

**International Association of Machinists Motor City Pension Fund**

**EIN/Plan #: 38-6237143/001**

**Checklist Item #8 – 3.03 Plan Sponsor's Determination of Projected Insolvency**

*Does the application include the plan sponsor's determination of projected insolvency that includes the documentation set forth in section 5 of Revenue Procedure 2016-27?*

*See section 3.03.*

Document 8.1 provides the documentation of the projected insolvency including the documentation set forth in section 5 of Revenue Procedure 2016-27.

## **Document 8.1**

### **Plan Sponsor’s Determination of Projected Insolvency**

The Board of Trustees for the International Association of Machinists Motor City Pension Fund determined after review of all of the available information and possible reasonable plan changes that the Pension Fund would become insolvent unless benefits are suspended as required under Code § 432(e)(9)(C)(ii).

United Actuarial Services, Inc., the Pension Fund’s Actuary, determined that the Pension Fund was in Critical Status as of July 1, 2008 when the Plan first became subject to compliance with the Pension Protection Act of 2006. In October 2008, the Board of Trustees adopted its initial rehabilitation plan which was designed to eliminate adjustable benefits in order to reduce the present value of accumulated benefits. This rehabilitation plan also declared that the exhaustion of all reasonable measures had been taken.

In 2009, the Plan Actuary advised the Board of Trustees that the Pension Fund was facing insolvency by June 30, 2024. No further changes were made to the rehabilitation plan, however, since all reasonable measures had already been exhausted in the previous year’s rehabilitation plan.

In 2016, the Plan’s actuary certified to the Board of Trustees that the Pension Fund was in critical and declining status for the Plan Year beginning July 1, 2016. The Plan’s Actuary determined that the Pension Fund would be insolvent by the end of the 2025-2026 plan year. The actual certification is included as Document 5.1, pages 5.2 to 5.4, of this application. The Plan’s actuary determined this despite the fact that the Board of Trustees has taken all reasonable measures to avoid the insolvency.

The application filed on behalf of the Pension Fund also provides detailed information on the reasonable measures taken into account in making this determination that the proposed Suspension Plan is necessary to avoid insolvency. These are detailed in the following sections of the application as outline below:

- A detailed description of the measures taken in order to avoid insolvency over the 10 year period beginning in 2007 is provided in response to Checklist Item #18. This includes the consideration of a facilitated merger in both 2011 and 2015 and a partition study in 2014.
- Information concerning the contribution levels, benefit reductions, measures taken to retain and attract new contributing employers, compensation levels and competitiveness and other economic factors is provided in response to Checklist Item #19.
- Description of how the various Plan Factors were taken into account during the determination by the Board of Trustees that all reasonable measures had already been

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taken to avoid insolvency is provided in response to Checklist Item #20. This includes a mass withdrawal study which was performed in 2016.

- A description of all other factors taken into account during the Board of Trustees' determination that all reasonable measures were taken to avoid insolvency prior to filing this application for approval of a benefit suspension is provided in response to Checklist Item #21.

The Board of Trustees began formally considering the idea of a benefit suspension in June 2015. See pages 8.3 to 8.35 pages below. Initially, just percent adjustments to the PBGC guarantee were studied to give the Board a general idea of the degree of suspension needed. The next study was completed in November 2015. See pages 8.36 to 8.63. A cap or ceiling on the benefit multiplier was studied with potentially the elimination of all post-retirement increases and/or the maximum reduction applied to employers that did not pay their full withdrawal liability. A follow up study was completed in March 2016 that also added the maximum reduction to participants that terminated prior to 1/1/88 or inactive vested participants with 15 or less years of service. A pro rate of the maximum reduction and the multiplier ceiling would also apply to inactive vested participants with 15-20 years of service. See pages 8.64 to 8.92. Then, the mass withdrawal study was completed to see if that would provide any meaningful extension to the Plan's projected insolvency. When it did not, the Board decided to formally proceed with the benefit suspension. A fourth study was completed in November 2016. See pages 8.93 to 8.109. A flat percent reduction of 65% was suggested as an alternative to the multiplier ceiling because of the lack of history on many participants. Many special assumptions needed with a benefit suspension were added. The Plan's actuary shared in February 2017 the proposed benefit suspension formula, which was the maximum suspension (110% of the PBGC guarantee) for all participants. See pages 8.110 for the final pension model (more changes have been made after this model was prepared) and 8.111 for a comparison between a flat 65% reduction and the maximum reduction.

# **International Association of Machinists Motor City Pension Fund**

## **June 23, 2015 Board of Trustees' Meeting** **Preliminary Study on Benefit Suspension with** **Critical and Declining Status**

**Paul Bullock—United Actuarial Services, Inc.**



**United Actuarial  
Services, Inc.**

Actuaries and Consultants

# Critical and Declining Status Recap on Benefit Suspensions

- ◆ Key additional tool becomes available in the deep red zone
  - Benefits already earned can be suspended
  - This includes benefits already in pay status
  - Idea is to take a lesser reduction now to avoid a greater reduction, down to the PBGC guarantee, when plan becomes insolvent
- ◆ Actuarial conditions of benefit suspension
  - The Plan would eliminate its projected insolvency with the benefit suspension levels contemplated
  - In years after suspension, document that
    - the Plan would project an insolvency without continued suspensions, and
    - all reasonable measures continue to be taken



# Benefit Suspension

## Recap on General Conditions

- ◆ Suspensions cannot be lower than 110% of PBGC guarantee
- ◆ No suspensions for
  - Disabled participants
  - Participants over age 80 with phase-out beginning at age 75
- ◆ Suspensions can't materially exceed the level necessary to avoid a projected insolvency
- ◆ If suspensions are done in conjunction with a partition
  - Suspensions can't take effect prior to the partition effective date
  - Suspensions must be maxed out and more action is still needed to eliminate an insolvency *before* a partition would be approved

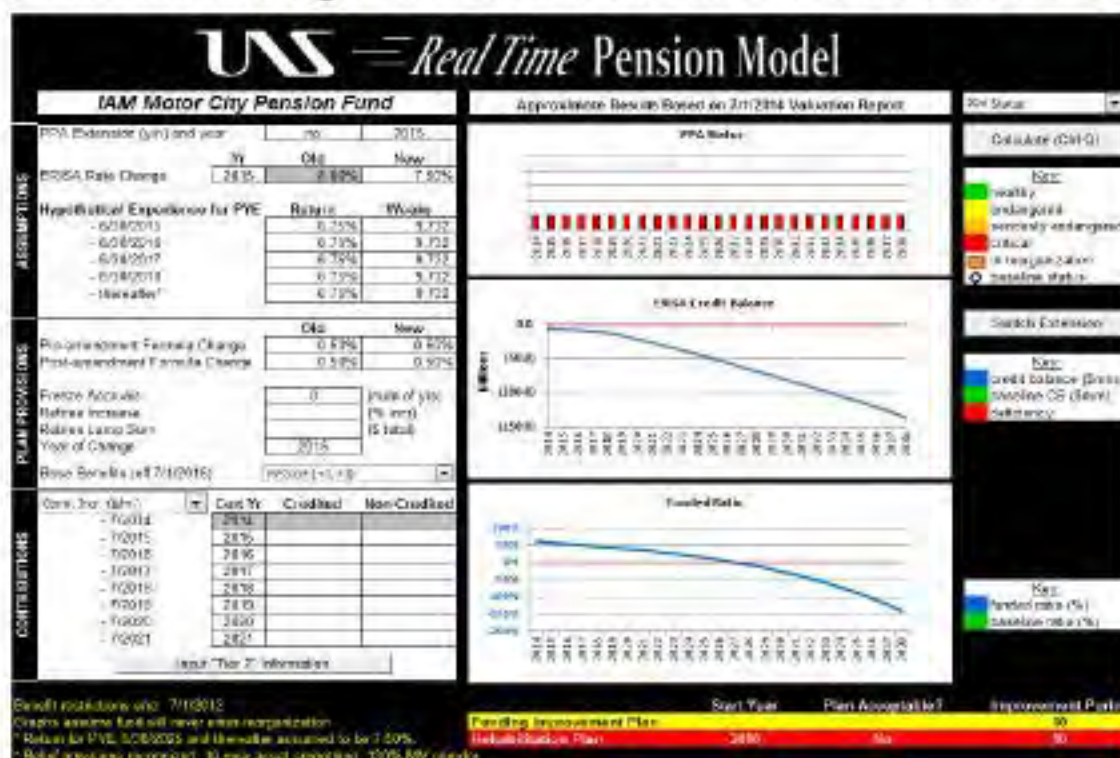
# Initial Suspension Study

- ◆ Goals of initial suspension study
  - Determine if maximum suspension, 110% of the PBGC guarantee, is enough in which case a partition is no longer a possibility
  - What level of suspension is just enough and what do the funding projections look like; the final suspension will project similarly
  - Establish more conservative assumptions with any suspension
    - Update mortality to RP-2014 with the blue collar adjustment and a 3-year set-forward to custom match the table to plan experience. Disabilities use the special RP-2014 disability table with a 3-year set-forward.
    - Lower the assumed rate of return to 7.50% as of July 1, 2015
    - Lower the asset return for 10 years starting with the 2014-15 year to 6.75%



## Current Outlook – Insolvency in 2028

Here is the current funding outlook with the more conservative assumptions\*:

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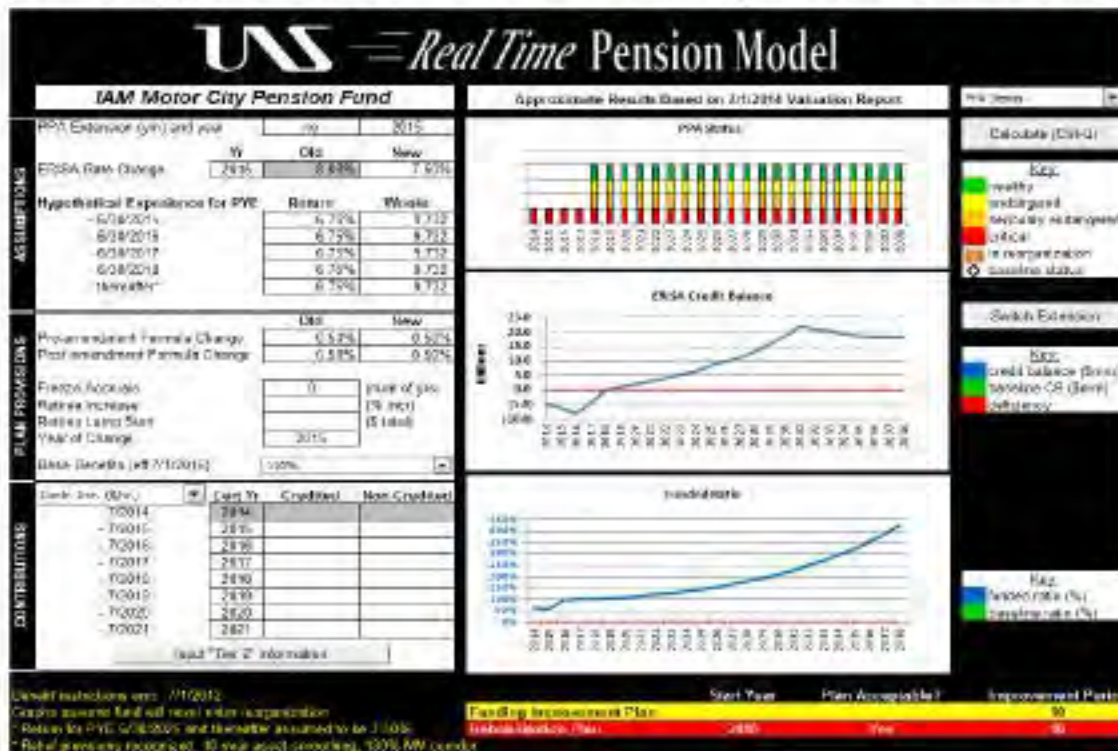
\*We received the 1.86% return for 2014-15 after this study was completed. If this return is added to this study, we estimate that the insolvency would move up an additional year to 2027. **8.7**



## Study Results

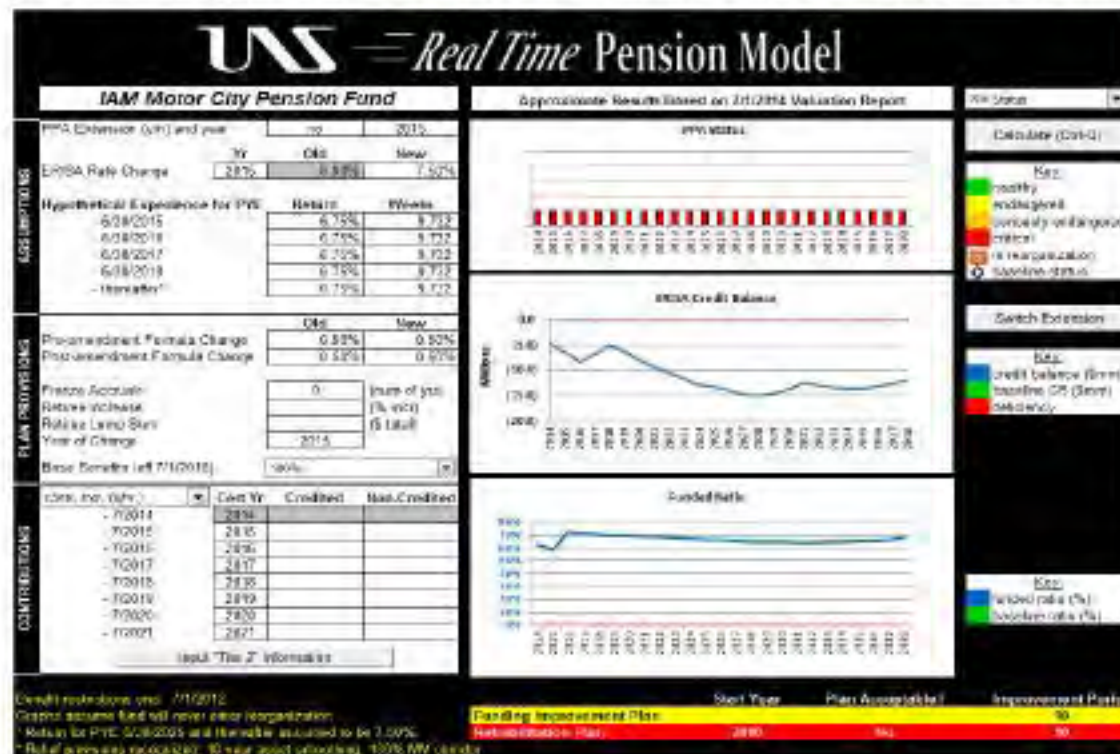
## 110% of PBGC Guarantee

The maximum suspension, 110% of the PBGC guarantee, more than works:

**United Actuarial Services, Inc.**

## Study Results of PBGC Guarantee

180% of the PBGC guarantee is the most that can be done, with this outlook\*:



United Actuarial Services, Inc.

\*We received the 1.86% return for 2014-15 after this study was completed. If this return is added to this study, we estimate that 170% of guarantee would be needed to generate the funding outlook above.



# How Are Participants Affected

## Actives Percent of Current Benefit at Ages 55, 62 and 65 with 180% of PBGC Guarantee

Row Labels	- None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	(blank)	Grand Total
<b>Under 25</b>												
Count of AA		4										4
Average of AB 55 %		100.0%										100.0%
Average of AB 62 %		100.0%										100.0%
Average of AB 65 %		100.0%										100.0%
<b>25-29</b>												
Count of AA	1	18										19
Average of AB 55 %	100.0%	100.0%										100.0%
Average of AB 62 %	100.0%	100.0%										100.0%
Average of AB 65 %	100.0%	100.0%										100.0%
<b>30-34</b>												
Count of AA		16	2	2								20
Average of AB 55 %		100.0%	100.0%	100.0%								100.0%
Average of AB 62 %		100.0%	100.0%	100.0%								100.0%
Average of AB 65 %		100.0%	100.0%	100.0%								100.0%
<b>35-39</b>												
Count of AA	8	8	8	10	6							37
Average of AB 55 %	100.0%	100.0%	100.0%	100.0%	100.0%							100.0%
Average of AB 62 %	100.0%	100.0%	100.0%	100.0%	99.9%							99.9%
Average of AB 65 %	100.0%	100.0%	100.0%	97.1%	100.0%							98.0%
<b>40-44</b>												
Count of AA		4	2	5	6	1						18
Average of AB 55 %		100.0%	100.0%	100.0%	100.0%	100.0%						100.0%
Average of AB 62 %		100.0%	100.0%	100.0%	100.0%	100.0%						100.0%
Average of AB 65 %		100.0%	100.0%	97.1%	100.0%	100.0%						99.4%
<b>45-49</b>												
Count of AA		6	5	10	5	3	5					30
Average of AB 55 %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					100.0%
Average of AB 62 %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					100.0%
Average of AB 65 %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					100.0%
<b>50-54</b>												
Count of AA		8	1	8	8	3	4	3				26
Average of AB 55 %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%				100.0%
Average of AB 62 %		100.0%	100.0%	100.0%	67.0%	100.0%	86.0%	100.0%				96.3%
Average of AB 65 %		100.0%	100.0%	100.0%	78.0%	100.0%	80.8%	100.0%				94.8%
<b>55-59</b>												
Count of AA		5	5	11	5	6	7	5	8			44
Average of AB 55 %		100.0%		98.4%	100.0%	100.0%	100.0%	100.0%	100.0%			99.9%
Average of AB 62 %		100.0%	100.0%	98.1%	95.1%	89.3%	91.5%	90.4%	100.0%			95.6%
Average of AB 65 %		100.0%	100.0%	97.2%	92.1%	83.7%	88.2%	86.5%	100.0%			93.4%
<b>60-64</b>												
Count of AA	1		2	7	1	5	4	2	4	2		28
Average of AB 55 %	100.0%		100.0%	100.0%	99.0%	96.5%	93.2%	84.0%	100.0%	100.0%		94.0%
Average of AB 62 %	100.0%		100.0%	94.3%	60.0%	67.1%	84.8%	77.0%	100.0%	100.0%		91.8%
<b>65+</b>												
Count of AA				2						1		3
Average of AB 55 %												
Average of AB 62 %												
Average of AB 65 %				80.7%						100.0%		80.7%
<b>Total Count of AA</b>	5	63	16	56	25	17	18	7	8	5		218
<b>Total Average of AB 55 %</b>	100.0%	100.0%	100.0%	99.8%	100.0%	100.0%	100.0%	100.0%	100.0%			100.0%
<b>Total Average of AB 62 %</b>	100.0%	100.0%	100.0%	98.7%	96.1%	94.0%	92.2%	90.7%	100.0%			98.0%
<b>Total Average of AB 65 %</b>	100.0%	100.0%	99.5%	97.9%	93.5%	86.5%	88.9%	87.2%	100.0%	100.0%		96.8%

United Actuarial Services, Inc.

# How Are Participants Affected

## Inactive Vested Monthly Benefit Impact at Age 60 with 180% of PBGC Guarantee

Row Labels	01-04	05-09	10-14	15-19	20-24	25-29	30-34	Grand Total
<b>30-34</b>								
Count of AA		2						2
Average of Current Benefit		269.45						269.45
Average of 180% of PBGC Guarantee		264.06						264.06
Average of Percent		98.8%						98.8%
<b>35-39</b>								
Count of AA		9	3					12
Average of Current Benefit		293.16	406.48					321.49
Average of 180% of PBGC Guarantee		279.02	406.48					310.88
Average of Percent		96.9%	100.0%					97.8%
<b>40-44</b>								
Count of AA		9	4	4				17
Average of Current Benefit		456.62	771.27	928.14				640.42
Average of 180% of PBGC Guarantee		328.07	473.40	802.51				473.90
Average of Percent		86.1%	85.5%	91.8%				87.8%
<b>45-49</b>								
Count of AA	1	18	17	19	4			59
Average of Current Benefit	256.60	308.79	807.64	1,126.32	1,301.81			743.28
Average of 180% of PBGC Guarantee	256.60	261.41	603.58	910.94	1,301.81			608.91
Average of Percent	100.0%	85.2%	85.7%	87.9%	100.0%			90.1%
<b>50-54</b>								
Count of AA		26	20	9	6	2		63
Average of Current Benefit		342.28	688.41	1,021.96	1,072.91	1,098.49		763.48
Average of 180% of PBGC Guarantee		272.38	492.19	655.98	1,375.71	1,421.41		538.23
Average of Percent		92.0%	89.0%	85.4%	74.9%	78.1%		88.4%
<b>55-59</b>								
Count of AA	1	24	83	7	6	1		72
Average of Current Benefit	234.08	343.46	520.02	596.04	1,679.18	1,452.99		574.14
Average of 180% of PBGC Guarantee	234.08	253.19	423.01	596.04	1,187.97	1,452.99		458.66
Average of Percent	100.0%	90.0%	92.5%	100.0%	81.9%	100.0%		91.7%
<b>60-64</b>								
Count of AA		16	58	16	6		1	77
Average of Current Benefit		358.99	292.59	528.06	953.29		2,588.18	436.61
Average of 180% of PBGC Guarantee		268.08	282.78	507.18	838.54		2,123.55	399.80
Average of Percent		95.0%	99.2%	98.7%	94.1%		82.0%	97.6%
<b>65+</b>								
Count of AA		5	12	5			2	24
Average of Current Benefit		505.91	300.98	624.24			2,761.04	524.36
Average of 180% of PBGC Guarantee		265.12	200.98	615.49			2,168.77	464.26
Average of Percent		93.8%	100.0%	99.1%			78.7%	96.7%
<b>Total</b>								
Total Count of AA	2	109	127	54	22	3	3	320
Total Average of Current Benefit	245.34	341.84	488.93	801.39	1,519.98	1,883.32	2,703.42	594.75
Total Average of 180% of PBGC Guarantee	245.34	274.78	396.34	672.27	1,164.57	1,431.94	2,150.36	479.52
Total Average of Percent	100.0%	92.5%	93.7%	93.7%	86.6%	85.4%	79.8%	92.6%

United Actuarial Services, Inc.



# How Are Participants Affected

## In Pay Status Impact of Monthly Benefit Receiving with 180% of PBGC Guarantee

Row Labels	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>50-54</b>										
Count of AA	1	3	1							4
Average of Current Benefit	199.90	332.55			565.71					357.94
Average of 180% of PBGC Guarantee	199.90	332.55			565.71					357.94
Average of Percent	100.0%	100.0%			100.0%					100.0%
<b>55-59</b>										
Count of AA	1	10	4	4	15	4	2			38
Average of Current Benefit	97.02	288.88	808.48	1,828.88	2,828.81	1,828.28	1,827.88			1,874.98
Average of 180% of PBGC Guarantee	97.02	288.78	808.12	876.21	1,311.92	1,097.28	1,439.89			881.70
Average of Percent	100.0%	99.9%	99.8%	83.5%	80.3%	59.8%	84.5%			95.0%
<b>60-64</b>										
Count of AA	6	11	13	13	29	10				77
Average of Current Benefit	291.45	532.88	627.89	1,771.07	2,420.10	2,194.73				1,332.71
Average of 180% of PBGC Guarantee	291.45	532.88	627.89	1,771.07	2,420.10	2,194.73				1,332.71
Average of Percent	100.0%	99.9%	99.9%	99.9%	99.9%	99.9%				99.9%
<b>65-69</b>										
Count of AA	7	38	33	33	88	30	4			189
Average of Current Benefit	374.61	239.40	465.58	894.52	2,452.07	2,424.36	1,816.42	2,575.92		1,342.90
Average of 180% of PBGC Guarantee	374.61	239.40	465.58	894.52	2,452.07	2,424.36	1,816.42	2,575.92		1,342.90
Average of Percent	100.0%	100.0%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%		99.9%
<b>70-74</b>										
Count of AA	1	5	27	18	18	14	20	6	5	105
Average of Current Benefit	818.80	880.78	378.77	872.74	882.88	2,118.80	2,308.88	2,888.88	2,188.82	1,788.80
Average of 180% of PBGC Guarantee	48.10	296.75	263.01	557.81	705.02	1,305.61	1,787.04	2,118.52	2,126.63	950.52
Average of Percent	15.2%	33.7%	26.5%	59.3%	79.9%	76.1%	85.6%	80.8%	96.9%	89.1%
<b>75-79</b>										
Count of AA	1	1	10	20	17	15	18	1	1	90
Average of Current Benefit	1,896.14	97.45	345.90	743.81	1,054.84	1,066.01	1,834.45	8,189.06	2,072.65	1,042.96
Average of 180% of PBGC Guarantee	888.29	97.45	345.90	743.81	1,054.84	1,066.01	1,834.45	8,189.06	2,072.65	1,042.96
Average of Percent	46.4%	100.0%	95.6%	92.2%	94.7%	95.4%	91.0%	71.0%	100.0%	93.4%
<b>80-84</b>										
Count of AA	8	3	18	18	18	18	8	7	1	78
Average of Current Benefit	757.18	290.44	287.69	552.19	668.76	909.90	2,008.31	1,505.68	1,450.62	779.61
Average of 180% of PBGC Guarantee	757.18	290.44	287.69	552.19	668.76	909.90	2,008.31	1,505.68	1,450.62	779.61
Average of Percent	100.0%	100.0%	100.0%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
<b>85-89</b>										
Count of AA	6	1	18	8	19	5	8	3	2	65
Average of Current Benefit	542.83	1,064.49	770.06	644.79	789.26	1,210.64	890.09	2,010.29	881.88	818.18
Average of 180% of PBGC Guarantee	542.83	1,064.49	770.06	644.79	789.26	1,210.64	890.09	2,010.29	881.88	818.18
Average of Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>90-94</b>										
Count of AA	1		6	6	6	5	2	1		29
Average of Current Benefit	820.56		591.35	475.24	481.05	608.61	541.47	784.97		530.78
Average of 180% of PBGC Guarantee	820.56		591.35	475.24	481.05	608.61	541.47	784.97		530.78
Average of Percent	100.0%		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		100.0%
<b>95+</b>										
Count of AA			8	9	8	8	2			18
Average of Current Benefit			322.28	587.60	591.95	522.74	432.04			484.84
Average of 180% of PBGC Guarantee			322.28	587.60	591.95	522.74	432.04			484.84
Average of Percent			100.0%	100.0%	100.0%	100.0%	100.0%			100.0%
<b>Total Count of AA</b>	12	24	111	105	114	120	83	28	11	614
<b>Total Average of Current Benefit</b>	580.05	348.52	308.08	590.66	952.73	1,873.35	2,006.34	1,766.81	1,757.21	1,102.46
<b>Total Average of 180% of PBGC Guarantee</b>	580.05	348.52	308.08	590.66	952.73	1,873.35	2,006.34	1,766.81	1,757.21	1,102.46
<b>Total Average of Percent</b>	99.0%	97.8%	98.0%	96.1%	93.0%	80.9%	86.3%	93.8%	85.9%	91.0%

United Actuarial Services, Inc.

