Industry & Local 338 Pension Plan

Actuarial Update

June 29, 2022

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Today's Discussion

- **Study of Form 5500 Data**
- **Updated Funding Projections**
- **Appendix**
  - Contribution Rate Summaries
  - Data, Assumptions, Methods, and Plan Provisions

Study of Form 5500 Data

Study Overview

- **Genesis:**
  - Originally a partnership with the Mechanical Contractors Association of America to study Form 5500 data for multiemployer pension plans in the construction industry (2012).

    "Inventory of Construction Industry Pension Plans"

  - Expanded partnership with the International Foundation of Employee Benefit Plans to study multiemployer pension plans in all industries (2013).

    "The Multiemployer Retirement Plan Landscape"

    2013 – 2017 Reports: "A Ten-Year Look"

    2018 – 2021 Reports: "A Fifteen-Year Look"

- **Purpose of 2020 study:**
  - Summarize and analyze key trends for multiemployer defined benefit pension plans.
  - Analyze how multiemployer plans have evolved over the last fifteen years (2005 to 2019).
  - Better understand where the plans may be headed in the future.
  - Also investigate differences in trends from industry to industry.
  - ***Compare results of individual plans to others in the same industry.***

What's Included in the Study

Form/Schedule	Data Available
Form 5500 *Basic Information*	Plan name, address, and identification NAICS (Industry) code Participant and beneficiary counts Employer count
Schedule H *Financial Information*	Asset values Contributions Benefit payments and operating expenses
Schedule B / MB *Actuarial Information* *(DB Plans Only)*	PPA certification status (2009 and later) Actuarial liabilities Normal cost Investment return assumption
Schedule R *Retirement Plan Information*	Asset allocations

- Study uses publically-available Form 5500 data from DOL website.
- Where possible, adjustments were made for missing or questionable data.
- See the *Multiemployer Retirement Plan Landscape* report for more information.

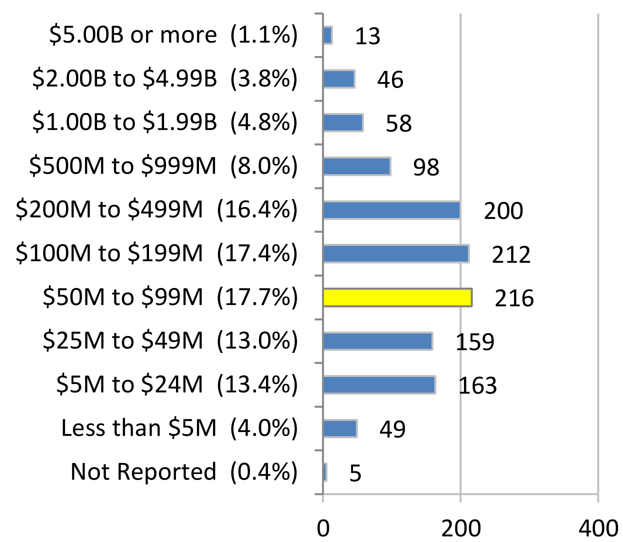
Individual Plan Results

- **Individual Plan**
  - Results are shown for the Industry & Local 338 Pension Plan.
  - Plan year begins July 1 (may affect comparability with calendar year results).
  - Referred to as “Local 338” in the following exhibits.
- **Comparison Against Other Plans**
  - Compare against results for all plans.
  - Most recent Form 5500 data is for plan years ending on or about 12/31/2019.
  - Industry & Local 338 Pension Plan: most recent filing is for plan year ending 6/30/2020.
  - Plan years beginning September through December are set forward one year.
    - Applies to historical exhibits only.
    - For example, 8/1/2018 = 2018 plan year; 9/1/2018 = 2019 plan year.
- **Results are for illustration only**
  - Form 5500 data is not perfect.
  - Adjustments were made for missing or questionable data.
  - Results from Form 5500 data may differ from plan’s actual results.

Overview: Plans in the Study

Asset Values

Multiemployer Defined Benefit Pension Plans:
All Industries



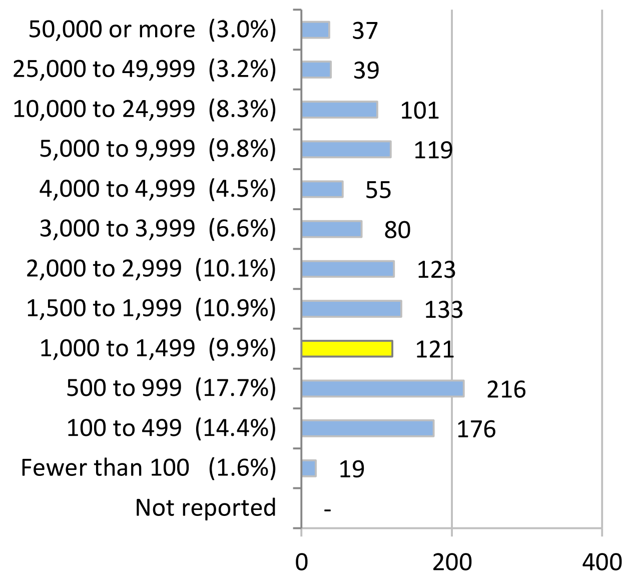
Asset Values: Median = $106M | Average = $474M

Total Plans: 1,219 Source: 2018-2019 Form 5500 data.

I&L 338: $91M

Number of Participants

Multiemployer Defined Benefit Pension Plans:
All Industries



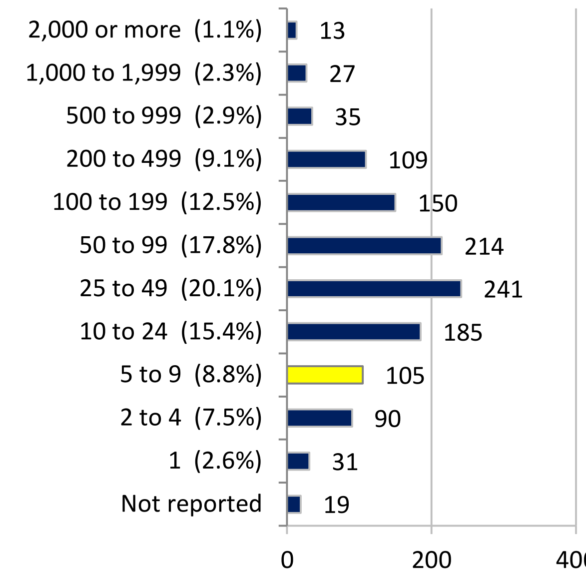
Participant Counts: Median = 1,758 | Average = 9,111

Total Plans: 1,219 Source: 2018-2019 Form 5500 data.

I&L 338: 1,166

Number of Employers

Multiemployer Defined Benefit Pension Plans:
All Industries



Employer Count: Median = 43 | Average = 166

Total Plans: 1,219 Source: 2018-2019 Form 5500 data.

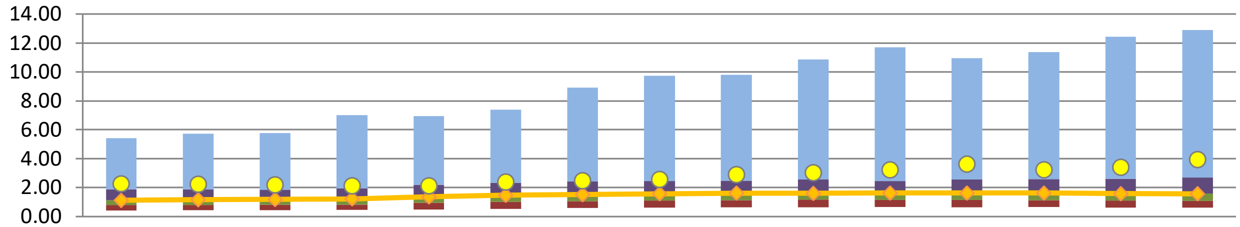
I&L 338: 7

- Plans distributed by asset value, number of participants, and number of employers.
- Results are based on plan years ending on or about 12/31/2019.
- 1,219 multiemployer defined benefit pension plans have asset values greater than zero.

Demographics: Participant Ratios

Participant Ratios: Inactive to Active (End of Plan Year)

Multiemployer Defined Benefit Pension Plans: All Industries

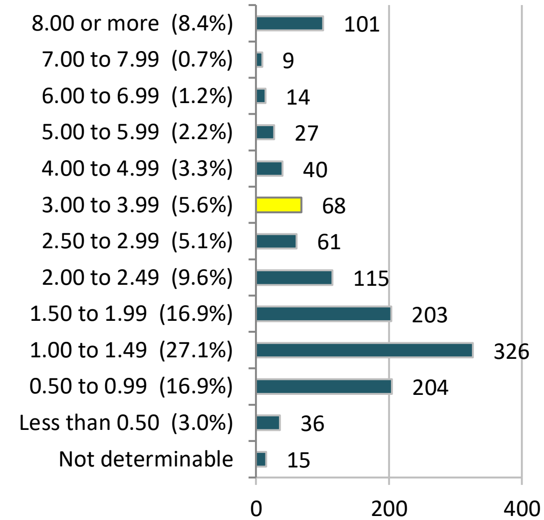


Plan Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of Plans	1,338	1,352	1,344	1,326	1,292	1,295	1,274	1,283	1,275	1,263	1,245	1,227	1,224	1,213	1,204
95th Percentile	5.42	5.72	5.76	7.00	6.94	7.37	8.90	9.73	9.81	10.85	11.70	10.95	11.37	12.44	12.90
75th Percentile	1.86	1.86	1.84	1.93	2.16	2.30	2.41	2.43	2.48	2.55	2.45	2.54	2.56	2.60	2.68
50th Percentile	1.11	1.16	1.18	1.21	1.35	1.47	1.51	1.57	1.61	1.60	1.62	1.62	1.62	1.58	1.57
25th Percentile	0.78	0.79	0.82	0.82	0.92	1.00	1.04	1.09	1.12	1.16	1.15	1.14	1.12	1.09	1.08
5th Percentile	0.40	0.43	0.42	0.45	0.47	0.53	0.58	0.61	0.62	0.62	0.64	0.63	0.63	0.61	0.61
I&L 338	2.26	2.23	2.18	2.12	2.13	2.38	2.48	2.58	2.89	3.02	3.23	3.62	3.23	3.42	3.94

Source: Form 5500 Data

Participant Ratios: Inactives to Actives

Multiemployer Defined Benefit Pension Plans: All Industries



Median Participant Ratio: 1.57

Total Plans: 1,219

Source: 2018-2019 Form 5500 data.

