50% option is elected) times a ratio of the original Joint and Survivor benefit to the original straight life annuity benefit.
- For all other retirees/beneficiaries, the maximum annual increase is \$200.

Changes in Plan Provisions since Prior Valuation

The benefit multipliers for Teamsters Local 214 and Local 580 were both increased from 1.6% to 1.8%. The member contribution rate was increased for Teamsters 580, from 5.50% to 6.35%.

1.2: Member Data Summary

Data on active and inactive members and their beneficiaries as of the valuation date was supplied by the Plan Administrator on electronic media. Member data was neither verified nor audited.

Active Participants	12/31/2009	12/31/2010
Number of Active Employees	570	497
Average Age	47.5	47.7
Average Service	11.0	10.8
Average Pay	\$ 53,687	\$ 55,868

Inactive Participants	12/31/2009	12/31/2010
Number of Retired Participants	656	673
Average Age	66.2	65.8
Average Annual Benefit	\$ 24,945	\$ 26,584
Number of Disabled Retirees	16	23
Average Age	62.9	63.5
Average Annual Benefit	\$ 18,146	\$ 17,857
Number of Beneficiaries/EDROs	127	144
Average Age	74.9	72.9
Average Annual Benefit	\$ 10,946	\$ 11,003
Number of Deferred Vested Participants	62	63
Average Age	51.4	51.1
Average Annual Benefit	\$ 11,017	\$ 11,824
Number of Terminated Participants Due Refunds	0	15
Average Balance	0	\$ 4,438

1.3: Changes in Membership from Prior Valuation

	Actives	Non-vested Terminations due Refunds	Vested Terminations	Retired	Disabled	Benefi- ciaries*	Total Participants
December 31, 2009	570	0	62	656	16	127	1,431
New Entrants	16						16
Rehires							0
Retirements	(58)		(4)	62			0
Disabilities							0
Vested Terminations	(5)		5				0
Died, With Beneficiaries' Benefit Payable	(3)			(7)		10	0
Non-Vested Terminations and Death without beneficiary	(16)	15		(16)		(8)	(25)
Domestic Relations Orders							0
Withdrawals Paid	(7)						(7)
Data Corrections				(22)	7	15	0
December 31, 2010	497	15	63	673	23	144	1,415

* also includes EDRO beneficiaries

Section 2:

Actuarial Methods and Assumptions

2.1: Actuarial Methods

Actuarial Cost Method

Annual contributions to the Plan are computed under the Entry Age Normal Actuarial Cost Method. Under this Cost Method, the Normal Cost is calculated as the amount necessary to fund members' benefits as a level percentage of payroll over their projected working lives.

At each valuation date, the Actuarial Accrued Liability is equal to the difference between the liability for the members' total projected benefit and the present value of future Normal Cost contributions.

The excess of the Actuarial Accrued Liability (AAL) over Plan assets is the Unfunded Actuarial Accrued Liability (UAAL), and the liability for each change in UAAL is amortized as a level percent of payroll over an open period of 30 years.

The total Plan cost is the sum of the Normal Cost and the amortization of the Unfunded Actuarial Accrued Liability.

Actuarial Value of Plan Assets

The valuation assets are equal to the expected actuarial value, plus a portion of actuarial gains and losses. Actuarial gains and losses from Plan investments over each of the five years prior to the calculation date are recognized at the rate of 20% per year in computing the actuarial value of assets. The detailed calculation of the actuarial value of Plan assets is shown in Section 3.3.

Changes in Actuarial Methods since Prior Valuation

There have been no changes in actuarial methods since the prior valuation, other than the change in actuary.

2.2: Actuarial Assumptions

Valuation Date All assets and liabilities are computed as of December 31, 2010.

Rate of Return The annual rate of return on all Plan assets is assumed to be 8.0%, net of investment and administrative expenses.

Cost of Living The cost of living as measured by the Consumer Price Index (CPI) will increase at the rate of 4.00% per year.