# Insolvent Reductions in 2028

## Actives Percent of Current Benefit at Ages 55, 62 and 65 with 100% of PBGC Guarantee

Row Labels	- None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	(blank)	Grand Total
<b>Under 25</b>												
Count of AA		4										4
Average of AB 55 %		99.5%										99.5%
Average of AB 62 %		94.5%										94.5%
Average of AB 65 %		90.2%										90.2%
<b>25-29</b>												
Count of AA	1	18										19
Average of AB 55 %	100.0%	98.8%										99.1%
Average of AB 62 %	100.0%	99.9%										99.4%
Average of AB 65 %	100.0%	96.9%										97.6%
<b>30-34</b>												
Count of AA		16	3	2								21
Average of AB 55 %		97.5%	98.0%	95.4%								97.6%
Average of AB 62 %		91.8%	88.7%	87.8%								90.8%
Average of AB 65 %		90.7%	86.0%	85.1%								88.9%
<b>35-39</b>												
Count of AA	8	8	8	10	5							39
Average of AB 55 %	100.0%	97.2%	93.4%	95.3%	89.3%							95.3%
Average of AB 62 %	100.0%	86.5%	79.4%	90.0%	78.0%							87.6%
Average of AB 65 %	100.0%	88.1%	78.5%	88.3%	75.8%							85.0%
<b>40-44</b>												
Count of AA		4	2	5	6	1						18
Average of AB 55 %		88.1%	100.0%	91.7%	80.1%	88.8%						88.8%
Average of AB 62 %		91.3%	93.4%	81.2%	84.4%	81.4%						85.9%
Average of AB 65 %		86.7%	89.0%	77.4%	82.7%	78.0%						83.0%
<b>45-49</b>												
Count of AA		6	3	10	5	3	3					30
Average of AB 55 %		98.5%	98.0%	91.6%	86.5%	87.6%	87.6%					92.1%
Average of AB 62 %		90.7%	91.1%	84.8%	82.2%	80.8%	80.4%					85.8%
Average of AB 65 %		87.6%	87.8%	81.2%	77.6%	79.5%	77.4%					82.1%
<b>50-54</b>												
Count of AA		4	1	4	8	3	4	2				26
Average of AB 55 %		96.7%	85.1%	91.8%	78.0%	86.5%	74.1%	68.0%				85.4%
Average of AB 62 %		90.6%	70.7%	85.5%	59.3%	82.4%	58.3%	75.6%				77.2%
Average of AB 65 %		87.8%	66.2%	88.2%	66.2%	77.8%	58.2%	75.8%				72.8%
<b>55-59</b>												
Count of AA		5	5	11	5	6	7	5	8			62
Average of AB 55 %		88.1%	85.0%	80.2%	72.5%	83.8%	74.9%	81.2%	81.1%			80.4%
Average of AB 62 %		89.5%	85.3%	83.0%	68.6%	83.5%	68.5%	68.4%	81.1%			76.1%
Average of AB 65 %		85.7%	82.2%	78.7%	60.5%	86.0%	60.0%	66.5%	81.8%			71.1%
<b>60-64</b>												
Count of AA	1		2	7	1	5	4	1	4	2		28
Average of AB 55 %	100.0%		86.4%	86.2%	88.8%	88.8%	70.8%	85.1%	71.9%	78.2%		78.2%
Average of AB 62 %	100.0%		84.4%	75.0%	70.4%	61.0%	61.5%	50.3%	73.3%	81.9%		69.2%
<b>65+</b>												
Count of AA				2						1		3
Average of AB 55 %				99.9%						81.0%		81.0%
Average of AB 62 %												
Average of AB 65 %												
<b>Total Count of AA</b>	5	63	16	26	25	17	18	7	8	3		218
<b>Total Average of AB 55 %</b>	100.0%	97.8%	93.7%	93.3%	85.0%	86.3%	78.6%	65.7%				82.6%
<b>Total Average of AB 62 %</b>	100.0%	90.7%	88.8%	88.4%	78.8%	73.4%	69.2%	68.2%	76.4%			82.7%
<b>Total Average of AB 65 %</b>	100.0%	87.5%	81.8%	80.2%	70.4%	66.0%	61.0%	64.6%	77.6%	81.7%		78.5%

United Actuarial Services, Inc.



# Insolvent Reductions in 2028

## Inactive Vested Monthly Benefit Impact at Age 60 with 100% of PBGC Guarantee

Row Labels	01-04	05-09	10-14	15-19	20-24	25-29	30-34	Grand Total
<b>30-34</b>								
Count of AA		2						2
Average of Current Benefit		269.45						269.45
Average of 100% of PBGC Guarantee		164.07						164.07
Average of Percent		73.4%						73.4%
<b>35-39</b>								
Count of AA		9	3					12
Average of Current Benefit		293.16	406.48					321.49
Average of 100% of PBGC Guarantee		183.51	314.53					216.27
Average of Percent		71.8%	79.7%					73.8%
<b>40-44</b>								
Count of AA		9	4	4				17
Average of Current Benefit		456.62	771.27	928.14				640.42
Average of 100% of PBGC Guarantee		205.88	322.26	494.55				301.19
Average of Percent		61.6%	67.3%	61.9%				63.0%
<b>45-49</b>								
Count of AA	1	18	17	13	4			53
Average of Current Benefit	256.60	308.79	807.64	1,126.32	1,301.81			743.28
Average of 100% of PBGC Guarantee	143.00	180.65	385.37	557.71	775.33			382.97
Average of Percent	55.7%	70.7%	59.2%	57.2%	59.5%			62.6%
<b>50-54</b>								
Count of AA		26	20	9	6	2		63
Average of Current Benefit		342.28	668.41	1,021.96	2,072.91	1,098.49		763.48
Average of 100% of PBGC Guarantee		190.89	328.53	459.58	785.01	935.30		353.19
Average of Percent		73.8%	68.5%	69.1%	43.1%	56.8%		68.0%
<b>55-59</b>								
Count of AA	1	24	33	7	6	1		72
Average of Current Benefit	234.08	343.46	520.02	596.04	1,679.18	1,452.99		574.14
Average of 100% of PBGC Guarantee	143.00	174.59	292.44	424.12	701.19	884.81		306.17
Average of Percent	61.1%	71.1%	72.7%	78.7%	52.9%	60.9%		70.8%
<b>60-64</b>								
Count of AA		16	38	16	6		1	77
Average of Current Benefit		358.99	292.59	528.06	953.29		2,588.18	438.61
Average of 100% of PBGC Guarantee		211.71	222.13	390.16	575.67		1,179.75	294.87
Average of Percent		72.5%	68.1%	65.5%	72.1%		45.6%	62.1%
<b>65+</b>								
Count of AA		5	12	5			2	24
Average of Current Benefit		305.93	300.98	674.24			2,761.04	574.38
Average of 100% of PBGC Guarantee		191.00	176.64	439.13			1,202.10	319.77
Average of Percent		72.8%	92.7%	77.4%			43.7%	81.3%
<b>Total</b>								
Total Count of AA	2	109	127	54	22	3	3	320
Total Average of Current Benefit	245.34	341.84	488.93	801.39	1,519.98	1,883.32	2,703.42	594.75
Total Average of 100% of PBGC Guarantee	143.00	188.81	280.05	458.73	703.30	918.47	1,194.65	321.92
Total Average of Percent	58.4%	71.3%	76.7%	72.0%	56.7%	58.0%	44.3%	72.1%

United Actuarial Services, Inc.

# Insolvent Reductions in 2028

## In Pay Status Impact of Monthly Benefit Receiving with 100% of PBGC Guarantee

Row Labels	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>50-54</b>										
Count of AA	1	3	3							4
Average of Current Benefit	199.90	332.55			505.71					357.94
Average of 100% of PBGC Guarantee	156.17	284.82			480.05					304.05
Average of Percent	88.16%	85.70%			94.71%					84.96%
<b>55-59</b>										
Count of AA	1	10	4	4	15	4	2			38
Average of Current Benefit	97.02	288.88	308.49	1,824.88	2,321.81	1,828.28	1,927.88			1,872.98
Average of 100% of PBGC Guarantee	87.89	219.92	482.40	629.35	785.92	661.23	909.95			563.58
Average of Percent	90.6%	86.9%	75.3%	86.7%	98.2%	72.3%	84.2%			86.0%
<b>60-64</b>										
Count of AA	6	11	13	13	25	10				77
Average of Current Benefit	291.45	332.88	627.69	1,371.07	2,420.10	2,194.73				1,332.71
Average of 100% of PBGC Guarantee	212.83	288.88	514.84	858.28	878.21	800.89				618.77
Average of Percent	73.0%	86.4%	81.5%	90.4%	80.2%	59.1%				64.3%
<b>65-69</b>										
Count of AA	7	34	33	33	38	30	4			187
Average of Current Benefit	374.61	239.40	465.58	894.32	2,452.07	2,424.36	1,816.42	2,575.92		1,342.90
Average of 100% of PBGC Guarantee	194.18	205.21	340.85	503.77	894.96	1,057.47	1,257.77	985.51		621.15
Average of Percent	88.8%	85.8%	83.9%	78.8%	85.8%	80.2%	80.8%	84.1%		88.1%
<b>70-74</b>										
Count of AA	1	5	27	18	18	14	20	6	5	105
Average of Current Benefit	818.20	880.78	378.71	872.74	882.85	3,118.90	3,308.98	3,833.88	3,186.23	1,780.10
Average of 100% of PBGC Guarantee	26.61	187.98	112.45	598.32	505.09	827.06	1,078.51	1,354.66	1,474.69	617.61
Average of Percent	3.3%	21.3%	29.7%	75.3%	75.1%	56.2%	34.8%	56.2%	70.5%	60.6%
<b>75-79</b>										
Count of AA	1	1	16	20	17	15	18	1		90
Average of Current Benefit	1,496.14	97.45	345.90	743.81	1,054.84	1,066.01	1,834.45	3,189.05	2,072.85	1,042.96
Average of 100% of PBGC Guarantee	883.00	84.30	288.08	483.89	782.89	782.87	1,377.48	3,828.11	1,748.97	728.18
Average of Percent	65.8%	86.7%	83.3%	65.0%	74.0%	73.2%	75.2%	84.4%	84.4%	82.4%
<b>80-84</b>										
Count of AA	8	1	18	18	18	18	8	7	3	78
Average of Current Benefit	757.18	290.44	287.69	552.18	668.76	909.90	2,008.31	1,305.68	1,450.63	779.61
Average of 100% of PBGC Guarantee	750.49	290.44	287.27	559.11	667.67	908.04	1,994.78	1,285.05	1,430.62	775.48
Average of Percent	97.8%	100.0%	99.8%	99.3%	99.8%	99.7%	99.2%	98.8%	100.0%	99.0%
<b>85-89</b>										
Count of AA	6	1	16	8	19	5	8	3	2	65
Average of Current Benefit	542.83	1,064.69	270.08	644.79	789.26	1,210.84	890.09	3,010.17	881.88	818.18
Average of 100% of PBGC Guarantee	542.53	1,064.49	270.06	444.75	755.35	1,210.64	650.05	3,010.25	581.66	616.19
Average of Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>90-94</b>										
Count of AA	1		6	6	6	5	2	3		29
Average of Current Benefit	820.55		591.35	475.24	881.05	608.61	541.47	784.97		530.78
Average of 100% of PBGC Guarantee	820.55		591.35	475.24	881.05	608.61	541.47	784.97		530.78
Average of Percent	100.0%		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		100.0%
<b>95+</b>										
Count of AA			8	9	8	5	2			18
Average of Current Benefit			322.28	587.60	591.95	522.74	432.04			484.84
Average of 100% of PBGC Guarantee			322.28	587.60	591.95	522.74	432.04			484.84
Average of Percent			100.0%	100.0%	100.0%	100.0%	100.0%			100.0%
<b>Total Count of AA</b>	12	24	131	105	114	120	83	38	11	634
<b>Total Average of Current Benefit</b>	680.05	348.52	308.08	590.66	952.73	1,873.05	2,006.34	1,766.61	1,757.21	1,102.46
<b>Total Average of 100% of PBGC Guarantee</b>	613.89	287.09	288.07	620.81	628.78	887.76	1,068.89	1,380.72	1,226.82	688.88
<b>Total Average of Percent</b>	89.0%	76.0%	91.5%	86.4%	84.5%	84.2%	85.4%	78.5%	87.7%	79.2%

United Actuarial Services, Inc.



# Challenge of 180% of Guarantee

- ◆ 180% of PBGC guarantee may not be an ideal solution
  - Benefits not yet in pay status would be complicated
    - Guarantee would be on benefit with early retirement factor applied
    - Level of suspension changes with level of early reduction
    - Participants likely would have trouble calculating their benefits

# Benefit Suspension

## Recap of Possibilities Under MPRA

- ◆ Any suspension must be equitably distributed
- ◆ Factors that may be taken into account include
  - Age and life expectancy
  - Length of time in pay status
  - Amount of benefit
  - Benefit type: early, normal, survivor
  - Extent of subsidized benefit
  - Extent of post-ret increases
  - History of benefit increases and reductions
  - Years to retirement for actives
  - Discrepancies between active and retiree benefits
  - Extent actives would withdraw support, which would trigger a drop in weeks and further cuts
  - Service earned with withdrawn employers that didn't pay their full withdrawal liability

# Ideas for Actual Suspension

- ◆ Flat percentage reduction with 110% guarantee floor, or
- ◆ Percentage reduction to benefits earned under 3.5% multiplier
  - These are generally the affected benefits with 180% of guarantee
  - This multiplier was derived from gains that later were lost
  - Benefits with the 0.5% and even 2.0% multiplier already hit enough
- ◆ May want to give maximum suspension to some participants
  - Bankrupt employer participants that would've been partitioned
  - Participants of withdrawn employers that paid no EWL
  - Inactive vested participants – but be careful:
    - Treat an inactive vested with 25 years same as one with 5 years?
    - What about inactive vested now in pay status?



# Maximum Suspension

## Actives Percent of Current Benefit at Ages 55, 62 and 65 with 110% of PBGC Guarantee

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	(blank)	Grand Total
<b>Under 25</b>												
Count of AA		4										4
Average of AB 55 %		100.0%										100.0%
Average of AB 62 %		99.2%										99.2%
Average of AB 65 %		98.2%										98.2%
<b>25-29</b>												
Count of AA	1	18										19
Average of AB 55 %	100.0%	100.0%										100.0%
Average of AB 62 %	100.0%	97.0%										97.7%
Average of AB 65 %	100.0%	95.2%										95.4%
<b>30-34</b>												
Count of AA		16	3	2								20
Average of AB 55 %		99.8%	100.0%	99.2%								99.9%
Average of AB 62 %		97.8%	97.8%	96.2%								97.6%
Average of AB 65 %		96.0%	94.0%	92.0%								95.5%
<b>35-39</b>												
Count of AA	8	8	8	10	6							37
Average of AB 55 %	100.0%	99.7%	97.5%	99.8%	97.4%							99.1%
Average of AB 62 %	100.0%	97.5%	97.0%	97.0%	96.8%							97.4%
Average of AB 65 %	100.0%	96.7%	95.9%	96.0%	95.3%							96.7%
<b>40-44</b>												
Count of AA		4	2	5	6	1						18
Average of AB 55 %		100.0%	100.0%	97.2%	96.2%	96.4%						98.4%
Average of AB 62 %		99.0%	100.0%	94.3%	91.9%	90.6%						93.7%
Average of AB 65 %		95.0%	97.0%	85.2%	91.0%	96.8%						91.0%
<b>45-49</b>												
Count of AA		6	3	10	5	3	3					30
Average of AB 55 %		100.0%	100.0%	97.7%	95.5%	96.4%	99.8%					97.7%
Average of AB 62 %		98.5%	98.7%	95.4%	90.6%	91.2%	91.2%					93.0%
Average of AB 65 %		96.0%	95.0%	89.9%	85.0%	87.5%	85.1%					90.3%
<b>50-54</b>												
Count of AA		4	1	8	6	3	4	1				26
Average of AB 55 %		100.0%	91.4%	98.2%	85.0%	95.2%	81.5%	74.8%				91.7%
Average of AB 62 %		97.0%	77.7%	94.5%	85.0%	90.7%	69.2%	61.2%				84.3%
Average of AB 65 %		95.1%	69.2%	91.8%	88.0%	89.0%	69.2%	68.5%				79.8%
<b>55-59</b>												
Count of AA		5	3	11	5	6	7	5	8			44
Average of AB 55 %		90.7%	93.8%	99.8%	81.8%	92.0%	81.3%	67.8%	89.4%			89.4%
Average of AB 62 %		90.4%	85.8%	90.4%	75.5%	89.0%	75.3%	75.3%	89.2%			80.3%
Average of AB 65 %		91.2%	90.4%	85.7%	86.5%	82.8%	87.1%	75.1%	90.0%			77.9%
<b>60-64</b>												
Count of AA	1		2	7	1	5	4	2	4	2		28
Average of AB 55 %	100.0%		99.1%	94.2%	84.0%	71.0%	77.8%	98.9%	79.2%			80.3%
Average of AB 62 %	100.0%		97.8%	81.1%	70.7%	67.7%	67.7%	95.4%	80.2%	90.0%		75.5%
<b>65+</b>												
Count of AA				2						1		3
Average of AB 55 %												
Average of AB 62 %												
Average of AB 65 %												
<b>Total Count of AA</b>	5	63	16	56	25	17	18	7	8	3		218
<b>Total Average of AB 55 %</b>	100.0%	99.8%	96.5%	98.6%	95.6%	94.0%	86.4%	72.3%				97.0%
<b>Total Average of AB 62 %</b>	100.0%	97.7%	95.9%	94.2%	82.4%	78.8%	76.0%	71.7%	81.2%			88.8%
<b>Total Average of AB 65 %</b>	100.0%	95.4%	90.0%	87.5%	77.4%	72.0%	67.5%	71.0%	85.3%	89.9%		85.7%

United Actuarial Services, Inc.



# Maximum Suspension

## Inactive Vested Monthly Benefit Impact at Age 60 with 110% of PBGC Guarantee

Row Labels	01-04	05-09	10-14	15-19	20-24	25-29	30-34	Grand Total
<b>30-34</b>								
Count of AA		2						2
Average of Current Benefit		269.45						269.45
Average of 110% of PBGC Guarantee		179.60						179.60
Average of Percent		79.8%						79.8%
<b>35-39</b>								
Count of AA		9	3					12
Average of Current Benefit		293.16	406.46					321.49
Average of 110% of PBGC Guarantee		201.86	345.97					287.89
Average of Percent		79.0%	87.7%					81.2%
<b>40-44</b>								
Count of AA		9	4	4				17
Average of Current Benefit		456.62	771.27	923.14				640.42
Average of 110% of PBGC Guarantee		226.12	264.40	544.00				321.12
Average of Percent		57.4%	74.0%	58.1%				59.1%
<b>45-49</b>								
Count of AA	1	18	17	13	4			53
Average of Current Benefit	256.60	308.79	807.64	1,128.32	1,301.61			745.28
Average of 110% of PBGC Guarantee	157.30	198.58	423.91	613.48	852.86			421.22
Average of Percent	61.3%	77.7%	65.1%	62.9%	65.5%			68.8%
<b>50-54</b>								
Count of AA		28	20	9	8	2		67
Average of Current Benefit		542.28	688.41	1,021.96	2,072.91	2,096.49		763.48
Average of 110% of PBGC Guarantee		209.24	359.70	505.01	868.51	1,028.83		587.59
Average of Percent		60.2%	74.1%	75.8%	67.4%	62.2%		73.9%
<b>55-59</b>								
Count of AA	1	24	33	7	6	1		72
Average of Current Benefit	234.08	843.46	520.02	596.04	1,679.18	1,452.99		574.14
Average of 110% of PBGC Guarantee	157.90	191.41	320.51	464.58	771.30	973.29		385.85
Average of Percent	67.2%	77.5%	78.8%	85.4%	58.2%	67.0%		77.0%
<b>60-64</b>								
Count of AA		16	38	16	6		1	77
Average of Current Benefit		252.99	291.59	529.06	952.39		2,599.19	426.61
Average of 110% of PBGC Guarantee		252.82	239.89	426.32	631.04		1,297.73	321.38
Average of Percent		79.7%	92.2%	89.9%	78.6%		50.1%	87.5%
<b>65+</b>								
Count of AA		5	12	5			2	24
Average of Current Benefit		305.93	200.98	624.24			2,761.04	524.36
Average of 110% of PBGC Guarantee		210.10	189.34	479.14			1,322.31	348.45
Average of Percent		68.1%	97.0%	83.2%			48.2%	85.5%
<b>Total Count of AA</b>	2	109	127	54	22	3	3	320
<b>Total Average of Current Benefit</b>	245.34	341.84	488.93	801.39	1,519.98	1,883.32	2,703.42	594.75
<b>Total Average of 110% of PBGC Guarantee</b>	157.30	207.30	305.68	505.09	775.03	1,010.31	1,314.11	352.74
<b>Total Average of Percent</b>	64.3%	77.9%	82.0%	78.2%	62.1%	63.8%	38.8%	78.0%

United Actuarial Services, Inc.

# Maximum Suspension

## In Pay Status Impact of Monthly Benefit Receiving with 110% of PBGC Guarantee

Row Labels	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>50-54</b>										
Count of AA	1	2	2	1						4
Average of Current Benefit	100.96	102.55		566.71						157.94
Average of 110% of PBGC Guarantee	185.12	315.30		526.04						334.34
Average of Percent	61.6%	62.2%		62.2%						65.4%
<b>55-59</b>										
Count of AA	1	10	4	4	15		4	2		38
Average of Current Benefit	97.03	288.88	808.48	1,828.88	2,325.41		1,828.88	2,927.88		1,874.98
Average of 110% of PBGC Guarantee	90.60	210.33	527.20	603.20	962.02		715.75	1,000.95		616.93
Average of Percent	99.0%	91.8%	65.1%	75.6%	92.8%		74.3%	70.8%		72.7%
<b>60-64</b>										
Count of AA	6	11	13	13	25		10		1	77
Average of Current Benefit	291.45	532.88	627.69	1,771.07	2,420.10		2,194.73		1,615.24	1,332.71
Average of 110% of PBGC Guarantee	282.38	527.44	538.64	885.11	888.28		881.77		1,487.98	875.48
Average of Percent	95.0%	97.4%	84.2%	62.4%	62.2%		63.2%		90.2%	69.2%
<b>65-69</b>										
Count of AA	7	28	22	22	38		20	4	2	187
Average of Current Benefit	374.61	239.44	465.58	894.52	2,452.07		2,424.36	1,816.42	2,575.92	1,342.90
Average of 110% of PBGC Guarantee	212.89	219.33	572.92	553.41	984.45		1,161.64	1,561.55	1,060.29	681.15
Average of Percent	88.8%	96.0%	88.5%	62.7%	68.9%		68.7%	78.8%	67.8%	74.4%
<b>70-74</b>										
Count of AA	1	5	27	18	15		14	6	5	105
Average of Current Benefit	818.40	880.78	278.77	472.74	882.88		2,118.90	2,308.98	2,888.88	1,282.10
Average of 110% of PBGC Guarantee	29.49	216.39	229.10	435.79	553.49		907.73	1,186.14	1,591.12	677.23
Average of Percent	9.2%	70.4%	92.5%	83.0%	82.1%		80.0%	80.3%	54.9%	75.0%
<b>75-79</b>										
Count of AA	1	1	16	20	17		18	1	1	90
Average of Current Benefit	1,496.14	97.45	345.90	743.81	1,054.84		1,068.01	1,834.45	8,189.06	1,042.96
Average of 110% of PBGC Guarantee	888.28	97.28	247.03	509.83	821.80		828.17	1,298.97	1,933.62	784.24
Average of Percent	65.9%	99.9%	90.8%	80.5%	80.2%		80.0%	78.2%	80.0%	80.1%
<b>80-84</b>										
Count of AA	8	2	18	14	18		8	7	2	78
Average of Current Benefit	757.18	290.44	287.69	552.18	668.76		909.90	2,008.31	1,305.68	1,450.62
Average of 110% of PBGC Guarantee	750.51	290.44	287.52	542.09	668.28		909.24	1,996.20	1,288.98	1,430.62
Average of Percent	91.6%	100.0%	98.9%	98.0%	98.6%		98.9%	98.2%	100.0%	98.6%
<b>85-89</b>										
Count of AA	6	1	16	8	19		5	3	2	65
Average of Current Benefit	542.88	1,064.68	270.08	644.78	789.24		1,210.64	850.09	2,010.28	881.88
Average of 110% of PBGC Guarantee	542.53	1,064.49	270.06	444.75	759.25		1,210.64	650.05	1,010.25	581.66
Average of Percent	100.0%	100.0%	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	100.0%
<b>90-94</b>										
Count of AA	1		6	6	6		5	2	1	29
Average of Current Benefit	820.55		591.35	475.24	481.05		541.47	784.97		530.78
Average of 110% of PBGC Guarantee	820.55		481.48	479.24	481.99		480.61	541.47		480.78
Average of Percent	100.0%		100.0%	100.0%	100.0%		100.0%	100.0%		100.0%
<b>95+</b>										
Count of AA			8	9	6		5	2		18
Average of Current Benefit			322.28	587.60	591.95		522.74	432.04		484.84
Average of 110% of PBGC Guarantee			322.28	587.60	591.95		522.74	432.04		484.84
Average of Percent			100.0%	100.0%	100.0%		100.0%	100.0%		100.0%
<b>Total Count of AA</b>	12	24	131	105	114		83	28	11	634
<b>Total Average of Current Benefit</b>	680.05	348.52	308.08	590.66	952.75		1,873.95	2,006.34	1,766.61	1,757.21
<b>Total Average of 110% of PBGC Guarantee</b>	613.82	289.52	280.87	482.88	699.89		908.82	1,184.44	1,289.01	877.52
<b>Total Average of Percent</b>	89.1%	81.1%	94.9%	90.3%	87.5%		87.7%	89.6%	81.7%	86.0%



# 2015 PPA Zone Status Funding Update

- ◆ Critical and Declining status (“deep red zone”) requires
  - Critical status, and
  - Projected insolvency within 15 years or within 20 years if:
    - Inactives to actives is more than a 2-to-1 ratio, or
    - Funded percentage is less than 80%
- ◆ The Plan is projected to be in the deep red zone for 2015
  - An insolvency is projected in 2029, which is 14 years out
  - 2015 projected funded ratio is 61.0%, just need insolvency in 20 years
  - These results based on March 31, 2015 financials and other updates outlined on next slide

# Basis for Funding Update

- ◆ The projected zone result is based on 2014 valuation plus:
  - The 2014-15 return is estimated to be 1.86% based on March 31, 2015 financials plus 2% for the last 3 months (8% expected return pace)
  - Estimated future weeks are 5,826 per future year after subtracting out 3,906 weeks per year from Ryder's withdrawal
  - Ryder's EWL payments are considered reasonably collectible and have been added to projections
  - The special assumption updates used for the study were not added because the PPA certification is based on the 2014 valuation result



# 2015 PPA Zone Status

## Scheduled Progress

- ◆ Scheduled progress certification satisfied if
  - The Board has reconsidered in the 2014-15 plan year whether all reasonable measures still have been exhausted
  - This reconsideration does not necessarily require further action
  - Should be done if it has not already; PPA requires annual updates to the rehabilitation plan

# Next Steps

- ◆ Regulations regarding benefit suspensions to be released any day now
- ◆ PPA certification completed 9/28/15
- ◆ PPA zone notice and Annual Funding Notice
  - Mailed out by 10/28/15
  - Opportune time to also mail out suspension notice (submission of proposed suspensions must have already been made to IRS)
  - Would address concern participants may have regarding suspensions
- ◆ Second wave of suspension studies?
  - Further studies will add 2014-15 return from 2015 PPA certification update
- ◆ Timing of suspension?
  - The reduction level will only be greater the closer the Plan gets to insolvency
  - If effective 8/1/16, should do 2015 valuation ASAP so estimated suspension impact notice going with 10/28/15 notices would have latest benefit figures

**United Actuarial Services, Inc.**

# Actuarial Basis

This report includes results which are based on plan provisions, assumptions, methods and demographic data described in the July 1, 2014 actuarial valuation of the International Association of Machinists Motor City Pension Fund except as noted. This report is subject to the same qualifications and limitations as detailed in that report.

I am a Member of the Academy of Actuaries and fully meet the qualification requirements of the Academy to provide the opinion contained herein.