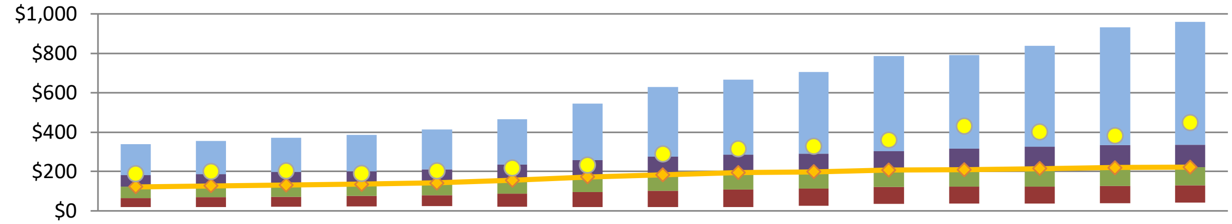
I&L 338: 3.94

- Participant ratio = number of inactive participants / number of active participants.
- Inactive participants include inactive participants with deferred benefits, retirees, and beneficiaries.
- More difficult for plans with high inactive/active participant ratios to improve plan funding via changes to employer contributions or future benefit accruals.

Liabilities: Accrued Liability per Active Participant

Liability per Active Participant ($Thousands)

Multiemployer Defined Benefit Pension Plans: All Industries

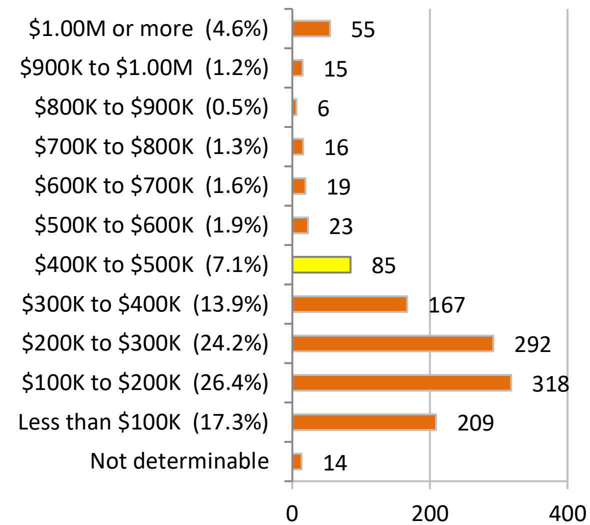


Plan Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of Plans	1,330	1,348	1,336	1,188	1,228	1,278	1,272	1,284	1,275	1,263	1,244	1,230	1,224	1,212	1,205
95th Percentile	$340	$356	$371	$386	$413	$465	$545	$629	$667	$706	$785	$791	$838	$932	$960
75th Percentile	$181	$187	$197	$201	$212	$236	$258	$276	$285	$291	$303	$316	$326	$334	$336
50th Percentile	$123	$128	$131	$136	$142	$156	$173	$184	$195	$199	$208	$209	$215	$220	$222
25th Percentile	$66	$70	$72	$76	$81	$88	$95	$103	$109	$114	$121	$123	$125	$127	$129
5th Percentile	$19	$21	$22	$23	$25	$22	$20	$21	$20	$26	$35	$37	$39	$39	$42
I&L 338	$190	$200	$203	$192	$203	$218	$233	$289	$315	$329	$360	$432	$401	$382	$448

Source: Form 5500 Data

Liability Per Active Participant

Multiemployer Defined Benefit Pension Plans: All Industries



Median Liability per Active Participant: $222K

Total Plans: 1,219 Source: 2018-2019 Form 5500 data.

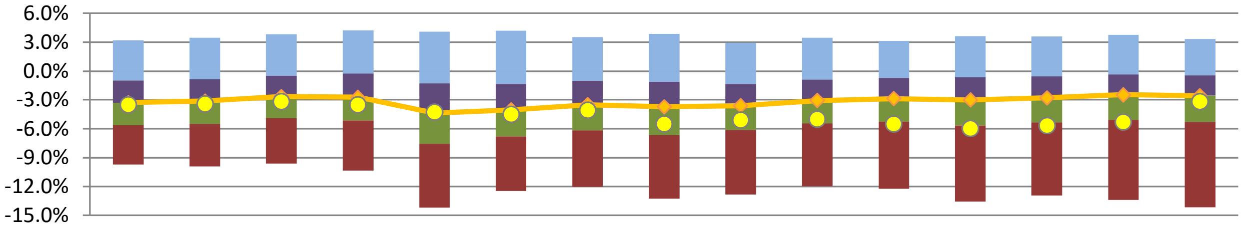
I&L 338: $448,313

- Liability Per Active = Accrued Liability / number of active participants.
- <u>Example:</u> A plan has an accrued liability of $200,000,000 and 2,000 actives. The liability per active is $100,000.
- More difficult for plans with higher liability per active participant to improve plan funding via changes to employer contributions or future benefit accruals.

Assets: Net Cash Flows

Net Cash Flow as a Percentage of Assets

Multiemployer Defined Benefit Pension Plans: All Industries

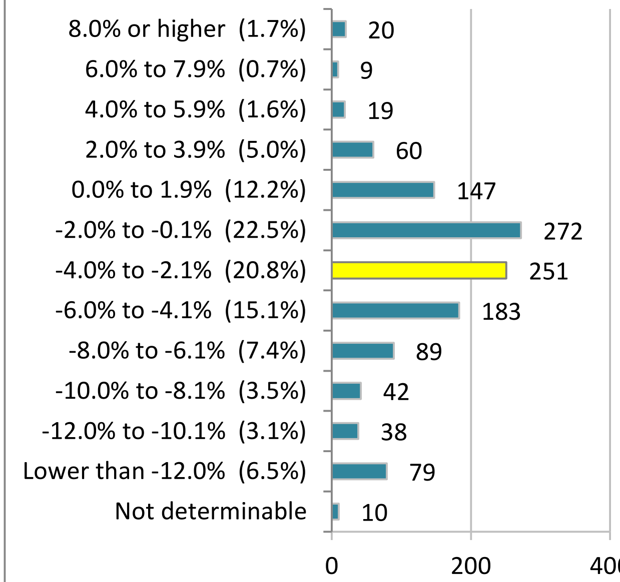


Plan Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of Plans	1,345	1,363	1,354	1,333	1,214	1,283	1,280	1,291	1,277	1,270	1,248	1,237	1,232	1,222	1,209
95th Percentile	3.2%	3.4%	3.8%	4.2%	4.1%	4.2%	3.5%	3.9%	2.9%	3.5%	3.1%	3.6%	3.6%	3.7%	3.3%
75th Percentile	-1.0%	-0.9%	-0.5%	-0.3%	-1.3%	-1.3%	-1.0%	-1.1%	-1.3%	-0.9%	-0.7%	-0.7%	-0.6%	-0.4%	-0.4%
50th Percentile	-3.3%	-3.1%	-2.7%	-2.7%	-4.4%	-4.0%	-3.5%	-3.7%	-3.6%	-3.1%	-2.9%	-3.0%	-2.8%	-2.5%	-2.6%
25th Percentile	-5.6%	-5.5%	-4.9%	-5.1%	-7.5%	-6.8%	-6.2%	-6.6%	-6.1%	-5.4%	-5.2%	-5.7%	-5.4%	-5.1%	-5.3%
5th Percentile	-9.7%	-9.9%	-9.6%	-10.4%	-14.2%	-12.5%	-12.1%	-13.3%	-12.8%	-12.0%	-12.2%	-13.6%	-12.9%	-13.4%	-14.2%
I&L 338	-3.5%	-3.4%	-3.2%	-3.5%	-4.3%	-4.5%	-4.1%	-5.5%	-5.1%	-5.0%	-5.5%	-6.0%	-5.7%	-5.3%	-3.2%

Source: Form 5500 Data

Net Cash Flow (% of Assets)

Multiemployer Defined Benefit Pension Plans: All Industries



Median Net Cash Flow: -2.6% of Assets

Total Plans: 1,219 Source: 2018-2019 Form 5500 data.

