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Mid-Atlantic UFCW & Participating Employers Pension Fund

Actuarial Valuation Report as of January 1, 2017

Produced by Cheiron
February 2018

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CHEIRON

February 2, 2018

Mid-Atlantic UFCW & Participating Employers Pension Fund Trustees
c/o Mr. William Jensen
Associated Administrators, LLC
4301 Garden City Drive, Suite 201
Landover, MD 20785

Dear Trustees:

At your request, we have performed the January 1, 2017 Actuarial Valuation of the Mid-Atlantic UFCW & Participating Employers Pension Fund (the Fund). This report contains information on the Fund's assets and liabilities and also discloses contribution levels, including the minimum required amount as mandated by Federal law.

In the Foreword, we refer to the general approach employed in the preparation of this report. We also comment on the sources and reliability of both the data and the actuarial assumptions on which our findings are based. Those comments are the basis for our certification that this report is complete to the best of our knowledge and belief. The results of this report are only applicable to the 2017 plan year and rely on future Fund experience conforming to the underlying assumptions. Future valuation reports may differ significantly from the current results presented in this report due to such factors as the following: Fund experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan 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 which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion 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.

The purpose of this report is to present the annual actuarial valuation of the Mid-Atlantic UFCW & Participating Employers Pension Fund. This report is for the use of the Fund and its auditors in preparing financial reports in accordance with applicable law and accounting requirements. Other users of this 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

Gene M. Kalwarski, FSA, FCA, EA, MAAA
Principal Consulting Actuary

Kevin Woodrich, FSA, FCA, EA, MAAA
Principal Consulting Actuary

FOREWORD

Cheiron has performed the Actuarial Valuation of the Mid-Atlantic UFCW & Participating Employers Pension Fund as of January 1, 2017. The purpose of this report is to:

1) Measure and disclose, as of the valuation date, the financial condition of the Fund; and
2) Provide specific information and documentation required by the Federal Government and the auditors of the Fund.

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

Section I presents a summary of the valuation and compares this year's results to last year's results.

Section II contains exhibits relating to the valuation of assets.

Section III shows the various measures of liabilities.

Section IV shows the development of the minimum and maximum contributions.

Section V provides information required by the Fund's auditor.

The appendices to this report contain a summary of the Fund's membership at the valuation date, a summary of the major provisions of the Fund, and the actuarial methods and assumptions used in the valuation. There have been no changes to the Fund since the prior valuation.

In preparing our report, we relied without audit on information (some oral and some written) supplied by Associated Administrators LLC, Investment Performance Services, Inc., and Salter & Company, LLC. This information includes, but is not limited to, 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 actuarial assumptions, analyzed individually, represent our best estimates for the future experience of the Fund. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the Fund could vary from our results.

SECTION I – SUMMARY

The table below sets out the principal results of this year's valuation and compares them to last year's results.

Table I-1
Summary of Principal Results

		January 1, 2016	January 1, 2017	Change
Participant Counts				
Actives	Tier I	1,012	904	(10.7%)
	Tier II	16,228	15,997	(1.4%)
	Total	17,240	16,901	(2.0%)
Terminated Vesteds		1,696	2,095	23.5%
In Pay Status		539	831	54.2%
Total		19,475	19,827	1.8%
Financial Information				
(1) Market Value of Assets (MVA)		$ 42,964,141	$ 62,675,364	45.9%
(2) Actuarial Value of Assets (AVA)		47,212,109	66,126,587	40.1%
(3) Total Present Value of Future Benefits		$ 116,927,390	$ 129,050,288	10.4%
(4) Actuarial Liability		$ 46,524,240	$ 60,656,739	30.4%
(5) Surplus / (Unfunded) Actuarial Liability [(2) - (4)]		687,869	5,469,848	
(6) Funding Ratio on AVA Basis [(2) ÷ (4)]		101.5%	109.0%	7.5%
(7) Accrued Liability / PPA Liability		$ 46,524,240	$ 60,656,739	30.4%
(8) Surplus / (Unfunded) Accrued Benefit [(2) - (7)]		687,869	5,469,848	
(9) Funding Ratio on AVA Basis [(2) ÷ (7)]		101.5%	109.0%	7.5%
(10) Funding Ratio on MVA Basis [(1) ÷ (7)]		92.3%	103.3%	11.0%
(11) Present Value of Vested Benefits for Withdrawal Liability		$ 43,160,366	$ 55,716,456	29.1%
Contributions and Cash Flows				
Employer Contributions (Actual / Estimated)		$ 17,411,385	*$ 17,400,000*	(0.1%)
ERISA Minimum Required Contribution		12,929,859	12,811,807	(0.9%)
ERISA Maximum Deductible Contribution		142,002,222	175,470,722	23.6%
ERISA Credit Balance at Start of Year		4,096,021	9,610,956	
Prior Year Benefit Payouts		$ 781,164	$ 1,201,005	
Prior Year Administrative Expenses		989,766	1,193,245	
Prior Year Total Investment Return (Net of Invest. and Admin. Expenses)		(796,478)	3,500,843	

SECTION I – SUMMARY

General Comments

- The Market Value of Assets returned 6.9%, compared to the assumption of 8.0%. This return is net of both investment and administrative expenses. In dollars, the total actuarial investment loss (the difference between expected and actual returns on a market value basis) was $0.6 million.

- For minimum funding purposes we use a smoothed value of assets referred to as the Actuarial Value of Assets. This method phases in investment gains and losses over five years. As a result, this means the $0.6 million loss described above would be phased in at a rate of $0.1 million per year over the next five years. The resulting Actuarial Value of Assets is $66.1 million (105.5% of Market Value).

  The rate of return on the Actuarial Value of Assets was 4.9%, resulting in an actuarial investment loss of $1.7 million.

- The Fund experienced a liability gain of $1.0 million. When combined with the actuarial investment loss of $1.7 million, the Fund experienced a total net increase in unfunded liability due to experience of $0.7 million.

- The Fund's funding ratio (Actuarial Value of Assets as a percentage of Actuarial Liability) increased from 101.5% as of January 1, 2016 to 109.0% as of January 1, 2017. Based on Market Value of Assets, the funding ratio increased from 92.3% as of January 1, 2016 to 103.3% as of January 1, 2017.

- The Fund's assets grew $19.7 million due to $3.5 million in investment performance and employer contributions exceeding both benefit payments and expenses by $16.2 million. This positive cash flow position was the primary reason for the funded status increasing this past year.

- The Fund uses Shortfall Funding to determine the minimum funding requirements and its Credit Balance. This began with the 2014 Plan Year. The Fund cannot cease to use the Shortfall Method until at least five years have elapsed unless it seeks approval from the Internal Revenue Service.

- The Fund's Credit Balance increased from $4,096,021 as of December 31, 2015 to $9,610,956 as of December 31, 2016, mainly because of the level of contributions.

- The Fund has no Unfunded Vested Benefits as of December 31, 2016. Therefore no Withdrawal Liability would be assessed to any employer completely withdrawing in 2017 assuming a mass withdrawal is not triggered.