Redacted by the U.S. Department of the Treasury

Paul Bullock, ASA, EA, MAAA

**United Actuarial Services, Inc.**



# Appendix

## Annual Benefit Impact on Actives At Age 55 Retirement with 180% of PBGC Guarantee

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	Grand Total
<b>Under 25</b>									
Count of AA		4							4
Average of Current Benefit		6,899.44							6,899.44
Average of 180% of PBGC Guarantee		6,899.44							6,899.44
Average of Percent		100.0%							100.0%
<b>25-29</b>									
Count of AA	1	18							19
Average of Current Benefit	741.91	8,640.59							8,414.34
Average of 180% of PBGC Guarantee	741.91	8,640.59							8,414.34
Average of Percent	100.0%	100.0%							100.0%
<b>30-34</b>									
Count of AA		16	2	2					20
Average of Current Benefit		5,659.78	10,089.67	13,323.87					6,864.18
Average of 180% of PBGC Guarantee		5,659.78	10,089.67	13,323.87					6,864.18
Average of Percent		100.0%	100.0%	100.0%					100.0%
<b>35-39</b>									
Count of AA	3	6	3	10	5				27
Average of Current Benefit	521.07	6,750.84	12,801.15	10,298.42	20,024.42				10,502.89
Average of 180% of PBGC Guarantee	521.07	6,750.84	12,801.15	10,298.42	20,024.42				10,502.89
Average of Percent	100.0%	100.0%	100.0%	100.0%	100.0%				100.0%
<b>40-44</b>									
Count of AA		4	2	5	6	1			18
Average of Current Benefit		3,322.08	5,617.80	14,758.79	15,685.20	19,772.26			11,788.96
Average of 180% of PBGC Guarantee		3,322.08	5,617.80	14,758.79	15,685.20	19,772.26			11,788.96
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%			100.0%
<b>45-49</b>									
Count of AA		6	3	10	5	3	3		30
Average of Current Benefit		2,986.09	4,580.06	10,674.74	18,167.04	17,749.38	21,261.35		11,542.38
Average of 180% of PBGC Guarantee		2,986.09	4,580.06	10,674.74	18,167.04	17,749.38	21,261.35		11,542.38
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		100.0%
<b>50-54</b>									
Count of AA		4	1	9	3	2	4	2	25
Average of Current Benefit		2,216.70	14,259.24	7,760.32	21,336.59	16,473.85	36,860.52	22,238.45	15,297.79
Average of 180% of PBGC Guarantee		2,216.70	14,259.24	7,760.32	21,336.59	16,473.85	36,860.52	22,238.45	15,297.79
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>55-59</b>									
Count of AA		1		4	2	2	2	1	12
Average of Current Benefit		1,507.63		4,466.57	21,983.04	22,866.11	31,660.68	48,429.36	18,585.18
Average of 180% of PBGC Guarantee		1,507.63		4,466.57	21,983.04	22,866.11	31,660.68	48,429.36	18,585.18
Average of Percent		100.0%		99.4%	100.0%	100.0%	100.0%	100.0%	99.5%
<b>Total Count of AA</b>	4	59	11	40	21	8	9	3	155
<b>Total Average of Current Benefit</b>	576.28	6,087.61	8,883.44	9,947.04	18,744.94	18,962.54	30,505.28	30,968.75	11,418.53
<b>Total Average of 180% of PBGC Guarantee</b>	576.28	6,087.61	8,883.44	9,939.60	18,744.94	18,962.54	30,505.28	30,968.75	11,416.61
<b>Total Average of Percent</b>	100.0%	100.0%	100.0%	99.8%	100.0%	100.0%	100.0%	100.0%	100.0%

United Actuarial Services, Inc.

# Appendix

## Annual Benefit Impact on Actives At Age 62 Retirement with 180% of PBGC Guarantee

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	Grand Total
<b>Under 25</b>										
Count of AA		4								4
Average of Current Benefit		8,297.52								8,297.52
Average of 180% of PBGC Guarantee		8,297.52								8,297.52
Average of Percent		100.0%								100.0%
<b>25-29</b>										
Count of AA	1	18								19
Average of Current Benefit	921.00	10,759.69								10,241.94
Average of 180% of PBGC Guarantee	921.00	10,759.69								10,241.94
Average of Percent	100.0%	100.0%								100.0%
<b>30-34</b>										
Count of AA		16	2	2						20
Average of Current Benefit		7,104.34	12,077.34	15,352.34						8,416.44
Average of 180% of PBGC Guarantee		7,104.34	12,077.34	15,352.34						8,416.44
Average of Percent		100.0%	100.0%	100.0%						100.0%
<b>35-39</b>										
Count of AA	3	6	8	10	5					32
Average of Current Benefit	887.45	8,856.56	15,794.10	11,888.59	22,247.00					12,247.39
Average of 180% of PBGC Guarantee	887.45	8,856.56	15,794.10	11,888.59	22,059.70					12,209.20
Average of Percent	100.0%	100.0%	100.0%	100.0%	99.5%					99.9%
<b>40-44</b>										
Count of AA		4	1	5	6	1				18
Average of Current Benefit		4,618.54	7,146.60	17,122.53	17,577.27	22,100.40				13,863.56
Average of 180% of PBGC Guarantee		4,618.54	7,146.60	17,122.53	17,577.27	22,100.40				13,863.56
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%				100.0%
<b>45-49</b>										
Count of AA		6	5	10	5	5	5			36
Average of Current Benefit		4,706.00	8,520.91	12,849.66	20,495.19	19,885.87	23,202.20			15,601.00
Average of 180% of PBGC Guarantee		4,706.00	8,520.91	12,849.66	20,495.19	19,885.87	23,202.20			15,601.00
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			100.0%
<b>50-54</b>										
Count of AA		4	1	9	5	1	4	2		26
Average of Current Benefit		4,195.42	17,456.28	9,513.45	25,029.56	18,511.53	40,050.26	24,586.59		17,409.00
Average of 180% of PBGC Guarantee		4,195.42	17,456.28	9,513.45	19,546.18	18,511.52	32,292.47	24,566.60		16,882.00
Average of Percent		100.0%	100.0%	100.0%	77.0%	100.0%	86.9%	100.0%		96.3%
<b>55-59</b>										
Count of AA		5	5	11	5	6	7	3	4	56
Average of Current Benefit		2,304.93	5,071.93	9,818.56	20,816.02	26,732.60	28,308.62	28,137.30	21,914.41	17,247.71
Average of 180% of PBGC Guarantee		2,394.93	5,071.93	8,543.62	19,034.90	22,711.38	24,049.91	23,173.17	21,914.41	15,408.78
Average of Percent		100.0%	100.0%	88.2%	95.1%	89.3%	91.2%	82.4%	100.0%	95.0%
<b>60-64</b>										
Count of AA	1		2	6	1	5	4	2	4	25
Average of Current Benefit	193.82		3,296.91	6,619.61	29,641.30	31,961.73	34,361.22	36,969.50	32,977.67	27,647.96
Average of 180% of PBGC Guarantee	193.82		3,356.81	6,618.64	20,511.82	19,855.02	21,152.34	27,124.61	20,877.67	15,284.38
Average of Percent	100.0%		100.0%	100.0%	69.4%	65.5%	62.2%	82.0%	100.0%	59.0%
<b>Total Count of AA</b>	5	65	16	53	25	15	18	7	8	210
<b>Total Average of Current Benefit</b>	626.45	7,446.67	9,053.66	11,015.41	20,875.42	22,981.73	29,140.68	29,354.54	22,996.04	14,194.22
<b>Total Average of 180% of PBGC Guarantee</b>	635.45	7,446.67	9,053.66	10,958.85	19,674.40	20,393.49	25,318.89	24,678.47	22,896.04	13,964.23
<b>Total Average of Percent</b>	100.0%	100.0%	100.0%	99.2%	96.1%	95.0%	92.1%	90.7%	100.0%	98.0%



# Appendix

## Annual Benefit Impact on Actives At Age 65 Retirement with 180% of PBGC Guarantee

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>Under 25</b>											
Count of AA		4									4
Average of Current Benefit		8,895.69									8,895.69
Average of 180% of PBGC Guarantee		8,895.69									8,895.69
Average of Percent		100.0%									100.0%
<b>25-29</b>											
Count of AA	1	18									19
Average of Current Benefit	997.75	11,582.18									11,025.08
Average of 180% of PBGC Guarantee	997.75	11,582.18									11,025.08
Average of Percent	100.0%	100.0%									100.0%
<b>30-34</b>											
Count of AA		18	2	2							20
Average of Current Benefit		7,723.45	12,950.65	16,078.83							9,081.69
Average of 180% of PBGC Guarantee		7,723.45	12,950.65	16,078.83							9,081.69
Average of Percent		100.0%	100.0%	100.0%							100.0%
<b>35-39</b>											
Count of AA	5	6	5	10	5						27
Average of Current Benefit	758.75	8,798.02	17,078.78	12,381.58	25,188.83						12,888.82
Average of 180% of PBGC Guarantee	758.75	8,798.02	16,325.31	12,381.53	21,538.04						12,005.42
Average of Percent	100.0%	100.0%	97.1%	100.0%	86.1%						98.0%
<b>40-44</b>											
Count of AA		4	2	2	6	1					10
Average of Current Benefit		5,174.16	7,801.80	16,135.58	18,388.18	25,098.18					14,465.95
Average of 180% of PBGC Guarantee		5,174.16	7,801.80	17,576.40	18,388.18	25,098.18					14,750.09
Average of Percent		100.0%	100.0%	97.1%	100.0%	100.0%					99.6%
<b>45-49</b>											
Count of AA		6	5	10	3	3					20
Average of Current Benefit		5,444.28	7,262.70	14,791.78	21,492.06	20,798.66	24,022.90				14,488.27
Average of 180% of PBGC Guarantee		5,444.28	7,262.70	15,781.78	21,492.06	20,798.66	24,022.90				14,485.27
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%				100.0%
<b>50-54</b>											
Count of AA		4	1	9	5	2	4	2			24
Average of Current Benefit		5,043.45	18,826.44	10,264.79	23,065.45	15,584.81	41,338.72	25,564.57			18,313.80
Average of 180% of PBGC Guarantee		5,043.45	18,826.44	10,264.79	17,827.22	16,986.81	41,198.88	25,896.87			18,921.58
Average of Percent		100.0%	100.0%	100.0%	78.4%	100.0%	80.8%	100.0%			94.5%
<b>55-59</b>											
Count of AA		8	8	11	8	8	7	8	2		60
Average of Current Benefit		3,212.91	6,401.04	9,766.55	21,016.29	20,103.22	20,364.79	20,144.96	22,527.45		18,274.90
Average of 180% of PBGC Guarantee		3,212.91	6,401.04	9,159.41	19,014.21	21,677.92	25,302.84	21,884.74	22,557.45		18,485.54
Average of Percent		100.0%	100.0%	97.1%	93.1%	98.7%	98.2%	98.6%	100.0%		98.2%
<b>60-64</b>											
Count of AA	1		2	2	1	5	4	2	4	2	24
Average of Current Benefit	280.90		1,930.82	4,485.84	31,181.48	21,178.83	25,116.27	37,237.84	24,808.78	21,809.70	18,928.43
Average of 180% of PBGC Guarantee	280.90		3,016.92	3,808.61	19,735.85	16,610.25	21,078.41	26,626.55	24,068.59	21,809.70	16,070.90
Average of Percent	100.0%		100.0%	94.1%	60.1%	87.2%	88.8%	77.1%	100.0%	100.0%	81.8%
<b>65+</b>											
Count of AA				2						1	2
Average of Current Benefit				15,558.62						25,578.20	16,251.61
Average of 180% of PBGC Guarantee				11,671.07						23,578.20	15,640.11
Average of Percent				90.7%						100.0%	97.3%
<b>Total Count of AA</b>	5	65	16	58	25	17	18	7	8	5	214
<b>Total Average of Current Benefit</b>	712.06	8,187.13	10,042.28	12,158.18	21,621.71	25,446.01	30,207.91	30,439.90	25,763.01	22,590.24	15,225.40
<b>Total Average of 180% of PBGC Guarantee</b>	712.06	8,187.13	9,901.26	11,888.15	19,800.88	19,918.80	24,888.23	24,008.87	23,768.01	22,499.24	14,908.80
<b>Total Average of Percent</b>	100.0%	100.0%	99.5%	97.8%	93.5%	90.5%	88.9%	87.7%	100.0%	100.0%	96.0%



# Appendix

## Annual Benefit Impact on Actives At Age 55 Retirement with 110% of PBGC Guarantee

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	Grand Total
<b>Under 25</b>									
Count of AA		4							4
Average of Current Benefit		6,899.44							6,899.44
Average of 110% of PBGC Guarantee		6,899.44							6,899.44
Average of Percent		100.0%							100.0%
<b>25-29</b>									
Count of AA	1	18							19
Average of Current Benefit	741.91	8,840.59							8,414.54
Average of 110% of PBGC Guarantee	741.91	8,840.59							8,414.54
Average of Percent	100.0%	100.0%							100.0%
<b>30-34</b>									
Count of AA		16	2	2					20
Average of Current Benefit		5,699.78	10,089.67	13,828.87					6,864.18
Average of 110% of PBGC Guarantee		5,696.43	10,089.67	13,805.18					6,848.63
Average of Percent		99.8%	100.0%	99.9%					99.9%
<b>35-39</b>									
Count of AA	3	6	8	10	5				27
Average of Current Benefit	521.07	6,750.84	12,801.15	10,298.42	20,024.42				10,502.89
Average of 110% of PBGC Guarantee	521.07	6,717.04	12,277.52	10,170.35	19,155.50				10,265.86
Average of Percent	100.0%	99.7%	97.1%	98.8%	97.4%				99.1%
<b>40-44</b>									
Count of AA		4	2	5	6	1			18
Average of Current Benefit		3,322.08	5,617.80	14,758.79	15,685.20	19,772.26			11,788.96
Average of 110% of PBGC Guarantee		3,322.08	5,617.80	14,095.68	15,111.03	18,899.40			11,430.99
Average of Percent		100.0%	100.0%	97.1%	96.1%	95.6%			98.5%
<b>45-49</b>									
Count of AA		6	3	10	5	3	3		30
Average of Current Benefit		2,986.09	4,580.06	10,674.74	18,167.04	17,749.38	21,261.35		11,542.38
Average of 110% of PBGC Guarantee		2,986.09	4,580.06	10,354.49	17,284.53	17,091.20	20,433.07		11,189.90
Average of Percent		100.0%	100.0%	97.7%	95.1%	96.4%	96.4%		97.7%
<b>50-54</b>									
Count of AA		4	1	9	3	2	4	2	25
Average of Current Benefit		2,216.70	14,259.24	7,760.32	21,536.39	16,473.85	36,860.52	22,238.45	15,297.79
Average of 110% of PBGC Guarantee		2,216.70	13,037.61	7,566.31	16,971.14	15,650.81	26,793.90	16,634.48	12,826.55
Average of Percent		100.0%	91.4%	98.2%	85.6%	95.2%	81.5%	74.8%	91.7%
<b>55-59</b>									
Count of AA		1		4	2	2	2	1	12
Average of Current Benefit		1,307.63		4,466.57	21,983.04	22,888.11	31,660.68	48,429.36	18,585.18
Average of 110% of PBGC Guarantee		1,238.01		4,460.27	16,544.77	20,964.22	23,671.03	32,599.79	14,508.24
Average of Percent		94.7%		99.9%	81.9%	92.0%	81.3%	67.3%	89.3%
<b>Total Count of AA</b>	4	59	11	40	21	8	9	3	155
<b>Total Average of Current Benefit</b>	576.28	6,087.61	8,883.44	9,947.04	18,744.94	18,962.54	30,505.28	30,968.75	11,418.53
<b>Total Average of 110% of PBGC Guarantee</b>	576.28	6,076.66	8,629.52	9,731.62	17,051.06	17,925.38	24,868.54	21,956.25	10,555.99
<b>Total Average of Percent</b>	100.0%	99.8%	98.5%	98.6%	93.6%	94.9%	86.4%	72.3%	97.0%

# Appendix

## Annual Benefit Impact on Actives At Age 62 Retirement with 110% of PBGC Guarantee

Row Labels	June	01-03	05-09	10-14	15-19	20-24	25-29	30-34	35-39	Grand Total
<b>Under 25</b>										
Count of AA		4								4
Average of Current Benefit		8,297.52								8,297.52
Average of 110% of PBGC Guarantee		8,300.45								8,300.45
Average of Percent		95.2%								95.2%
<b>25-29</b>										
Count of AA	1	18								19
Average of Current Benefit	921.00	10,759.60								10,241.96
Average of 110% of PBGC Guarantee	921.00	10,489.52								9,998.55
Average of Percent	100.0%	97.6%								97.6%
<b>30-34</b>										
Count of AA		16	2	2						20
Average of Current Benefit		7,104.34	12,077.34	15,252.34						8,416.44
Average of 110% of PBGC Guarantee		8,827.04	11,767.48	14,343.07						8,092.93
Average of Percent		97.8%	97.8%	96.2%						97.6%
<b>35-39</b>										
Count of AA	2	6	2	10	5					27
Average of Current Benefit	887.45	8,858.38	13,754.10	11,688.39	22,247.00					12,247.99
Average of 110% of PBGC Guarantee	887.45	8,519.09	13,102.83	11,201.92	18,015.44					10,910.41
Average of Percent	100.0%	97.3%	97.3%	97.0%	86.8%					94.4%
<b>40-44</b>										
Count of AA		4	2	5	6	1				18
Average of Current Benefit		4,618.34	7,146.60	17,122.50	17,577.27	22,100.40				13,063.50
Average of 110% of PBGC Guarantee		4,516.02	7,146.60	14,315.75	16,242.55	20,025.17				12,300.91
Average of Percent		98.0%	100.0%	89.3%	92.9%	90.6%				93.7%
<b>45-49</b>										
Count of AA		8	3	10	5	3	3			30
Average of Current Benefit		4,708.09	8,570.91	12,849.88	20,495.19	19,883.87	25,203.30			15,601.00
Average of 110% of PBGC Guarantee		4,600.58	6,412.52	11,842.19	18,535.24	18,117.12	21,106.09			12,520.45
Average of Percent		98.3%	99.7%	92.4%	90.4%	91.0%	91.2%			91.0%
<b>50-54</b>										
Count of AA		4	1	9	8	3	4	2		25
Average of Current Benefit		4,195.42	17,458.28	9,513.45	23,029.58	18,511.53	40,050.28	24,568.59		17,409.00
Average of 110% of PBGC Guarantee		4,014.28	12,567.39	8,908.42	13,081.28	16,762.79	22,374.00	19,027.78		12,621.89
Average of Percent		97.0%	77.7%	94.3%	65.5%	90.7%	94.2%	81.2%		84.5%
<b>55-59</b>										
Count of AA		5	3	11	5	8	7	3	4	44
Average of Current Benefit		2,004.00	2,071.92	8,919.56	20,816.03	26,732.60	28,308.52	18,137.20	21,914.41	17,247.71
Average of 110% of PBGC Guarantee		2,278.12	4,378.84	7,489.59	14,378.21	16,661.70	16,373.16	17,374.66	19,537.65	12,240.01
Average of Percent		90.4%	50.6%	90.4%	75.3%	69.8%	73.3%	73.3%	89.2%	83.2%
<b>60-64</b>										
Count of AA		1	2	6	1	5	4	2	4	25
Average of Current Benefit		192.92	2,292.81	6,618.64	19,641.20	11,851.72	24,161.32	35,969.50	20,877.67	17,447.96
Average of 110% of PBGC Guarantee		155.52	3,218.42	5,958.44	12,553.00	12,587.01	17,018.84	18,138.78	18,688.63	11,855.17
Average of Percent		100.0%	90.1%	91.2%	41.2%	73.0%	77.6%	56.9%	79.1%	80.2%
<b>Total Count of AA</b>	5	63	16	33	25	15	18	7	8	210
<b>Total Average of Current Benefit</b>	635.45	7,446.67	9,053.66	11,015.41	20,875.42	22,981.72	29,140.88	29,254.54	22,896.04	14,194.22
<b>Total Average of 110% of PBGC Guarantee</b>	635.45	7,209.12	8,160.02	9,988.92	16,149.15	16,435.68	19,639.34	18,393.87	19,113.15	11,438.71
<b>Total Average of Percent</b>	100.0%	97.7%	91.9%	93.2%	82.4%	78.8%	76.0%	71.7%	84.2%	85.9%



# Appendix

## Annual Benefit Impact on Actives At Age 65 Retirement with 110% of PBGC Guarantee

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>Under 25</b>											4
Count of AA		2									2
Average of Current Benefit		8,890.60									8,890.60
Average of 110% of PBGC Guarantee		8,671.57									8,671.57
Average of Percent		98.3%									98.3%
<b>25-29</b>											19
Count of AA	1	18									19
Average of Current Benefit	997.75	11,983.18									11,028.04
Average of 110% of PBGC Guarantee	997.75	10,984.62									10,411.63
Average of Percent	100.0%	92.2%									95.4%
<b>30-34</b>											20
Count of AA		16	2	1							20
Average of Current Benefit		7,723.43	12,950.63	16,078.83							9,081.60
Average of 110% of PBGC Guarantee		7,341.87	12,388.30	14,888.81							8,511.50
Average of Percent		95.0%	94.6%	92.6%							95.0%
<b>35-39</b>											35
Count of AA		8	8	10	5						35
Average of Current Benefit		9,759.02	17,076.79	22,281.53	23,199.33						12,995.32
Average of 110% of PBGC Guarantee		9,141.70	12,768.78	11,488.58	17,623.79						11,093.24
Average of Percent		100.0%	94.7%	80.9%	76.0%						94.7%
<b>40-44</b>											18
Count of AA		4	2	5	6	1					18
Average of Current Benefit		8,174.18	7,801.80	18,155.98	18,888.18	29,088.18					14,286.88
Average of 110% of PBGC Guarantee		4,929.71	7,638.90	14,163.70	16,649.84	20,055.75					12,543.78
Average of Percent		95.9%	97.9%	78.1%	88.0%	69.0%					91.0%
<b>45-49</b>											30
Count of AA		5	3	10	5	3	3				30
Average of Current Benefit		5,443.25	7,352.70	15,781.78	21,492.96	20,798.66	24,053.99				14,485.27
Average of 110% of PBGC Guarantee		5,188.88	7,081.31	12,188.08	18,153.83	18,120.78	20,185.88				12,889.09
Average of Percent		95.2%	96.2%	77.0%	84.3%	87.5%	84.0%				90.3%
<b>50-54</b>											29
Count of AA		4	1	8	6	2	4	2			29
Average of Current Benefit		5,043.45	18,826.44	10,264.79	23,669.49	19,384.81	41,588.72	25,564.37			16,315.80
Average of 110% of PBGC Guarantee		4,732.88	12,269.40	9,504.32	11,782.09	16,357.79	20,124.74	21,355.48			12,241.90
Average of Percent		93.8%	65.1%	91.8%	50.2%	84.2%	48.2%	51.4%			78.6%
<b>55-59</b>											44
Count of AA		5	5	11	5	6	7	5	4		44
Average of Current Benefit		4,212.43	8,201.04	8,798.56	21,418.29	28,108.72	28,881.78	28,164.99	21,897.24		18,274.86
Average of 110% of PBGC Guarantee		2,846.05	5,758.83	7,646.23	13,203.88	15,535.38	16,648.11	16,741.15	20,588.77		11,879.32
Average of Percent		91.2%	70.0%	87.0%	61.5%	62.6%	57.7%	73.1%	94.0%		77.0%
<b>60-64</b>											38
Count of AA	1		2	7	1	5	2	4	2		38
Average of Current Benefit	290.90		3,928.32	9,498.84	51,161.48	21,139.83	25,138.27	57,257.84	24,968.58	21,800.76	18,929.43
Average of 110% of PBGC Guarantee	290.90		3,928.32	8,588.02	11,284.58	12,203.58	19,029.36	17,807.27	18,942.09	18,889.48	13,217.40
Average of Percent	100.0%		97.5%	91.1%	22.1%	67.7%	67.7%	30.9%	80.7%	90.3%	75.5%
<b>65+</b>											4
Count of AA				3						1	4
Average of Current Benefit				15,558.02						25,578.20	18,231.81
Average of 110% of PBGC Guarantee				7,575.44						21,121.82	11,996.23
Average of Percent				48.7%						82.6%	44.3%
<b>Total Count of AA</b>	5	65	16	56	25	17	18	7	8	3	218
<b>Total Average of Current Benefit</b>	712.98	8,187.15	10,042.28	12,156.18	21,821.71	23,446.01	30,207.01	50,139.00	25,785.01	22,899.24	15,225.40
<b>Total Average of 110% of PBGC Guarantee</b>	712.98	7,716.70	8,500.23	10,105.83	18,889.79	18,870.88	17,738.38	18,814.88	20,110.63	20,110.63	12,889.09
<b>Total Average of Percent</b>	100.0%	95.4%	98.0%	87.5%	77.4%	72.6%	67.1%	71.0%	85.3%	89.9%	85.7%



# Appendix

## Annual Benefit Impact on Actives At Age 55 Retirement with 100% of PBGC Guarantee

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	Grand Total
<b>Under 25</b>									
Count of AA		4							4
Average of Current Benefit		6,899.44							6,899.44
Average of 100% of PBGC Guarantee		6,848.61							6,848.61
Average of Percent		99.5%							99.5%
<b>25-29</b>									
Count of AA	1	18							19
Average of Current Benefit	741.91	8,840.59							8,414.34
Average of 100% of PBGC Guarantee	741.91	8,815.41							8,201.01
Average of Percent	100.0%	98.0%							98.1%
<b>30-34</b>									
Count of AA		16	2	2					20
Average of Current Benefit		5,659.78	10,089.67	13,323.87					6,864.18
Average of 100% of PBGC Guarantee		5,439.32	9,821.97	12,547.61					6,580.41
Average of Percent		97.9%	98.0%	95.4%					97.6%
<b>35-39</b>									
Count of AA	3	6	3	10	5				27
Average of Current Benefit	521.07	6,750.84	12,801.15	10,298.42	20,024.42				10,502.89
Average of 100% of PBGC Guarantee	521.07	6,470.91	11,542.83	9,778.23	17,558.56				9,651.57
Average of Percent	100.0%	97.2%	92.4%	95.5%	89.5%				95.0%
<b>40-44</b>									
Count of AA		4	2	5	8	1			18
Average of Current Benefit		3,522.08	5,617.80	14,758.79	15,685.20	19,772.26			11,788.96
Average of 100% of PBGC Guarantee		3,259.55	5,617.80	13,095.49	14,034.56	17,181.27			10,618.88
Average of Percent		98.1%	100.0%	91.7%	90.1%	86.9%			95.3%
<b>45-49</b>									
Count of AA		6	3	10	5	3	3		30
Average of Current Benefit		2,986.09	4,580.06	10,674.74	18,167.04	17,749.38	21,261.35		11,542.38
Average of 100% of PBGC Guarantee		2,938.96	4,513.28	9,598.23	15,713.21	15,537.46	18,575.51		10,268.69
Average of Percent		98.9%	98.3%	91.6%	86.5%	87.6%	87.6%		92.1%
<b>50-54</b>									
Count of AA		4	1	9	3	2	4	2	25
Average of Current Benefit		2,216.70	14,259.24	7,760.32	21,536.59	16,475.85	36,860.52	22,238.45	15,297.79
Average of 100% of PBGC Guarantee		2,111.63	11,852.38	7,004.32	15,600.45	14,228.01	28,176.17	15,122.25	11,741.79
Average of Percent		96.7%	85.1%	92.8%	78.0%	86.5%	74.1%	68.0%	85.4%
<b>55-59</b>									
Count of AA		1		4	2	2	2	1	12
Average of Current Benefit		1,507.65		4,466.57	21,985.04	32,866.11	51,660.68	48,429.56	18,585.18
Average of 100% of PBGC Guarantee		1,125.46		4,163.74	15,040.70	19,058.38	21,519.11	29,636.17	13,221.08
Average of Percent		86.1%		94.4%	74.5%	83.6%	73.9%	61.2%	82.4%
<b>Total Count of AA</b>	4	59	11	40	21	8	9	3	155
<b>Total Average of Current Benefit</b>	576.28	6,087.61	8,883.44	9,847.04	18,744.94	18,962.54	30,505.28	30,968.75	11,418.53
<b>Total Average of 100% of PBGC Guarantee</b>	576.28	5,905.26	8,263.66	9,100.78	15,592.81	16,285.80	22,607.76	19,960.22	9,850.40
<b>Total Average of Percent</b>	100.0%	97.8%	95.7%	93.3%	85.9%	86.8%	78.6%	65.7%	92.6%

# Appendix

## Annual Benefit Impact on Actives At Age 62 Retirement with 100% of PBGC Guarantee

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	Grand Total
<b>Under 25</b>										
Count of AA		4								4
Average of Current Benefit		8,297.52								8,297.52
Average of 100% of PBGC Guarantee		7,726.20								7,726.20
Average of Percent		94.3%								94.3%
<b>25-29</b>										
Count of AA	1	18								19
Average of Current Benefit	971.00	10,759.69								10,741.86
Average of 100% of PBGC Guarantee	921.00	9,501.30								9,097.11
Average of Percent	100.0%	89.9%								90.4%
<b>30-34</b>										
Count of AA		16	2	2						20
Average of Current Benefit		7,104.34	12,077.04	13,132.34						8,410.44
Average of 100% of PBGC Guarantee		6,277.00	10,667.71	13,233.54						7,413.72
Average of Percent		88.2%	88.7%	97.2%						90.8%
<b>35-39</b>										
Count of AA	3	6	3	10	5					21
Average of Current Benefit	687.45	8,858.56	15,794.10	11,686.59	22,247.00					12,247.59
Average of 100% of PBGC Guarantee	687.45	7,768.22	11,911.48	10,228.13	16,277.67					9,947.25
Average of Percent	100.0%	88.9%	79.4%	90.0%	78.9%					87.6%
<b>40-44</b>										
Count of AA		4	2	5	6	1				18
Average of Current Benefit		4,618.54	7,146.60	17,122.50	17,577.27	22,100.40				13,663.56
Average of 100% of PBGC Guarantee		4,157.39	6,602.63	13,014.30	14,765.94	18,204.70				11,205.98
Average of Percent		71.3%	82.4%	81.2%	84.4%	82.4%				85.9%
<b>45-49</b>										
Count of AA		6	3	10	5	3	0			30
Average of Current Benefit		4,706.09	6,520.91	12,849.64	20,495.19	19,883.87	23,200.20			13,601.00
Average of 100% of PBGC Guarantee		4,219.79	5,897.68	10,763.63	18,050.22	16,470.11	19,189.17			11,306.39
Average of Percent		90.7%	91.1%	84.9%	87.2%	83.9%	82.9%			85.8%
<b>50-54</b>										
Count of AA		4	1	9	3	2	4	2		25
Average of Current Benefit		4,195.42	17,426.28	9,513.45	25,029.56	18,311.53	40,030.26	24,566.59		17,409.00
Average of 100% of PBGC Guarantee		3,684.55	12,333.90	8,098.74	11,846.88	15,259.75	21,249.17	18,125.25		11,489.10
Average of Percent		90.6%	70.7%	85.9%	59.3%	82.4%	58.3%	73.9%		77.2%
<b>55-59</b>										
Count of AA		5	1	11	5	6	7	3	4	44
Average of Current Benefit		1,394.95	5,071.92	8,818.56	20,818.02	26,732.60	28,308.52	28,157.20	21,914.41	17,247.71
Average of 100% of PBGC Guarantee		1,091.14	4,298.95	6,829.34	13,071.10	16,147.00	16,702.87	15,749.69	17,761.50	11,124.72
Average of Percent		89.5%	85.3%	89.0%	68.6%	68.3%	68.5%	68.4%	81.1%	76.1%
<b>60-64</b>										
Count of AA	1		2	8	1	5	4	2	4	23
Average of Current Benefit	193.92		3,096.91	6,618.64	20,542.20	21,851.72	24,161.23	25,968.50	22,977.67	17,647.36
Average of 100% of PBGC Guarantee	193.92		2,924.02	5,442.65	11,395.65	11,715.46	15,471.67	16,489.80	16,989.68	10,785.42
Average of Percent	100.0%		86.4%	85.4%	59.6%	60.4%	70.0%	65.7%	71.0%	73.7%
<b>Total Count of AA</b>	5	63	16	53	25	15	18	7	8	210
<b>Total Average of Current Benefit</b>	635.45	7,446.67	9,053.66	11,015.41	20,875.42	22,981.72	20,140.68	29,354.54	22,896.04	14,194.22
<b>Total Average of 100% of PBGC Guarantee</b>	635.45	6,615.15	7,444.22	9,096.66	14,681.04	14,941.53	17,853.94	16,639.88	17,375.59	10,425.80
<b>Total Average of Percent</b>	100.0%	90.7%	85.8%	85.4%	74.9%	71.0%	69.1%	65.2%	76.5%	82.7%

United Actuarial Services, Inc.