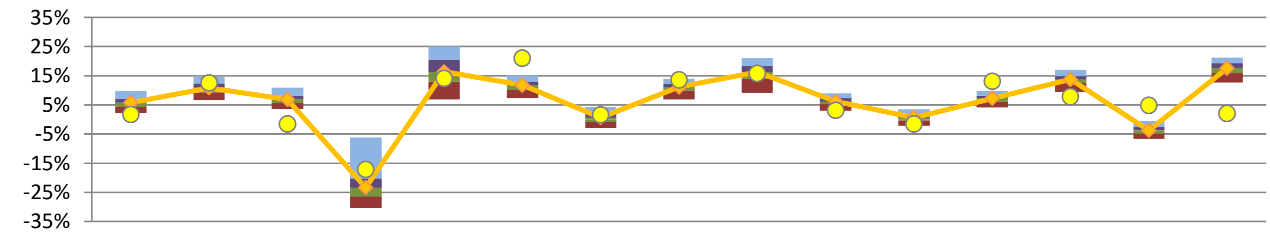
I&L 338: -3.2% of Assets

- Net cash flow = cash in versus cash out, as a % of average asset value.
  - Cash in = employer contributions
  - Cash out = benefit payments and operating expenses
- Example: if a plan's net cash flow is -4.0% of assets, the plan's investment return must be at least +4.0% to avoid a decline in the asset value from one year to the next.

Assets: Investment Returns

Net Investment Returns

Multiemployer Defined Benefit Pension Plans: All Industries

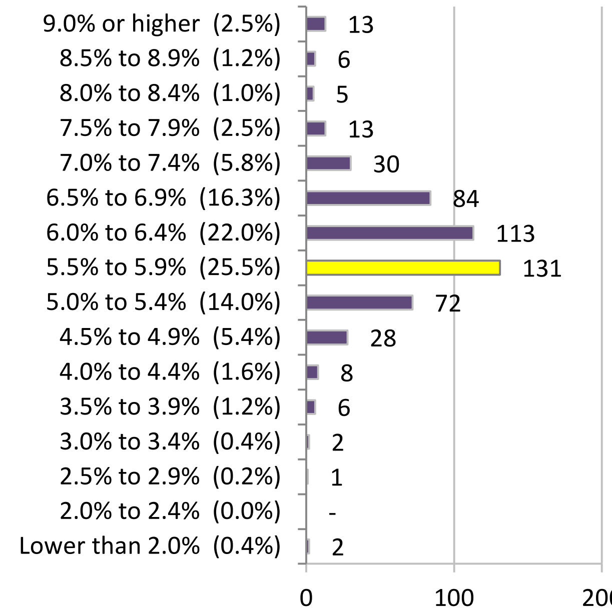


Plan Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of Plans	681	699	691	700	669	670	659	668	666	661	650	642	650	648	642
95th Percentile	9.9%	14.6%	11.0%	-6.1%	25.1%	15.1%	4.4%	14.0%	21.1%	9.0%	3.5%	9.9%	17.0%	-0.5%	21.2%
75th Percentile	7.1%	12.4%	8.2%	-20.3%	20.5%	13.0%	2.0%	12.3%	18.4%	7.3%	1.6%	8.2%	14.9%	-2.7%	19.3%
50th Percentile	5.8%	10.9%	6.9%	-23.4%	16.4%	11.8%	0.6%	11.2%	16.3%	6.2%	0.6%	7.3%	13.7%	-3.7%	17.6%
25th Percentile	4.4%	9.3%	5.7%	-26.4%	13.0%	10.2%	-0.8%	10.0%	14.0%	5.2%	-0.3%	6.2%	12.5%	-4.8%	16.0%
5th Percentile	2.2%	6.6%	3.6%	-30.4%	6.8%	7.3%	-3.0%	6.9%	9.2%	3.0%	-2.1%	4.2%	9.5%	-6.6%	12.6%
I&L 338	1.7%	12.5%	-1.6%	-17.2%	14.1%	21.0%	1.6%	13.6%	15.8%	3.1%	-1.6%	13.1%	7.8%	4.8%	2.0%

Calendar Year Plans Only | Note: I&L 338 Plan Year Begins July 1. Source: Form 5500 Data

Annualized Returns: 2005 - 2019

Multiemployer Defined Benefit Pension Plans: All Industries



Median Annualized Return: 6.05% per Year
Subset of 514 Calendar Year Plans
Source: Form 5500 Data

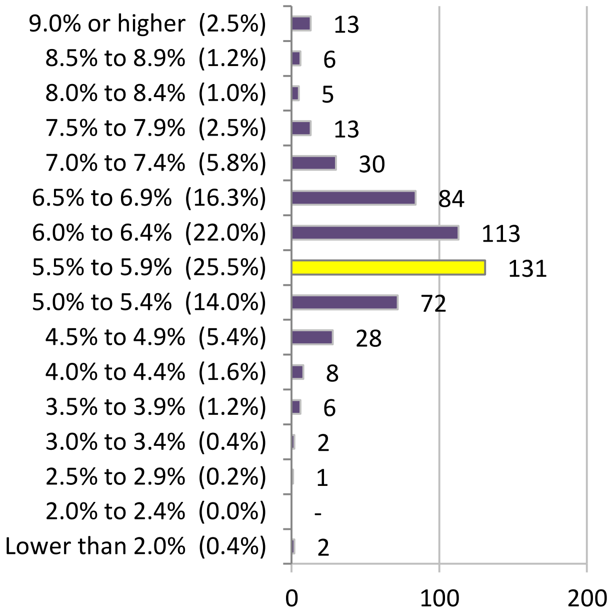
I&L 338: 5.64%

- Results include calendar year plans only; may not be comparable with non-calendar plan years.
- Returns are net of investment fees, but gross of operating expenses.
- Plan's investment allocation is a key driver of its investment returns.
- Note: investment horizons for most pension plans are longer than fifteen years.

Annualized Investment Return: Actual vs. Expected

Annualized Returns: 2005 - 2019

Multiemployer Defined Benefit Pension Plans:
All Industries

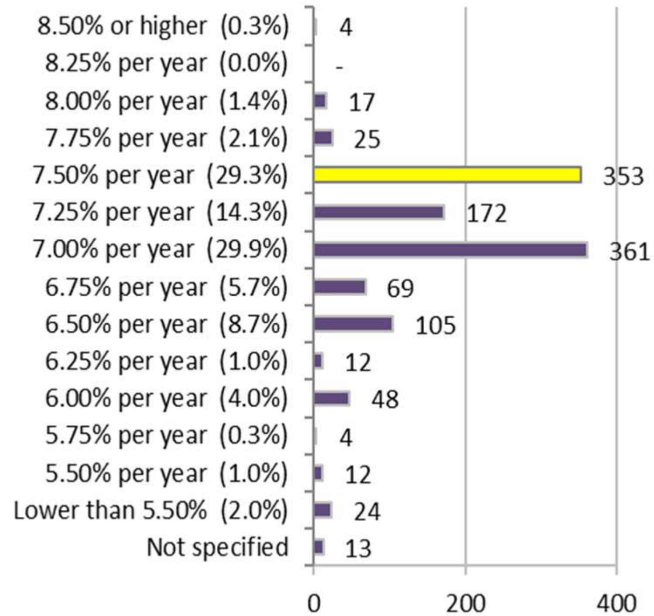


Median Annualized Return: 6.05% per Year
Subset of 514 Calendar Year Plans
Source: Form 5500 Data

I&L 338: 5.64%

Investment Return Assumptions

Multiemployer Defined Benefit Pension Plans:
All Industries



Median Investment Return Assumption: 7.00%
Total Plans: 1,219 Source: 2018-2019 Form 5500 data.

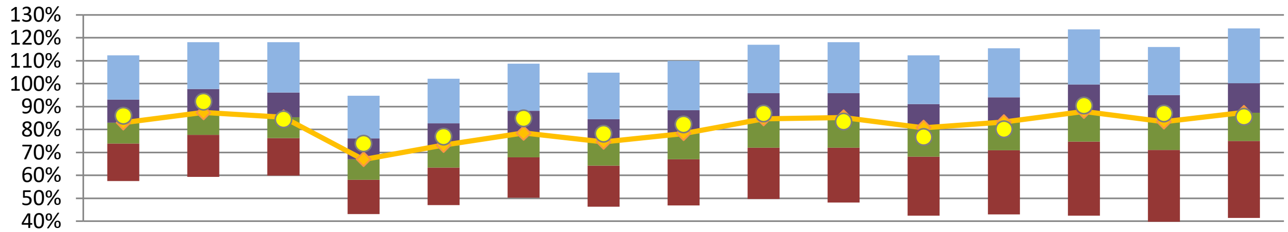
I&L 338: 7.50%

- Results may not be comparable for non-calendar plan years.
- Actual return results include only those calendar year plans with complete Form 5500 data for the 15-year period from 1/1/2005 to 12/31/2019.
- Note: 15 years is too short of a time horizon to draw conclusions about long-term investment policies.