Increases in Pay Increases in salary vary based on the age and service of the member as shown below (includes inflation of 4.00%):

		Service				
Age	0	5	10	15	20	
25	11.0%	11.0%	10.0%	9.0%	7.5%	
30	10.1%	10.1%	9.1%	8.1%	6.6%	
40	9.1%	9.1%	8.1%	7.1%	5.6%	
50	8.3%	8.3%	7.3%	6.3%	4.8%	
60	7.5%	7.5%	6.5%	5.5%	4.0%	

Member Mortality Rates of mortality for Plan members are specified by the 1983 Group Annuity Mortality Tables, set forward 1 year for males and females. For Disabled members, the tables are set forward 10 years for both males and females.

Service Retirement Retirement is assumed to occur among eligible members in accordance with the table below.

Age	Rule of 65 Members	UAW/ New Members
45-49	10%	0%
50	11%	30%
51-53	11%	30%
54	11%	40%
55-56	15%	40%
57	15%	20%
58-59	15%	10%
60	25%	20%
61	25%	35%
62-64	25%	20%
65+	100%	100%

Disability

Rates of disability vary based on the age of the member as shown below. 50% of disabilities are assumed to be duty-related.

Representative Assumed Rates of Disability

Age	Rate
20	.0007
30	.0007
40	.0025
50	.0083
60	.0180

Termination

Rates of termination vary based on the age and service of the member as shown below.

Representative Assumed Rates of Termination

Age	Service					
	0	1	2	3	4	5+
25	0.07	0.04	0.03	0.03	0.03	0.025
30	0.07	0.04	0.03	0.03	0.03	0.025
40	0.07	0.04	0.03	0.03	0.03	0.015
50	0.07	0.04	0.03	0.03	0.03	0.007
60	0.07	0.04	0.03	0.03	0.03	0.007

Family Composition

90% of Plan members are assumed to be married. Male spouses are assumed to be three years older than their wives.

Change in Actuarial Assumptions since Prior Valuation

There have been no changes to the Actuarial Assumptions since the prior valuation.

2.3: Glossary of Actuarial Terms

Actuarial Accrued Liability

A plan's actuarial accrued liability is the level of assets estimated by the system actuary to be needed as of the valuation date to

- Finance all previously earned benefits for actively employed members of the plan (and their beneficiaries, if applicable) for when they eventually retire, die or terminate with deferred vested benefits, and
- Finance all currently payable benefits of current pensioners and their beneficiaries (if applicable).

It is important to note that the Actuarial Accrued Liability is not a debt; instead, it is an asset target set by the actuarial cost method to produce an orderly accumulation of assets to finance the plan's obligations.

Actuarial Assumptions

The actuarial assumptions are the actuary's anticipated rates of future termination, death, disability and retirement for each member of the plan as well as the actuary's anticipated rate of investment return on underlying assets. Because these assumptions will not be in exact accord with actual events, actuarial gains and losses will materialize.

Actuarial Value of Assets

The actuarial value of assets, used for funding purposes, is computed using an asset smoothing technique in which investment gains and losses are not fully recognized in the year they occur, but are spread out over time, typically a specified number of years. Use of an actuarial value of assets (rather than market value) helps avoid large fluctuations in recognized value of the underlying assets and, in turn, avoids large fluctuations in required contribution rates.

Actuarial Present Value of Benefits

The actuarial present value of benefits is the Actuarial Accrued Liability plus actuarial present value of future Normal Costs. The actuarial present value of benefits can also be explained as the actuarial present value of all future benefits expected to be paid to the Plan's current members, whether based on current or future service.

Actuarial Funding Policy

The plan's actuarial funding policy is the scheduled program of accumulating assets to fund the plan's obligations, often as a level percentage of payroll.

The funding policy includes:

- The Normal Cost, and
- Amortization of the Unfunded or Overfunded Actuarial Accrued Liability (whichever is applicable).

Investment Gains and Losses

When the investment return on assets exceeds the assumed rate of return (the actuarial assumption as to investment return), this difference is identified as an investment gain. Correspondingly, when the returns are less than expected, this difference is identified as an investment loss. These investment gains and losses are either recognized immediately to produce the market value of assets or are spread out to produce the Actuarial Value of Assets.

Normal Cost

The Normal Cost is calculated as the annual amount necessary to fund each member's benefits from that member's Plan entry date to the end of his or her projected working life.

Unfunded Actuarial Accrued Liability

When the actuarial value of assets is below the Actuarial Accrued Liability, there is an Unfunded Actuarial Accrued Liability is funded according to an amortization schedule. When the actuarial value of assets is in excess of the Actuarial Accrued Liability, the amortization is negative, and can partially or fully offset the Normal Cost contribution.