# Appendix

## Annual Benefit Impact on Actives At Age 65 Retirement with 100% of PBGC Guarantee

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>Under 25</b>											
Count of AA		2									2
Average of Current Benefit		9,896.69									9,896.69
Average of 100% of PBGC Guarantee		7,961.58									7,961.58
Average of Percent		80.2%									80.2%
<b>25-29</b>											
Count of AA	1	18									19
Average of Current Benefit	997.75	11,562.18									11,025.04
Average of 100% of PBGC Guarantee	997.75	9,063.07									9,491.21
Average of Percent	100.0%	77.9%									87.0%
<b>30-34</b>											
Count of AA			10	3	2						15
Average of Current Benefit			7,713.45	12,950.65	18,078.83						9,081.69
Average of 100% of PBGC Guarantee			6,610.18	11,138.73	15,585.87						7,788.24
Average of Percent			85.7%	86.0%	85.1%						85.1%
<b>35-39</b>											
Count of AA	8	8	8	10	8						32
Average of Current Benefit	758.75	9,759.02	17,076.79	12,381.53	23,199.53						12,995.32
Average of 100% of PBGC Guarantee	758.75	8,310.64	11,607.58	10,490.63	16,031.63						10,075.28
Average of Percent	100.0%	84.1%	67.9%	84.1%	69.1%						80.0%
<b>40-44</b>											
Count of AA		2	2	5	6	2					17
Average of Current Benefit		3,174.18	7,801.80	18,135.98	18,338.18	25,096.18					14,086.88
Average of 100% of PBGC Guarantee		4,511.75	6,944.40	12,876.09	15,136.12	18,133.50					11,409.13
Average of Percent		69.7%	80.0%	77.8%	82.2%	78.0%					80.0%
<b>45-49</b>											
Count of AA	6	5	5	10	5	3					34
Average of Current Benefit	5,415.25	7,352.70	15,781.78	21,492.06	20,796.66	24,038.99					16,485.27
Average of 100% of PBGC Guarantee	4,710.43	6,018.26	11,080.08	16,668.89	16,478.64	18,550.80					11,562.80
Average of Percent	87.0%	81.8%	81.7%	77.0%	79.5%	77.4%					82.1%
<b>50-54</b>											
Count of AA	2	1	8	8	3	3					25
Average of Current Benefit	5,043.45	18,826.44	10,264.79	25,659.48	19,584.81	41,588.72					18,515.80
Average of 100% of PBGC Guarantee	4,300.21	11,115.100	8,458.97	10,710.99	14,852.54	18,286.13					11,131.50
Average of Percent	85.3%	58.5%	82.4%	41.7%	75.6%	43.9%					72.8%
<b>55-59</b>											
Count of AA	5	2	11	5	6	7					36
Average of Current Benefit	4,212.91	8,401.64	8,796.56	21,918.28	28,108.22	28,681.38					18,172.88
Average of 100% of PBGC Guarantee	2,597.66	5,217.13	6,975.41	12,005.53	14,121.35	15,134.64					10,806.13
Average of Percent	61.7%	62.2%	79.3%	54.8%	50.2%	52.8%					71.1%
<b>60-64</b>											
Count of AA	1	2	7	1	5	4					20
Average of Current Benefit	200.90	3,926.82	9,493.84	31,181.48	21,159.83	25,188.27					18,929.43
Average of 100% of PBGC Guarantee	200.90	4,408.12	8,838.69	20,406.79	11,096.24	16,012.40					11,118.79
Average of Percent	100.0%	84.4%	75.0%	33.4%	52.0%	61.9%					69.2%
<b>65+</b>											
Count of AA				3						1	4
Average of Current Benefit				15,558.62						23,178.20	18,231.81
Average of 100% of PBGC Guarantee				6,705.13						19,201.85	10,609.50
Average of Percent				42.8%						83.3%	58.4%
<b>Total Count of AA</b>	5	65	16	56	25	17	18	7	4	5	218
<b>Total Average of Current Benefit</b>	712.08	8,187.15	10,042.28	12,136.18	21,821.71	25,446.01	30,207.01	30,439.90	25,783.01	22,599.24	15,225.40
<b>Total Average of 100% of PBGC Guarantee</b>	712.08	7,067.87	7,727.18	8,202.88	10,272.30	14,978.82	16,124.88	16,418.99	16,282.20	18,400.82	10,696.54
<b>Total Average of Percent</b>	100.0%	87.5%	81.8%	80.1%	70.4%	60.0%	51.0%	54.0%	77.6%	81.7%	76.5%



# **International Association of Machinists Motor City Pension Fund**

## **December 4, 2015 Board of Trustees' Meeting** **Study on Benefit Suspension with** **Critical and Declining Status**

**Paul Bullock—United Actuarial Services, Inc.**



**United Actuarial  
Services, Inc.**

Actuaries and Consultants

# Critical and Declining Status Recap on Benefit Suspensions

- ◆ Key additional tool becomes available in the deep red zone
  - Benefits already earned can be suspended
  - This includes benefits already in pay status
  - Idea is to take a lesser reduction now to avoid a greater reduction, down to the PBGC guarantee, when plan becomes insolvent
- ◆ Actuarial conditions of benefit suspension
  - The Plan would eliminate its projected insolvency with the benefit suspension levels contemplated
  - In years after suspension, document that
    - the Plan would project an insolvency without continued suspensions, and
    - all reasonable measures continue to be taken

# Benefit Suspension

## Recap on General Conditions

- ◆ Suspensions cannot be lower than 110% of PBGC guarantee
- ◆ No suspensions for
  - Disabled participants
  - Participants over age 80 with phase-out beginning at age 75
- ◆ Suspensions can't materially exceed the level necessary to avoid a projected insolvency
- ◆ If suspensions are done in conjunction with a partition
  - Suspensions can't take effect prior to the partition effective date
  - Suspensions must be maxed out and more action is still needed to eliminate an insolvency *before* a partition would be approved



# Benefit Suspension

## Recap of Possibilities Under MPRA

- ◆ Any suspension must be equitably distributed
- ◆ Factors that may be taken into account include
  - Age and life expectancy
  - Length of time in pay status
  - Amount of benefit
  - Benefit type: early, normal, survivor
  - Extent of subsidized benefit
  - Extent of post-ret increases
  - History of benefit increases and reductions
  - Years to retirement for actives
  - Discrepancies between active and retiree benefits
  - Extent actives would withdraw support, which would trigger a drop in weeks and further cuts
  - Service earned with withdrawn employers that didn't pay their full withdrawal liability

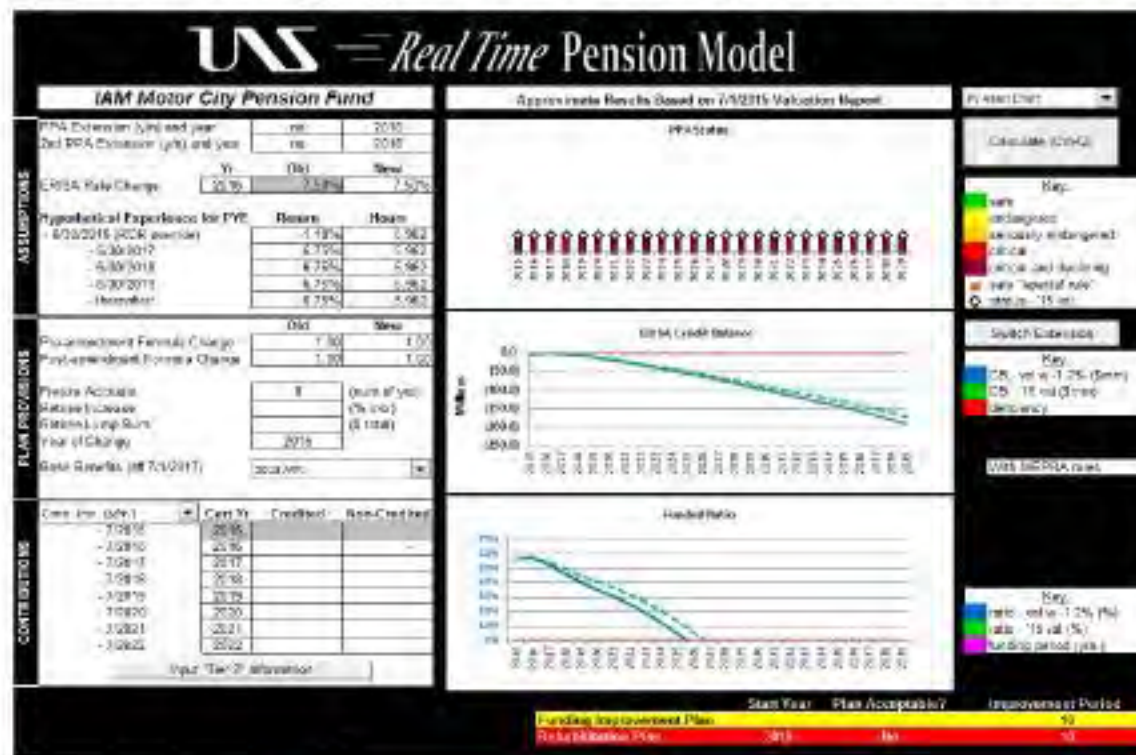
# Benefit Suspension Funding Conditions

- ◆ The proposed regulations released on June 17 outline the funding conditions that must be satisfied after suspension\*
  - The solvency ratio must be 1.0+ for extended period of 30+ years
    - Ratio numerator: beg. of yr. assets + inv. inc. + contributions – expenses
    - Ratio denominator: expected benefit payments for the year
  - The funded ratio is at least 100% at end of extended period OR the solvency ratio only *increases* in last 5 years of extended period
  - “Goldilocks Rule” – The above tests would *not* be satisfied if the level of reduction per participant was 5% less



## Current Outlook Insolvency in 2025-26

The insolvency has moved up 1 year due to a weak -1.18% return in 2015-16 so far:



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Note: -1.18% return estimate based on 9/30/15 unaudited financials, then return at 6.75% per annum rate for remaining 9 months.

# Suspension Studies – Round 2

- ◆ At the June 23<sup>rd</sup> meeting we were asked to value what level of suspension would be needed with the following changes:
  - Study #1 – Lower past multiplier in 0.1% increments to a new max ceiling
    - The 3.5% multiplier benefits would be affected first, then 3.4%, etc.
    - The floor benefit would still be 110% of PBGC premium
    - We assumed pre-1988 termination participants (whose benefits are based on a crediting rate and not a multiplier) will always be below the ceiling multiplier
    - Disabilities/age 80+ participants protected, ages 75-79 participants partly protected
  - Study #2 – Eliminate all post-retirement increases, then follow Study #1
  - Study #3 – For participants of employers that didn't pay their full EWL, make the minimum suspension high enough so that the corresponding liability value equals to their employer's unfunded liability, then follow Study #2
  - All suspensions are assumed to be effective July 1, 2017



# Study #1

## Historical Multipliers

- ◆ Multiplier levels subject to reduction in Study #1
  - Pre-7/1/04 contributions
    - <1.6% multiplier assumed if terminated prior to 1/1/88 (detailed data n/a)
    - 2.9% multiplier if terminated prior to 7/1/91
    - 3.1% multiplier if terminated prior to 7/1/92
    - 3.2% multiplier if terminated prior to 7/1/93
    - 3.3% multiplier if terminated prior to 7/1/94
    - 3.4% multiplier if terminated prior to 7/1/95
    - 3.5% multiplier is otherwise used
  - 7/1/04 to 6/30/06 – 2.0% multiplier
  - 7/1/06 and later – 0.5% multiplier applies on credited contributions

**UNS**  $\equiv$  *Real Time* Pension Model



# Study #1

## Impact to Historical Multiplier Schedule

- ◆ Pre-7/1/04 contributions
  - No reduction if terminated prior to 1/1/88 (detailed data n/a)
  - 1.6% multiplier is otherwise used
- ◆ 7/1/04 to 6/30/06 – 1.6% multiplier
- ◆ 7/1/06 and later – 0.5% multiplier remains unchanged

# Study #1 Results

## Active Accrued Benefit Impact w/1.6% Multiplier Ceiling

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>Under 25</b>											
Count of AA	1	2									3
Average of BENA	3.67	29.58									20.81
Average of Study 1 BENA	3.67	29.58									20.81
Average of Percent	100.0%	100.0%									100.0%
<b>25-29</b>											
Count of AA		15									15
Average of BENA		54.41									54.41
Average of Study 1 BENA		54.41									54.41
Average of Percent		100.0%									100.0%
<b>30-34</b>											
Count of AA		14		1							15
Average of BENA		41.93		754.53							89.44
Average of Study 1 BENA		41.93		552.61							75.98
Average of Percent		100.0%		72.2%							84.9%
<b>35-39</b>											
Count of AA	2	2	3	3	1						11
Average of BENA	0.80	21.32	203.99	607.59	1104.59						326.32
Average of Study 1 BENA	0.80	21.32	203.99	458.55	712.11						230.02
Average of Percent	100.0%	100.0%	100.0%	73.3%	64.3%						76.6%
<b>40-44</b>											
Count of AA	1	2		3	5						11
Average of BENA	1.82	100.65		551.68	1513.46						856.86
Average of Study 1 BENA	1.82	100.65		407.38	948.27						560.80
Average of Percent	100.0%	100.0%		73.0%	62.7%						65.4%
<b>45-49</b>											
Count of AA	1	3	1	2	5	5					17
Average of BENA	4.32	54.72	222.72	673.72	1093.44	1280.70					800.59
Average of Study 1 BENA	4.32	54.72	222.72	528.34	706.47	789.34					525.11
Average of Percent	100.0%	100.0%	100.0%	78.4%	64.6%	61.6%					63.6%
<b>50-54</b>											
Count of AA		3		3	1	2	2	4			15
Average of BENA		80.76		751.56	904.28	1826.16	2571.77	2336.81			1444.53
Average of Study 1 BENA		80.76		565.25	619.21	1040.05	1437.23	1303.15			848.29
Average of Percent		100.0%		71.4%	68.5%	56.9%	55.9%	55.8%			58.7%
<b>55-59</b>											
Count of AA		3		5	4	2	5	2			24
Average of BENA		64.28		735.84	1477.63	1825.92	2165.38	4879.31			1415.57
Average of Study 1 BENA		64.28		558.11	806.30	1102.18	1234.97	2090.13			849.94
Average of Percent		100.0%		75.0%	81.0%	60.4%	57.0%	52.8%			60.0%
<b>60-64</b>											
Count of AA		2	2	4	2	2	1	2	4	1	20
Average of BENA		31.40	280.67	473.29	1531.09	2305.22	1510.54	2760.38	1937.61	1798.50	1378.52
Average of Study 1 BENA		31.40	260.67	341.89	1206.71	1326.35	879.61	1523.42	1102.54	1016.10	820.53
Average of Percent		100.0%	100.0%	72.2%	62.5%	57.5%	58.2%	55.2%	56.9%	56.5%	59.5%
<b>65+</b>											
Count of AA				2							2
Average of BENA				1185.83							1185.83
Average of Study 1 BENA				795.21							795.21
Average of Percent				67.1%							67.1%
Total Count of AA	5	38	6	23	18	12	8	8	4	3	111
Total Average of BENA	2.08	52.02	215.67	691.24	1378.67	1678.98	2185.11	2828.15	1937.61	1798.50	880.56
Total Average of Study 1 BENA	2.08	52.02	215.67	506.59	869.08	998.84	1241.12	1554.96	1102.54	1016.10	555.72
Total Average of Percent	100.0%	100.0%	100.0%	73.3%	63.0%	59.5%	56.8%	55.0%	56.0%	56.5%	62.0%

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# Study #1 Results

Inactive Vested Accrued Benefit Impact w/1.6% Mult. Ceiling

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total	
30-34												
Count of AA			1	2							3	
Average of BENFIT			418.65	201.08							273.60	
Average of Study 1 BENFIT			311.91	198.23							236.12	
Average of Percent			74.5%	98.6%							86.3%	
35-39												
Count of AA			9	10	3						22	
Average of BENFIT			266.89	331.43	513.59						329.87	
Average of Study 1 BENFIT			201.34	296.92	471.88						281.67	
Average of Percent			75.4%	89.6%	91.9%						85.4%	
40-44												
Count of AA			10	6	5						21	
Average of BENFIT			333.78	555.48	794.62						506.85	
Average of Study 1 BENFIT			228.12	385.25	560.74						352.21	
Average of Percent			68.1%	69.4%	70.6%						69.5%	
45-49												
Count of AA			20	22	15	4	2				63	
Average of BENFIT			115.46	649.55	985.17	1099.10	856.12				838.50	
Average of Study 1 BENFIT			213.34	448.04	646.15	801.34	785.33				453.84	
Average of Percent			67.6%	69.0%	65.6%	72.9%	91.7%				68.9%	
50-54												
Count of AA			1	24	25	8	8	2	1		69	
Average of BENFIT			243.03	327.70	577.28	634.79	1459.80	1996.70	1594.52		650.50	
Average of Study 1 BENFIT			157.30	235.90	405.22	501.29	914.07	1235.41	1160.09		447.87	
Average of Percent			64.7%	72.0%	70.2%	79.0%	62.6%	61.9%	72.8%		68.9%	
55-59												
Count of AA			1	26	37	7	7	5	2	1	86	
Average of BENFIT			225.07	325.72	451.57	834.04	1552.05	954.38	1191.88	1543.72	592.37	
Average of Study 1 BENFIT			157.30	211.58	330.39	600.16	867.39	814.12	1043.51	1387.76	415.13	
Average of Percent			69.9%	65.0%	73.2%	70.3%	55.9%	85.2%	87.6%	89.9%	70.1%	
60-64												
Count of AA				20	40	14	9	1	1	1	87	
Average of BENFIT				329.17	296.04	549.17	1218.92	879.32	1810.67	1545.38	495.37	
Average of Study 1 BENFIT				252.30	243.27	430.26	835.70	802.58	1297.73	1392.90	383.96	
Average of Percent				76.6%	82.2%	78.3%	68.6%	91.3%	71.7%	90.1%	77.5%	
65+												
Count of AA			1	5	14	7	1		2		31	
Average of BENFIT			357.70	321.12	219.09	609.01	336.97		2810.60	1602.89	543.70	
Average of Study 1 BENFIT			357.70	234.23	200.13	542.04	326.97		1459.80	1454.73	414.07	
Average of Percent			100.0%	72.3%	51.3%	89.0%	100.0%		51.9%	90.8%	76.2%	
Total Count of AA			1	2	115	156	59	29	10	6	2	382
Total Average of BENFIT			357.70	234.05	321.65	431.98	733.89	1318.84	1135.69	1901.69	1544.54	565.41
Total Average of Study 1 BENFIT			357.70	157.30	226.54	323.21	541.37	843.03	891.47	1244.07	1390.33	407.69
Total Average of Percent			100.0%	67.2%	70.4%	74.8%	73.8%	63.9%	78.5%	65.4%	90.0%	72.1%

United Actuarial Services, Inc.

# Study #1 Results

In Pay Status Impact on Monthly Benefit w/1.6% Mult. Ceiling

Row Labels	None	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>50-54</b>										
Count of AA			2		1					3
Average of Benefit			332.53		566.71					410.60
Average of Study 1 Benefit			313.30		528.04					384.88
Average of Percent			94.2%		91.2%					91.7%
<b>55-59</b>										
Count of AA		2	8	5	4	13	4	4		40
Average of Benefit		148.49	262.79	844.42	1646.66	2323.61	1348.46	1665.10		1386.73
Average of Study 1 Benefit		139.90	234.90	567.12	1028.68	1193.18	740.63	1186.35		806.22
Average of Percent		94.2%	89.4%	67.2%	62.5%	51.4%	54.9%	71.2%		58.3%
<b>60-64</b>										
Count of AA		5	11	14	12	21	10	1	1	75
Average of Benefit		313.02	503.80	740.75	1874.53	2293.95	2297.04	643.62	1615.24	1511.65
Average of Study 1 Benefit		245.58	382.16	467.79	972.57	1313.12	1318.27	635.35	1457.35	886.70
Average of Percent		78.5%	75.9%	63.2%	51.9%	57.2%	57.4%	98.7%	90.2%	58.7%
<b>65-69</b>										
Count of AA		8	28	19	16	35	17	5	3	131
Average of Benefit		312.11	237.99	360.00	923.20	2529.61	2607.11	1921.12	2360.50	1376.46
Average of Study 1 Benefit		210.16	221.66	325.31	630.11	1366.54	1539.80	1352.69	1528.29	835.91
Average of Percent		67.3%	93.1%	90.4%	68.3%	54.0%	59.1%	70.4%	64.7%	60.7%
<b>70-74</b>										
Count of AA		5	27	20	18	12	22	4	3	111
Average of Benefit		371.73	293.16	649.58	908.58	2315.47	2155.47	2271.78	2156.42	1170.11
Average of Study 1 Benefit		238.00	251.21	467.42	605.00	1228.61	1256.47	1410.44	1622.16	730.68
Average of Percent		64.0%	85.7%	72.0%	66.6%	53.1%	58.2%	62.1%	75.2%	62.4%
<b>75-79</b>										
Count of AA		2	17	20	15	15	20	3	1	93
Average of Benefit		412.45	275.59	769.49	1024.63	1063.05	1832.50	3701.30	2072.45	1097.21
Average of Study 1 Benefit		214.98	250.53	618.39	886.68	874.17	1434.42	2019.75	1931.40	861.81
Average of Percent		52.1%	90.9%	80.4%	86.5%	82.2%	78.3%	94.6%	93.2%	78.5%
<b>80-84</b>										
Count of AA		10	2	11	12	12	6	6	1	72
Average of Benefit		408.45	290.44	296.94	507.34	873.86	1029.86	2009.39	1426.39	1786.43
Average of Study 1 Benefit		408.45	290.44	296.92	507.34	866.20	1029.68	2009.39	1426.39	1786.43
Average of Percent		100.0%	100.0%	100.0%	100.0%	99.1%	100.0%	100.0%	100.0%	99.8%
<b>85+</b>										
Count of AA		70	1	4	3	10	7	2	5	105
Average of Benefit		392.91	1064.49	451.65	875.39	1260.55	1015.70	832.06	1081.22	590.71
Average of Study 1 Benefit		392.91	1064.49	451.65	875.39	1260.55	1015.70	832.06	1081.22	590.71
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Total Count of AA</b>		80	25	108	93	88	115	81	28	630
<b>Total Average of Benefit</b>		394.85	347.52	302.28	629.33	1127.66	2001.01	2104.64	1823.75	1116.83
<b>Total Average of Study 1 Benefit</b>		394.85	258.17	268.80	494.58	836.80	1202.07	1387.12	1350.34	780.86
<b>Total Average of Percent</b>		100.0%	74.3%	88.9%	78.6%	74.2%	60.1%	65.9%	74.0%	69.9%



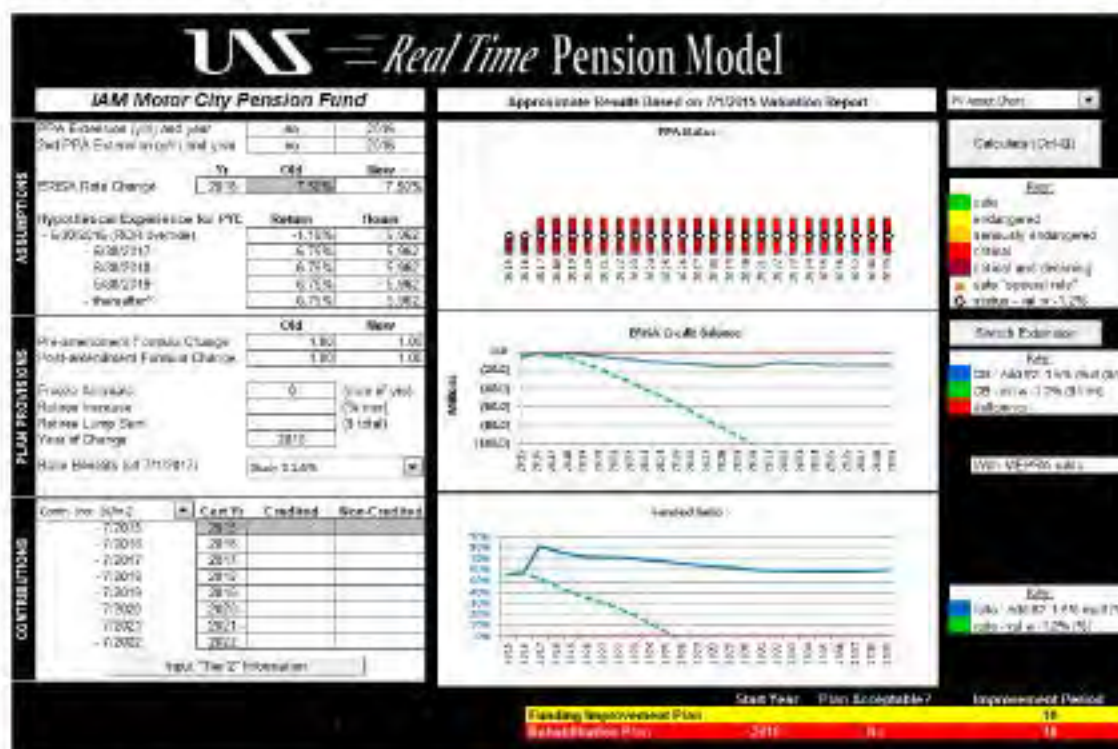
# Study #2

## Post-Retirement Increases

- ◆ Past post-retirement increases subject to reduction in Study #2
  - If retired before May 1, 1988, 10% increase
  - If retired before May 1, 1989, 5% increase + 1% per whole year retired before Jan. 1, 1989 with max increase of 25% and min increase of \$20
  - If retired before July 1, 1991, \$20 increase
  - If retired before July 1, 1994, \$100 increase
  - If retired before July 1, 1995, \$20 increase
  - If retired before July 1, 1999, \$30 increase
  - If retired before July 1, 2000, \$20 increase

## Repeal Post-Ret Incr. & 1.6% Mult. Ceiling

The savings from eliminating post-ret. increases didn't move up the 1.6% multiplier ceiling



United Actuarial Services, Inc.