Plan Funding: Funded Percentages

Market Value Funded Percentages (End of Year)

Multiemployer Defined Benefit Pension Plans: All Industries

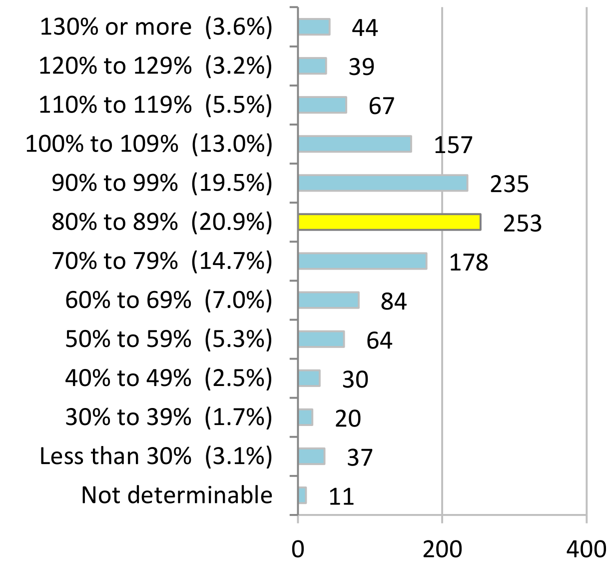


Plan Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of Plans	1,253	1,273	1,249	1,179	1,146	1,240	1,239	1,253	1,257	1,268	1,249	1,238	1,235	1,221	1,208
95th Percentile	112%	118%	118%	95%	102%	109%	105%	110%	117%	118%	112%	115%	124%	116%	124%
75th Percentile	93%	98%	96%	76%	83%	88%	85%	89%	96%	96%	91%	94%	100%	95%	100%
50th Percentile	83%	87%	85%	67%	73%	78%	75%	78%	85%	85%	81%	83%	88%	83%	87%
25th Percentile	74%	78%	76%	58%	63%	68%	64%	67%	72%	72%	68%	71%	75%	71%	75%
5th Percentile	58%	59%	60%	43%	47%	50%	46%	47%	50%	48%	42%	43%	42%	40%	41%
I&L 338	86%	92%	84%	74%	77%	85%	78%	82%	87%	83%	77%	80%	90%	87%	86%

Source: Form 5500 Data

Market Value Funded Percentages

Multiemployer Defined Benefit Pension Plans: All Industries



Median Market Value Funded Percentage: 87.4%

Total Plans: 1,219 Source: 2018-2019 Form 5500 data.

I&L 338: 85.5%

- Results include all plan year ending dates. Most plans use calendar plan years. Note that funded percentages for plans with different plan years may vary substantially due to market conditions
- Funded percentages are measured as of the end of the plan year and are based on the *market value* of assets.
- Note: funded percentages under PPA are measured based on the *actuarial value* of assets.

Horizon

Plan Funding: Zone (PPA) Certification Statuses

Distribution of PPA Certification Statuses

Multiemployer Defined Benefit Pension Plans: All Industries

Plan Year Beginning	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Green Zone (N)	357	602	716	692	698	768	786	747	771	786	800
Endangered (E)	252	202	187	206	190	160	150	138	126	120	114
Seriously End. (S)	102	48	17	21	14	5	4	6	5	2	7
Critical (C)	354	340	289	311	321	316	225	211	193	176	175
Critical & Declining (D)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	108	114	111	114
I&L 338	N	N	N	N	N	N	N	E	C	C	N
Plans with Status	1,065	1,192	1,209	1,230	1,223	1,249	1,165	1,210	1,209	1,195	1,210
Plans with No Status	243	111	75	66	60	27	19	34	32	34	9

Source: Form 5500 Data

Zone certification data not available for 2008 plan year.

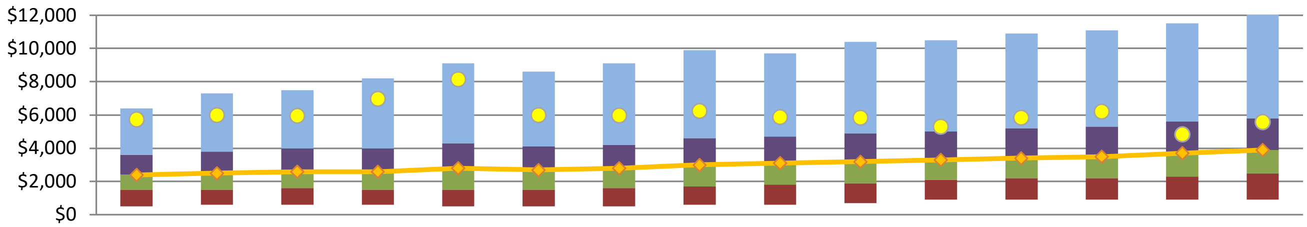
Simplified definitions:

- "N" = neither critical or endangered (green zone): None of the above tests are met.
- "E" = endangered status (yellow zone): Less than 80% funded or credit balance is projected to be less than zero in the next 7 years.
- "S" = seriously endangered status (orange zone): Both of the endangered status tests are met.
- "C" = critical status (red zone): Credit balance is projected to be less than zero in the next 4 or 5 years (depending on circumstances).
- "D" = critical and declining status: Projected insolvency in the next 15 or 20 years (depending on circumstances).

Plan Cost: Normal Cost per Active

Normal Cost per Active Participant

Multiemployer Defined Benefit Pension Plans: All Industries

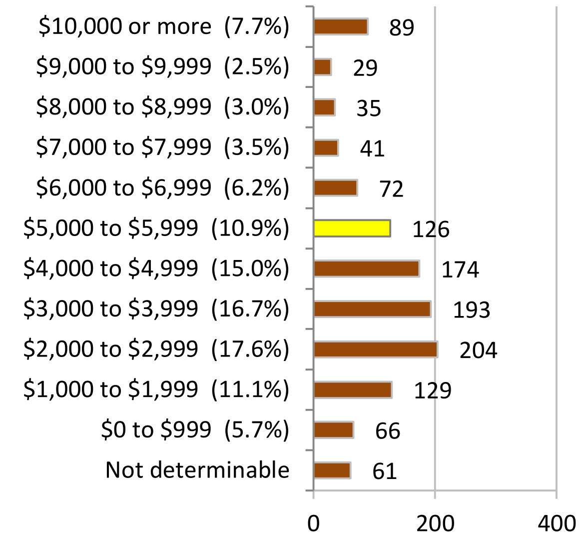


Plan Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of Plans	1,319	1,343	1,326	1,267	1,195	1,276	1,255	1,263	1,248	1,234	1,195	1,180	1,174	1,162	1,158
95th Percentile	$6,400	$7,300	$7,500	$8,200	$9,100	$8,600	$9,100	$9,900	$9,700	$10,400	$10,500	$10,900	$11,100	$11,500	$12,300
75th Percentile	$3,600	$3,800	$4,000	$4,000	$4,300	$4,100	$4,200	$4,600	$4,700	$4,900	$5,000	$5,200	$5,300	$5,600	$5,800
50th Percentile	$2,400	$2,500	$2,600	$2,600	$2,800	$2,700	$2,800	$3,000	$3,100	$3,200	$3,300	$3,400	$3,500	$3,700	$3,900
25th Percentile	$1,500	$1,500	$1,600	$1,500	$1,500	$1,500	$1,600	$1,700	$1,800	$1,900	$2,100	$2,200	$2,200	$2,300	$2,500
5th Percentile	$500	$600	$600	$600	$500	$500	$500	$600	$600	$700	$900	$900	$900	$900	$900
I&L 338	$5,738	$6,005	$5,956	$6,974	$8,158	$5,998	$5,983	$6,237	$5,876	$5,850	$5,304	$5,841	$6,215	$4,839	$5,585

Source: Form 5500 Data

Normal Cost per Active Participant

Multiemployer Defined Benefit Pension Plans: All Industries



Median Normal Cost per Active Participant: $3,918

Total Plans: 1,219 Source: 2018-2019 Form 5500 data.

I&L 338: $5,585 Per Active

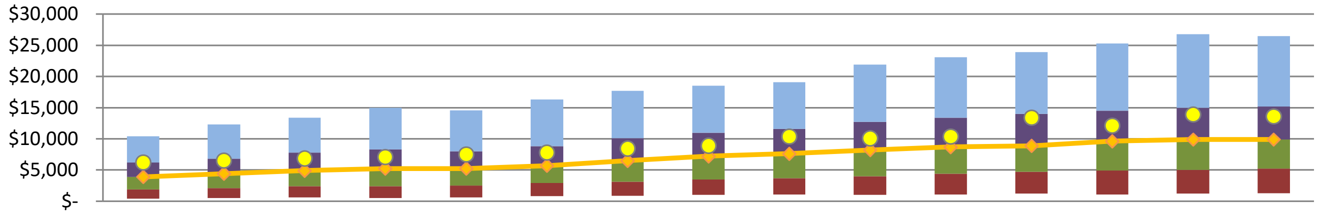
- Cost of benefit accruals plus operating expenses (normal cost) in a plan year per active participant.
- Annualized increases since 2005: Median Plan: 3.53% vs. I&L 338: -0.19%.