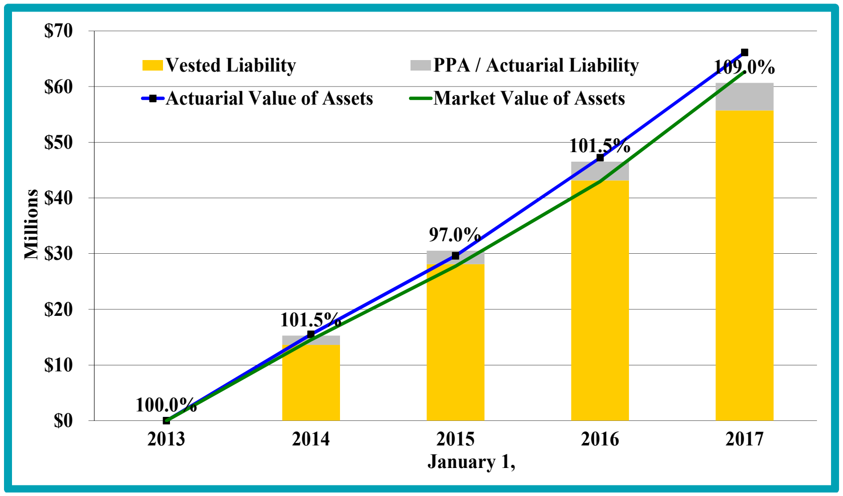
Historical Summary

It is important to take a step back from the results and view them in the context of the Fund's recent history. On the next few pages, we present a series of charts which display key results from the valuations since the Fund's establishment on January 1, 2013.

SECTION I – SUMMARY

Assets & Liabilities

The gold bars are the value of the vested benefits already earned while the additional gray bars show the additional non-vested accrued benefit values which together make up the Actuarial Liability. The blue line is the Actuarial Value of Assets (AVA) and the green line is the Market Value of Assets (MVA). The percentages shown on the top are ratios of the Actuarial Value of Assets to the Actuarial Liability.

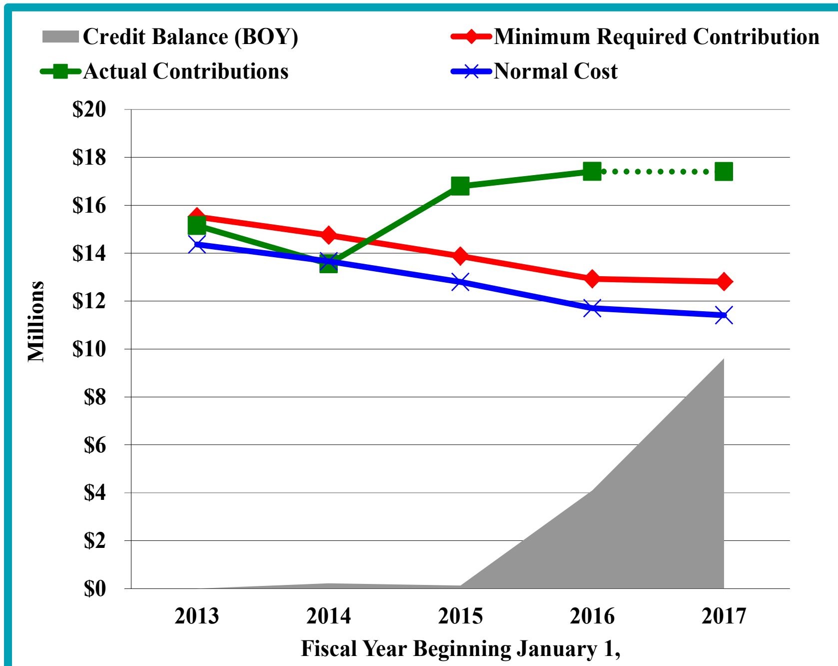


The Fund continues to have positive net cash flows, as employer contributions have exceeded the benefits paid since the Fund's inception. Contributions have also, on average, exceeded the cost of benefit accruals and this, when combined with the positive investment performance in 2016, increased the funding ratio to 109.0%.

Minimum Funding

This next chart shows the historical contributions paid to the Fund (green line) relative to the ERISA Minimum Required Contribution (red line) before considering the Credit Balance offset (gray area). The Normal Cost, which is the value of the benefits expected to be earned in the upcoming plan year, is shown by the blue line. This is the primary component of the Minimum Required Contribution.

Over time, the Credit Balance will grow if contributions and interest on it exceed the current year's charges (red line). It will decrease if the opposite is true.

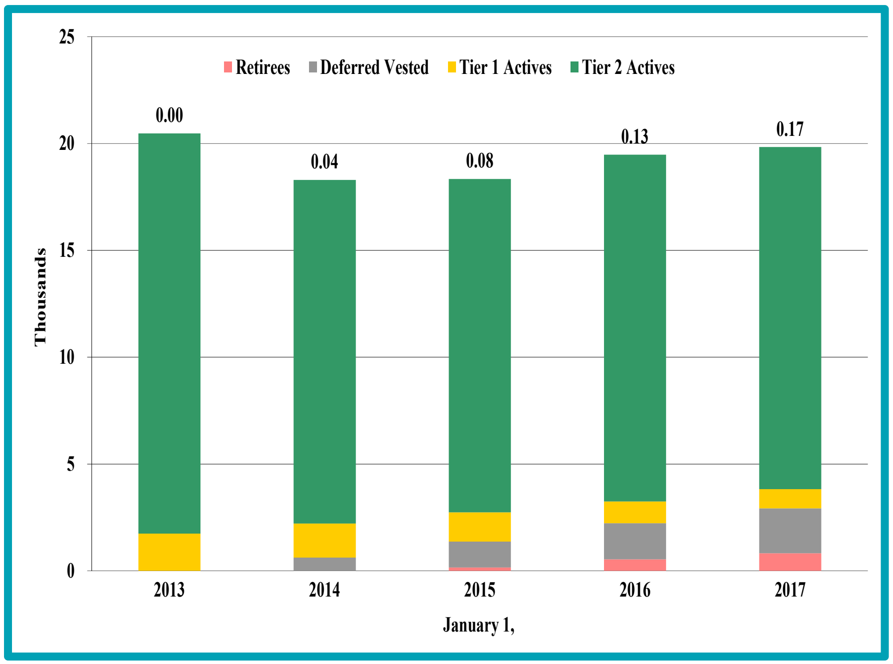


SECTION I – SUMMARY

The Credit Balance grew to $9.6 million as of December 31, 2016 due to employer contributions exceeding the Minimum Required Contribution in 2016. As illustrated in the chart, estimated contributions for 2017 (green dotted line) are once again expected to exceed the Minimum Required Contribution.

Participation

The last historical chart shows the participants of the Fund at successive valuations. The numbers above the bars on the chart indicate the ratio of inactive participants to active participants (the "support ratio") at each valuation.



As illustrated, the "support ratio" has increased over the period shown. As a new fund, there were no inactives as of the Fund's effective date of January 1, 2013. Therefore, the "support ratio" has increased as the number of inactives increases despite the number of actives remaining relatively stable in recent years.

SECTION II – ASSETS

Assets at Market Value

Market values are "snap-shot" or "cash-out" values which provide the principal basis for measuring financial performance from one year to the next.