Section 3:

Asset Information

3.1: Statement of Net Plan Assets

	12/31/2009	12/31/2010
<u>ASSETS</u>		
Cash, Short-Term		
Investments and Receivables	\$ 4,916,022	\$ 8,164,401
Accrued Interest and Dividends	211,751	230,821
Investments:		
Government Bonds	29,236,792	33,824,597
Corporate Bonds	41,249,035	36,176,835
Common Stock	40,387,887	81,656,038
Other Equities	54,256,000	21,642,841
Real Estate	6,631,000	7,074,200
Total System Assets	176,888,487	\$ 188,769,733
Accounts Payable	(120,005)	(937,294)
<u>NET ASSETS AVAILABLE FOR BENEFIT</u>	\$ 176,768,482	\$ 187,832,439

3.2: Income Statement

	<u>2009</u>	<u>2010</u>
Total Plan Assets – Beginning of Year	\$ 157,951,415	\$ 176,768,482
<u>ADDITIONS</u>		
Member contributions	1,370,171	1,696,038
Employer contributions	6,043,861	7,186,000
Employer contributions – Healthcare Reserve	350,000	0
Adjustments	0	(21,934)
Investment Income:		
Interest	1,590,148	11,990,094
Dividends	140,382	335,366
Market Appreciation	28,700,607	9,816,219
Miscellaneous		
Total Additions	+\$ 38,195,169	31,001,784
<u>EXPENDITURES</u>		
Member contributions refunded	0	0
Retirement benefits paid	17,885,800	19,158,835
Other expenses	18,630	246,211
Investment expenses	727,099	534,780
Transfers	746,572	0
Total Expenditures	-\$ 19,378,102	19,939,827
Adjustments	0	2,000
<u>NET INCREASE/(DECREASE)</u>	\$ 18,817,067	11,063,957
Total Plan Assets – End of Year	176,768,482	\$ 187,832,439

3.3: Computation of Actuarial Value of Assets

<u>Year Ended</u>	<u>Expected Earnings¹</u>	<u>Actual Earnings²</u>	<u>Investment Gain/(Loss)</u>	<u>Percent of (c) Deferred</u>	<u>Amount Deferred</u>
	(a)	(b)	(c) = (b) - (a)	(d)	(e) = (c) x (d)
12/31/2010	15,897,374	22,143,679	6,246,305	80%	4,997,044
12/31/2009	16,639,256	29,685,408	13,046,152	60%	7,827,691
12/31/2008	17,273,688	(49,044,101)	(66,317,789)	40%	(26,527,116)
12/31/2007	17,151,852	10,968,989	(6,182,863)	20%	(1,236,573)
(1) Total Gain/(Loss) Unrecognized as of Valuation Date					(14,938,954)
(2) Market Value, Total Fund					187,832,439
(3) Actuarial Value, Total Fund: [(2)-(1)]					202,771,393
(4) Healthcare Reserve as of 12/31/2010					15,330,803
(5) Actuarial Value, Pension Plan: [(3)-(4)]					187,440,590
Ratio of Actuarial Value to Market Value, Total Fund					108.0%
Approximate Rate of Return based on Market Value					12.9%
Approximate Rate of Return based on Actuarial Value					3.3%

¹ Computed assuming 8.0% return on actuarial value. Employee contributions and benefits assumed to be paid throughout the year, employer contributions one month prior to end of year.

² Market Value return

Section 4:

Actuarial Computations

4.1: Comparison of Prior Actuarial Calculations

	<u>Prior Actuary (2010)</u>	<u>EFI (2010)</u>
Total Entry Age Normal Cost	\$ 4,483,172	\$ 4,375,913
<u>Estimated Employee Contributions</u>	<u>1,325,060</u>	<u>1,313,287</u>
Net City Normal Cost	3,158,111	3,062,625
Valuation Payroll	30,601,855	30,601,855
City Normal Cost Rate (% of pay)	10.32%	10.01%
Active Actuarial Accrued Liability	65,089,689	64,441,787
Terminated Members Actuarial Accrued Liability	4,491,470	4,568,359
<u>Retiree/Beneficiary Actuarial Accrued Liability</u>	<u>176,133,432</u>	<u>174,613,727</u>
Total Valuation Actuarial Accrued Liability (AAL)	245,714,591	243,623,873
Member Benefit Fund	16,583,768	16,583,768
Total Actuarial Accrued Liability	262,298,359	260,207,641
Actuarial Value of Assets	193,324,229	193,129,867
Net Unfunded Actuarial Accrued Liability (UAAL)	68,974,130	67,077,774
Amortization of UAAL	3,769,623	3,665,982
Amortization Rate (% of pay)	12.31%	11.98%
Total City Contribution Rate	22.63%	21.99%
Projected Fiscal Payroll	32,245,175	31,547,766
Estimated City Contribution	\$ 7,297,083	\$ 6,936,590

4.2: Employer Contributions

	<u>2010 (EFI)</u>	<u>2011</u>
Total Entry Age Normal Cost	\$ 4,375,913	\$ 4,214,833
<u>Estimated Employee Contributions</u>	<u>1,313,287</u>	<u>1,365,370</u>
Net City Normal Cost	3,062,625	2,849,463
Valuation Payroll	30,601,855	27,766,628
City Normal Cost Rate (% of pay)	10.01%	10.26%
Active Actuarial Accrued Liability	64,441,787	55,339,084
Terminated Members Actuarial Accrued Liability	4,568,359	4,901,433
<u>Retiree/Beneficiary Actuarial Accrued Liability</u>	<u>174,613,727</u>	<u>193,594,309</u>
Total Valuation Actuarial Accrued Liability (AAL)	243,623,873	253,834,826
Member Benefit Fund	16,583,768	15,627,109
Total Actuarial Accrued Liability	260,207,641	269,461,935
Actuarial Value of Assets	193,129,867	187,440,590
Net Unfunded Actuarial Accrued Liability (UAAL)	67,077,774	82,021,345
Amortization of UAAL	3,665,982	4,482,689
Amortization Rate (% of pay)	11.98%	16.15%
Total City Contribution Rate	21.99%	26.41%
Projected Fiscal Payroll	31,547,766	28,769,143
Estimated City Contribution	\$ 6,936,590	\$ 7,596,879

Section 5:

Disclosure Information

5.1: GASB Schedules

GASB Statement No. 25 requires preparation of schedules of funding status and employer contributions, as well as the disclosure of plan provisions, actuarial assumptions, and other information. The required schedules are shown below. In each case, we have relied upon information from our files and contained in the reports of other actuaries employed by the employer in completing the schedules.

Schedule of Funding Status

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	Unfunded Liability as a Percent of Payroll
12/31/2001	191,311,000	213,648,000	22,337,000	90%	20,282,000	110%
12/31/2002	192,920,000	215,405,000	22,484,000	90%	19,098,000	118%
12/31/2003	199,329,000	221,088,000	21,759,000	90%	30,579,000	71%
12/31/2004	206,200,000	231,389,000	25,189,000	89%	32,383,000	78%
12/31/2005	207,881,000	241,882,000	34,001,000	86%	30,851,000	110%
12/31/2006	208,765,000	251,427,000	42,661,000	83%	31,944,000	134%
12/31/2007	208,572,000	254,356,000	45,784,000	82%	31,797,000	144%
12/31/2008	200,600,000	258,331,000	57,731,000	78%	29,688,000	195%
12/31/2009	193,324,000	262,298,000	68,974,000	74%	30,602,000	225%
12/31/2010	187,440,590	269,461,935	82,021,345	70%	27,766,628	295%

Schedule of Employer Contributions

Fiscal Year Ending	Annual Required Contribution	Actual Contribution	Percentage Contributed
6/30/2001	3,215,000	3,215,000	100.0%
6/30/2002	3,105,000	3,105,000	100.0%
6/30/2003	3,567,000	3,499,000	98.1%
6/30/2004	3,466,000	3,466,000	100.0%
6/30/2005	4,675,000	4,675,000	100.0%
6/30/2006	4,900,000	4,900,000	100.0%
6/30/2007	5,231,000	5,231,000	100.0%
6/30/2008	6,022,000	6,022,000	100.0%
6/30/2009	6,048,000	6,477,000	107.1%
6/30/2010	6,472,000	6,045,000	93.4%
6/30/2011	7,297,000	7,297,000	100.0%
6/30/2012	7,597,000		