Horizon

Contributions per Active

Contributions per Active Participant

Multiemployer Defined Benefit Pension Plans: All Industries

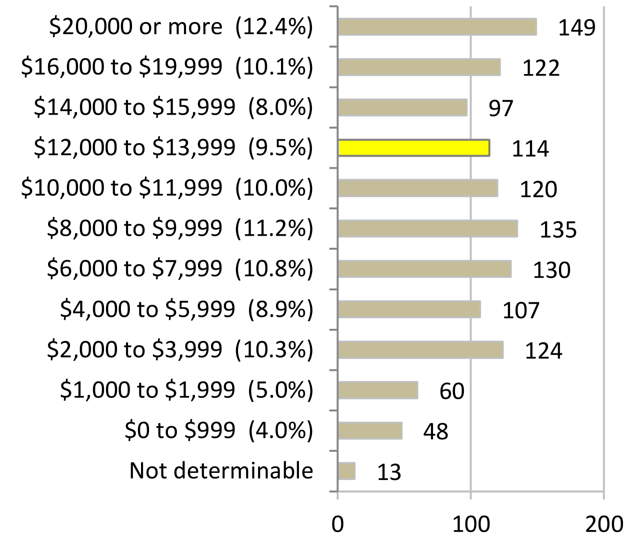


Plan Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of Plans	1,342	1,355	1,346	1,329	1,213	1,294	1,273	1,285	1,276	1,265	1,245	1,231	1,225	1,214	1,206
95th Percentile	$10,400	$12,300	$13,400	$15,000	$14,600	$16,300	$17,700	$18,500	$19,100	$21,900	$23,100	$23,900	$25,300	$26,800	$26,500
75th Percentile	$6,200	$6,800	$7,800	$8,300	$8,000	$8,800	$10,100	$11,000	$11,600	$12,700	$13,400	$14,000	$14,500	$15,000	$15,200
50th Percentile	$3,900	$4,400	$4,900	$5,200	$5,200	$5,700	$6,500	$7,200	$7,600	$8,200	$8,700	$8,900	$9,600	$9,900	$9,900
25th Percentile	$1,900	$2,100	$2,400	$2,400	$2,500	$2,900	$3,100	$3,500	$3,700	$4,000	$4,400	$4,700	$4,900	$5,000	$5,200
5th Percentile	$400	$500	$600	$500	$600	$800	$900	$1,000	$1,100	$1,000	$1,100	$1,200	$1,100	$1,200	$1,300
I&L 338	$6,180	$6,533	$6,873	$7,102	$7,506	$7,782	$8,450	$8,900	$10,378	$10,099	$10,370	$13,419	$12,139	$13,885	$13,610

Source: Form 5500 Data

Contributions per Active Participant

Multiemployer Defined Benefit Pension Plans:
All Industries



Median Contributions per Active Participant: $9,943

Total Plans: 1,219 Source: 2018-2019 Form 5500 data.

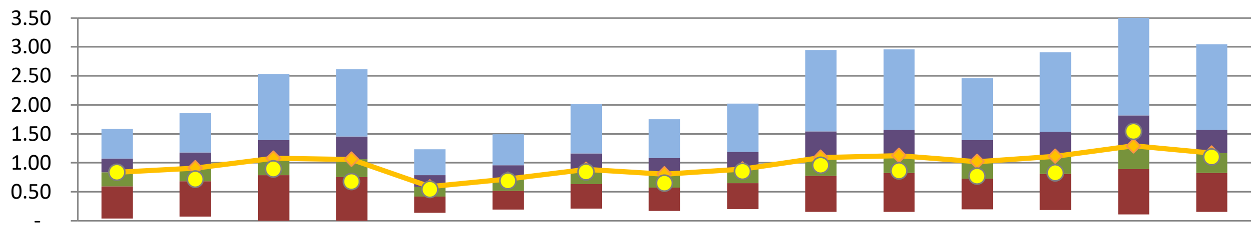
I&L 338: $13,610 Per Active

- Employer contributions per active participant.
- Hours worked (or other contribution base units) are not reported on the Form 5500.
- Annualized increases since 2005: Median Plan: 6.9% vs. I&L 338: 6.9%.

Ratio: Contributions vs Costs

Ratio: Contributions vs. Plan Costs

Multiemployer Defined Benefit Pension Plans: All Industries

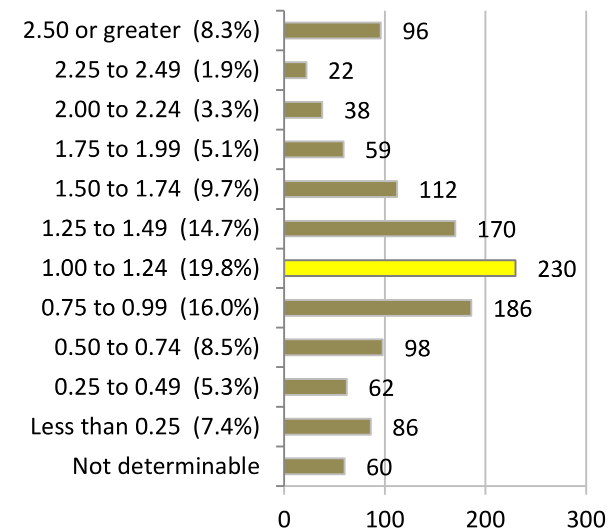


Plan Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of Plans	1,324	1,350	1,330	1,186	1,128	1,199	1,226	1,237	1,216	1,220	1,198	1,183	1,179	1,169	1,159
95th Percentile	1.59	1.86	2.54	2.62	1.23	1.49	2.02	1.76	2.02	2.95	2.96	2.47	2.91	3.76	3.05
75th Percentile	1.08	1.18	1.39	1.45	0.79	0.96	1.16	1.09	1.19	1.55	1.57	1.40	1.54	1.82	1.57
50th Percentile	0.84	0.91	1.08	1.06	0.59	0.72	0.89	0.81	0.89	1.10	1.13	1.02	1.11	1.29	1.17
25th Percentile	0.60	0.68	0.79	0.76	0.42	0.52	0.63	0.58	0.65	0.78	0.83	0.73	0.81	0.90	0.83
5th Percentile	0.04	0.07	0.00	0.00	0.14	0.20	0.21	0.17	0.20	0.15	0.16	0.20	0.19	0.11	0.15
I&L 338	0.84	0.72	0.89	0.68	0.54	0.69	0.84	0.65	0.85	0.96	0.86	0.77	0.83	1.54	1.10

Source: Form 5500 Data

Ratio: Contributions vs. Costs

Multiemployer Defined Benefit Pension Plans:
All Industries



Median Contribution-Cost Ratio: 1.17

Total Plans: 1,219 Source: 2018-2019 Form 5500 data.

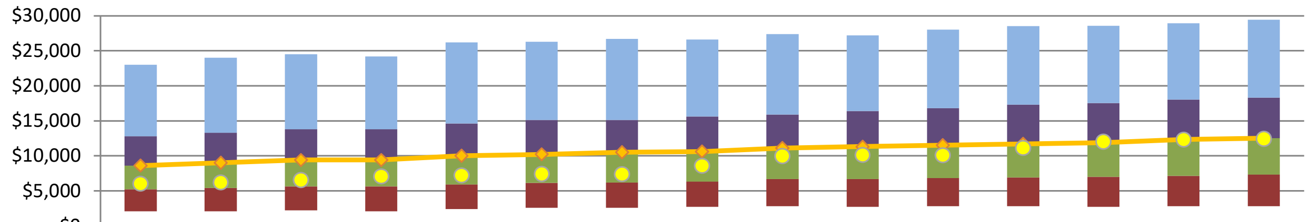
I&L 338: 1.10

- Actuarial cost components:
  - Normal cost (cost of benefit accruals plus operating expenses) .
  - 15-year amortization of unfunded liability (based on market value of assets).
- If ratio of contributions to costs ≥ 1.00, plan is approaching 100% funding in 15 years or less.

Benefits per Retiree and Beneficiary

Annual Benefit Payments per Retiree and Beneficiary

Multiemployer Defined Benefit Pension Plans: All Industries

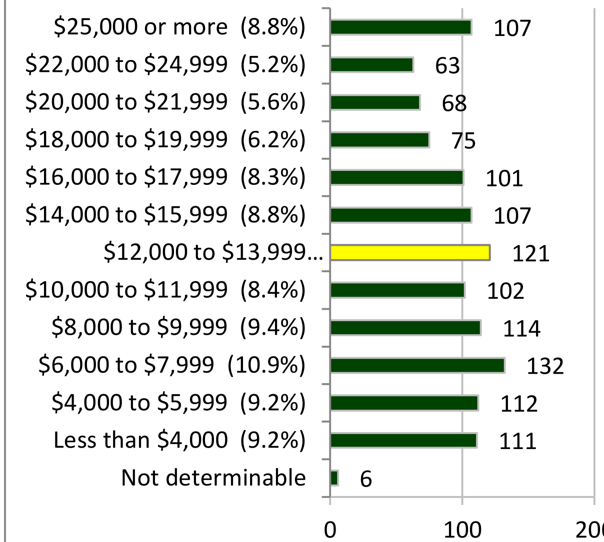


Plan Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of Plans	1,336	1,352	1,346	1,339	1,215	1,294	1,278	1,289	1,275	1,272	1,251	1,238	1,234	1,226	1,213
95th Percentile	$23,000	$24,000	$24,500	$24,200	$26,200	$26,300	$26,700	$26,600	$27,400	$27,200	$28,000	$28,500	$28,600	$28,900	$29,400
75th Percentile	$12,800	$13,300	$13,800	$13,800	$14,600	$15,100	$15,100	$15,600	$15,900	$16,400	$16,800	$17,300	$17,500	$18,000	$18,300
50th Percentile	$8,600	$9,000	$9,400	$9,400	$10,000	$10,200	$10,500	$10,600	$11,100	$11,300	$11,500	$11,700	$11,900	$12,300	$12,500
25th Percentile	$5,200	$5,400	$5,600	$5,600	$5,900	$6,100	$6,200	$6,300	$6,700	$6,700	$6,800	$6,900	$7,000	$7,100	$7,300
5th Percentile	$2,100	$2,100	$2,200	$2,100	$2,400	$2,600	$2,600	$2,700	$2,800	$2,700	$2,800	$2,800	$2,700	$2,800	$2,800
I&L 338	$6,017	$6,198	$6,531	$7,043	$7,183	$7,410	$7,355	$8,540	$9,959	$10,088	$10,084	$11,111	$12,010	$12,305	$12,387

Source: Form 5500 Data

Annual Benefit Payments per Retiree and Beneficiary

Multiemployer Defined Benefit Pension Plans: All Industries



Median Annual Benefit Payments: $12,548

Total Plans: 1,219

Source: 2018-2019 Form 5500 data.