# Study #2 Results

In Pay Status Impact w/1.6% Mult. Ceiling & Repeal Post-Ret. Incr.

Row Labels	None	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>50-54</b>										
Count of AA			2		1					3
Average of Benefit			332.53		566.71					410.60
Average of Study 2 Benefit			313.30		528.04					384.88
Average of Percent			94.2%		91.2%					91.7%
<b>55-59</b>										
Count of AA		2	8	5	4	13	4	4		40
Average of Benefit		148.49	262.79	844.42	1646.66	2323.61	1348.46	1665.10		1386.73
Average of Study 2 Benefit		139.90	234.90	567.12	1028.68	1193.18	740.63	1186.35		806.22
Average of Percent		94.2%	89.4%	67.2%	62.5%	51.4%	54.9%	71.2%		58.3%
<b>60-64</b>										
Count of AA		5	11	14	12	21	10	1	1	75
Average of Benefit		313.02	503.80	740.75	1874.53	2293.95	2297.04	643.62	1615.24	1511.65
Average of Study 2 Benefit		245.58	382.16	467.79	972.57	1313.12	1318.27	635.35	1457.35	886.70
Average of Percent		78.5%	75.9%	63.2%	51.9%	57.2%	57.4%	98.7%	90.2%	58.7%
<b>65-69</b>										
Count of AA		8	28	19	16	35	17	5	3	131
Average of Benefit		312.11	237.99	360.00	923.20	2529.61	2607.11	1921.12	2360.50	1376.46
Average of Study 2 Benefit		210.16	221.66	325.31	630.11	1363.68	1533.33	1352.69	1528.29	834.31
Average of Percent		67.3%	93.1%	90.4%	68.3%	53.9%	58.8%	70.4%	64.7%	60.6%
<b>70-74</b>										
Count of AA		5	27	20	18	12	22	4	3	111
Average of Benefit		371.73	293.16	649.58	908.58	2315.47	2155.47	2271.78	2156.42	1170.11
Average of Study 2 Benefit		238.00	251.21	486.61	601.19	1228.61	1252.84	1410.44	1622.16	729.19
Average of Percent		64.0%	85.7%	71.8%	66.2%	53.1%	58.1%	62.1%	75.2%	62.3%
<b>75-79</b>										
Count of AA		2	17	20	15	15	20	3	1	93
Average of Benefit		412.45	275.59	769.49	1024.63	1063.05	1832.50	3701.30	2072.45	1097.21
Average of Study 2 Benefit		214.98	250.53	615.88	885.56	873.13	1431.73	2019.75	1931.40	860.78
Average of Percent		52.1%	90.9%	80.0%	86.4%	82.1%	78.2%	94.6%	93.2%	78.5%
<b>80-84</b>										
Count of AA		10	2	11	12	12	6	6	1	72
Average of Benefit		408.45	290.44	296.94	507.34	873.86	1029.86	2009.39	1426.39	1786.43
Average of Study 2 Benefit		408.45	290.44	296.92	507.34	866.09	1029.68	2009.39	1426.39	1786.43
Average of Percent		100.0%	100.0%	100.0%	100.0%	99.1%	100.0%	100.0%	100.0%	99.8%
<b>85+</b>										
Count of AA		70	1	4	3	10	7	2	5	105
Average of Benefit		392.91	1064.49	451.65	875.39	1260.55	1015.70	832.06	1081.22	590.71
Average of Study 2 Benefit		392.91	1064.49	451.65	875.39	1260.55	1015.70	832.06	1081.22	590.71
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Total Count of AA</b>		80	25	108	93	88	115	81	28	630
<b>Total Average of Benefit</b>		394.85	347.52	302.28	629.33	1127.66	2001.01	2104.64	1823.75	1116.83
<b>Total Average of Study 2 Benefit</b>		394.85	258.17	268.80	493.87	835.21	1201.06	1384.81	1350.14	780.11
<b>Total Average of Percent</b>		100.0%	74.3%	88.9%	78.5%	74.1%	60.0%	65.8%	74.0%	69.8%

# Study #3

## Orphan Participants

- ♦ The following employers didn't pay their EWL and, based on individual asset workup, have \$0 as of 9/30/15 so their participants are "orphaned" and can be reduced the maximum
  - ABC Paving (Employer ID is 1100)
  - Borman Foods/Farmer Jack (1503)
  - E & L Transport (2500)
  - Pyrek Transport Inc. (6400)
  - Thomas Goodfellow (3200)
  - Other bankrupt employers can't count because they had no EWL
- ♦ Ryder (7313, 7300, 7104, 7103) didn't pay 10% of EWL but their assets cover participant liabilities so they aren't orphaned



Max Out Orphan Participant Reduction,  
Repeal Post-Ret Increase, and **1.9% Mult. Ceiling**

# UNS *Real Time* Pension Model

## IAM Motor City Pension Fund

Approximate Results Based on 7/1/2015 Valuation Report

By Asset Class

Calculate (Ctrl-Q)

Exp.

- Safe
- Underfunded
- Severely Underfunded
- Critical and Declining
- Safe "Special Rule"
- Critical - Vol > 0.2%

Quick Look on:

- Exp. (2) - Age 62, 1.5% red.
- Exp. (1) - Age 60, 1.2% (1mm)
- Reference

With MERPP rate:

Exp.

- Exp. - Age 62, 1.2% red (1)
- Exp. - Vol > 0.2% (1)

Start Year Plan Affordable?

Improvement Period

Feasible Improvement Plan

Desired Outcome Plan

2015

Yes

10

10

ASSUMPTIONS

PLAN PROJECTIONS

CONTRIBUTIONS

Plan Extension (yrs) and year	no	2035	
Red Plan Extension (yrs) and year	no	2035	
	Yes	Old	New
CRRA Rate Change	-28.5%	7.58%	7.50%
Hypothetical Experience for PVE			
- 6/30/2015 (CRRA overide)		System	Hours
- 6/30/2017		-1.16%	1,362
- 6/30/2018		6.75%	1,362
- 6/30/2019		6.75%	1,362
- 6/30/2020		6.75%	1,362
- 6/30/2021		6.75%	1,362
- 6/30/2022		6.75%	1,362

	Old	New
Pay Commission/Pension Change	1.80%	1.00%
Post-employment Pension Change	3.50%	1.00%
Pension Accrual	0	(Start of year)
Active Increase		(% rate)
Retire Lump Sum		(\$ total)
Yield of Change	281%	
Date Scenario (at 7/1/2017)	2035-01-01	2035-01-01

Contrib. Inv. Yr 2	Cost Fr	Credited	Non-Credited
- 7/2015	281%		
- 7/2016	281%		
- 7/2017	281%		
- 7/2018	281%		
- 7/2019	281%		
- 7/2020	281%		
- 7/2021	281%		
- 7/2022	281%		

Input "Tab 2" Information

Feasible Improvement Plan

Desired Outcome Plan

Start Year Plan Affordable?

Improvement Period

10

10

# Study #3 Results

## Active Accrued Benefit Impact w/1.9% Multiplier Ceiling

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>Under 25</b>											
Count of AA		1	2								3
Average of BENA		2.67	29.58								20.61
Average of Study 3 BENA		2.67	29.58								20.61
Average of Percent		100.0%	100.0%								100.0%
<b>25-29</b>											
Count of AA			13								13
Average of BENA			94.41								94.41
Average of Study 3 BENA			94.41								94.41
Average of Percent			100.0%								100.0%
<b>30-34</b>											
Count of AA			14		1						15
Average of BENA			41.92		754.52						89.44
Average of Study 3 BENA			41.92		609.25						79.75
Average of Percent			100.0%		80.7%						89.2%
<b>35-39</b>											
Count of AA		2	2	3	1	1					12
Average of BENA		0.80	21.32	203.99	607.59	1104.39					326.32
Average of Study 3 BENA		0.80	21.32	203.99	498.14	798.97					268.69
Average of Percent		100.0%	100.0%	100.0%	82.0%	72.3%					82.3%
<b>40-44</b>											
Count of AA		1	2		3	5					11
Average of BENA		1.82	100.65		551.86	1513.46					656.86
Average of Study 3 BENA		1.82	100.65		448.86	1009.07					626.83
Average of Percent		100.0%	100.0%		81.4%	70.6%					73.2%
<b>45-49</b>											
Count of AA		1	3	1	2	5	5				17
Average of BENA		4.32	54.72	222.72	673.72	1093.44	1280.70				800.55
Average of Study 3 BENA		4.32	54.72	222.72	577.39	792.21	891.45				596.13
Average of Percent		100.0%	100.0%	100.0%	85.7%	72.5%	69.6%				72.2%
<b>50-54</b>											
Count of AA			8		9	1	2	2	4		16
Average of BENA			80.76		791.36	904.28	1828.16	2571.77	2336.81		1444.53
Average of Study 3 BENA			80.76		624.11	688.76	1188.76	1643.33	1454.69		963.12
Average of Percent			100.0%		78.6%	76.2%	65.0%	63.9%	64.0%		66.7%
<b>55-59</b>											
Count of AA			5		5	4	3	5	2		24
Average of BENA			64.28		735.84	1477.63	1825.82	2165.26	3879.31		1415.57
Average of Study 3 BENA			64.28		610.43	1025.13	1244.90	1410.87	2412.56		962.01
Average of Percent			100.0%		83.0%	69.4%	66.2%	65.2%	62.2%		68.0%
<b>60-64</b>											
Count of AA		2	2	4	2	2	1	2	4	1	20
Average of BENA		31.40	280.67	473.29	1931.09	2205.22	1510.94	2760.28	1937.61	1799.30	1278.52
Average of Study 3 BENA		31.40	280.67	376.45	1361.39	1511.02	999.31	1750.59	1258.18	1164.38	928.77
Average of Percent		100.0%	100.0%	79.5%	70.5%	63.6%	66.1%	63.4%	64.9%	64.7%	67.4%
<b>65+</b>											
Count of AA					3						3
Average of BENA					1185.83						1185.83
Average of Study 3 BENA					858.86						858.86
Average of Percent					74.9%						74.9%
<b>TOTAL</b>											
Total Count of AA		5	48	6	23	18	12	8	8	4	133
Total Average of BENA		2.08	52.02	233.67	691.24	1378.67	1678.98	2185.11	2828.13	1937.61	800.36
Total Average of Study 3 BENA		2.08	52.02	233.67	557.07	978.75	1132.96	1417.60	1786.13	1258.18	599.83
Total Average of Percent		100.0%	100.0%	100.0%	80.6%	71.0%	67.5%	64.9%	63.2%	64.0%	68.7%

United Actuarial Services, Inc.



# Study #3 Results

Non-Orphan Inactive Vested Benefit Impact w/1.9% Mult. Ceiling

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>30-34</b>											
Count of AA			1	2							3
Average of BENFIT			418.65	201.08							273.60
Average of Study 3 BENFIT			354.22	198.23							250.22
Average of Percent			84.6%	98.6%							91.5%
<b>35-39</b>											
Count of AA			9	10	3						22
Average of BENFIT			266.89	331.43	513.59						329.87
Average of Study 3 BENFIT			210.84	296.92	471.88						285.36
Average of Percent			79.0%	89.6%	91.9%						86.6%
<b>40-44</b>											
Count of AA			10	6	5						21
Average of BENFIT			333.78	555.48	794.62						506.85
Average of Study 3 BENFIT			241.87	415.24	584.73						373.03
Average of Percent			72.5%	74.8%	73.6%						73.6%
<b>45-49</b>											
Count of AA			20	20	14	4	2				60
Average of BENFIT			315.46	599.30	933.21	1099.10	856.12				624.48
Average of Study 3 BENFIT			228.96	449.53	647.35	801.34	785.33				456.81
Average of Percent			72.6%	75.0%	69.4%	72.9%	91.7%				73.2%
<b>50-54</b>											
Count of AA			1	23	22	8	6	1	1		62
Average of BENFIT			243.03	294.92	432.00	634.75	1034.98	1053.16	1594.52		491.39
Average of Study 3 BENFIT			157.30	235.73	346.65	516.53	751.02	952.80	1160.09		386.37
Average of Percent			64.7%	79.9%	80.2%	81.3%	72.6%	90.5%	72.8%		78.6%
<b>55-59</b>											
Count of AA			25	36	7	4	5	2	1		80
Average of BENFIT			333.08	423.42	854.04	738.43	954.38	1191.88	1543.72		515.02
Average of Study 3 BENFIT			228.87	326.63	626.49	512.97	814.12	1043.51	1387.76		393.29
Average of Percent			68.7%	77.1%	73.4%	69.5%	85.3%	87.6%	89.9%		76.4%
<b>60-64</b>											
Count of AA			18	40	14	9	1	1	1	1	85
Average of BENFIT			260.66	296.04	549.17	1218.92	879.32	1810.67	1545.36	1778.18	484.77
Average of Study 3 BENFIT			220.93	247.01	440.43	877.09	802.58	1297.73	1392.90	1589.51	388.23
Average of Percent			84.8%	83.4%	80.2%	72.0%	91.3%	71.7%	90.1%	89.4%	80.1%
<b>65+</b>											
Count of AA		1	5	14	6	1		2		1	30
Average of BENFIT		357.70	321.17	219.09	611.13	336.97		2810.60		1602.89	541.95
Average of Study 3 BENFIT		357.70	248.73	200.13	541.06	336.97		1663.95		1454.73	425.63
Average of Percent		100.0%	77.5%	91.3%	88.5%	100.0%		59.2%		90.8%	78.5%
<b>Total Count of AA</b>	<b>1</b>	<b>1</b>	<b>111</b>	<b>150</b>	<b>57</b>	<b>24</b>	<b>9</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>363</b>
<b>Total Average of BENFIT</b>	<b>357.70</b>	<b>243.03</b>	<b>305.18</b>	<b>391.28</b>	<b>719.13</b>	<b>1036.13</b>	<b>935.18</b>	<b>1401.69</b>	<b>1544.54</b>	<b>1690.54</b>	<b>510.53</b>
<b>Total Average of Study 3 BENFIT</b>	<b>357.70</b>	<b>157.30</b>	<b>230.75</b>	<b>312.76</b>	<b>549.66</b>	<b>749.76</b>	<b>821.85</b>	<b>1112.12</b>	<b>1390.13</b>	<b>1522.12</b>	<b>395.21</b>
<b>Total Average of Percent</b>	<b>100.0%</b>	<b>64.7%</b>	<b>75.6%</b>	<b>79.9%</b>	<b>76.4%</b>	<b>72.4%</b>	<b>87.9%</b>	<b>69.0%</b>	<b>90.0%</b>	<b>90.0%</b>	<b>77.4%</b>

United Actuarial Services, Inc.

# Study #3 Results

Orphan Inactive Vested Benefit Impact w/110% PBGC Guar. At Age 60

Row Labels	01-04	05-09	10-14	15-19	20-24	25-29	Grand Total
<b>45-49</b>							
Count of AA			2	1			3
Average of BENFIT			1152.03	1712.68			1338.91
Average of Study 3 BENFIT			427.66	599.71			485.01
Average of Percent			37.1%	35.0%			36.2%
<b>50-54</b>							
Count of AA		1	3		2	1	7
Average of BENFIT		1081.67	1642.69		2734.29	2940.24	2059.79
Average of Study 3 BENFIT		285.11	501.40		855.32	1061.78	651.67
Average of Percent		26.4%	30.5%		31.3%	36.1%	31.6%
<b>55-59</b>							
Count of AA	1	1	1		3		6
Average of BENFIT	225.07	141.77	1464.81		2636.89		1623.72
Average of Study 3 BENFIT	157.30	141.16	363.76		858.60		539.67
Average of Percent	69.9%	99.6%	24.8%		32.6%		33.2%
<b>60-64</b>							
Count of AA		2					2
Average of BENFIT		945.78					945.78
Average of Study 3 BENFIT		304.77					304.77
Average of Percent		32.2%					32.2%
<b>65+</b>							
Count of AA				1			1
Average of BENFIT				596.31			596.31
Average of Study 3 BENFIT				547.92			547.92
Average of Percent				91.9%			91.9%
<b>Total Count of AA</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>19</b>
<b>Total Average of BENFIT</b>	<b>225.07</b>	<b>778.75</b>	<b>1449.49</b>	<b>1154.50</b>	<b>2675.85</b>	<b>2940.24</b>	<b>1613.97</b>
<b>Total Average of Study 3 BENFIT</b>	<b>157.30</b>	<b>258.95</b>	<b>453.88</b>	<b>573.82</b>	<b>857.29</b>	<b>1061.78</b>	<b>548.01</b>
<b>Total Average of Percent</b>	<b>69.9%</b>	<b>33.3%</b>	<b>31.3%</b>	<b>49.7%</b>	<b>32.0%</b>	<b>36.1%</b>	<b>34.0%</b>

United Actuarial Services, Inc.



# Study #3 Results

Non-Orphan In Pay Status Impact on Benefit w/1.9% Mult. Ceiling

Row Labels	None	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>50-54</b>										
Count of AA			1		1					2
Average of Benefit			335.10		566.71					452.41
Average of Study 3 Benfit			315.99		528.04					422.02
Average of Percent			93.3%		93.2%					93.3%
<b>55-59</b>										
Count of AA		2	7	3	2	7	3	4		28
Average of Benefit		148.49	279.89	516.68	512.19	2158.88	1714.40	1665.10		1133.80
Average of Study 3 Benfit		139.90	248.02	460.43	491.37	1296.71	1046.57	1254.59		771.96
Average of Percent		94.2%	88.6%	89.1%	95.9%	60.1%	61.0%	75.3%		68.1%
<b>60-64</b>										
Count of AA		5	9	12	9	15	8	1	1	60
Average of Benefit		313.02	296.12	569.48	1718.14	1875.23	2039.88	643.62	1615.24	1220.56
Average of Study 3 Benfit		245.58	279.08	423.27	1056.17	1179.50	1321.46	635.35	1457.35	811.36
Average of Percent		78.5%	94.2%	74.3%	61.5%	62.9%	64.8%	98.7%	90.2%	66.5%
<b>65-69</b>										
Count of AA		8	27	17	15	26	15	4	3	115
Average of Benefit		312.11	240.45	330.06	932.27	2250.29	2423.18	1898.27	2360.50	1200.99
Average of Study 3 Benfit		275.47	223.51	306.42	662.41	1441.20	1646.11	1380.63	1663.08	831.81
Average of Percent		72.2%	93.0%	82.8%	71.1%	64.0%	67.9%	72.7%	70.5%	69.3%
<b>70-74</b>										
Count of AA		4	26	19	16	7	18	4	3	97
Average of Benefit		411.04	281.28	602.74	675.54	1665.99	1991.05	2271.78	2156.42	971.91
Average of Study 3 Benfit		274.73	246.03	466.57	542.86	1135.57	1283.11	1479.96	1622.16	689.38
Average of Percent		66.8%	87.5%	77.4%	80.3%	68.2%	64.4%	65.1%	75.2%	70.9%
<b>75-79</b>										
Count of AA		2	17	18	14	15	15	3	1	85
Average of Benefit		412.45	275.59	507.15	1055.47	1063.05	1688.98	3701.30	2072.45	986.73
Average of Study 3 Benfit		246.14	252.82	427.98	915.69	892.99	1369.35	2295.47	1931.40	800.78
Average of Percent		59.7%	91.7%	84.4%	86.8%	84.0%	81.1%	62.0%	93.2%	81.2%
<b>80-84</b>										
Count of AA		10	2	11	12	12	6	5	1	71
Average of Benefit		408.45	290.44	296.94	507.34	873.86	1029.86	2009.39	1345.46	808.94
Average of Study 3 Benfit		408.45	290.44	296.92	507.34	867.80	1029.68	2009.39	1345.46	807.79
Average of Percent		100.0%	100.0%	100.0%	100.0%	99.2%	100.0%	100.0%	100.0%	99.9%
<b>85+</b>										
Count of AA		70	1	4	3	10	7	2	5	105
Average of Benefit		392.91	1064.49	451.65	875.39	1260.55	1015.70	832.06	1081.22	590.71
Average of Study 3 Benfit		392.91	1064.49	451.65	875.39	1260.55	1015.70	832.06	1081.22	590.71
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Total Count of AA</b>	<b>80</b>	<b>24</b>	<b>102</b>	<b>84</b>	<b>79</b>	<b>89</b>	<b>67</b>	<b>26</b>	<b>12</b>	<b>563</b>
<b>Total Average of Benefit</b>	<b>394.85</b>	<b>353.06</b>	<b>279.67</b>	<b>515.36</b>	<b>1009.06</b>	<b>1672.18</b>	<b>1980.65</b>	<b>1816.21</b>	<b>1771.92</b>	<b>962.00</b>
<b>Total Average of Study 3 Benfit</b>	<b>394.85</b>	<b>272.84</b>	<b>258.49</b>	<b>438.91</b>	<b>828.65</b>	<b>1180.34</b>	<b>1429.25</b>	<b>1389.07</b>	<b>1439.09</b>	<b>747.98</b>
<b>Total Average of Percent</b>	<b>100.0%</b>	<b>77.3%</b>	<b>92.4%</b>	<b>85.4%</b>	<b>82.1%</b>	<b>70.6%</b>	<b>72.2%</b>	<b>76.5%</b>	<b>81.2%</b>	<b>77.8%</b>

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# Study #3 Results

## Orphan In Pay Status Impact on Benefit w/110% of PBGC Guarantee

Row Labels	05-09	10-14	15-19	20-24	25-29	30-34	35-39	Grand Total
<b>50-54</b>								
Count of AA		1						1
Average of Benefit		326.99						326.99
Average of Study 3 Benfit		310.60						310.60
Average of Percent		95.0%						95.0%
<b>55-59</b>								
Count of AA		1	2	2	6	1		12
Average of Benefit		143.08	1336.03	2781.14	2515.80	250.63		1976.91
Average of Study 3 Benfit		143.08	707.85	893.19	816.11	250.63		707.70
Average of Percent		100.0%	53.0%	32.1%	32.4%	100.0%		35.8%
<b>60-64</b>								
Count of AA		2	2	3	6	2		15
Average of Benefit		1438.35	1768.34	2343.73	3340.76	3325.72		2676.04
Average of Study 3 Benfit		408.21	722.60	707.84	1068.33	1165.01		875.01
Average of Percent		28.4%	40.9%	30.2%	32.0%	35.0%		32.7%
<b>65-69</b>								
Count of AA		1	2	1	9	2	1	16
Average of Benefit		171.52	614.51	787.14	3336.51	3986.55	2012.54	2637.62
Average of Study 3 Benfit		171.52	485.91	712.92	1008.85	1233.83	1376.38	923.74
Average of Percent		100.0%	79.1%	90.6%	30.2%	30.9%	68.4%	35.0%
<b>70-74</b>								
Count of AA		1	1	1	2	5	4	14
Average of Benefit		214.51	601.93	1539.54	2772.82	3224.75	2895.40	2543.36
Average of Study 3 Benfit		176.96	501.39	707.85	806.17	1040.15	1233.83	938.18
Average of Percent		82.5%	83.3%	46.0%	29.1%	32.3%	42.6%	38.9%
<b>75-79</b>								
Count of AA			2	1		5		8
Average of Benefit			3130.49	592.79		2263.06		2271.14
Average of Study 3 Benfit			2643.73	571.02		1676.59		1630.18
Average of Percent			65.3%	96.3%		74.1%		71.8%
<b>80-84</b>								
Count of AA							1	1
Average of Benefit							1831.03	1831.03
Average of Study 3 Benfit							1831.03	1831.03
Average of Percent							100.0%	100.0%
<b>Total Count of AA</b>	<b>1</b>	<b>6</b>	<b>9</b>	<b>9</b>	<b>26</b>	<b>14</b>	<b>2</b>	<b>67</b>
<b>Total Average of Benefit</b>	<b>214.51</b>	<b>686.70</b>	<b>1693.14</b>	<b>2168.78</b>	<b>3126.60</b>	<b>2698.01</b>	<b>1921.79</b>	<b>2417.90</b>
<b>Total Average of Study 3 Benfit</b>	<b>176.96</b>	<b>323.84</b>	<b>958.67</b>	<b>756.24</b>	<b>984.12</b>	<b>1311.90</b>	<b>1603.71</b>	<b>965.90</b>
<b>Total Average of Percent</b>	<b>82.5%</b>	<b>47.2%</b>	<b>56.6%</b>	<b>34.9%</b>	<b>31.5%</b>	<b>48.6%</b>	<b>83.4%</b>	<b>39.9%</b>

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# Next Steps - Solution

- ◆ Any further tweaks to proposed solution?
  - Central States has a maximum reduction on terminated vested participants, arguing actives might otherwise reject proposal
  - Terminated vested max reduction should consider
    - Length of service
    - Extend to terminated vested now in pay status?
    - Return to work requirement needed for term vested to be treated as active?
- ◆ Data improvements
  - Pre-1/1/88 terminations
    - They are not reduced in any of these studies because data unavailable
    - They are a small part of liabilities, so changes shouldn't be significant
  - We must perform an open group projection on final solution to include new entrants, which may have slight impact on the solution

# Next Steps - Timing

## ◆ IRS Submission

- Have three month windows of time for cash flow projections
- Can file before final regulations but may need to revise accordingly
- Additional work to be done for submission
  - Draft notice including estimated impact to each participant is due within 4 business days prior to submission
  - Draft a ballot for the vote
  - Various other pieces of information required by Rev. Proc. 2015-34
- Must be no later than 9/30/16 with a 7/1/17 effective date

## ◆ After IRS Submission – up to 225-day wait for approval

- Hold membership meetings to explain suspension and voting
- Line up third party to carry out voting
- Voting must be within 30 days of IRS approval!



# Basis for Study

## General Assumptions

- ◆ This study is based on 2015 valuation with these exceptions:
  - The assets are based on the 6/30/15 unaudited financial statements
  - We assumed a -1.18% return for the 2015-16 year based on 9/30/15 unaudited financials and 6.75% per annum return for last 9 months
  - We assumed a 6.75% annual return through the 2024-25 plan year
  - We assumed 5,962 future annual weeks starting in 2015-16 year
  - Future contributions in projections include all reasonably collectible contributions developed with the 6/30/15 EWL report

# Basis for Study

## Benefit Assumptions

- ◆ We made the following benefit assumptions for the study
  - All suspensions are effective as of July 1, 2017.
  - Pre-1/1/1988 terminations, who have a credit formula, are assumed to have an equivalent multiplier under 1.6% and were not reduced.
  - A terminated participant's multiplier was determined using his or her reported date of termination.
  - For determining a beneficiary's reduction, we assumed the retiree's benefit was the beneficiary's benefit divided by the J&S percentage.



# Actuarial Basis

This report includes results which are based on plan provisions, assumptions, methods and demographic data described in the July 1, 2015 actuarial valuation of the International Association of Machinists Motor City Pension Fund except as previously noted. This report is subject to the same qualifications and limitations as detailed in that report.

I am a Member of the Academy of Actuaries and fully meet the qualification requirements of the Academy to provide the opinion contained herein.