Table II-1
Statement of Assets at Market Value, January 1, 2017

	Amount	%
Investments		
Mutual Funds	$ 16,178,420	25.8%
Limited Partnerships	35,608,575	56.8%
Corporate Obligations	6,258,839	10.0%
Temporary	1,229,039	2.0%
Subtotal	$ 59,274,873	94.6%
Receivables		
Employer Contributions	$ 3,225,972	5.1%
Interest and Dividends	87,374	0.1%
Prepaids and other receivables	37,429	0.1%
Subtotal	$ 3,350,775	5.3%
Cash	$ 105,454	0.2%
Total Assets	$ 62,731,102	100.1%
Liabilities		
Accounts Payable	$ (55,738)	-0.1%
Subtotal	$ (55,738)	-0.1%
Market Value of Assets for Statement	**$ 62,675,364**	100.0%
Expected Withdrawal Liability Payments	0	
Market Value of Assets for Funding	**$ 62,675,364**	

Changes in Market Value

The components of asset change are:

- Contributions
- Benefit payments
- Expenses
- Investment income (realized and unrealized)

The specific changes during 2016 are presented below:

Table II-2
Changes in Market Values

Market Value of Assets -- January 1, 2016	$ 42,964,141
Employer Contributions	$ 17,411,385
Investment Return (Gross)	4,840,390
Benefit Payments	(1,201,005)
Administrative Expenses	(1,193,245)
Investment Expenses	(146,302)
Market Value of Assets -- January 1, 2017	$ 62,675,364

SECTION II – ASSETS

Investment Performance

The following table calculates the actuarial investment gain/loss and the return for the plan year on a Market Value basis. The return is an appropriate measure for comparing the actual asset performance to the long-term 8% assumption.

Table II-3 Market Value Investment Gains/(Losses) Item		
January 1, 2016 Market Value	$	42,964,141
2016 Employer Contributions		17,411,385
2016 Benefit Payments		(1,201,005)
Expected Investment Earnings (8%)		4,073,072
Expected Value December 31, 2016	$	63,247,593
Investment Gain / (Loss)	$	(572,229)
January 1, 2017 Market Value		62,675,364
Return		6.86%

Assets at Actuarial Value

For long-term planning, actuaries commonly use smoothing techniques to mitigate the short-term volatility exhibited by the capital markets. The Actuarial Value of Assets is calculated by excluding a portion of the prior four years of investment experience using a sliding scale over five years. The expected return on market assets is determined using the Fund's actual cash flows and the assumed actuarial rate of return. The Actuarial Value of Assets is constrained so that it cannot exceed 120% of the market value and cannot be less than 80% of the market value. The asset valuation method is described more fully in Appendix C.

The table below shows the development of the Actuarial Value of Assets.

Table II-4 Development of Actuarial Value of Assets as of January 1, 2017							
Market Value of Assets as of December 31, 2016						$	62,675,364
Plan Year		Initial Gain/(Loss)	Percent Recognized	Percent Deferred			Amount Deferred
2013	$	(1,222,649)	80%	20%		$	(244,530)
2014	$	(1,405,429)	60%	40%			(562,172)
2015		(3,644,564)	40%	60%			(2,186,738)
2016		(572,229)	20%	80%			(457,783)
Total Gain/(Loss) Excluded						$	(3,451,223)
Preliminary Actuarial Value as of January 1, 2017						$	66,126,587
Corridor for Actuarial Value							
80% of Market Value						$	50,140,291
120% of Market Value						$	75,210,437
Actuarial Value of Assets as of January 1, 2017						$	66,126,587
Actuarial Value as a percent of Market Value of							105.5%

SECTION II – ASSETS

Asset Gains / (Losses) on Actuarial Value Basis

The following table calculates the actuarial investment gain/loss and the return for the plan year on an Actuarial Value basis. This actuarial gain/loss is one component of the Fund's overall actuarial experience gain/loss which is recognized for minimum funding requirements.

Table II-5
Actuarial Value Investment Gains/(Losses)

Item		
January 1, 2016 Actuarial Value	$	47,212,109
2016 Employer Contributions		17,411,385
2016 Benefit Payments		(1,201,005)
Expected Investment Earnings (8%)		4,412,910
Expected Value December 31, 2016	$	67,835,399
Investment Gain / (Loss)	$	(1,708,812)
January 1, 2017 Actuarial Value		66,126,587
Return		4.89%

SECTION III – LIABILITIES

In this section, we present detailed information on fund liabilities including:

- Disclosure of Fund liabilities at January 1, 2016 and January 1, 2017; and
- Statement of changes in these liabilities during the year.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them.

- **Present Value of Future Benefits:** Used for analyzing the financial outlook of the Fund, this is the amount of money needed today to fully pay off all future benefits of current participants of the Fund, assuming participants continue to accrue benefits and all actuarial assumptions are met.

- **Actuarial Liabilities:** Used for minimum funding standards, this liability is determined using an actuarial funding method to apportion the total obligations between past and present. For this Fund, that method is the Unit Credit Cost method. The Actuarial Liability under the Unit Credit Cost method is the total amount of money needed to fully pay off all future obligations of the Fund, assuming no further accrual of benefits as of the valuation date and that all actuarial assumptions are met.

- **Accrued Liabilities:** Used for communicating the current level of liabilities, this liability is the total amount of money needed to fully pay off all future obligations of the Fund, assuming no further accrual of benefits and all actuarial assumptions are met. These liabilities are required for financial disclosures (FASB ASC Topic No. 960). For that purpose they are referred to as the Present Value of Accumulated Benefits. They can be used to establish comparative benchmarks with other plans. They also use the Unit Credit Cost method.

- **Vested Liabilities:** This liability is that portion of the accrued liabilities which are vested.

- **Current Liabilities:** Used for Federal Government compliance purposes, the calculation of this liability is defined by federal regulations and is used to determine maximum allowable tax deductible contributions. This liability is based on an interest rate used by the PBGC to value insolvent plans.

None of the liabilities presented in this report is appropriate for settlement purposes.

The following table discloses each of these liabilities for the current valuation and the prior one. With respect to each disclosure, a subtraction of the appropriate value of Fund assets yields, for each respective type, a net surplus or an unfunded liability.

SECTION III – LIABILITIES

Table III-1
Liabilities/Net Surplus (Unfunded)

	January 1, 2016	January 1, 2017
PRESENT VALUE OF FUTURE BENEFITS		
Active Participant Benefits	$ 107,986,540	$ 116,931,354
Retiree and Inactive Benefits	8,940,850	12,118,934
Total Present Value of Future Benefits	**$ 116,927,390**	**$ 129,050,288**
ACTUARIAL LIABILITY / ACCRUED LIABILITY		
Actuarial Liability / Accrued Liability	$ 46,524,240	$ 60,656,739
Actuarial Value of Assets	47,212,109	66,126,587
Net Surplus (Unfunded)	**$ 687,869**	**$ 5,469,848**
Assets as a Percentage of Actuarial Liability	101.5%	109.0%
VESTED LIABILITY FOR WITHDRAWAL LIABILITY PURPOSES		
Present Value of Vested Benefits	$ 43,160,366	$ 55,716,456
Market Value of Assets	42,964,141	62,675,364
Net Surplus (Unfunded)	**$ (196,225)**	**$ 6,958,908**
CURRENT LIABILITY		
Current Liability	$ 104,759,113	$ 141,923,819
Market Value of Assets	42,964,141	62,675,364
Net Surplus (Unfunded)	**$ (61,794,972)**	**$ (79,248,455)**

SECTION III – LIABILITIES

Allocation of Liabilities by Type

The Fund's participants may qualify for a benefit on death, termination, and disability as well as on retirement. The value of the liabilities arising from each of these sources is shown in the following table.