I&L 338: $12,387

- Average annual benefits plan actually pays to retirees and beneficiaries
- Annualized increases since 2005: Median Plan: 2.7% vs. I&L 338: 5.3%.

2022 PPA Zone Status Certification - Preliminary Discussion

2022 PPA Certification

- **Due September 28, 2022**
  - Expect to certify the Plan in the Green Zone
- **Will be based on**
  - Assets
    - Preliminary assets as of June 30, 2022
    - 7.25% per year beginning July 1, 2022
  - Liabilities
    - Projected based on results of the July 1, 2021 actuarial valuation
- **Contribution Rates**
  - Zone Status: rate increases included in CBAs as of the certification date
  - Scheduled Progress: consider all increases required by the Rehabilitation Plan

2022 PPA Certification (continued)

- **Projected Contributions:**
  - Contribution Rates
    - Only rate increases already included in CBAs as of the certification date are recognized
  - Industry Activity Assumption
    - PPA requires that the actuary's annual certification of the zone status of a multiemployer plan reflects industry activity assumptions that are based on input from the Trustees, provided in good faith
    - The industry activity assumption is very important, as it directly affects the level of the contributions expected in future years
    - Assumption is often based on prior year's work levels or contributions

2022 PPA Certification: Industry Activity

Plan Year	Active Count	Average Weeks / Active Total Wks	Average Weeks / Active Active Wks	Total Weeks	Average Ultimate Contribution Rate
7/1/2022 – 6/30/2023+	?	?		?	?
7/1/2021 – 6/30/2022	189 average 1st 6 months	?		?	$320.70
7/1/2020 – 6/30/2021	207	49.4	47.7	10,228	315.70
7/1/2019 – 6/30/2020	204	51.2	48.0	10,240	302.62
7/1/2018 – 6/30/2019	226 CNR=17	54.7	48.4	12,366	274.36
7/1/2017 – 6/30/2018	238 CNR=20, Culinart=21	51.9	47.7	12,351	261.20
7/1/2016 – 6/30/2017	238 CNR=13, Culinart=19	50.6	49.3	11,740	249.60
7/1/2015 – 6/30/2016	243	48.5	47.5	11,775	232.00
7/1/2014 – 6/30/2015	265	50.2	47.5	13,303	215.20
7/1/2013 – 6/30/2014	306	51.3	N/A	15,698	223.20
7/1/2012 – 6/30/2013	326	49.9	N/A	16,267	206.80
7/1/2011 – 6/30/2012	382	51.2	N/A	19,558	177.60

Historical contribution information for plan years prior to 7/1/2015 – 6/30/2016 obtained from prior years' actuarial valuation reports.

Updated Funding Projections

Projection Assumptions and Methods

- **Unless otherwise stated, the projection assumptions, methods, data and plan provisions used are the same as those used for the Preliminary July 1, 2021 actuarial valuation.**
  - No future expected gains or losses other than those attributable to investment returns, as applicable.
- **Investment Earnings**
  - 25.04% return on assets for the plan year ending June 30, 2021
  - 7.25% per year, net of investment-related expenses, thereafter unless otherwise noted
- **Operating Expenses**
  - $375,000 for the plan year beginning July 1, 2021, increasing 2.5% per year

Other assumptions may be reasonable and could produce different results. Other risks can negatively impact the funded status of the plan such as participants living longer than assumed. Additional scenarios available upon request.

Projection Assumptions and Methods (cont.)

- **Work Levels**
  - Plan year beginning July 1, 2021 – 10,100 total weeks
- **Contribution Rates**
  - Included in Collective Bargaining Agreements as bargained
    - The Plan's Funding Policy was revoked during the July 22, 2021 Board Meeting
  - All contributions rate increases are benefit-bearing

Other assumptions may be reasonable and could produce different results. Other risks can negatively impact the funded status of the plan such as participants living longer than assumed. Additional scenarios available upon request.

Projection Assumptions and Methods (cont.)

- **Contracts**
  - 55% of hours worked under contracts beginning that are expected to renew in PYB 2020
    - HP Hood, draft renewal with expiration October 31, 2023
      - Draft CBA includes increases September 1, 2021, November 1, 2021 and November 1, 2022
    - Montefiore New Rochelle, renewed with expiration November 5, 2023 ***[Updated]***
    - Paraco, renewed February 1, 2021, expires January 31, 2024
  - 31% of hours worked under contracts that are expected to renew in PYB 2021
    - FrieslandCampina, renewed with expiration December 31, 2023 ***[Updated]***
  - 13% of hours worked under contracts beginning that are expected to renew in PYB 2022
    - LP Transport, expires August 15, 2022

Other assumptions may be reasonable and could produce different results. Other risks can negatively impact the funded status of the plan such as participants living longer than assumed. Additional scenarios available upon request.

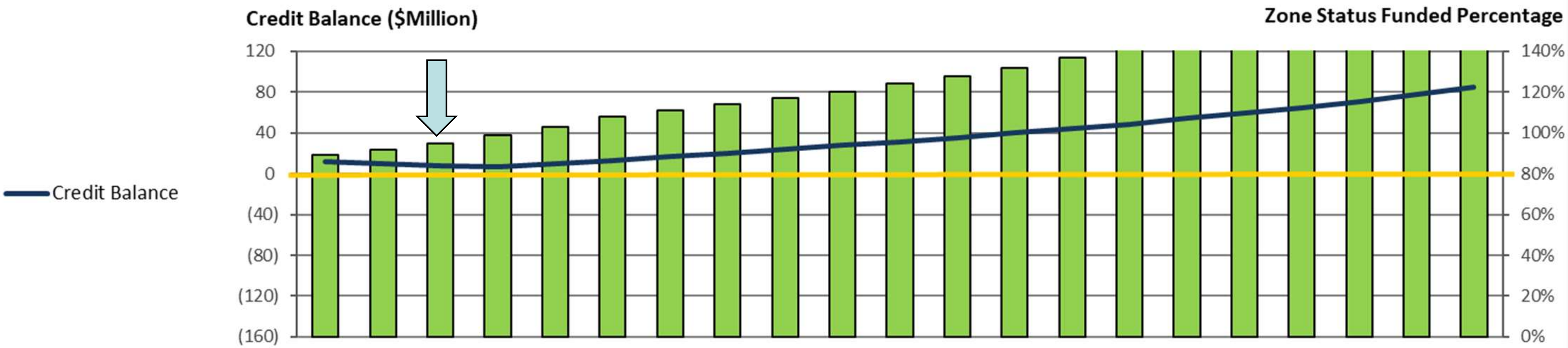
Projection Roadmap

Scenario	Valuation Discount Rate 2021+	Investment Return PYB 2021 / PYB 2022+	Weeks Worked PYB 2021+	Zone Status 2040-2041	FSA Balance 6/30/2041	% Funded 7/1/2040	Weekly Contrib Rate 7/1/2040
Certification Basis: Contribution Rates Included in Current Collective Bargaining Agreements							
1 July 1, 2021 Valuation	7.25%	7.25%/ 7.25% thereafter	10,100	Green	$85M	182%	$327
2 Low ROA PYE 2022	7.25%	0.00% 2021/ 7.25% thereafter	10,100	Green	$56M	153%	$327
3 Low ROA That Results in Non-Green	7.25%	-14.00% 2021/ 7.25% thereafter	10,100	Green	$1M	97%	$327
4 Alternative Discount Rate	7.00%	7.00%/ 7.00% thereafter	10,100	Green	$71M	166%	$327
5 Alternative Discount Rate and Low ROA	7.00%	0.00% 2021/ 7.00% thereafter	10,100	Green	$44M	140%	$327
6 Alternative Discount Rate and Low ROA That Results in Non-Green	7.00%	-11.50% 2021/ 7.00% thereafter	10,100	Green	$1M	96%	$327

Scenario 1: 2021 Valuation

7.25% Return PYB 2021+ | 10.1 Thousand Weeks Worked beginning PYB 2021

Industry And Local 338 Pension Plan



Plan Year Beginning 7/1	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
(1) Investment Return (%)	25.04	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
(2) Weeks Worked(Thousands)	10.0	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
(3) Weekly Contribution Rate ($)	316	321	324	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327
(4) Contributions+EWL Payments($M)	3.4	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
(5) Actuarial Value of Assets ($M)	94	98	102	105	109	114	116	118	120	123	125	128	131	134	138	142	146	150	155	161	166
(6) Zone Status Liability ($M)	106	107	106	106	106	105	104	104	103	102	101	100	99	98	97	96	95	94	93	92	91
(7) Credit Balance ($M)	12	10	8	7	10	13	17	20	24	28	31	35	40	44	49	54	59	64	71	78	85
(8) Zone Status Funded Percentage	89%	92%	95%	99%	103%	108%	111%	114%	117%	120%	124%	128%	132%	137%	142%	147%	153%	159%	166%	174%	182%