Redacted by the U.S. Department of the Treasury

Paul Bullock, ASA, EA, MAAA

**United Actuarial Services, Inc.**

# **International Association of Machinists Motor City Pension Fund**

## **March 4, 2016 Board of Trustees' Meeting** **Additional Benefit Suspension Study** **Special Handling of Inactive Vested Participants**

**Paul Bullock—United Actuarial Services, Inc.**



# Critical and Declining Status Recap on Benefit Suspensions

- ◆ Key additional tool becomes available in the deep red zone
  - Benefits already earned can be suspended
  - This includes benefits already in pay status
  - Idea is to take a lesser reduction now to avoid a greater reduction, down to the PBGC guarantee, when plan becomes insolvent
- ◆ Actuarial conditions of benefit suspension
  - The Plan would eliminate its projected insolvency with the benefit suspension levels contemplated
  - In years after suspension, document that
    - the Plan would project an insolvency without continued suspensions, and
    - all reasonable measures continue to be taken

# Benefit Suspension

## Recap on General Conditions

- ◆ Suspensions cannot be lower than 110% of PBGC guarantee
- ◆ No suspensions for
  - Disabled participants
  - Participants over age 80 with phase-out beginning at age 75
- ◆ Suspensions can't materially exceed the level necessary to avoid a projected insolvency
- ◆ If suspensions are done in conjunction with a partition
  - Suspensions can't take effect prior to the partition effective date
  - Suspensions must be maxed out and more action is still needed to eliminate an insolvency *before* a partition would be approved



# Benefit Suspension

## Recap of Possibilities Under MPRA

- ◆ Any suspension must be equitably distributed
- ◆ Factors that may be taken into account include
  - Age and life expectancy
  - Length of time in pay status
  - Amount of benefit
  - Benefit type: early, normal, survivor
  - Extent of subsidized benefit
  - Extent of post-ret increases
  - History of benefit increases and reductions
  - Years to retirement for actives
  - Discrepancies between active and retiree benefits
  - Extent actives would withdraw support, which would trigger a drop in weeks and further cuts
  - Service earned with withdrawn employers that didn't pay their full withdrawal liability

# Benefit Suspension

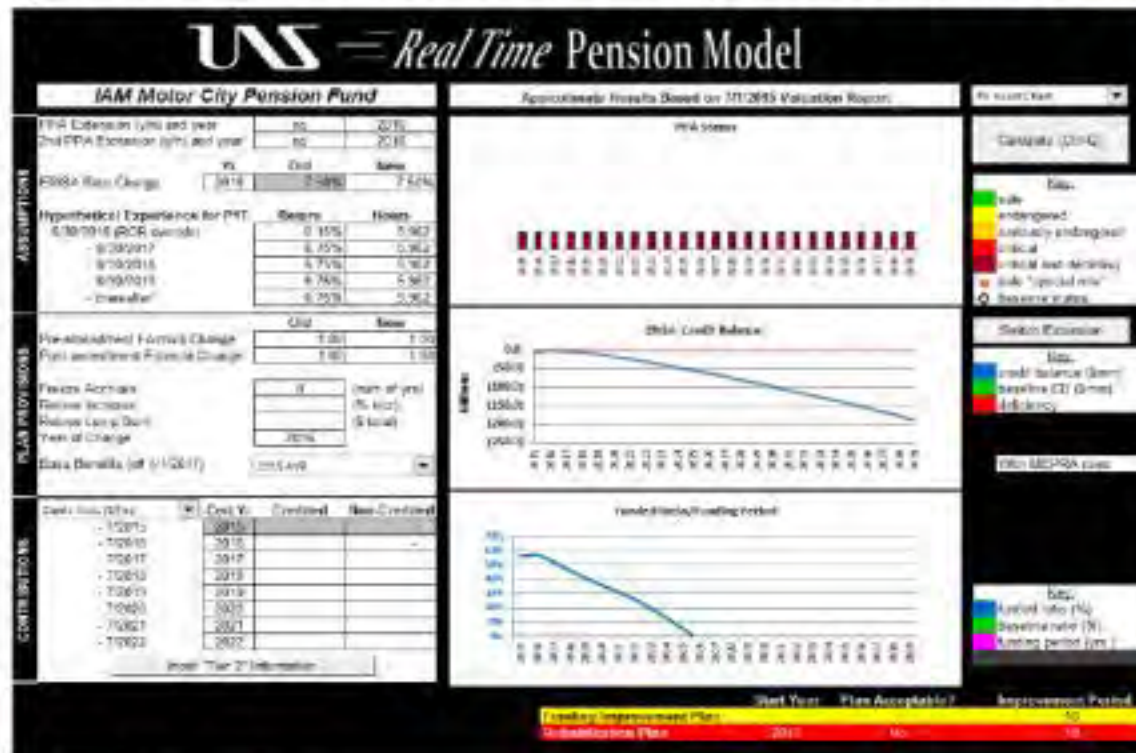
## Recap of Funding Conditions

- ◆ The proposed regulations released on June 17 outline the funding conditions that must be satisfied after suspension\*
  - The solvency ratio must be 1.0+ for extended period of 30+ years
    - Ratio numerator: beg. of yr. assets + inv. inc. + contributions – expenses
    - Ratio denominator: expected benefit payments for the year
  - The funded ratio is at least 100% at end of extended period OR the solvency ratio only *increases* in last 5 years of extended period
  - “Goldilocks Rule” – The above tests would *not* be satisfied if the level of reduction per participant was 5% less



## Current Outlook Insolvency in 2025-26

The insolvency is still 1 year earlier due to a weak -0.15% return in 2015-16 so far:

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Note: +0.15% return estimate based on 12/31/15 unaudited financials, then return at 6.75% per annum rate for remaining 6 months.

8.69

# Suspension Studies – Round 3

- ◆ Our starting point is Study #3, which included:
  - Eliminate all post-retirement increases
  - For participants of employers that didn't pay their full EWL, make the minimum suspension high enough so that the corresponding liability value equals to their employer's unfunded liability
  - After above changes made, lower the past multiplier in 0.1% increments to a new maximum ceiling
    - Study #3 used a 1.9% multiplier ceiling
    - The floor benefit would still be 110% of PBGC premium
    - We assumed pre-1988 termination participants (whose benefits are based on a crediting rate and not a multiplier) will always be below the ceiling multiplier
    - Disabilities/age 80+ participants protected, ages 75-79 participants partly protected
  - All suspensions are assumed to be effective July 1, 2017



# Suspension Studies – Round 3

## Historical Multipliers

- ◆ Multiplier levels subject to reduction
  - Pre-7/1/04 contributions
    - <1.9% multiplier assumed if terminated prior to 1/1/88 (detailed data n/a)
    - 2.9% multiplier if terminated prior to 7/1/91
    - 3.1% multiplier if terminated prior to 7/1/92
    - 3.2% multiplier if terminated prior to 7/1/93
    - 3.3% multiplier if terminated prior to 7/1/94
    - 3.4% multiplier if terminated prior to 7/1/95
    - 3.5% multiplier is otherwise used
  - 7/1/04 to 6/30/06 – 2.0% multiplier
  - 7/1/06 and later – 0.5% multiplier applies on credited contributions

# Suspension Studies – Round 3

## Orphan Participants

- ◆ The following employers didn't pay their EWL and, based on individual asset workup, have \$0 as of 12/30/15 so their participants are “orphaned” and can be reduced the maximum
  - ABC Paving (Employer ID is 1100)
  - Borman Foods/Farmer Jack (1503)
  - E & L Transport (2500)
  - Pyrek Transport Inc. (6400)
  - Thomas Goodfellow (3200)
  - Other bankrupt employers can't count because they had no EWL
- ◆ Ryder (7313, 7300, 7104, 7103) didn't pay 10% of EWL but their assets cover participant liabilities so they aren't orphaned



# Suspension Studies – Round 3

## Study #4

- ◆ Study #4 starts with Study #3 plus the following:
  - Leave in post-retirement increases because they provided no savings
  - Maximum reduction (110% of guarantee) for inactive vested who are
    - Orphaned participants of employers noted on previous slide
    - Participants terminated prior to 1/1/1988
  - Use the multiplier ceiling for these inactive vested participants
    - Ryder participants – They paid enough EWL to fund their vested liability
    - Edward C. Levy, Bill Wink Chevrolet, and Superior participants – All of these employers are current on their EWL payment schedules

# Suspension Studies – Round 3

## Study #4 (Continued)

- ◆ Study #4 starts with Study #3 plus the following:
  - All other inactive vested not included above are reduced as follows
    - 20+ years of service – Use the multiplier ceiling
    - More than 15 but less than 20 years of service – Prorate between multiplier ceiling and 110% of PBGC guarantee (for example, 80%/20% for 19 years, 60%/40% for 18 years, etc.)
    - 15 or less years of service – 110% of PBGC guarantee
  - Inactive vested for all of the above groupings include inactive vested that are now retired and also future inactive vested participants



# Suspension Studies – Round 3

## Other Changes for Study #4

- ◆ More benefit tweaks from what we've learned on suspensions
  - Applicability of maximum reduction/110% of PBGC guarantee
    - This benefit floor for actives only applies thru July 1, 2017 effective date
    - Benefits earned after July 1, 2017 use the regular 0.5% multiplier
  - Survivor % w/PBGC guarantee > Joint & 50% or 75% elected form
    - Survivor's guarantee is based on his/her benefit, not participant guarantee
    - Adding 50%/75% factor means that more is guaranteed
  - Assumed retirement age for current inactive vested
    - Lowered from 60 to 52 if getting some or all of the maximum reduction
    - Benefit has much smaller reduction because early retirement reduction offset to a large extent by more of the benefit being under the guarantee

# Suspension Studies – Round 3

## Other Changes for Study #4

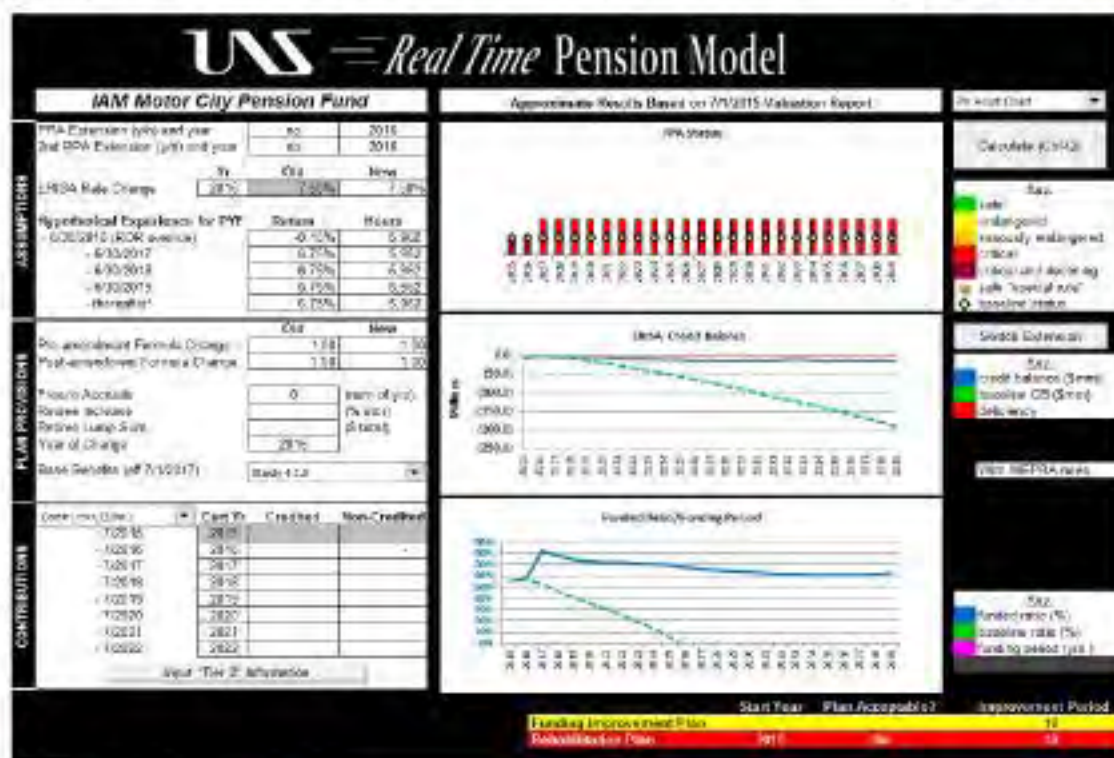
- ◆ Example of why age 52 assumed retirement age used
  - Assume a participant has a \$2,160 benefit and 24 years of service
    - Benefit at age 65
      - ◆ The 110% guarantee at 65 is \$943.80 ( $=1.1 \times \$35.75 \times 24$ )
      - ◆ \$2,160 is \$90 per year of service =  $\$2,160 / 24$  years of service
      - ◆ Only \$35.75 of \$90/year guaranteed (100% of 1<sup>st</sup> \$11 + 75% of next \$33)
    - Benefit at age 52
      - ◆ The 110% guarantee at 52 is \$692.74 ( $=1.1 \times \$26.24 \times 24$ )
      - ◆ Age 52 benefit is 34.8% of \$2,160 = \$751.68
      - ◆ \$751.68 is \$31.32 per year of service =  $\$751.68 / 24$  years of service
      - ◆ 100% of 1<sup>st</sup> \$11.00 + 75% of \$20.32 = \$26.24
    - \$692.74 is 73.4% of \$943.80 or *more than double* a regular age 52 benefit



## Study #4 Results

### 100% Multiplier Ceiling

Recovery still takes a while: the funded ratio starts increasing 21 years out in 2037.

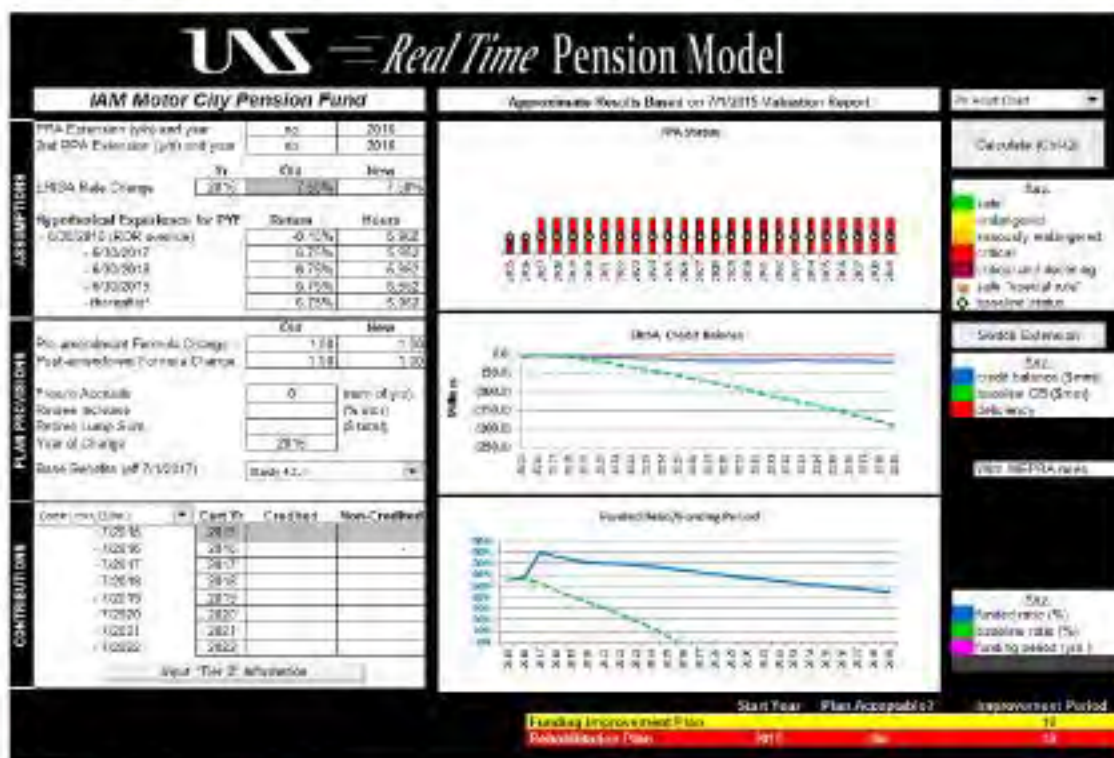


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## Study #4 Results

## 2.1% Multiplier Ceiling

A ceiling of 2.1% also works, but barely. The funded ratio only starts increasing 30 years out.

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# Study #4

## Which Multiplier Ceiling to Use?

- ◆ Study #4 uses a 2015-16 return of -0.15% based on 12/31/15 financials and 6 months of return at 6.75% annual rate
  - 2.0% is lowest multiplier that satisfies the Goldilocks Rule and is the recommended solution because it has the best chance of recovery
  - A higher 2.1% multiplier ceiling also works but just barely and comes with almost 10 additional years before the funded ratio starts rising
- ◆ Further return updates may affect multiplier ceiling
  - Return must be  $< 1.35\%$  in order for 2.0% multiplier ceiling to work
  - Return must be  $< 3.11\%$  in order for 2.1% multiplier ceiling to work
  - A delay from the July 1, 2017 effective date could lower the ceiling

# Study #4 Results

## Active Accrued Benefit Impact w/2.0% Multiplier Ceiling

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total	
<b>Under 25</b>												
Count of AA	1	3									5	
Average of BENA	2.87	29.58									20.61	
Average of Study 4 BENA	2.87	29.58									20.61	
Average of Percent	99.8%	100.0%									100.0%	
<b>25-29</b>												
Count of AA			15								15	
Average of BENA			54.41								54.41	
Average of Study 4 BENA			54.40								54.40	
Average of Percent			100.0%								100.0%	
<b>30-34</b>												
Count of AA			14	1							15	
Average of BENA			41.93	754.53							89.44	
Average of Study 4 BENA			41.93	838.13							81.01	
Average of Percent			100.0%	83.2%							90.8%	
<b>35-39</b>												
Count of AA	2	2	5	3	1						11	
Average of BENA	0.80	21.32	205.99	807.59	1104.59						326.32	
Average of Study 4 BENA	0.80	21.31	205.98	811.32	827.88						274.81	
Average of Percent	99.8%	100.0%	100.0%	83.2%	74.9%						84.2%	
<b>40-44</b>												
Count of AA	1	2		3	5						11	
Average of BENA	1.82	100.65		551.68	1510.46						856.86	
Average of Study 4 BENA	1.82	100.64		462.73	1108.34						648.91	
Average of Percent	100.3%	100.0%		83.9%	72.8%						79.7%	
<b>45-49</b>												
Count of AA	1	3	3	2	5	5					17	
Average of BENA	4.32	54.72	222.72	875.72	1095.44	1280.70					800.59	
Average of Study 4 BENA	4.32	54.72	222.72	595.75	820.79	925.49					606.47	
Average of Percent	99.9%	100.0%	100.0%	68.1%	75.1%	72.3%					75.8%	
<b>50-54</b>												
Count of AA			3	2	1	2	2	4			15	
Average of BENA			80.76	791.56	904.28	1828.16	2571.77	2338.81			1444.55	
Average of Study 4 BENA			80.75	645.74	711.94	1238.35	1712.32	1558.53			1061.69	
Average of Percent			100.0%	81.3%	78.7%	67.7%	66.6%	66.7%			69.3%	
<b>55-59</b>												
Count of AA			3	5	4	3	5	2			24	
Average of BENA			64.28	735.84	1477.63	1825.82	2195.38	3879.31			1415.57	
Average of Study 4 BENA			64.28	627.87	1068.77	1292.48	1468.51	2520.04			999.27	
Average of Percent			100.0%	85.2%	72.1%	70.8%	67.8%	69.0%			70.8%	
<b>60-64</b>												
Count of AA			2	2	4	2	2	1	2	4	20	
Average of BENA			51.40	280.67	475.25	1951.09	2305.22	1510.94	2760.38	1957.61	1798.30	1378.52
Average of Study 4 BENA			51.40	280.66	387.95	1412.95	1575.24	1039.21	1826.31	1310.06	1212.48	964.85
Average of Percent			100.0%	100.0%	82.0%	73.2%	68.2%	68.8%	66.2%	67.9%	67.4%	70.0%
<b>65+</b>												
Count of AA					2						2	
Average of BENA					1185.83						1185.83	
Average of Study 4 BENA					919.81						919.81	
Average of Percent					77.6%						77.6%	
Total Count of AA	5	48	6	23	18	12	8	6	4	3	133	
Total Average of BENA	3.08	52.02	233.67	891.24	1278.67	1878.98	2185.11	2828.32	1827.63	1798.30	880.38	
Total Average of Study 4 BENA	3.08	52.02	233.67	571.80	1015.10	1177.67	1476.42	1865.85	1310.06	1212.18	621.86	
Total Average of Percent	99.9%	100.0%	100.0%	83.0%	73.6%	70.1%	67.6%	66.0%	67.6%	67.4%	72.3%	

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# Study #4 Results

Inactive Vested Benefit Impact w/2.0% Mult. Ceiling at Age 60 for Only  
Ryder Participants and Employers Current on EWL

Row Labels	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>30-34</b>									
Count of AA		2							2
Average of BENFIT		201.08							201.08
Average of Study 4 BENFIT		198.23							198.23
Average of Percent		98.6%							98.6%
<b>35-39</b>									
Count of AA	5	9	3						17
Average of BENFIT	204.04	296.40	513.59						307.56
Average of Study 4 BENFIT	167.03	273.71	471.86						277.30
Average of Percent	81.9%	92.3%	91.9%						90.2%
<b>40-44</b>									
Count of AA	8	4	3						15
Average of BENFIT	244.25	228.60	548.79						300.99
Average of Study 4 BENFIT	193.53	223.54	449.36						252.70
Average of Percent	79.2%	97.8%	81.9%						84.0%
<b>45-49</b>									
Count of AA	8	11	11	1	2				33
Average of BENFIT	242.51	472.64	797.54	732.64	856.12				556.28
Average of Study 4 BENFIT	190.19	373.98	584.83	668.87	785.33				433.57
Average of Percent	78.4%	79.1%	73.3%	91.3%	91.7%				77.9%
<b>50-54</b>									
Count of AA	7	13	5	2	1	1			29
Average of BENFIT	218.29	294.60	454.15	530.52	1534.79	1594.52			407.55
Average of Study 4 BENFIT	179.38	274.70	426.05	498.17	1061.78	1160.09			350.87
Average of Percent	82.2%	93.2%	93.6%	93.9%	69.2%	72.8%			86.1%
<b>55-59</b>									
Count of AA	8	13	2	1	3	2	1		30
Average of BENFIT	196.92	287.56	761.50	336.96	763.64	1191.88	1543.72		446.40
Average of Study 4 BENFIT	163.19	252.21	574.70	336.96	707.64	1043.51	1387.76		388.94
Average of Percent	82.9%	87.7%	75.3%	100.0%	92.7%	87.6%	89.9%		87.1%
<b>60-64</b>									
Count of AA	2	4		4	1		1	1	13
Average of BENFIT	248.37	389.01		1076.10	879.32		1545.36	1778.18	812.31
Average of Study 4 BENFIT	216.42	319.02		849.87	802.58		1392.90	1589.51	684.11
Average of Percent	87.1%	82.0%		79.0%	91.3%		90.1%	89.4%	84.2%
<b>65+</b>									
Count of AA				1				1	2
Average of BENFIT				336.97				1602.89	969.93
Average of Study 4 BENFIT				336.97				1454.73	895.65
Average of Percent				100.0%				90.8%	92.4%
<b>Total Count of AA</b>	38	56	24	9	7	3	2	2	141
<b>Total Average of BENFIT</b>	224.06	326.92	656.41	752.47	916.75	1126.09	1544.54	1690.54	469.60
<b>Total Average of Study 4 BENFIT</b>	181.55	285.60	519.85	637.63	791.89	1082.37	1390.33	1522.12	395.30
<b>Total Average of Percent</b>	81.0%	87.4%	79.2%	84.7%	86.6%	81.6%	90.0%	90.0%	84.2%

United Actuarial Services, Inc.

# Study #4 Results

Inactive Vested Benefit Impact w/2.0% Mult. Ceiling at 60 (20+ Yrs),  
110% PBGC Guar. at 52 ( $\leq 15$  Yrs Svc) or Blend at 52 (16-19 Yrs Svc)

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	Grand Total
<b>30-34</b>									
Count of AA			1						1
Average of BENFIT			218.53						218.53
Average of Study 4 BENFIT			200.71						200.71
Average of Percent			91.8%						91.8%
<b>35-39</b>									
Count of AA			3	1					4
Average of BENFIT			209.39	337.55					241.43
Average of Study 4 BENFIT			192.41	317.81					223.78
Average of Percent			91.9%	94.2%					92.7%
<b>40-44</b>									
Count of AA			2	1	2				5
Average of BENFIT			361.17	249.68	607.28				437.31
Average of Study 4 BENFIT			250.71	235.48	530.76				359.69
Average of Percent			69.4%	94.3%	87.4%				82.2%
<b>45-49</b>									
Count of AA			12	8	3	3			28
Average of BENFIT			179.85	304.26	746.79	1221.18			403.70
Average of Study 4 BENFIT			138.96	271.12	519.87	845.49			305.09
Average of Percent			77.3%	89.1%	69.6%	69.2%			75.6%
<b>50-54</b>									
Count of AA		1	15	9	3	4	1		33
Average of BENFIT		126.86	155.40	314.41	488.52	1287.21	1053.16		392.58
Average of Study 4 BENFIT		116.76	133.13	278.65	433.91	877.44	952.80		315.63
Average of Percent		92.0%	87.0%	88.6%	88.8%	68.2%	90.5%		80.4%
<b>55-59</b>									
Count of AA			16	21	5	3	2		47
Average of BENFIT			255.57	324.19	658.15	757.71	1240.50		403.16
Average of Study 4 BENFIT			172.32	272.00	436.73	571.64	973.85		304.58
Average of Percent			67.2%	83.9%	66.4%	75.4%	78.5%		75.5%
<b>60-64</b>									
Count of AA			16	30	14	5		1	66
Average of BENFIT			250.76	264.58	535.29	1333.18		1810.67	423.03
Average of Study 4 BENFIT			205.78	208.28	429.48	925.37		1297.73	325.43
Average of Percent			82.1%	78.7%	80.2%	69.4%		71.7%	76.9%
<b>65+</b>									
Count of AA		1	5	12	5			2	25
Average of BENFIT		357.70		321.12	212.89	525.28		2810.60	510.62
Average of Study 4 BENFIT		357.70		211.90	190.76	441.20		1744.92	376.09
Average of Percent		100.0%		66.0%	89.6%	84.0%		62.1%	73.7%
<b>Total Count of AA</b>	<b>1</b>	<b>1</b>	<b>70</b>	<b>82</b>	<b>32</b>	<b>15</b>	<b>3</b>	<b>3</b>	<b>207</b>
<b>Total Average of BENFIT</b>	<b>357.70</b>	<b>126.86</b>	<b>225.31</b>	<b>282.33</b>	<b>572.87</b>	<b>1183.43</b>	<b>1178.05</b>	<b>2477.29</b>	<b>417.66</b>
<b>Total Average of Study 4 BENFIT</b>	<b>357.70</b>	<b>116.76</b>	<b>172.61</b>	<b>237.56</b>	<b>447.66</b>	<b>825.86</b>	<b>966.83</b>	<b>1595.86</b>	<b>320.96</b>
<b>Total Average of Percent</b>	<b>100.0%</b>	<b>92.0%</b>	<b>76.6%</b>	<b>84.1%</b>	<b>78.1%</b>	<b>69.8%</b>	<b>82.1%</b>	<b>64.4%</b>	<b>76.8%</b>

United Actuarial Services, Inc.