Table III-2
Allocation of Liabilities by Type

Benefit Type	Retirement	Termination	Death	Disability	Total
Unit Credit Normal Cost	$ 9,302,480	$ 1,347,246	$ 183,460	$ 581,104	$ 11,414,290
Unit Credit Actuarial Liability					
Actives	$ 40,367,923	$ 4,964,089	$ 890,954	$ 2,314,839	$ 48,537,805
Terminated Vesteds	0	3,367,393	0	0	3,367,393
Retirees and Beneficiaries	8,503,727	0	10,304	237,510	8,751,541
Total	$ 48,871,650	$ 8,331,482	$ 901,258	$ 2,552,349	$ 60,656,739
RPA Current Liability Normal Cost	$ 21,559,907	$ 6,276,892	$ 278,648	$ 1,533,738	$ 29,649,185
RPA Current Liability					
Actives	$ 89,046,138	$ 21,891,723	$ 1,511,857	$ 5,900,229	$ 118,349,947
Terminated Vesteds	0	9,041,843	0	0	9,041,843
Retirees and Beneficiaries	14,078,962	0	16,219	436,848	14,532,029
Total	$ 103,125,100	$ 30,933,566	$ 1,528,076	$ 6,337,077	$ 141,923,819
Vested RPA Current Liability					
Actives	$ 56,171,188	$ 48,470,743	$ 979,853	$ 5,416,724	$ 111,038,508
Terminated Vesteds	0	9,041,843	0	0	9,041,843
Retirees and Beneficiaries	14,078,962	0	16,219	436,848	14,532,029
Total	$ 70,250,150	$ 57,512,586	$ 996,072	$ 5,853,572	$ 134,612,380

Changes in Liabilities

The Fund's liabilities are subject to change at successive valuations as the experience of the Fund varies from that assumed in the valuation. The liabilities may change for any of several reasons, including:

- New hires since the last valuation
- Benefits accrued since the last valuation
- Plan amendments
- Interest on Actuarial Liabilities
- Benefits paid to retirees
- Participants leaving employment at rates different from expected
- Changes in actuarial assumptions
- Changes in actuarial methods

The chart below shows the actuarial liabilities at the current and prior valuations and accounts for the changes in these values over the prior year.

Table III-3
Changes in Actuarial Liabilities

Liabilities as of January 1, 2016	$	46,524,240
Liabilities as of January 1, 2017	$	60,656,739
Liability Increase (Decrease)		14,132,499
Change due to:		
Benefit Accruals	$	11,707,736
Benefit Payments		(1,201,005)
Increase for Interest		4,611,443
Experience (Gains)/Losses		(985,675)
Changes in Assumptions		0
Plan Amendments		0
Total	$	14,132,499

SECTION IV – CONTRIBUTIONS

In this section, we present detailed information on the Fund's contributions from two perspectives:

- Actuarial contributions; and
- Government Limits which could affect the above.

Actuarial Contributions

For this Fund, the actuarial contribution is developed using the **Unit Credit Cost** method. The actuarial contribution which can also be considered as the actuarial cost is determined in two parts.

The first part is the Unit Credit Normal Cost. This is the value of the benefits expected to be accrued over the coming year.

The second part is an amortization payment to pay off the unfunded actuarial liability. The unfunded actuarial liability is the difference between the actuarial assets of the Fund at the valuation date and the assets the Fund should hold as determined by the actuarial cost method. The amortization payment is determined using the amortization schedule required by the IRS to determine the Minimum Required Contribution. Because of this, the actuarial contribution and the Minimum Required Contribution are the same.

Government Limits

ERISA and the IRS Tax Code place various limits on the contributions made to qualified pension plans. The limits impact the minimum that must be paid, the maximum that can be deducted and the timing of contributions.

To ensure that minimum contributions are met, pension plans are required to retain an Enrolled Actuary to complete Schedule MB to Form 5500 on an annual basis. When the bargained contributions exceed the Minimum Required Contribution, the Fund will build up a Credit Balance. The Credit Balance can be used to make up the difference between the Minimum Required Contribution and the bargained contribution.

The actuarial contribution for 2017 is shown below compared to the Government Limits and the projected contributions.

Table IV-1
Contributions for 2017

Actuarial Contribution	
Unit Credit Normal Cost	$ 11,414,290
Amortization Payment	448,494
Interest to End of Year	949,023
Total Contribution	$ 12,811,807
Government Limits	
Maximum Deductible Contribution	$ 175,470,722
Minimum Contribution (before Credit Balance)	12,811,807
Interest Adjusted Credit Balance	10,379,832
Minimum Contribution (after Credit Balance)	2,431,975
Estimated Employer Contributions	*$ 17,400,000*

SECTION IV – CONTRIBUTIONS

The tables on the following pages show the development of the minimum and maximum contributions for 2017.

For its current plan year (2017) and prior year(2016) Funding Standard Account(FSA), the Fund continues to use a special provision of ERISA available to multi-employer plans called Shortfall Funding. Shortfall Funding is intended to help Funds adjust their minimum funding requirements to lessen the effects of fluctuations in contribution base units and the timing of bargaining contracts. The Fund adopted Shortfall Funding starting with the 2014 Plan.

Under Shortfall Funding, a Shortfall Loss for each plan year after adoption is determined as the difference between the regular FSA charges and the charges using Shortfall Funding. To do this a Shortfall Factor is applied to the "Without Shortfall" FSA Charges to determine "With Shortfall" FSA Charges for that plan year.

The Shortfall Loss for the year is the difference between the "With Shortfall" Charges and the regular "Without Shortfall" Charge. This loss is amortized as an additional charge starting in the current year FSA beginning with the 2017 FSA. This date was determined based on the expiration of the last collective bargaining contract in effect when Shortfall Funding was adopted. Shortfall Losses that occurred before December 31, 2016 were increased with interest to that date.

The Shortfall Factor for a given year is the ratio of the actual to the expected contribution base units. The 2016 Shortfall Factor used in the table on the following page is 0.99825. The Fund must use the Shortfall Funding until 2019 unless it requests special approval from the IRS to terminate earlier.