Scenario 2: One-Year Low Return

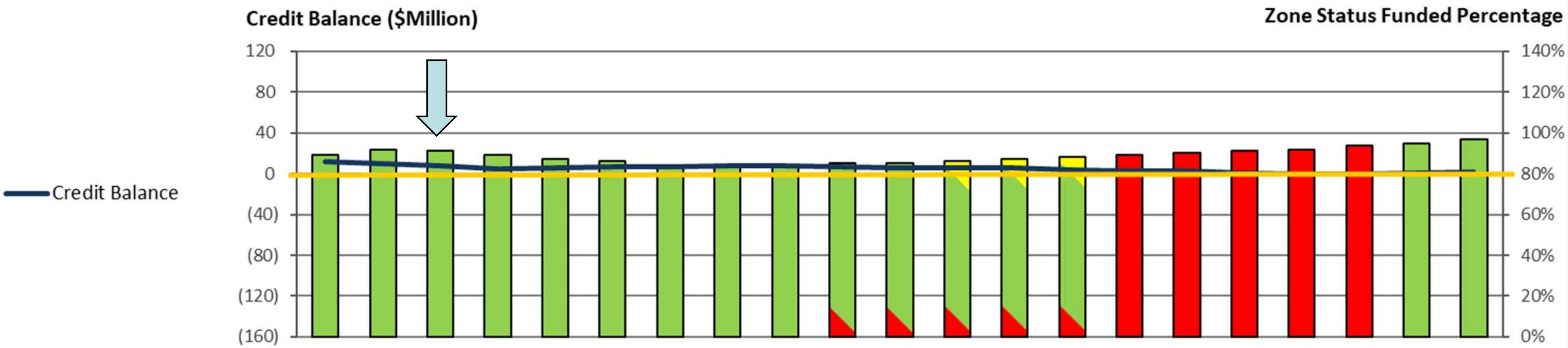
0.00% Return PYB 2021; 7.25% Return PYB 2022+ | 10.1 Thousand Weeks Worked beginning PYB 2021

Plan Year Beginning 7/1	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
(1) Investment Return (%)	25.04	0.00	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
(2) Weeks Worked(Thousands)	10.0	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
(3) Weekly Contribution Rate ($)	316	321	324	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327
(4) Contributions+EWL Payments($M)	3.4	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
(5) Actuarial Value of Assets ($M)	94	98	100	102	103	106	106	107	109	110	112	114	116	118	120	123	126	129	132	136	140
(6) Zone Status Liability ($M)	106	107	106	106	106	105	104	104	103	102	101	100	99	98	97	96	95	94	93	92	91
(7) Credit Balance ($M)	12	10	8	6	8	11	13	16	18	21	23	25	28	30	33	36	39	42	47	51	56
(8) Zone Status Funded Percentage	89%	92%	94%	95%	97%	101%	101%	103%	106%	108%	111%	114%	117%	120%	124%	128%	132%	137%	142%	147%	153%

Scenario 3: One-Year Low Return – Non-Green

-14.00% Return PYB 2021; 7.25% Return PYB 2022+ | 10.1 Thousand Weeks Worked beginning PYB 2021

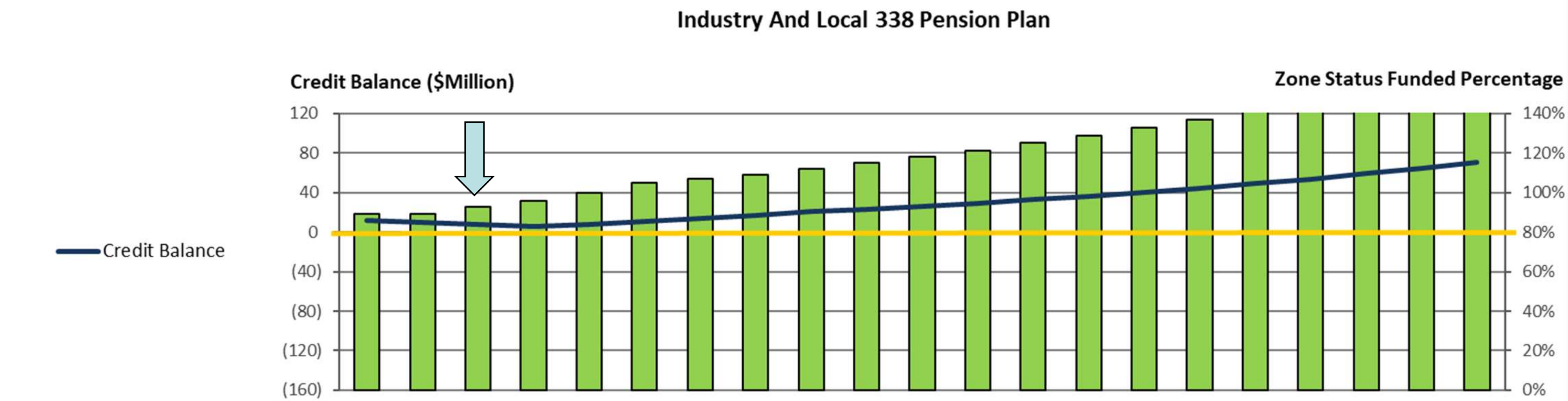
Industry And Local 338 Pension Plan



Plan Year Beginning 7/1	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
(1) Investment Return (%)	25.04	(14.00	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
(2) Weeks Worked(Thousands)	10.0	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
(3) Weekly Contribution Rate ($)	316	321	324	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327
(4) Contributions+EWL Payments($M)	3.4	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
(5) Actuarial Value of Assets ($M)	94	98	97	95	93	91	87	87	87	87	87	87	87	87	87	87	87	87	88	88	88
(6) Zone Status Liability ($M)	106	107	106	106	106	105	104	104	103	102	101	100	99	98	97	96	95	94	93	92	91
(7) Credit Balance ($M)	12	10	8	5	6	7	7	8	8	7	6	6	5	4	3	2	1	(0)	(0)	0	1
(8) Zone Status Funded Percentage	89%	92%	91%	89%	87%	86%	83%	83%	84%	85%	85%	86%	87%	88%	89%	90%	91%	92%	94%	95%	97%

Scenario 4: Alternative Discount Rate

7.00% Discount Rate | 7.00% Return PYB 2021+ | 10.1 Thousand Weeks Worked beginning PYB 2021

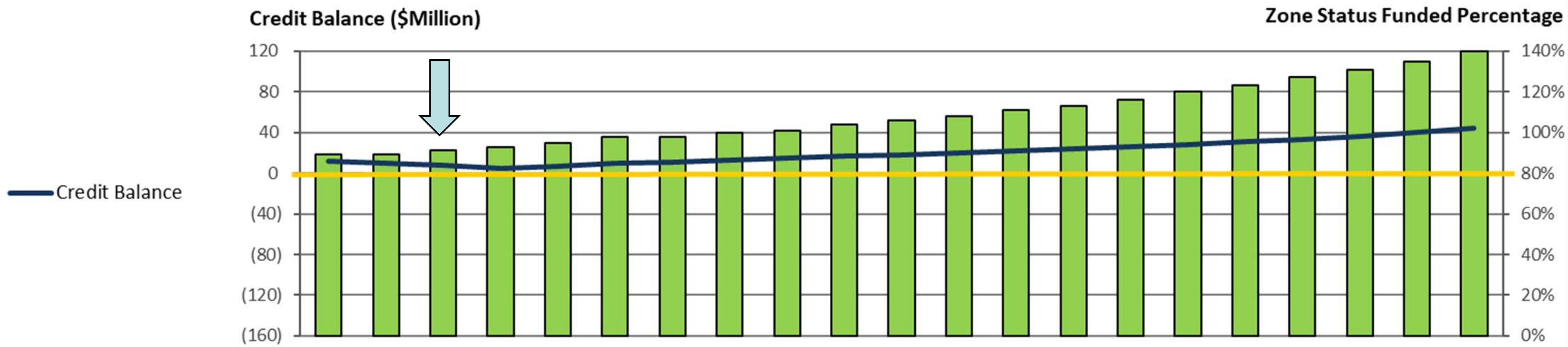


Plan Year Beginning 7/1	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
(1) Investment Return (%)	25.04	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
(2) Weeks Worked(Thousands)	10.0	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
(3) Weekly Contribution Rate ($)	316	321	324	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327
(4) Contributions+EWL Payments($M)	3.4	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
(5) Actuarial Value of Assets ($M)	94	98	101	105	108	113	115	116	118	120	122	124	127	129	132	135	139	142	146	151	155
(6) Zone Status Liability ($M)	106	109	109	109	108	108	107	106	105	104	103	102	101	100	99	98	97	96	95	94	93
(7) Credit Balance ($M)	12	10	8	5	8	11	14	17	21	23	26	30	33	37	40	45	49	53	59	65	71
(8) Zone Status Funded Percentage	89%	89%	93%	96%	100%	105%	107%	109%	112%	115%	118%	121%	125%	129%	133%	137%	142%	148%	153%	160%	166%

Scenario 5: Alternative Discount Rate and Low ROA

7.00% Discount Rate | 0.00% Return PYB 2021; 7.00% Return PYB 2022+ |
10.1 Thousand Weeks Worked beginning PYB 2021