# Study #4 Results

Inactive Vested Benefit Impact w/110% PBGC Guarantee at Age 52 for Orphan or Pre-1/1/1988 Termination Participants

Row Labels	01-04	05-09	10-14	15-19	20-24	Grand Total
<b>35-39</b>						
Count of AA		1				1
Average of BENFIT		113.13				113.13
Average of Study 4 BENFIT		70.44				70.44
Average of Percent		62.19%				62.19%
<b>40-44</b>						
Count of AA			1			1
Average of BENFIT			1017.75			1017.75
Average of Study 4 BENFIT			510.89			510.89
Average of Percent			50.24%			50.24%
<b>45-49</b>						
Count of AA			5	1		6
Average of BENFIT			770.17	843.01		801.36
Average of Study 4 BENFIT			415.67	571.71		501.59
Average of Percent			60.71%	67.82%		62.85%
<b>50-54</b>						
Count of AA		1	5		1	7
Average of BENFIT		448.37	477.48		1477.29	802.25
Average of Study 4 BENFIT		240.87	501.19		1555.32	572.48
Average of Percent		54.29%	58.59%		59.79%	57.59%
<b>55-59</b>						
Count of AA	1	1	5		5	8
Average of BENFIT	105.10	317.00	636.41		1070.80	845.37
Average of Study 4 BENFIT	119.11	195.40	314.87		1511.60	451.14
Average of Percent	89.11%	72.89%	49.59%		53.99%	54.09%
<b>60-64</b>						
Count of AA		1	0			1
Average of BENFIT		117.00	375.00			474.00
Average of Study 4 BENFIT		104.77	202.45			153.41
Average of Percent		89.59%	93.0%			89.49%
<b>65+</b>						
Count of AA			1	1		2
Average of BENFIT			561.24	371.30		467.27
Average of Study 4 BENFIT			242.07	554.15		198.11
Average of Percent			44.5%	67.7%		24.1%
<b>Total Count of AA</b>	1	7	18	3	5	34
<b>Total Average of BENFIT</b>	106.10	463.12	570.82	843.50	1573.43	708.25
<b>Total Average of Study 4 BENFIT</b>	149.13	224.64	371.30	569.14	857.29	423.54
<b>Total Average of Percent</b>	89.11%	74.5%	65.1%	67.4%	59.5%	60.0%

United Actuarial Services, Inc.

# Study #4 Results

In Pay Status Impact on Benefit w/2.0% Mult. Ceiling  
for Active Retirements and Inactive Vested of Employers Paying EWL

Row Labels	None	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>50-54</b>										
Count of AA			2		1					3
Average of Benefit			392.55		566.71					410.60
Average of Study 4 Benefit			313.30		528.04					384.88
Average of Percent			94.2%		92.2%					92.7%
<b>55-59</b>										
Count of AA		1	3	1	2	9	4	4		24
Average of Benefit		199.96	101.73	588.46	512.19	1806.45	1348.46	1665.10		1267.93
Average of Study 4 Benefit		183.12	101.73	534.64	491.37	1168.80	883.24	1277.34		881.97
Average of Percent		91.6%	100.0%	90.9%	95.9%	64.7%	65.5%	76.7%		69.6%
<b>60-64</b>										
Count of AA		2	4	3	10	14	8		1	42
Average of Benefit		138.08	304.64	810.88	1570.90	1963.86	2033.88		1613.24	1330.05
Average of Study 4 Benefit		150.28	284.21	565.06	1014.54	1264.65	1366.91		1457.35	1032.76
Average of Percent		95.1%	93.3%	69.7%	64.6%	64.4%	67.0%		90.2%	66.6%
<b>65-69</b>										
Count of AA		6	8	10	6	24	15	4	3	76
Average of Benefit		268.41	177.62	270.49	1654.92	2282.84	2423.18	1898.27	2260.50	1642.42
Average of Study 4 Benefit		221.03	176.13	334.12	1033.24	1578.12	1710.24	1400.21	1708.02	1138.34
Average of Percent		82.4%	99.2%	90.2%	62.4%	68.2%	70.6%	73.8%	72.4%	69.3%
<b>70-74</b>										
Count of AA		3	6	6	4	7	18	4	3	51
Average of Benefit		524.94	548.02	905.07	798.64	1065.99	1991.05	2271.78	2156.42	1500.88
Average of Study 4 Benefit		255.56	412.31	599.57	624.04	1165.66	1312.65	1503.12	1627.59	1026.96
Average of Percent		67.7%	75.2%	66.2%	79.4%	70.0%	66.0%	66.2%	75.5%	68.4%
<b>75-79</b>										
Count of AA		2	6	8	9	13	15	3	1	57
Average of Benefit		412.45	465.62	644.63	1345.16	1087.78	1688.98	3701.30	2072.45	1290.07
Average of Study 4 Benefit		256.53	426.34	497.34	1151.86	909.07	1380.55	2387.88	1931.40	1035.72
Average of Percent		62.2%	91.6%	77.2%	85.6%	83.6%	81.7%	64.5%	94.2%	80.3%
<b>80-84</b>										
Count of AA		10	2	4	8	10	11	3	4	53
Average of Benefit		408.45	290.44	524.61	562.26	915.94	1035.81	1943.73	1115.38	855.12
Average of Study 4 Benefit		408.45	290.44	324.61	562.26	912.56	1035.62	1945.73	1115.38	853.74
Average of Percent		100.0%	100.0%	100.0%	100.0%	99.2%	100.0%	100.0%	100.0%	99.8%
<b>85+</b>										
Count of AA		70	1	4	3	9	7	2	4	103
Average of Benefit		392.91	1064.49	451.63	875.39	1320.18	1015.70	832.06	912.66	746.04
Average of Study 4 Benefit		352.91	1064.49	451.63	875.39	1320.18	1015.70	832.06	912.66	746.04
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Total Count of AA</b>	<b>80</b>	<b>17</b>	<b>37</b>	<b>39</b>	<b>51</b>	<b>85</b>	<b>67</b>	<b>23</b>	<b>12</b>	<b>411</b>
<b>Total Average of Benefit</b>	<b>394.85</b>	<b>363.03</b>	<b>345.86</b>	<b>626.59</b>	<b>1247.29</b>	<b>1709.07</b>	<b>1949.65</b>	<b>1850.29</b>	<b>1771.92</b>	<b>1163.80</b>
<b>Total Average of Study 4 Benefit</b>	<b>394.85</b>	<b>296.18</b>	<b>411.91</b>	<b>519.78</b>	<b>1015.01</b>	<b>1238.11</b>	<b>1430.88</b>	<b>1391.17</b>	<b>1451.68</b>	<b>900.58</b>
<b>Total Average of Percent</b>	<b>100.0%</b>	<b>81.6%</b>	<b>90.2%</b>	<b>82.0%</b>	<b>81.4%</b>	<b>72.0%</b>	<b>73.4%</b>	<b>75.2%</b>	<b>81.9%</b>	<b>77.4%</b>

United Actuarial Services, Inc.



# Study #4 Results

In Pay Status Impact on Benefit Inactive Vested Retirees w/2.0% Mult.  
Ceiling (20+ Yrs), 110% Guarantee ( $\leq 15$  Yrs) or Blend (16-19 Yrs)

Row Labels	05-09	10-14	15-19	20-24	25-29	35-39	Grand Total
<b>55-59</b>							
Count of AA	1	4	2				7
Average of Benefit	97.02	413.51	480.80				387.52
Average of Study 4 Benfit	96.68	357.74	423.32				339.18
Average of Percent	99.6%	86.5%	88.0%				87.5%
<b>60-64</b>							
Count of AA	3	5	8		1	1	18
Average of Benefit	416.33	289.31	304.75		634.42	643.62	356.20
Average of Study 4 Benfit	309.12	272.06	288.71		607.34	635.35	324.44
Average of Percent	74.2%	94.0%	94.7%		95.7%	98.7%	91.1%
<b>65-69</b>							
Count of AA	2	19	6	10	2		39
Average of Benefit	443.24	269.36	266.47	658.55	647.74		397.03
Average of Study 4 Benfit	186.79	242.51	255.72	543.30	610.77		337.69
Average of Percent	42.1%	90.0%	96.0%	82.5%	94.3%		85.1%
<b>70-74</b>							
Count of AA	1	18	13	9			41
Average of Benefit	69.34	217.73	447.40	449.98			337.92
Average of Study 4 Benfit	69.34	203.83	388.83	418.31			306.29
Average of Percent	100.0%	93.6%	86.9%	93.0%			90.6%
<b>75-79</b>							
Count of AA		11	9	6	2		28
Average of Benefit		171.93	341.82	543.82	902.29		358.40
Average of Study 4 Benfit		159.36	319.34	513.71	837.99		335.19
Average of Percent		92.7%	93.4%	94.5%	92.9%		93.5%
<b>80-84</b>							
Count of AA		7	3	1	1		12
Average of Benefit		281.13	354.03	280.03	964.37		356.20
Average of Study 4 Benfit		281.09	354.03	280.03	964.37		356.18
Average of Percent		100.0%	100.0%	100.0%	100.0%		100.0%
<b>Total Count of AA</b>	<b>7</b>	<b>64</b>	<b>41</b>	<b>26</b>	<b>6</b>	<b>1</b>	<b>145</b>
<b>Total Average of Benefit</b>	<b>328.83</b>	<b>249.95</b>	<b>364.71</b>	<b>545.32</b>	<b>783.14</b>	<b>643.62</b>	<b>363.95</b>
<b>Total Average of Study 4 Benfit</b>	<b>209.57</b>	<b>231.07</b>	<b>333.70</b>	<b>483.08</b>	<b>744.87</b>	<b>635.35</b>	<b>328.29</b>
<b>Total Average of Percent</b>	<b>63.7%</b>	<b>92.4%</b>	<b>91.5%</b>	<b>88.6%</b>	<b>95.1%</b>	<b>98.7%</b>	<b>90.2%</b>

United Actuarial Services, Inc.

# Study #4 Results

In Pay Status Impact on Benefit w/110% of PBGC Guarantee  
Orphan or Pre-1/1/1988 Termination Inactive Vested

Row Labels	05-09	10-14	15-19	20-24	25-29	30-34	35-39	Grand Total
<b>55-59</b>								
Count of AA		1	2	2	4			9
Average of Benefit		143.08	1336.03	2781.14	3487.23			2480.70
Average of Study 4 Benfit		143.08	707.85	893.19	963.46			799.89
Average of Percent		100.0%	53.0%	32.1%	27.6%			32.2%
<b>60-64</b>								
Count of AA		2	3	2	6	2		15
Average of Benefit		1438.35	1901.95	3392.72	3340.76	3325.72		2804.27
Average of Study 4 Benfit		408.21	694.74	938.88	1068.33	1165.00		901.23
Average of Percent		28.4%	36.5%	27.7%	32.0%	35.0%		32.1%
<b>65-69</b>								
Count of AA		1	2	1	9	2	1	16
Average of Benefit		125.00	614.51	787.14	3336.51	3986.55	2012.54	2634.71
Average of Study 4 Benfit		125.00	485.90	712.92	1008.85	1233.82	1376.38	920.84
Average of Percent		100.0%	79.1%	90.6%	30.2%	30.9%	68.4%	35.0%
<b>70-74</b>								
Count of AA	1	3	1	4	5	5		19
Average of Benefit	214.51	236.02	1539.54	1644.73	3224.75	2780.60		2056.20
Average of Study 4 Benfit	176.96	222.39	707.85	649.28	1040.15	1377.17		854.51
Average of Percent	82.5%	94.2%	46.0%	39.5%	32.3%	49.5%		41.6%
<b>75-79</b>								
Count of AA			4			4		8
Average of Benefit			1865.93			2248.48		2057.20
Average of Study 4 Benfit			1313.61			1608.10		1460.86
Average of Percent			70.4%			71.5%		71.0%
<b>80-84</b>								
Count of AA			1	1		1	2	5
Average of Benefit			527.99	1006.79		2327.67	2048.41	1591.85
Average of Study 4 Benfit			527.99	1006.79		2327.67	2048.41	1591.85
Average of Percent			100.0%	100.0%		100.0%	100.0%	100.0%
<b>85+</b>								
Count of AA				1			1	2
Average of Benefit				723.87			1755.46	1239.67
Average of Study 4 Benfit				723.87			1755.46	1239.67
Average of Percent				100.0%			100.0%	100.0%
<b>Total Count of AA</b>	<b>1</b>	<b>7</b>	<b>13</b>	<b>11</b>	<b>24</b>	<b>14</b>	<b>4</b>	<b>74</b>
<b>Total Average of Benefit</b>	<b>214.51</b>	<b>550.40</b>	<b>1472.17</b>	<b>1949.49</b>	<b>3339.41</b>	<b>2846.37</b>	<b>1966.20</b>	<b>2331.21</b>
<b>Total Average of Study 4 Benfit</b>	<b>176.96</b>	<b>250.24</b>	<b>843.23</b>	<b>791.35</b>	<b>1022.67</b>	<b>1460.26</b>	<b>1807.16</b>	<b>997.46</b>
<b>Total Average of Percent</b>	<b>82.5%</b>	<b>45.3%</b>	<b>57.3%</b>	<b>40.6%</b>	<b>30.6%</b>	<b>51.3%</b>	<b>91.9%</b>	<b>42.6%</b>

United Actuarial Services, Inc.



# Study #4 – Data Missing

- ◆ For participants whose employer is not noted
  - All considered in the grouping where reduction is based on service
  - Includes 89 inactive vested and 205 retired participants
- ◆ For missing date of termination
  - Assume 6/30 of latest year with contributions on 138 inactive vested and 88 participants in pay status
  - Use date of retirement for participants in pay status without any contribution history provided for 316 participants in pay status, so all of these participants, unless orphans, aren't considered inactive vested
  - Pre-1/1/1988 terminations were given the maximum reduction

# Next Steps - Timing

- ◆ Prior to IRS submission on suspensions
  - Coordination with PBGC's initial merger feasibility study
    - We will provide the PBGC with all requested data by week of Feb. 29.
    - They said 6-8 weeks to complete, so should be done by end of April.
    - It may take longer; they took more time than they said to just request data.
  - We need approval of suspension at least 3 months before filing
    - June 30 deadline – If we miss this date, then July 1, 2017 effective date not possible and, barring a mid-year effective date, we move out a year.
    - This leaves, at most, 2 months for full merger study.
    - We may only have initial feasibility merger study, but this may be enough to justify a year delay if the initial merger study results are favorable.



# Next Steps - Timing

## ◆ IRS Submission

- Have three month windows of time for cash flow projections
- Can file before final regulations but may need to revise accordingly
- Additional work to be done for submission
  - Draft notice including estimated impact to each participant is due within 4 business days prior to submission
  - Draft a ballot for the vote
  - Various other pieces of information required by Rev. Proc. 2015-34
- Must be no later than 9/30/16 with a 7/1/17 effective date

## ◆ After IRS Submission – up to 225-day wait for approval

- Hold membership meetings to explain suspension and voting
- Line up third party to carry out voting
- Voting must be within 30 days of IRS approval!

# Basis for Study

## General Assumptions

- ◆ This study is based on 2015 valuation with these exceptions:
  - We assumed a -0.15% return for the 2015-16 year based on 12/31/15 unaudited financials and 6.75% per annum return for last 6 months
  - We assumed a 6.75% annual return through the 2024-25 plan year
  - We assumed 5,962 future annual weeks starting in 2015-16 year
  - Future contributions in projections include all reasonably collectible contributions developed with the 6/30/15 EWL report
  - Current inactive vested with all or a portion of their benefit based on the 110% of the PBGC guarantee are assumed to retire at age 52



# Basis for Study Benefit Assumptions

- ◆ We made the following benefit assumptions for the study
  - All suspensions are effective as of July 1, 2017.
  - A terminated participant's multiplier was determined using his or her reported date of termination. If date of termination missing, the 6/30 of the last year of contributions is used as the date of termination. If that's missing too, assume date of retirement is date of termination.

# Actuarial Basis

This report includes results which are based on plan provisions, assumptions, methods and demographic data described in the July 1, 2015 actuarial valuation of the International Association of Machinists Motor City Pension Fund except as previously noted. This report is subject to the same qualifications and limitations as detailed in that report.

I am a Member of the Academy of Actuaries and fully meet the qualification requirements of the Academy to provide the opinion contained herein.

Redacted by the U.S. Department of the Treasury

Paul Bullock, ASA, EA, MAAA

**United Actuarial Services, Inc.**



November 8, 2016

Board of Trustees  
International Association of Machinists Motor City Pension Fund  
Troy, Michigan

**Re: Benefit Suspension Update**

Dear Trustees:

We have prepared a few items to aid in our discussion regarding benefit suspensions:

1. **Summary of Additional Assumptions with a Benefit Suspension** – We have learned about a few special assumptions that are warranted to add to our benefit suspension studies. This attachment provides a summary and discussion of these additional assumptions.
2. **Age and Service Tables with Old and New Higher Tier Benefit Suspension Formula** – We have updated these tables to include three additional months of asset experience from June, July and August. They use both the old multiplier ceiling formula for the higher tier and the new flat percent reduction formula to allow for a comparison between the two.

The multiplier ceiling of 1.0% is lower than the previous 1.1% ceiling calculated back in June. Here are the positive and negative items impacting this update:

- The additional operational expense assumptions from #1 above, which includes a 2% increase per year and an extra \$100,000 in fees for the next two plan years, are the key reason why this result is worse.
- These additional expenses were partly offset by improved actual asset returns. The estimated return for the 2015-16 plan year improved from -2.48% to -1.35%. The estimated return for the 2016-17 plan year, including asset experience from July and August, improved from our expected 6.75% to 9.10%.

The new flat percent reduction would be a **65% reduction** to all participants on the higher tier. This reduction is much simpler and will allow us to properly adjust affected participants in pay status without requiring their contribution history. For example, if a participant has a \$1,000 per month benefit in retirement, the 65% reduction will lower his benefit to \$350.

There is one group, active participants with most if not all accruals at the 0.5% multiplier, that we wanted to avoid hurting with the benefit suspension. Their benefits have already been reduced enough. The multiplier ceiling concept guaranteed that the 0.5% multiplier years would not be touched. The flat reduction does not have that guarantee. However, everyone's benefit cannot be reduced below 110% of the PBGC guarantee. Participants with only 0.5% multiplier accruals are already below this floor level so they continue to see no further reduction under the flat reduction formula.

This flat percent reduction is replacing the multiplier ceiling for what I have been referring to as the higher tier benefit. The lower tier benefit, the maximum reduction of 110% of the PBGC guarantee, still applies to the same groups of participants as it did before. Age and service grids are not provided for the lower tier because those results have not changed since our last update. Maintaining the lower tier benefit is subject to it still being an equitable distribution among the various groups. We have not yet determined if it is an equitable distribution with the flat percentage reduction being the higher tier. We may have to move participants from the lower tier benefit to the higher tier benefit if the equitable distribution calculations no longer work.

The 65% flat percentage reduction result is still preliminary. We still have a number of additional items to add before getting the final suspension percentage for a suspension filing that would be made by the end of March, 2017:

- **The asset experience through December 31, 2016** – The asset return is still the biggest variable which could still significantly change our final result. An additional loss could be enough to make even the maximum benefit suspension not feasible.
  - **The plan experience from the July 1, 2016 actuarial valuation** – Our preliminary valuation result at this moment yields a very small experience gain on plan liabilities. Unless there is an unexpected surprise, the 2016 plan experience gain or loss is not expected to significantly change our result.
  - **Adding final special assumptions** – The mortality update especially should drop plan liabilities by about 0.25% to 0.40%. The open group projection with new entrants could also affect the result, but it is difficult to tell whether this change will help or hurt the final result.
3. **Sample Benefit Suspension Participant Notice** – This attached preliminary sample notice provides an idea of what content would be provided to participants in late March if the Board decides to proceed.

Deciding to approve this benefit suspension is tough choice that no Board ever wants to consider. Participants have been loyal, sometimes for their entire career, knowing that they will receive a monthly lifetime pension for their hard work and dedication. This implicit promise would be broken by taking away a big chunk of their pension benefits and is a compelling reason to do nothing. However, this alone is a false sense of reality. The Plan is projected to be insolvent in less than 10 years at which time participants' benefit will be cut to the PBGC guarantee level. Additionally, the PBGC is also in financial trouble. By the time of Plan insolvency, this PBGC guarantee could be cut yet further to save itself from insolvency (one study looked at a 25% cut) or cut by a whopping 90% if the PBGC's funds are used up. No action on a suspension would lead to at least a 10% greater cut in 10 years for most participants<sup>1</sup>, and it could be much greater.

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<sup>1</sup> Participants with most or all of their benefits earned at the 0.5% multiplier may already be below the PBGC guarantee and, therefore, would not receive any further reduction with the Plan's insolvency.



As fiduciaries, the Board must operate in what is in the best interest of plan participants. Approving a benefit suspension at least gives participants a choice (remember, they get an opportunity to vote on the suspension) between a smaller haircut now or a bigger haircut later.

Finally, there is only a small window of opportunity to do a benefit suspension. Once the maximum reduction on all participants, 110% of the PBGC guarantee, does not eliminate the insolvency, the window of opportunity is shut<sup>2</sup>. This could happen as early as this current January 1, 2018 proposed suspension date with a big enough loss or soon thereafter, even if there is not an additional loss. Waiting further to consider a benefit suspension risks having this window of opportunity shut forever.

The results in this letter are based on the plan provisions, assumptions, methods and demographic data as summarized in the July 1, 2016 PPA certification letter with the following exceptions:

- The asset return for the 2016-17 plan year is assumed to be 9.10% based on actual experience through August 31, 2016 combined with a return at an annual rate of 6.75% for the remaining ten months of the plan year.
- Operational expenses are assumed to increase by 2% per year beginning with the 2016-17 plan year. Also, an additional \$100,000 is added to the operational expenses in both the 2016-17 and 2017-18 plan years.

I am available at (317) 580-8652 or [pbullock@unitedactuarial.com](mailto:pbullock@unitedactuarial.com) if you have any questions. I will be in attendance at your November 10<sup>th</sup> meeting to review this letter.

Sincerely,

Redacted by the U.S. Department  
of the Treasury

Paul Bullock, ASA, EA, MAAA  
Vice President

Enclosures

cc: Mr. Duane Menter, Administrator  
Mr. Michael Mills, Fund Counsel  
Ms. Violet Gjorgjevski, Plan Associate

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<sup>2</sup> Technically, MPRA allows plans to partition a portion of the plan off to the PBGC when the maximum suspension does not work. However, the PBGC would only approve a suspension that includes a partition if such partition did not compromise their ability to make payments to plans that they have already promised. This effectively makes the a partition solution very difficult, if not impossible, to accomplish at this time.

## IAM Motor City Pension Fund

### Additional Projection Assumptions with a Benefit Suspension

There are a few additional projection assumption changes we have added (where noted in *italics*) or need to incorporate into the final benefit suspension solution as a result of recent benefit suspension application denials, guidance from speakers at educational sessions, and experience from the first UAS actuary that has completed a benefit suspension application (for Bricklayers Local 7):

- **Employment trends** – It is important to add an annual decline in work if the industry has had a track record of declining work in the past. The lack of a decline in an industry that had a track record of one was part of the reason for the Road Carriers Local 707 and Iron 16 suspension denials. Here is a 5, 10 and 15-year average annual change in work for employers that were current as of June 30, 2015 (all other employers excluded):

Period	Average Increase
7/1/2010-6/30/2015 (5 years)	+0.48%/year
7/1/2005-6/30/2015 (10 years)	-2.71%/year
7/1/2000-6/30/2015 (15 years)	-1.01%/year

A 5-year history includes most of the recovery period from the recession but not the recession itself, so this figure may be high. A 10-year history includes the recession and partial recovery, but this doesn't include stronger market periods like the 1990's. The 15-year history includes more years before the recession and an smaller decline of only 1% per year. Further history (which is unavailable) likely would show that something higher, including 0% growth, could be justified. It's also worthwhile to note that the maximum suspension would not work with a 1% decline per year. Considering all of this, *we have left the Plan at 0% growth in future weeks worked in our latest update.*

- **Future new entrants** – The final run must include what's called an open group projection. This is where we replace current actives after they terminate, retire, etc. with new entrants. These new entrants must have a distribution of entry ages which reflect ages of actual new entrants to the Plan over at least the past 5 years.
- **Expenses** – *Both of these items have been added to our latest update.*
  - We need to estimate and add the additional cost of completing the benefit suspension application. We estimate this cost to be \$100,000 in each of the next two plan years. This is extra expense could have easily been \$150,000 with the multiplier ceiling formula given the benefit calculation challenges we would have faced with limited documentation. Brick 7, our other fund that filed for a suspension, faced similar issues with less than half the participant size and generated \$120,000 in special charges in the suspension filling year.
  - Future expenses should also be increased annually by expected inflation. We used an annual increase of 2.0% per year into the future.

## **IAM Motor City Pension Fund**

### **Additional Projection Assumptions with a Benefit Suspension**

- **Bankruptcy rates** – There is an annual probability that an employer paying withdrawal liability would go bankrupt and would no longer be able to pay withdrawal liability. We used an annual rate of bankruptcy of 13.6% for the smaller employers in our mass withdrawal liability study. However, no application has yet to add bankruptcy rates. Why? From what I have learned, it seems the track record of employers going bankrupt is considerably worse with mass withdrawal. It generates greater, uncapped assessments that further incentivizes employers to declare bankruptcy. Also, mass withdrawal can be a plan sponsor decision, whereas a regular withdrawal is primarily an employer's financial decision, so mass withdrawal employers could get stuck with a withdrawal liability that they did not financially choose or can afford. As a result of no bankruptcy rates with prior suspension filings and these above arguments, I will likely leave bankruptcy rates out of the benefit suspension.
- **Mortality** – The Society of Actuaries recently published mortality improvement scale MP-2016. This adds three additional years (2012, 2013 and 2014) to their study. The rate of mortality improvement over these three years continued to be slower and, therefore, the new scale has slower improvements. We will add in this scale with the 2016 valuation. It is estimated to lower plan liabilities by about 0.25% to 0.40%.

We will hear back on at least one additional suspension application (Teamsters 469) before the end of the year. We will hear on a second (Brick 7) in early February and could hear about a third (Iron 17) ahead of their 225-day due date because they resubmitted their application and had already started their approval process. We will monitor these responses to see if there's any further adjustments we need to make before filing our application.