SECTION IV – CONTRIBUTIONS

Table IV-2
Funding Standard Account for Plan Years Ending December 31,

	2016 Without Shortfall	2016 With Shortfall	2016 Shortfall (Loss)	2017 Without Shortfall
1. Charges For Plan Year				
a. Normal Cost	$ 11,707,736	$ 11,687,210	$ (20,526)	$ 11,414,290
b. Amortization Charges	267,662	267,193	(469)	451,802
c. Interest on a. and b. to Year End	958,032	956,352	(1,680)	949,287
d. Total Charges	$ 12,933,430	$ 12,910,755	$ (22,675)	$ 12,815,379
2. Credits For Plan Year				
a. Prior Year Credit Balance	$ 4,096,021	$ 4,096,021		$ 9,610,956
b. Employer Contributions *(estimate for 2017)*	17,411,385	17,411,385		*17,400,000*
c. Amortization Credits	3,308	3,302	$ (6)	3,308
d. Interest on a., b., and c. to Year End	1,011,003	1,011,003	0	1,451,752
e. Total Credits	$ 22,521,717	$ 22,521,711	$ (6)	$ 28,466,016
3. Credit Balance at End of Year [2. - 1.] *(estimate for 2017)*	$ 9,588,287	$ 9,610,956	$ (22,669)	*$ 15,650,637*

SECTION IV – CONTRIBUTIONS

Table IV-3 Calculation of the Maximum Deductible Contribution for the Plan Year Starting January 1, 2017			
1. "Fresh Start" Method			
a.	Normal Cost	$	11,414,290
b.	Net Charge to Amortize Unfunded Actuarial Liability over 10 years		(754,786)
c.	Interest on a. and b. to Year End		852,760
d.	Total	$	11,512,264
e.	Minimum Required Contribution at Year End		12,811,807
f.	Larger of d. and e.		12,811,807
g.	Full Funding Limit		87,919,443
h.	Maximum Deductible Contribution, less of f. and g.	$	12,811,807
2. 140% of Current Liability Calculation			
a.	Current Liability at Start of Year	$	141,923,819
b.	Present Value of Benefits Estimated to Accrue during Year		29,649,185
c.	Expected Benefit Payments		1,678,026
d.	Net Interest on a., b. and c. at Current Liability Interest Rate (3.05%)		5,207,579
e.	Expected Current Liability at End of Year, [a. + b. – c. + d.]		175,102,557
f.	140% of e.		245,143,580
g.	Actuarial Value of Assets		66,126,587
h.	Net Interest on c. and g. at Valuation Interest Rate (8.00%)		5,224,297
i.	Estimated Value of Assets, [g. – c. + h.]		69,672,858
j.	Unfunded Current Liability at Year End, [f. – i.], not less than $0	$	175,470,722
3. Maximum Deductible Contribution at Year End, greater of 1h. and 2j.		$	175,470,722

SECTION IV – CONTRIBUTIONS

Table IV-4
Development of Actuarial Gain/(Loss) for the Plan Year Ended December 31, 2016

1.	Unfunded Actuarial Liability at Start of Year	$	(687,869)
2.	Normal Cost at Start of Year		11,707,736
3.	Interest on 1. and 2. to End of Year		881,590
4.	Employer Contributions for Prior Year		17,411,385
5.	Interest on 4. to End of Year		683,057
6.	Change in Unfunded Actuarial Liability Due to Changes in Assumptions		0
7.	Change in Unfunded Actuarial Liability Due to Changes in Plan Design		0
8.	Change in Unfunded Actuarial Liability Due to Change in Funding Method		0
9.	Expected Unfunded/(Surplus) Actuarial Liability at End of Year [1. + 2. + 3. – 4. – 5. + 6. + 7. + 8.]	$	(6,192,985)
10.	Actual Unfunded/(Surplus) Actuarial Liability at End of Year	$	(5,469,848)
11.	Actuarial Gain / (Loss) [9. – 10.]		
	a. Investment Gain / (Loss)	$	(1,708,812)
	b. Liability Experience Gain / (Loss)		985,675
	c. Total Actuarial Gain / (Loss) [11a. + 11b.]	$	(723,137)
12.	Amortization Factor for Actuarial Gain / (Loss)		9.2442
13.	Amortization Credit / (Charge) for Actuarial Gain / (Loss) [11c ÷ 12]	$	(78,226)

SECTION IV – CONTRIBUTIONS

Table IV-5
Schedule of Amortizations Required for Minimum Required Contribution as of January 1, 2017

Type of Base	Date Established	Initial Amount	Initial Amortization Years	1/1/2017 Outstanding Balance	Remaining Amortization Years	Beginning of Year Amortization Amount
CHARGES						
1. Actuarial Loss	1/1/2014	$ 16,706	15	$ 14,709	12	$ 1,807
2. Actuarial Loss	1/1/2015	503,197	15	464,648	13	54,433
3. Shortfall Funding Method*	1/1/2015	552,882	20	644,881	18	63,713
4. Actuarial Loss	1/1/2016	1,954,428	15	1,882,447	14	211,421
5. Shortfall Funding Method*	1/1/2016	384,758	20	415,539	19	40,064
6. Actuarial Loss	1/1/2017	723,137	15	723,137	15	78,226
7. Shortfall Funding Method*	1/1/2017	22,669	20	22,669	20	2,138
TOTAL CHARGES				$ 4,168,030		$ 451,802
CREDITS						
1. Assumption Change	1/1/2014	$ 30,579	15	$ 26,922	12	$ 3,308
TOTAL CREDITS				$ 26,922		$ 3,308
TOTALS				$ 4,141,108		$ 448,494

* Based on Fund electing to start amortization in 2017, the year after expiration of current collective bargaining agreement. The Initial Amount was determined based on Pre-Shortfall FSA Charges and increased with interest until amortization commences in 2017.

SECTION IV – CONTRIBUTIONS

Table IV-6 Accumulated Reconciliation Account and Balance Test as of January 1, 2017		
1. Reconciliation Account at Start of Year	$	0
2. Net Outstanding Amortization Bases	$	4,141,108
3. Credit Balance at Start of Year	$	9,610,956
4. Unfunded Actuarial Liability at Start of Year from Funding Equation [2. - 1. - 3.]	$	(5,469,848)
5. Actuarial Liability at Start of Year	$	60,656,739
6. Actuarial Value of Assets at Start of Year	$	66,126,587
7. Unfunded Actuarial Liability at Start of Year from Liability Calculation [5. - 6.]	$	(5,469,848)
The Fund passes the Balance Test because line 4. equals line 7.		

SECTION IV – CONTRIBUTIONS

Table IV-7
Development of Full Funding Limitation for the Plan Year beginning January 1, 2017

		Minimum	Maximum
1.	ERISA Actuarial Liability Calculation		
a.	Actuarial Liability	$ 60,656,739	$ 60,656,739
b.	Normal Cost	11,414,290	11,414,290
c.	Lesser of Market Value and Actuarial Value of Assets	62,675,364	62,675,364
d.	Credit Balance at Start of Year	9,610,956	N/A
e.	Net Interest on a., b., c., and d. at Funding Interest Rate (8.00%)	1,520,530	751,653
f.	Actuarial Liability Full Funding Limit, [a. + b. – c. + d.] x 1.08, limited to zero	$ 20,527,151	$ 10,147,318
2.	Full Funding Limit Override (RPA 1994)		
a.	RPA 1994 Current Liability at Start of Year	$ 141,923,819	$ 141,923,819
b.	Present Value of Benefits Estimated to Accrue during Year	29,649,185	29,649,185
c.	Expected Benefit Payments	1,678,026	1,678,026
d.	Net Interest on a., b. and c. at Current Liability Interest Rate (3.05%)	5,207,579	5,207,579
e.	Expected Current Liability at End of Year, [a. + b. – c. + d.]	175,102,557	175,102,557
f.	90% of e.	157,592,301	157,592,301
g.	Actuarial Value of Assets	66,126,587	66,126,587
h.	Net Interest on c. and g. at Valuation Interest Rate (8.00%)	5,224,297	5,224,297
i.	Estimated Value of Assets, [g. – c. + h.]	69,672,858	69,672,858
j.	RPA 1994 Full Funding Limit Override [f. – i.], limited to zero	$ 87,919,443	$ 87,919,443
3.	Full Funding Limitation at End of Year, greater of 1f. and 2j.	$ 87,919,443	$ 87,919,443