Net Pension Obligation/(Asset)

	2010	2011
Net Pension Obligation/(Asset)		
– Beginning of Year	(428,480)	(9,947)
Annual Required Contribution	6,472,349	7,297,083
Interest on the NPO	(34,278)	(796)
<u>Adjustment to the NPO</u>	<u>24,323</u>	<u>544</u>
Annual Pension Cost	6,462,394	7,296,831
Contributions	(6,043,861)	(7,297,083)
Increase/(Decrease) in NPO	418,553	(252)
Net Pension Obligation/(Asset)		
– End of Year	(9,947)	(10,199)

5.2: Summary of Valuation Information

The table below summarizes certain information about this actuarial report.

Valuation date	December 31, 2010
Actuarial cost method	Entry Age Normal, Level Percentage of Payroll
Amortization method	Level Percentage of Payroll
Remaining amortization period	30 years
Asset valuation method	Five year closed period smoothing (Market Value vs. Expected Actuarial Value)
Actuarial assumptions:	
Investment rate of return*	8.00%
Projected salary increases*	4.00% - 11.00%, based on age and service
*Includes inflation at	4.00%
Cost of living adjustments	None assumed

Appendix:

Detailed Participant Data

Count of Active Members

Service / Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total
20-24	6	0	0	0	0	0	0	6
25-29	9	3	0	0	0	0	0	12
30-34	7	19	1	0	0	0	0	27
35-39	6	33	4	0	0	0	0	43
40-44	9	51	20	11	5	0	0	96
45-49	11	50	28	14	7	4	1	115
50-54	6	31	20	14	11	4	2	88
55-59	2	19	11	12	15	4	0	63
60-64	1	15	13	4	6	1	0	40
65+	0	4	2	1	0	0	0	7
Total	57	225	99	56	44	13	3	497

Average Salary of Active Members

Service / Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total
20-24	49,901	0	0	0	0	0	0	49,901
25-29	43,065	69,084	0	0	0	0	0	49,570
30-34	46,831	58,682	42,179	0	0	0	0	54,998
35-39	59,636	58,488	48,653	0	0	0	0	57,734
40-44	53,273	58,854	52,646	47,229	49,898	0	0	55,239
45-49	59,159	56,801	51,528	46,914	64,867	60,832	62,111	55,217
50-54	52,550	57,032	52,897	54,865	48,288	67,187	135,211	56,587
55-59	48,575	56,568	56,360	53,083	53,506	58,461	0	55,005
60-64	96,709	65,343	60,304	56,281	52,296	39,039	0	60,969
65+	0	53,293	65,259	26,187	0	0	0	55,257
Total	52,842	58,354	53,774	50,585	53,434	60,381	110,844	55,868

Inactive Participants

Number of

Age	Beneficiaries	Retired	Disabled	Terminated	Total
				Vested	
Under 35	2	0	0	1	3
35-39	1	0	0	1	2
40-44	1	3	0	9	13
45-49	4	13	1	16	34
50-54	7	66	2	14	89
55-59	11	145	7	17	180
60-64	14	141	6	3	164
65-69	17	104	2	2	125
70-74	19	69	2	0	90
75-79	14	53	0	0	67
80+	54	79	3	0	136
Total	144	673	23	63	903

Average Annual Benefit

Age	Beneficiaries	Retired	Disabled	Terminated	Total
				Vested	
Under 35	\$ 11,552	\$ 0	\$ 0	\$ 5,499	\$ 9,534
35-39	12,508	0	0	3,997	8,252
40-44	6,672	31,595	0	18,656	20,720
45-49	14,375	30,035	25,280	16,869	21,857
50-54	13,228	34,438	14,934	9,274	28,374
55-59	14,982	32,667	23,665	8,307	28,935
60-64	14,711	29,172	19,014	5,083	27,125
65-69	14,627	25,533	11,595	5,646	23,508
70-74	10,719	21,810	13,297	0	19,280
75-79	9,770	21,032	0	0	18,679
80+	8,003	12,758	8,680	0	10,781
Total	\$ 11,003	\$ 26,584	\$ 17,857	\$ 11,824	\$ 22,847