Industry And Local 338 Pension Plan

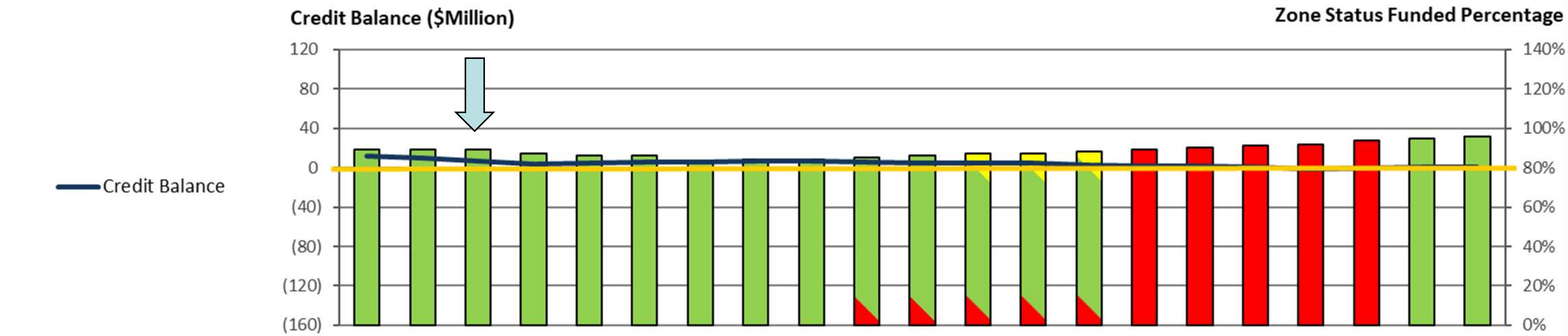


Plan Year Beginning 7/1	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
(1) Investment Return (%)	25.04	0.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
(2) Weeks Worked(Thousands)	10.0	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
(3) Weekly Contribution Rate ($)	316	321	324	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327
(4) Contributions+EWL Payments($M)	3.4	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
(5) Actuarial Value of Assets ($M)	94	98	100	101	103	106	105	106	107	108	110	111	112	114	116	118	120	122	125	128	131
(6) Zone Status Liability ($M)	106	109	109	109	108	108	107	106	105	104	103	102	101	100	99	98	97	96	95	94	93
(7) Credit Balance ($M)	12	10	7	5	7	9	11	13	15	17	18	20	22	24	26	28	31	33	37	40	44
(8) Zone Status Funded Percentage	89%	89%	91%	93%	95%	98%	98%	100%	101%	104%	106%	108%	111%	113%	116%	120%	123%	127%	131%	135%	140%

Scenario 6: Alternative Discount Rate and Low ROA – Non-Green

7.00% Discount Rate | -11.50% Return PYB 2021; 7.00% Return PYB 2022+ |
10.1 Thousand Weeks Worked beginning PYB 2021

Industry And Local 338 Pension Plan



Plan Year Beginning 7/1	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
(1) Investment Return (%)	25.04	(11.50)	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
(2) Weeks Worked(Thousands)	10.0	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
(3) Weekly Contribution Rate ($)	316	321	324	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327
(4) Contributions+EWL Payments($M)	3.4	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
(5) Actuarial Value of Assets ($M)	94	98	98	96	94	93	89	89	89	89	89	89	89	89	89	89	89	89	89	90	90
(6) Zone Status Liability ($M)	106	109	109	109	108	108	107	106	105	104	103	102	101	100	99	98	97	96	95	94	93
(7) Credit Balance ($M)	12	10	7	4	5	6	6	6	6	6	5	5	4	3	2	1	0	(1)	(0)	0	1
(8) Zone Status Funded Percentage	89%	89%	89%	87%	86%	86%	83%	84%	84%	85%	86%	87%	87%	88%	89%	90%	91%	92%	94%	95%	96%

Forecast Observations

- **The Plan remains sensitive to both investment return and contributions**
  - The investment return for plan year ended June 30, 2021 added to the funding cushion.
  - Future investment returns and contribution levels (hours worked) will impact the projected funding of the Plan.

- **Long term funding improvement is compromised if investment returns are less than assumed or contribution levels fall**
  - Investment returns for the current plan year are falling short of the assumed return
  - Investment professionals are generally reporting lower expectations for investment returns, particularly in the short term
    - We continue to monitor movements in the outlook for future investment returns reported by investment professionals

- **Managing the Credit Balance**
  - The plan currently has a credit balance which is more sensitive in the short term to experience gains and losses than in the long term

Appendix

Contribution Rate Summary

Employer	Contract Expiration Date	As of 7/1/2019 Valuation Active Count (Valn Data)	As of 7/1/2019 Valuation Total Wkly Contrib Rate	As of 7/1/2020 Valuation Active Count (Valn Data)	As of 7/1/2020 Valuation Total Wkly Contrib Rate	As of 7/1/2021 Valuation Active Count (Valn Data)	As of 7/1/2021 Valuation Total Wkly Contrib Rate
College of New Rochelle	8/31/2013	17	$ 269.04	0	$ 269.04	0	$ 269.04
HP Hood / Crowley	10/31/2020	91	322.98	91	342.58	94	342.58
Culinart	12/31/2016	0	267.15	0	267.15	0	267.15
Freisland Campina	12/31/2021	65	242.64	62	261.33	65	281.24
LP Transport	8/15/2019	32	322.75	29	331.51	27	340.53
Montefiore New Rochelle	11/5/2020	13	270.30	13	290.21	13	290.21
Paraco Gas	1/31/2021	7	263.84	8	283.75	7	292.51
Westchester L860	9/30/2013	1	243.28	1	243.28	1	243.28
Total		226		204		207	

Notes

1) All contributions are benefit-bearing, effective beginning July 1, 2016.
2) Contribution rates shown above are as reported by Plan Administrator.
3) Contribution rates as of 7/1/2019 include surcharges for College of New Rochelle, Culinart, Friesland Campina, Westchester L 860

Historical Contribution Rates by Contract

Employer	Base Rate	As of Plan Year Ending 2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
College of New Rochelle	$ 110.44	$ 158.00	$ 174.00	$ 174.00	$ 174.00	$ 174.00	$ 174.00	$ 208.95	$ 269.04	N/A	N/A
HP Hood / Crowley	130.00	186.34	204.97	225.47	248.00	272.79	286.43	303.98	322.67	342.58	342.58
Culinart	108.44	154.98	170.48	187.53	206.28	226.91	226.91	267.15	267.15	N/A	N/A
Friesland Campina	100.12	146.57	161.23	177.35	195.09	205.09	215.09	247.60	242.64	261.33	281.24
LP Transport	160.00	192.00	208.00	228.80	251.60	276.80	290.80	322.75	322.75	331.51	340.53
Montefiore New Rochelle	120.12	175.85	193.44	212.78	234.06	234.06	234.06	251.61	270.30	290.21	311.41
Paraco Gas	124.00	156.00	172.00	188.00	206.80	227.60	227.60	245.15	263.84	283.75	292.51
Westchester L860	130.15	186.55	205.21	205.21	205.21	205.21	205.21	243.28	243.28	243.28	243.28

Notes

1) Effective July 1, 2016, all contributions (and future rate increases, if any) are benefit-bearing.
2) Contribution rates for 2018 include surcharges for College of New Rochelle, Culinart, Friesland Campina, Westchester L 860

Data, Assumptions, Methods, and Plan Provisions

- **Please see our February 18, 2022 presentation**

Actuarial Certification

We have prepared this actuarial report for use by the **Industry & Local 338 Pension Plan** (the "Plan"). This report has been prepared solely for the benefit of the Plan, and it is not complete without the accompanying discussion with a representative of Horizon Actuarial Services, LLC. This report should not be distributed to others not affiliated with the Plan or relied upon by any other person without prior written consent from Horizon Actuarial Services, LLC.

In preparing this report, we have relied on all the information and data provided by the Plan, including plan provisions and asset information, as being complete and accurate. We have not independently verified the accuracy or completeness of the data or information provided, but we have reviewed the data for reasonableness to the extent that we believe appropriate based on the purpose for which it has been used.

The valuation summarized in this report involves actuarial calculations that require assumptions about future events. These calculations are performed using actuarial models, the intended purpose of which is the estimation and projection of the Plan's liabilities and assets, zone status, and other related information summarized herein. We believe that the assumptions and methods used in this report are reasonable individually and in the aggregate, and are appropriate for the purposes for which they have been used. However, other assumptions and methods could also be reasonable and could generate materially different results. We have relied on the input of experts in developing certain assumptions, such as mortality and the valuation interest rate. Because it is not possible or practical to model all aspects of a situation, we may use summary information, estimates, or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that are immaterial in our judgment.

We have not performed a detailed analysis of the potential effects of risk on the Plan's future financial condition, but have included a discussion of some risks that may significantly affect the Plan. A more detailed assessment of the risks could provide the Trustees with a better understanding of the risks inherent in the Plan and may include additional scenario testing, sensitivity testing, stress testing and stochastic modeling.

Future events and actual experience will vary from any assumptions we have used, and calculations prepared with actual data will vary from estimates or summaries used for modeling purposes. Actual future results will differ from our projections. As these differences arise, contributions and/or benefits may need to be adjusted to take these changes into account.

In our opinion, any methods, assumptions, and calculations are in accordance with the applicable provisions of the Internal Revenue Code and ERISA, and the procedures followed and presentation of results conform with generally accepted actuarial principles and practices. The undersigned consultants of Horizon Actuarial Services, LLC with actuarial credentials meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. There is no relationship between the Plan and Horizon Actuarial Services, LLC that affects our objectivity.

Mary Ann Dunleavy

Mary Ann Dunleavy, ASA, EA, MAAA
Senior Consulting Actuary

Dylan Nitta

Dylan Nitta, ASA, MAAA
Actuary