SECTION V – FASB ASC TOPIC NO. 960 DISCLOSURE

Table V-1
Present Value of Accumulated Benefits as of January 1, 2017 in Accordance with FASB ASC Topic No. 960

		Amounts	Counts
1. Actuarial Present Value of Benefits			
For Retirees and Beneficiaries	$	8,751,541	831
Terminated Vesteds		3,367,393	2,095
Active Participants		45,333,203	11,121
Total Vested Benefits	$	57,452,137	14,047
2. Non-vested Benefits	$	3,204,602	5,780
3. Accumulated Benefits	$	60,656,739	19,827
4. Market Value of Assets	$	62,675,364	
5. Funded Ratios			
Vested Benefits		109%	
Accumulated Benefits		103%	

Reconciliation of Present Value of Accumulated Benefits

1. Actuarial Present Value at Start of Prior Plan Year	$	46,524,240
2. Increase (Decrease) over Prior Year due to:		
Benefit Accruals	$	11,707,736
Benefit Payments		(1,201,005)
Increase for Interest		4,611,443
Experience (Gains)/Losses		(985,675)
Changes in Assumptions		0
Plan Amendments		0
Total		14,132,499
3. Actuarial Present Value at End of Prior Year	$	60,656,739

APPENDIX A – MEMBERSHIP INFORMATION

The data for this valuation was provided electronically by Associated Administrators LLC (AA). Cheiron did not audit any of the data. The data is as of January 1, 2017. Below is a list of assumptions Cheiron made in processing the data this year. These assumptions only affected a de minimis number of participants.

Participant Status for Valuation Purposes

Only those participants who had an active status (A or AV) and last month worked after August were considered active employees for valuation purposes. The remaining participants were valued as terminated vested if they had at least five years of vesting service; otherwise non-vested terminations.

Accrued Benefits for Terminated Vested Employees

The accrued benefit for each terminated vested was estimated based on the amount of benefit service reported and the monthly accrual levels for Tier I or Tier II participation.

Full-Time/Part-Time Status

Full-time versus part-time status is not included in the data provided to Cheiron. For Tier I participants, this status is determined based on the most recent contribution rate for that participant. Tier II participants are assigned full-time versus part-time status based on the majority of their hours for the 2016 plan year. If they do not have hours in the 2016 plan year, earlier years are used.

APPENDIX A – MEMBERSHIP INFORMATION

The following is a list of data charts contained in this section:

- Age/Service Distribution for Tier I Full-Time Active Participants
- Age/Service Distribution for Tier I Part-Time Active Participants
- Age/Service Distribution for Tier II Full-Time Active Participants
- Age/Service Distribution for Tier II Part-Time Active Participants
- Counts and Average Benefit Amount by Age for Retirees, Beneficiaries, and Disabled Participants
- Counts and Average Benefit Amount by Age for Deferred Vested Participants and Surviving Spouses entitled to future benefits
- Participant Reconciliation

Table A-1
Full-Time Tier I Participants as of January 1, 2017

	COMPLETED YEARS OF CREDITED SERVICE*										
AGE	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	Total
Under 25	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	2	0	0	2
50-54	0	0	0	2	1	1	5	70	109	1	189
55-59	0	0	1	2	5	3	1	22	172	100	306
60-64	0	0	0	0	1	1	1	8	46	140	197
65-69	0	0	1	0	0	0	0	1	13	49	64
70 & Up	0	0	0	0	0	0	1	0	1	16	18
Total	0	0	2	4	7	5	8	103	341	306	**776**

Average Age = 58.8 Average Service* = 38.8

* *Includes credited service earned under FELRA & UFCW Pension Fund earned prior to January 1, 2013.*

APPENDIX A – MEMBERSHIP INFORMATION

Table A-2
Part-Time Tier I Participants as of January 1, 2017

COMPLETED YEARS OF CREDITED SERVICE

AGE	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	Total
Under 25	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0	0
50-54	0	0	1	0	0	0	0	11	8	0	20
55-59	0	0	0	0	0	0	0	7	40	15	62
60-64	0	0	0	0	0	1	0	1	12	19	33
65-69	0	0	0	0	0	0	0	0	3	8	11
70 & Up	0	0	0	0	0	0	0	0	0	2	2
Total	0	0	1	0	0	1	0	19	63	44	**128**

Average Age = 59.2 Average Service* = 38.6

* *Includes credited service earned under FELRA & UFCW Pension Fund earned prior to January 1, 2013.*

APPENDIX A – MEMBERSHIP INFORMATION

Table A-3
Full-Time Tier II Participants as of January 1, 2017

	COMPLETED YEARS OF CREDITED SERVICE*										
AGE	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	Total
Under 25	5	76	34	0	0	0	0	0	0	0	115
25-29	4	76	171	35	0	0	0	0	0	0	286
30-34	4	49	91	176	48	0	0	0	0	0	368
35-39	4	42	95	129	180	35	0	0	0	0	485
40-44	2	43	66	100	133	198	60	0	0	0	602
45-49	0	34	82	117	132	137	339	85	0	0	926
50-54	1	42	64	114	163	106	243	271	0	0	1,004
55-59	1	32	55	122	132	104	215	161	2	0	824
60-64	0	22	21	57	80	77	140	95	2	0	494
65-69	0	11	9	25	31	31	47	23	2	0	179
70 & Up	0	6	4	10	14	12	20	14	0	0	80
Total	21	433	692	885	913	700	1,064	649	6	0	**5,363**

Average Age = 48.3 Average Service* = 18.1

** Includes credited service earned under FELRA & UFCW Pension Fund earned prior to January 1, 2013.*

APPENDIX A – MEMBERSHIP INFORMATION

Table A-4
Part-Time Tier II Participants as of January 1, 2017

	COMPLETED YEARS OF CREDITED SERVICE										
AGE	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	Total
Under 25	679	1,293	103	0	0	0	0	0	0	0	2,075
25-29	170	600	448	38	0	0	0	0	0	0	1,256
30-34	111	282	271	206	9	0	0	0	0	0	879
35-39	69	241	174	161	98	4	0	0	0	0	747
40-44	77	204	182	128	117	72	11	0	0	0	791
45-49	94	245	186	146	112	78	90	16	0	0	967
50-54	93	298	240	169	149	58	93	56	0	0	1,156
55-59	89	271	280	189	130	72	88	46	0	0	1,165
60-64	44	222	171	139	110	68	63	23	1	0	841
65-69	28	113	105	83	69	28	41	11	0	0	478
70 & Up	16	86	60	60	33	8	13	3	0	0	279
Total	1,470	3,855	2,220	1,319	827	388	399	155	1	0	**10,634**

Average Age = 42.2 Average Service* = 7.2

* *Includes credited service earned under FELRA & UFCW Pension Fund earned prior to January 1, 2013.*

APPENDIX A – MEMBERSHIP INFORMATION

Table A-5
Inactive Participants as of January 1, 2017

Pensioners and Beneficiaries Receiving Benefits

	Disability Retirements		Normal, Early Deferred Vested Retirements		Surviving Spouses and Beneficiaries Receiving Benefits		Total	
Age	Number	Monthly Benefit	Number	Monthly Benefit	Number	Monthly Benefit	Number	Monthly Benefit
Under 55	12	$ 5,481	65	$ 6,832	0	$ 0	77	$ 12,313
55-59	7	6,532	172	17,504	0	0	179	24,036
60-64	18	11,899	219	22,251	0	0	237	34,150
65-69	0	0	244	18,888	1	1,075	245	19,963
70-74	0	0	75	5,582	0	0	75	5,582
75-79	0	0	15	1,164	0	0	15	1,164
80 & Over	0	0	3	232	0	0	3	232
Total	**37**	**$ 23,912**	**793**	**$ 72,453**	**1**	**$ 1,075**	**831**	**$ 97,440**

Deferred Vested Participants and Surviving Spouses Entitled to Future Benefits

Age	Number	Monthly Benefit
Under 45	1,013	$ 35,649
45-49	226	8,610
50-54	276	12,074
55-59	258	12,347
60-64	185	8,692
65 & Over	137	5,402
Total	**2,095**	**$ 82,774**

APPENDIX A – MEMBERSHIP INFORMATION

Table A-6
Data Reconciliation from the Prior to Current Valuation

	Active Participants	Deferred Vested	Disability Retirements	Retirees	Beneficiaries	Total
January 1, 2016	**17,240**	**1,696**	**19**	**520**	**0**	**19,475**
New Members	2,404	0	0	0	0	2,404
Died / Terminated without a Vested Benefit / Cash Out	(1,959)	(101)	0	(4)	0	(2,064)
Vested Termination	(713)	713	0	0	0	0
Rehired Inactives	81	(81)	0	0	0	0
Disablements	(7)	(13)	20	0	0	0
Retirements	(145)	(127)	(3)	275	0	0
Miscellaneous Adjustments	0	8	1	2	1	12
January 1, 2017	**16,901**	**2,095**	**37**	**793**	**1**	**19,827**

APPENDIX B – SUMMARY OF MAJOR PLAN PROVISIONS

This summary reflects all amendments made to the Fund up to and including January 2017. The rates for the majority of participants are set forth in this appendix.

1. **Eligibility**

   Each employee of either Giant or Safeway with bargaining units represented by Locals 400, 27 or 1776 (formerly 1357), where the Collective Bargaining Agreements call for contributions to this Fund on behalf of such employee, will become a participant upon receipt of the first such contribution on his behalf.

2. **Normal Retirement Date**

   An employee's Normal Retirement Date is the last day of the month in which his 65th birthday occurs.

3. **Past Service**

   Service credited under the FELRA & UFCW Pension Fund as of January 1, 2013 is counted for purposes of determining benefit eligibility.

4. **Future Service**

   On and after January 1, 2013, an employee for whom monthly contributions are made receives future service credit for each month for which a contribution is made on his behalf. An employee for whom hourly contributions are made receives future service credit for each plan year at the rate of one-quarter of a year for each 400 such hours for which contributions are made up to a full year credit for 1,600 or more such hours. In either case, an employee also receives future service benefit credit for any period during which he is reported as being in the military service of the United States and returns to covered employment within the period for protection of his statutory rights to re-employment.

5. **Accrued Monthly Pension**

   An employee's Accrued Monthly Pension is determined according to the contribution rate applicable to him from time to time. The contribution rate for most of the participants in the Fund is set in the Collective Bargaining Agreement between FELRA and the participating unions.

   The applicable contribution rates and benefit rates for Tier I and Tier II employees are shown on the following page:

APPENDIX B – SUMMARY OF MAJOR PLAN PROVISIONS

	Tier I		Tier II			
	Full-Time	Part-Time	Full-Time		Part-Time	
Contribution Rate at January 1, 2017[1]	$573.23/month	$212.24/month	$0.47/hour	$0.31/hour	$0.47/hour	$0.31/hour
Benefit Rate Per Year of Credited Service (After December 31, 2012)	$47	$32	$25	$15	$15	$10

[1] Does not reflect any additional monies being allocated by the bargaining parties to the Fund for Safeway employees effective November 1, 2016.

For Tier I participants, the benefit rate for credited service in excess of 30 years is $54 per month per year of full-time credited service, and $37 per month per year of part-time credited service. Credited service earned in the FELRA & UFCW Pension Fund as of December 31, 2012 is included when determining whether the participant has more than 30 years of credited service.

6. Normal Retirement Benefit

An employee's Normal Retirement Benefit is his Accrued Monthly Pension determined as of his Normal Retirement Age (65).

7. Employment after Age 65

An employee whose employment continues beyond his Normal Retirement Age will continue to receive additional pension credit for that employment.

8. Early Retirement Benefit

An employee who has both attained age 55 and completed at least 15 years of Credited Service can retire prior to his Normal Retirement Date. Tier II participants are also eligible to retire provided the Participant has both attained age 62 and completed at least 10 years of Credited Service. His early retirement pension is equal to his Accrued Monthly Pension, reduced by one-half of one percent for each month in the period between the date his pension commences and his 60th birthday (65th in the case of employees having an hourly contribution basis).

9. Special Early Retirement

An employee (other than an employee having an hourly contribution basis) who has either (a) attained age 60 and completed at least five years of Credited Service, or (b) has completed at least 30 years of Credited Service regardless of age, may retire and receive his Accrued Monthly Pension without actuarial reduction.

APPENDIX B – SUMMARY OF MAJOR PLAN PROVISIONS

10. Disability Retirement

An employee who becomes totally and permanently disabled (according to Social Security criteria) after he has completed at least ten years of Credited Service, is entitled to a Disability Retirement Pension. His Accrued Pension will be payable without actuarial reduction as soon as his disability has been established to the satisfaction of the Trustees and he has completed the six-month waiting period.

11. Vesting

If an employee who has completed five or more years of "Vesting Service" terminates covered employment other than by death or disability prior to the time he is eligible for an Early (or Normal) Retirement Benefit, he will be entitled to a Deferred Vested Pension beginning on his 60th birthday (65th in the case of employees having an hourly contribution basis), equal to his Accrued Monthly Pension up to the date his covered employment terminates. A former employee may elect to receive his pension payments on the first day of any month on or after his 55th birthday, in which case his pension amount will be reduced by one-half of one percent for each month in the period between the date his pension begins and his 60th birthday (65th in the case of employees having an hourly contribution basis). For this purpose, Vesting Service is equal to (a) the number of years of Vesting Service granted under the FELRA & UFCW Pension Fund as of January 1, 2013, and (b) the number of years of Vesting Service earned after January 1, 2013 whereby one full year of Vesting Service is granted for each calendar year in which either five or more months of Credited Service were granted or 750 Regular Time Hours were credited; if an employee has less than 750 Regular Time Hours or five months of Credited Service in any plan year and transfers to (or is transferred from) non-covered service with a participating employer, such non-covered service will also be included as Vesting Service.

12. Pre-Retirement Spouse's Pension

Each employee who is vested under the Fund (other than as set out below) is provided with pre-retirement spouse's pension coverage, whereby if his death occurs before actual retirement, his spouse will receive a lifetime pension from the Fund. The spouse's pension will be payable starting with the later of (a) the earliest date the employee could have elected to retire under the Fund, or (b) the employee's death. The amount of such pension will be one-half of that which would have been payable to the employee if he had retired early on the date of the start of the spouse's pension and elected a Joint and 50 Percent Survivor option.

13. Normal Form of Pension

The normal form of pension for an unmarried employee (or for a married employee who so elects) will be a lifetime pension. If his pension accrual was greater than $15 per month per year of service (or $10 for part-time employees), the pension is also payable for 60-months certain. The normal form of pension payable to a married employee who does not elect otherwise will be an actuarially reduced pension on the Joint and 50 Percent Survivor basis.

Upon the death of a pensioner, other than pensioners receiving Deferred Vested Pensions, a lump sum death benefit will be paid to the employee's designated beneficiary. The amount is

APPENDIX B – SUMMARY OF MAJOR PLAN PROVISIONS

$500, $1,000 or $2,500, depending on the contribution rate applicable to the participant and the full-time/part-time employment status. This benefit will be split between the FELRA & UFCW Pension Fund and this Fund.

14. Reciprocity

An employee covered by this Fund may transfer to (or from) the UFCW and Participating Employers' Pension Plan without loss of pension credits. Upon eventual retirement, each Fund will pay the benefit for service accrued under that Fund, according to the benefit rate in effect under that Fund, at the time of retirement. Reciprocity also has been authorized between this Fund and certain other collectively bargained plans in the retail food industry, under which payment of benefits from each Fund is made according to the benefit rate in effect at the end of his covered employment under each Fund.

Note: The above summary is for the sole purpose of stating the principal plan provisions on which the valuation is based. Entitlement to benefits under the Fund is determined under the terms and provisions of the Pension Plan document.

15. Changes in Plan Provisions

None

APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

1. Rates of Investment Return

Funding and disclosure purposes:
8.00% compounded annually

Current Liability under RPA 1994:
3.05% compounded annually

All investment returns are net of investment expenses and administrative expenses.

The Fund's investment consultant, Investment Performance Services LLC, anticipates an annual return of 7.36% (net of fees) based on the current asset allocation, with an underlying inflation assumption of 2.50%. Furthermore, this underlying expectation does not incorporate the expectation that the active managers will outperform index funds. Based on the investment consultant's expectations and the Fund's assumption for inflation being higher at 3% result in the 8% assumption being reasonable at this time.

2. Rates of Mortality

Funding and disclosure purposes:

Active:	RP-2000 Combined Healthy mortality table for males and females.
Healthy Inactive:	RP-2000 Healthy Annuitant mortality table set forward one year for males and no adjustment for females. The mortality table for active lives is used prior to age 49 for males and age 50 for females, but set forward one year for males.
Disabled:	RP-2000 Disabled Annuitant for ages prior to 65. The same mortality as Healthy Inactives for ages 65 and older.

Past experience has shown more deaths have occurred than assumed, which has yielded liability gains attributable to this experience. Therefore, the current assumption includes a margin for future mortality improvements. This will continue to be monitored on an annual basis and adjustments will be made when necessary.

Current Liability:	The separate 2017 Static Mortality Tables for annuitants and non-annuitants as prescribed under IRS Notice 2016-50 and Regulation §1.431(c)(6)-1.

APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

3. Rates of Turnover

Terminations of employment for reasons other than death or retirement are assumed to be in accordance with annual rates as shown on the next page.

Service	Number Expected to Terminate Annually Per 1,000
0	400
1	220
2	180
3	150
4	130
5	120
6	110
7	105
8	90
9	90
10	90
11	80
12	80
13	80
14	70
15	70
16	70
17	50
18	50
19	50
20	40
21	30
22 and over	25

4. Rates of Retirement

Tier I rates of retirement depend on whether a participant has fewer than 30 years of service or more than 30 years of service.

	Number Expected to Retire Annually Per 1,000		
	Tier 1	Tier 1	Tier 2
Age	Less than 30 years	Over 30 years	
50	0	200	0
51	0	200	0
52	0	200	0
53	0	200	0
54	0	200	0
55	85	200	75
56	85	200	75
57	85	200	75
58	85	200	75
59	85	200	75
60	150	200	100
61	150	250	100
62	300	350	150
63	200	400	125
64	200	400	150
65	300	400	200
66	300	400	200
67	200	400	200
68	200	400	200
69	200	400	200
70 and over	1,000	1,000	1,000

Employees who leave employment with entitlement to a deferred vested pension are assumed to commence receipt of their pension when first eligible for unreduced benefits.

APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

5. Rates of Disability

Terminations of employment for disability are assumed to be equal to 50% of the Group Long-Term Disability Insurance Crude Rates of Disablement for males published in the Transactions of the Society of Actuaries, 1979.

Illustrative rates are shown below.

Age	Number Expected to Become Disabled Annually Per 1,000
25	0.3
30	0.3
35	0.4
40	0.7
45	1.4
50	2.7

6. Marital Status and Elections

80% of participants are assumed to be married at death, and eligible for pre-retirement spouse benefits.

56% of participants are assumed to elect the joint and survivor option on retirement. The rest are assumed to elect the single life form.

Husbands are assumed three-years older than their wives.

7. Service Accrual

All employees are assumed to earn one year of service credit for each year of future employment.

8. Rationale for Demographic Assumptions

Assumptions are based on the latest experience study review performed in 2007 for FELRA & UFCW Pension Fund. Since this Fund's plan provisions mirror those of that plan and the population is similar, the assumptions used in performing the valuation for that fund are appropriate here. The results of that study are incorporated here by reference. The assumptions continue to be closely monitored and Cheiron is proposing that an experience study be performed in the near future.

9. Changes since the Previous Valuation

As required, the current liability interest rate and mortality tables were updated. The interest rate went from 3.28% to 3.05% and the mortality table was updated to the 2017 Static Mortality Tables for annuitants and non-annuitants (per IRS Notice 2016-50).

APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Asset Valuation Method

The valuation assets are determined as the market value less (1) 80% of the investment gain/(loss) during the preceding year, less (2) 60% of the investment gain/(loss) during the second preceding year, less (3) 40% of the investment gain/(loss) during the third preceding year, less (4) 20% of the investment gain/(loss) during the fourth preceding year. For the purpose of this calculation, the gain/(loss) are defined as the difference between the actual and the expected return (based on the valuation interest rate) on the market value of assets during the year.

The actuarial value is taken to be the adjusted market value as described above, but subject to a 20 percent corridor limit around the actual market value; that is, the actuarial value is never greater than 120 percent of the market value, nor less than 80 percent of market value.

2. Funding Method: Unit Credit Cost Method

The cost method for valuation of liabilities used for this valuation is the unit credit method. This is one of a family of valuation methods known as accrued benefits methods. The chief characteristic of an accrued benefits method is that the funding pattern follows the pattern of benefit accrual. Under the unit credit actuarial cost method, the normal cost is determined as that portion of each Participant's benefit attributable to service expected to be earned in the upcoming plan year. The actuarial liability, which is determined for each Participant as of each valuation date, is the actuarial present value of the Participant's current accrued benefit as of the valuation date.

One of the significant effects of this funding method is that, depending on the demographics of the population, the unit credit method tends to produce lower costs in the early years. There is a possibility that as the population ages, the annual cost could increase over time.

3. Changes in Actuarial Methods since Last Valuation

None