# IAM Motor City Pension Fund

## Breakdown of Benefit Suspension Impact by Age and Service

**Actives with 1.0% Multiplier Ceiling, 110% of PBGC Guar. Minimum**

Row Labels	None	01-09	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>Under 25</b>											
Count of AA	1	2									3
Average of BENA	2.67	29.58									20.61
Average of Study 4 BENA	2.67	29.58									20.61
Average of Percent	100.0%	100.0%									100.0%
<b>25-29</b>											
Count of AA		15									15
Average of BENA		54.41									54.41
Average of Study 4 BENA		54.41									54.41
Average of Percent		100.0%									100.0%
<b>30-34</b>											
Count of AA		14		1							15
Average of BENA		41.93		754.53							89.44
Average of Study 4 BENA		41.93		521.06							73.87
Average of Percent		100.0%		69.1%							82.5%
<b>35-39</b>											
Count of AA	2	2	3	3	1						11
Average of BENA	0.80	21.52	205.99	602.59	1104.59						326.52
Average of Study 4 BENA	0.80	21.52	205.99	441.43	658.69						240.47
Average of Percent	100.0%	100.0%	100.0%	72.7%	59.6%						73.7%
<b>40-44</b>											
Count of AA	1	2		3	5						11
Average of BENA	1.82	100.65		351.68	1513.46						856.86
Average of Study 4 BENA	1.82	100.65		383.95	794.24						484.20
Average of Percent	100.0%	100.0%		69.6%	52.5%						56.3%
<b>45-49</b>											
Count of AA	1	3	1	2	5	5					17
Average of BENA	4.32	54.72	222.72	673.72	1093.44	1280.70					800.55
Average of Study 4 BENA	4.32	54.72	222.72	481.74	648.86	806.16					507.64
Average of Percent	100.0%	100.0%	100.0%	71.5%	56.3%	62.9%					63.4%
<b>50-54</b>											
Count of AA		3		3	1	2	2	4			15
Average of BENA		80.76		791.56	904.28	1828.16	2571.77	2396.81			1844.55
Average of Study 4 BENA		80.76		479.34	560.38	863.43	1202.97	1287.10			768.15
Average of Percent		100.0%		60.6%	62.0%	47.2%	46.9%	55.1%			53.2%
<b>55-59</b>											
Count of AA		5		5	4	5	5	2			24
Average of BENA		64.28		735.84	1472.63	1825.82	2165.28	3879.51			1415.57
Average of Study 4 BENA		64.28		508.40	767.96	943.28	1111.89	1445.27			717.50
Average of Percent		100.0%		69.1%	52.0%	51.2%	51.0%	57.7%			50.7%
<b>60-64</b>											
Count of AA		2	2	4	2	2	1	2	4	1	20
Average of BENA		31.40	280.67	473.29	1931.09	2305.22	1510.94	2760.38	1937.61	1798.30	1378.52
Average of Study 4 BENA		31.40	280.67	372.11	897.34	1021.55	1061.78	1301.55	1440.28	1543.51	845.99
Average of Percent		100.0%	100.0%	78.6%	46.5%	44.3%	70.3%	47.3%	74.3%	85.8%	61.4%
<b>65+</b>											
Count of AA				2							2
Average of BENA				1185.83							1185.83
Average of Study 4 BENA				661.75							661.75
Average of Percent				55.8%							55.8%
<b>Total Count of AA</b>	<b>5</b>	<b>48</b>	<b>6</b>	<b>23</b>	<b>18</b>	<b>12</b>	<b>8</b>	<b>8</b>	<b>4</b>	<b>1</b>	<b>113</b>
<b>Total Average of BENA</b>	<b>2.08</b>	<b>52.02</b>	<b>233.67</b>	<b>691.24</b>	<b>1378.67</b>	<b>1678.98</b>	<b>2185.11</b>	<b>2828.33</b>	<b>1937.61</b>	<b>1798.10</b>	<b>860.30</b>
<b>Total Average of Study 4 BENA</b>	<b>2.08</b>	<b>52.02</b>	<b>233.67</b>	<b>467.50</b>	<b>738.95</b>	<b>885.88</b>	<b>1128.40</b>	<b>1330.30</b>	<b>1440.28</b>	<b>1543.51</b>	<b>492.89</b>
<b>Total Average of Percent</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>67.6%</b>	<b>53.6%</b>	<b>52.8%</b>	<b>51.6%</b>	<b>47.0%</b>	<b>74.3%</b>	<b>85.8%</b>	<b>57.1%</b>

# IAM Motor City Pension Fund

## Breakdown of Benefit Suspension Impact by Age and Service

**Actives with 65% Flat Reduction, 110% of PBGC Guarantee Minimum**

Row Labels	None	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>Under 25</b>											
Count of AA	1	2									3
Average of BENA	2.67	26.58									20.61
Average of Study 5 BENA	0.95	28.18									19.10
Average of Percent	35.0%	95.5%									82.7%
<b>25-29</b>											
Count of AA		15									15
Average of BENA		54.41									54.41
Average of Study 5 BENA		50.98									50.98
Average of Percent		93.7%									93.7%
<b>30-34</b>											
Count of AA		14		1							15
Average of BENA		41.93		754.53							89.44
Average of Study 5 BENA		39.01		521.06							71.15
Average of Percent		93.0%		69.1%							79.6%
<b>35-39</b>											
Count of AA	2	2	3	3	1						11
Average of BENA	0.80	21.32	205.99	607.59	1104.59						326.32
Average of Study 5 BENA	0.28	20.23	190.86	441.43	658.69						236.05
Average of Percent	35.0%	94.9%	91.7%	72.7%	59.6%						72.3%
<b>40-44</b>											
Count of AA	1	2		3	5						11
Average of BENA	1.82	100.65		551.68	2513.46						856.86
Average of Study 5 BENA	0.64	94.75		383.95	703.95						441.97
Average of Percent	35.0%	94.1%		69.6%	46.3%						51.6%
<b>45-49</b>											
Count of AA	1	3	1	2	5	5					17
Average of BENA	4.32	54.72	222.72	673.72	1098.44	1280.70					800.56
Average of Study 5 BENA	1.51	51.19	207.94	481.73	548.86	806.16					505.98
Average of Percent	35.0%	93.6%	93.4%	71.5%	59.3%	62.9%					69.2%
<b>50-54</b>											
Count of AA		3		3	1	2	2	4			15
Average of BENA		80.76		791.56	904.28	1828.16	2571.77	2336.81			1444.55
Average of Study 5 BENA		74.19		429.30	560.38	825.83	1143.53	1263.16			757.48
Average of Percent		91.9%		54.2%	62.0%	45.2%	44.5%	54.1%			54.3%
<b>55-59</b>											
Count of AA		5		5	4	3	5	2			24
Average of BENA		64.28		735.84	1477.63	1825.82	2165.28	3879.31			1415.57
Average of Study 5 BENA		52.29		412.48	727.00	900.49	1089.04	1357.76			870.59
Average of Percent		81.3%		56.1%	48.2%	48.3%	50.3%	55.0%			47.4%
<b>60-64</b>											
Count of AA		2	2	4	2	2	1	2	4	1	20
Average of BENA		31.40	280.67	473.29	1931.09	2305.22	1510.94	2760.38	1937.61	1798.30	1378.52
Average of Study 5 BENA		28.93	249.02	372.11	676.12	938.87	1061.78	1255.64	1440.28	1543.51	807.60
Average of Percent		92.1%	88.7%	78.6%	35.0%	40.7%	70.3%	45.5%	74.3%	85.8%	58.6%
<b>65+</b>											
Count of AA				2							2
Average of BENA				1185.83							1185.83
Average of Study 5 BENA				545.63							545.63
Average of Percent				46.0%							46.0%
<b>Total Count of AA</b>	<b>5</b>	<b>48</b>	<b>6</b>	<b>23</b>	<b>18</b>	<b>12</b>	<b>8</b>	<b>8</b>	<b>4</b>	<b>1</b>	<b>133</b>
<b>Total Average of BENA</b>	<b>2.08</b>	<b>52.02</b>	<b>233.67</b>	<b>691.24</b>	<b>1378.67</b>	<b>1678.98</b>	<b>2185.11</b>	<b>2828.33</b>	<b>1937.61</b>	<b>1798.30</b>	<b>860.36</b>
<b>Total Average of Study 5 BENA</b>	<b>0.73</b>	<b>47.77</b>	<b>213.10</b>	<b>430.03</b>	<b>680.19</b>	<b>855.14</b>	<b>1099.26</b>	<b>1284.93</b>	<b>1440.28</b>	<b>1543.51</b>	<b>468.79</b>
<b>Total Average of Percent</b>	<b>35.0%</b>	<b>91.8%</b>	<b>91.2%</b>	<b>62.2%</b>	<b>45.3%</b>	<b>50.9%</b>	<b>50.3%</b>	<b>45.4%</b>	<b>74.3%</b>	<b>85.8%</b>	<b>54.5%</b>



# IAM Motor City Pension Fund

## Breakdown of Benefit Suspension Impact by Age and Service

**Inactive Vested with 1.0% Multiplier Ceiling Only, 110% of PBGC Guar. Minimum**

Row Labels	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>30-34</b>									
Count of AA		2							2
Average of BENFIT		201.08							201.08
Average of Study 4 BENFIT		198.23							198.23
Average of Percent		98.6%							98.6%
<b>35-39</b>									
Count of AA	5	9	3						17
Average of BENFIT	204.04	296.40	513.59						307.56
Average of Study 4 BENFIT	162.25	273.10	471.86						275.58
Average of Percent	79.5%	92.1%	91.9%						89.6%
<b>40-44</b>									
Count of AA	8	4	3						15
Average of BENFIT	244.25	228.60	548.79						300.99
Average of Study 4 BENFIT	193.48	223.54	449.36						252.67
Average of Percent	79.2%	97.8%	81.9%						83.9%
<b>45-49</b>									
Count of AA	8	11	11	1	2				33
Average of BENFIT	242.51	472.64	797.54	732.84	856.12				556.28
Average of Study 4 BENFIT	184.87	354.11	581.74	668.87	785.33				424.63
Average of Percent	76.2%	74.9%	72.9%	91.3%	91.7%				76.3%
<b>50-54</b>									
Count of AA	7	13	5	2	1	1			29
Average of BENFIT	218.29	294.60	454.15	530.52	1534.79	1594.52			407.55
Average of Study 4 BENFIT	173.96	274.68	426.05	498.17	1061.78	1160.09			349.55
Average of Percent	79.7%	93.2%	93.8%	93.9%	69.2%	72.8%			85.8%
<b>55-59</b>									
Count of AA	8	13	2	1	3	2	1		30
Average of BENFIT	196.92	287.56	761.50	336.96	763.64	1191.88	1543.72		446.40
Average of Study 4 BENFIT	159.52	251.99	574.70	336.96	707.64	1043.51	1387.76		387.87
Average of Percent	81.0%	87.6%	75.5%	100.0%	92.7%	87.6%	89.5%		86.9%
<b>60-64</b>									
Count of AA	2	4		4	1		1	1	13
Average of BENFIT	248.37	389.01		1076.10	879.32		1545.36	1778.18	812.31
Average of Study 4 BENFIT	216.42	319.02		722.14	802.58		1392.90	1589.51	644.81
Average of Percent	87.1%	82.0%		67.1%	91.3%		90.1%	89.4%	79.4%
<b>65+</b>									
Count of AA				1				1	2
Average of BENFIT				336.97				1602.89	969.93
Average of Study 4 BENFIT				336.97				1454.73	895.85
Average of Percent				100.0%				90.8%	92.4%
<b>Total Count of AA</b>	<b>38</b>	<b>56</b>	<b>24</b>	<b>9</b>	<b>7</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>141</b>
<b>Total Average of BENFIT</b>	<b>224.06</b>	<b>326.92</b>	<b>656.41</b>	<b>752.47</b>	<b>916.75</b>	<b>1326.09</b>	<b>1544.54</b>	<b>1690.54</b>	<b>469.60</b>
<b>Total Average of Study 4 BENFIT</b>	<b>178.02</b>	<b>281.55</b>	<b>518.44</b>	<b>580.86</b>	<b>793.99</b>	<b>1082.37</b>	<b>1390.33</b>	<b>1522.12</b>	<b>388.88</b>
<b>Total Average of Percent</b>	<b>79.5%</b>	<b>86.1%</b>	<b>79.0%</b>	<b>77.2%</b>	<b>86.6%</b>	<b>81.6%</b>	<b>90.0%</b>	<b>90.0%</b>	<b>82.8%</b>



# IAM Motor City Pension Fund

## Breakdown of Benefit Suspension Impact by Age and Service

**Inactive Vested with 65% Flat Reduction, 110% of PBGC Guarantee Minimum**

Row Labels	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>30-34</b>									
Count of AA		2							2
Average of BENFIT		201.08							201.08
Average of Study 5 BENFIT		198.23							198.23
Average of Percent		98.6%							98.6%
<b>35-39</b>									
Count of AA	5	9	3						17
Average of BENFIT	204.04	296.40	513.59						307.56
Average of Study 5 BENFIT	162.25	273.10	471.86						275.58
Average of Percent	79.5%	92.1%	91.9%						89.6%
<b>40-44</b>									
Count of AA	8	4	3						15
Average of BENFIT	244.25	228.60	548.79						300.99
Average of Study 5 BENFIT	193.48	223.54	449.36						252.67
Average of Percent	79.2%	97.8%	81.9%						83.9%
<b>45-49</b>									
Count of AA	8	11	11	1	2				33
Average of BENFIT	242.51	472.64	797.54	732.84	856.12				556.28
Average of Study 5 BENFIT	184.87	354.11	581.74	668.87	785.33				424.63
Average of Percent	76.2%	74.9%	72.9%	91.3%	91.7%				76.3%
<b>50-54</b>									
Count of AA	7	13	5	2	1	1			29
Average of BENFIT	218.29	294.60	454.15	530.52	1534.79	1594.52			407.55
Average of Study 5 BENFIT	173.96	274.68	426.05	498.17	1061.78	1160.09			349.55
Average of Percent	79.7%	93.2%	93.8%	93.9%	69.2%	72.8%			85.8%
<b>55-59</b>									
Count of AA	8	13	2	1	3	2	1		30
Average of BENFIT	196.92	287.56	761.50	336.96	763.64	1191.88	1543.72		446.40
Average of Study 5 BENFIT	159.52	251.99	574.70	336.96	707.64	1043.51	1387.76		387.87
Average of Percent	81.0%	87.6%	75.5%	100.0%	92.7%	87.6%	89.5%		86.9%
<b>60-64</b>									
Count of AA	2	4		4	1		1	1	13
Average of BENFIT	248.37	389.01		1076.10	879.32		1545.36	1778.18	812.31
Average of Study 5 BENFIT	216.42	319.02		722.14	802.58		1392.90	1589.51	644.81
Average of Percent	87.1%	82.0%		67.1%	91.3%		90.1%	89.4%	79.4%
<b>65+</b>									
Count of AA				1				1	2
Average of BENFIT				336.97				1602.89	969.93
Average of Study 5 BENFIT				336.97				1454.73	895.85
Average of Percent				100.0%				90.8%	92.4%
<b>Total Count of AA</b>	<b>38</b>	<b>56</b>	<b>24</b>	<b>9</b>	<b>7</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>141</b>
<b>Total Average of BENFIT</b>	<b>224.06</b>	<b>326.92</b>	<b>656.41</b>	<b>752.47</b>	<b>916.75</b>	<b>1326.09</b>	<b>1544.54</b>	<b>1690.54</b>	<b>469.60</b>
<b>Total Average of Study 5 BENFIT</b>	<b>178.02</b>	<b>281.55</b>	<b>518.44</b>	<b>580.86</b>	<b>793.99</b>	<b>1082.37</b>	<b>1390.33</b>	<b>1522.12</b>	<b>388.88</b>
<b>Total Average of Percent</b>	<b>79.5%</b>	<b>86.1%</b>	<b>79.0%</b>	<b>77.2%</b>	<b>86.6%</b>	<b>81.6%</b>	<b>90.0%</b>	<b>90.0%</b>	<b>82.8%</b>

# IAM Motor City Pension Fund

## Breakdown of Benefit Suspension Impact by Age and Service

**In Pay Status with 1.0% Multiplier Ceiling Only, 110% of PBGC Guar. Minimum**

Row Labels	None	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>50-54</b>										
Count of AA			2		1					3
Average of Benefit			332.55		566.71					410.60
Average of Study 4 Benefit			313.30		528.04					384.88
Average of Percent			94.2%		93.2%					93.7%
<b>55-59</b>										
Count of AA		1	3	1	2	9	4	4		24
Average of Benefit		199.96	101.73	588.46	512.19	1806.45	1348.46	1665.10		1267.93
Average of Study 4 Benefit		183.12	101.73	534.64	491.37	845.95	715.75	1089.74		701.72
Average of Percent		91.6%	100.0%	90.9%	95.9%	46.8%	53.1%	65.4%		55.3%
<b>60-64</b>										
Count of AA		2	4	3	10	14	8		1	42
Average of Benefit		158.06	304.64	810.66	1570.90	1963.86	2039.88		1615.24	1550.09
Average of Study 4 Benefit		150.28	284.21	350.53	694.32	938.23	1012.60		1457.35	764.90
Average of Percent		95.1%	93.3%	43.2%	44.2%	47.8%	49.6%		90.2%	69.3%
<b>65-69</b>										
Count of AA		6	8	10	6	24	15	4	3	76
Average of Benefit		268.41	177.62	370.49	1654.93	2383.84	2423.18	1898.27	2360.50	1643.42
Average of Study 4 Benefit		195.10	176.13	334.12	749.60	1081.33	1267.34	1346.76	1282.98	850.22
Average of Percent		72.7%	99.2%	90.2%	45.3%	45.4%	52.3%	70.9%	54.4%	51.7%
<b>70-74</b>										
Count of AA		3	6	6	4	7	18	4	3	51
Average of Benefit		524.94	548.02	905.07	798.64	1665.99	1991.05	2271.78	2156.42	1500.88
Average of Study 4 Benefit		304.77	369.50	481.31	572.51	865.28	1197.68	1403.41	1622.16	909.89
Average of Percent		58.1%	67.4%	53.2%	71.7%	51.9%	60.2%	61.8%	75.2%	60.6%
<b>75-79</b>										
Count of AA		2	6	8	9	13	15	3	1	57
Average of Benefit		412.45	465.62	644.63	1345.16	1087.78	1688.98	3701.30	2072.45	1290.07
Average of Study 4 Benefit		191.26	425.61	476.62	1176.93	897.04	1396.11	1848.16	1984.29	1008.31
Average of Percent		46.4%	91.4%	73.9%	87.5%	82.5%	82.7%	49.9%	95.7%	78.2%
<b>80-84</b>										
Count of AA		10	2	4	8	10	11	5	4	55
Average of Benefit		408.45	290.44	324.61	562.26	919.94	1035.81	1945.73	1115.38	855.12
Average of Study 4 Benefit		408.45	290.44	324.61	562.26	919.94	1035.81	1945.73	1115.38	855.12
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>85+</b>										
Count of AA		70	1	4	3	9	7	2	4	103
Average of Benefit		392.91	1064.49	451.65	875.39	1320.18	1015.70	832.06	912.66	578.11
Average of Study 4 Benefit		392.91	1064.49	451.65	875.39	1320.18	1015.70	832.06	912.66	578.11
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Total Count of AA</b>	<b>80</b>	<b>17</b>	<b>37</b>	<b>39</b>	<b>51</b>	<b>85</b>	<b>67</b>	<b>23</b>	<b>12</b>	<b>411</b>
<b>Total Average of Benefit</b>	<b>394.85</b>	<b>363.03</b>	<b>345.86</b>	<b>626.59</b>	<b>1247.29</b>	<b>1709.07</b>	<b>1949.65</b>	<b>1850.29</b>	<b>1771.92</b>	<b>1163.80</b>
<b>Total Average of Study 4 Benefit</b>	<b>394.85</b>	<b>270.38</b>	<b>306.85</b>	<b>480.83</b>	<b>919.90</b>	<b>975.57</b>	<b>1251.74</b>	<b>1261.58</b>	<b>1348.47</b>	<b>791.22</b>
<b>Total Average of Percent</b>	<b>100.0%</b>	<b>74.5%</b>	<b>88.7%</b>	<b>76.7%</b>	<b>73.8%</b>	<b>57.1%</b>	<b>64.2%</b>	<b>68.2%</b>	<b>76.1%</b>	<b>68.0%</b>



# IAM Motor City Pension Fund

## Breakdown of Benefit Suspension Impact by Age and Service

**In Pay Status with 65% Flat Reduction, 110% of PBGC Guarantee Minimum**

Row Labels	None	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
<b>50-54</b>										
Count of AA			2		1					3
Average of Benefit			332.55		566.71					410.60
Average of Study 5 Benefit			313.30		528.04					384.88
Average of Percent			94.2%		93.2%					93.7%
<b>55-59</b>										
Count of AA		1	3	1	2	9	4	4		24
Average of Benefit		199.96	101.73	588.46	512.19	1806.45	1348.46	1665.10		1267.93
Average of Study 5 Benefit		183.12	101.73	534.64	491.37	871.87	715.75	1089.74		711.44
Average of Percent		91.6%	100.0%	90.9%	95.9%	48.3%	53.1%	65.4%		56.1%
<b>60-64</b>										
Count of AA		2	4	3	10	14	8		1	42
Average of Benefit		158.06	304.64	810.66	1570.90	1963.86	2039.88		1615.24	1550.09
Average of Study 5 Benefit		150.28	284.21	349.00	726.81	981.21	1026.07		1457.35	789.41
Average of Percent		95.1%	93.3%	43.1%	46.3%	50.0%	50.3%		90.2%	50.9%
<b>65-69</b>										
Count of AA		6	8	10	6	24	15	4	3	76
Average of Benefit		268.41	177.62	370.49	1654.93	2383.84	2423.18	1898.27	2360.50	1643.42
Average of Study 5 Benefit		194.21	176.03	333.85	758.33	1061.61	1196.79	1346.76	1282.98	830.64
Average of Percent		72.4%	99.1%	90.1%	45.8%	44.5%	49.4%	70.9%	54.4%	50.2%
<b>70-74</b>										
Count of AA		3	6	6	4	7	18	4	3	51
Average of Benefit		524.94	548.02	905.07	798.64	1665.99	1991.05	2271.78	2156.42	1500.88
Average of Study 5 Benefit		304.77	363.99	482.31	572.51	926.68	1197.68	1403.41	1622.16	917.79
Average of Percent		58.1%	66.4%	53.3%	71.7%	55.6%	60.2%	61.8%	75.2%	61.1%
<b>75-79</b>										
Count of AA		2	6	8	9	13	15	3	1	57
Average of Benefit		412.45	465.62	644.63	1345.16	1087.78	1688.98	3701.30	2072.45	1290.07
Average of Study 5 Benefit		199.86	424.77	474.21	1176.93	897.04	1396.11	1869.62	1984.29	1009.30
Average of Percent		48.4%	91.2%	73.0%	87.5%	82.5%	82.7%	50.5%	95.7%	78.2%
<b>80-84</b>										
Count of AA		10	2	4	8	10	11	5	4	55
Average of Benefit		408.45	290.44	324.61	562.26	919.94	1035.81	1945.73	1115.38	855.12
Average of Study 5 Benefit		408.45	290.44	324.61	562.26	919.94	1035.81	1945.73	1115.38	855.12
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>85+</b>										
Count of AA		70	1	4	3	9	7	2	4	103
Average of Benefit		392.91	1064.49	451.65	875.39	1320.18	1015.70	832.06	912.66	578.11
Average of Study 5 Benefit		392.91	1064.49	451.65	875.39	1320.18	1015.70	832.06	912.66	578.11
Average of Percent		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Total Count of AA</b>	<b>80</b>	<b>17</b>	<b>37</b>	<b>39</b>	<b>51</b>	<b>85</b>	<b>67</b>	<b>23</b>	<b>12</b>	<b>411</b>
<b>Total Average of Benefit</b>	<b>394.85</b>	<b>363.03</b>	<b>345.86</b>	<b>626.59</b>	<b>1247.29</b>	<b>1709.07</b>	<b>1949.65</b>	<b>1850.29</b>	<b>1771.92</b>	<b>1163.80</b>
<b>Total Average of Study 5 Benefit</b>	<b>394.85</b>	<b>271.05</b>	<b>305.80</b>	<b>480.31</b>	<b>927.30</b>	<b>984.88</b>	<b>1237.55</b>	<b>1264.38</b>	<b>1348.47</b>	<b>791.79</b>
<b>Total Average of Percent</b>	<b>100.0%</b>	<b>74.7%</b>	<b>88.4%</b>	<b>76.7%</b>	<b>74.3%</b>	<b>57.6%</b>	<b>63.5%</b>	<b>68.9%</b>	<b>76.1%</b>	<b>68.0%</b>



## NOTICE OF A PROPOSED REDUCTION OF YOUR PENSION BENEFITS

On March 29, 2017, the Board of Trustees of the International Association of Machinists Motor City Pension Fund ("Plan") will submit an application to the U.S. Treasury Department for approval to reduce benefits under the Plan. This type of benefit reduction is allowed by the Federal law called the Multiemployer Pension Reform Act of 2014.

You are getting this notice because you have a pension benefit under the Plan. **The end of this notice describes the proposed reduction of your monthly payments.**<sup>1</sup> This notice will also answer the following questions for you—

1. Why is the Board of Trustees proposing to reduce benefits?
2. What will happen if the Plan runs out of money?
3. How did the Board of Trustees decide whose benefits to reduce and by how much?
4. What are the proposed reductions in benefits?
5. What comes next?

### **1. Why is the Board of Trustees proposing to reduce benefits?**

The Plan's actuary estimated that, unless benefits are reduced, the Plan will not have enough money to pay benefits in the year 2026. This estimate is based on how much money the actuary expects the Plan to receive and to pay out each year. The Plan's actuary estimated that, with the reduction of benefits that the Board of Trustees has proposed, the plan should not run out of money.

### **2. What will happen if the Plan runs out of money?**

If the Plan does not have enough money to pay benefits, then only the amount guaranteed by the Pension Benefit Guaranty Corporation ("PBGC") will be paid. You can find the amount of your benefit that is guaranteed by PBGC at the end of this notice.

### **3. How did the Board of Trustees decide whose benefits to reduce and by how much?**

Under Federal law, the Board of Trustees must apply the following rules to the proposed reduction—

- The total reduction in everybody's benefits must be estimated to be large enough to keep the plan from running out of money but not larger than needed to do that.
- Your monthly benefit and the benefit of your beneficiary cannot be reduced below 110% of the amount guaranteed by PBGC.
- Disability benefits (as defined under the Plan) cannot be reduced.

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<sup>1</sup> A version of this notice that does not include the estimate of the effect on your benefit is being sent to unions that represent Plan participants and to all contributing employers.

- The benefits of people who are at least 80 years old on January 31, 2018 and their beneficiaries cannot be reduced.
- The benefits of people who are at least 75 years old on January 31, 2018 and their beneficiaries are partially protected, and the closer the person is to age 80 the less the benefits can be reduced.
- The reduction of benefits must be spread fairly among the people who have a pension benefit under the plan.

In deciding whether the proposed reduction is spread fairly, the Board of Trustees took into account the following:

- Extent to which benefits are attributed to service with an employer that failed to pay its full withdrawal liability.
- Extent to which active participants are reasonably likely to withdraw support for the plan, accelerating employer withdrawals from the plan and increasing the risk of additional benefit reductions for participants in and out of pay status.

#### 4. What are the proposed reductions in benefits?

The Board of Trustees proposes the following reduction of benefits:

- A **65% reduction** will be applied in the calculation of your benefit. This reduction also applies if you are already in pay status as a participant or beneficiary. There are some exceptions to this reduction. You may satisfy one of the statutory exceptions explained under item #3 above:
  - Your benefit cannot be reduced below 110% of your PBGC guarantee benefit
  - Your benefit is not reduced at all if you receive a disability benefit or are over age 80
  - Your benefit is only partly reduced if you are between ages 75 and 80

You may be subject to a different reduction if you are in one of the groups noted in items (b) through (e) below and not fully protected by a statutory exception.
- When an employer stops participating in the Plan, they must pay withdrawal liability to fund the benefits of the participants that worked for them. The following five employers did not pay their employer withdrawal liability:
  - ABC Paving
  - Borman Foods/Farmer Jack
  - E&L Transport
  - Pyrek Transport, Inc.
  - Thomas Goodfellow

As a result of not paying their withdrawal liability, all of these benefits for these employers are unfunded. Therefore, if you worked for one of the employers listed above, your benefit will be suspended to the maximum extent, 110% of your PBGC guarantee benefit.

- c. If you have not earned a benefit after January 1, 1988, your benefit will be suspended to the maximum extent, 110% of your PBGC guarantee benefit.
- d. If you did earn a benefit after January 1, 1988 and you worked for one of the five employers that has fully paid or is current in paying their employer withdrawal liability, your benefit will have the 65% reduction applied. These five employers are:
  - Ryder Transport
  - Koenig Fuel and Supply
  - Edward Levy
  - Bill Wink Chevrolet
  - Superior Materials
- e. If you are a terminated vested participant or were a terminated vested participant at retirement and conditions #4b, #4c and #4d above are all not applicable, then your benefit will be reduced according to your years of service:
  - 15 years of service or less – Your benefit will be reduced to the maximum extent, 110% of your PBGC guarantee benefit.
  - More than 15 years but less than 20 years of service – Your benefit will be prorated between the 110% of your PBGC guarantee benefit and the 65% reduction noted above. 16 years of service will receive 80% of the 110% of the PBGC guarantee plus 20% of the 65% reduction benefit, 17 years of service will receive 60% of the 110% PBGC guarantee plus 40% of the 65% reduction benefit, etc.
  - 20 years of service or more – The above 65% reduction will apply to your benefit.

If you are a beneficiary of your spouse's Pension benefit, your benefit will be adjusted according to the conditions above based on your spouse's status at the time of his or her death.

## **5. What comes next?**

### ***Approval or denial of the application by the Treasury Department***

The Treasury Department will review the application to see whether it meets all of the legal requirements under Federal law. If the application meets all of those requirements, the Treasury Department is required to approve the application. If the application does not meet the legal requirements, the Treasury Department will deny the application. The Treasury Department will have until November 9, 2017 to make a decision.

### ***You can get information from the Treasury Department***

More information about the proposed benefit reductions and a copy of the application is available at [www.treasury.gov/mpira](http://www.treasury.gov/mpira).

The application will be available on that website within 30 days after the Treasury Department receives it. The application includes more information about the proposed reduction, including details about: 1) the Plan actuary's certification that the Plan will run out of money (that is, that



the plan is in “critical and declining status”); 2) how the proposed reduction would satisfy the requirement that it be large enough so that the Plan is estimated not to run out of money, while not being larger than needed; and 3) the sensitivity of these estimates to the assumptions used.

The application describes the steps the Board of Trustees has already taken to keep the Plan from running out of money and why the Board of Trustees believes that a benefit reduction is the only remaining option to keep the plan from running out of money. In addition, the application explains why the Board of Trustees believes that the proposed reduction is spread fairly among the people who have a pension benefit under the plan.

The Treasury Department website will also provide updated information on the application, such as whether the application has been updated or withdrawn.

For further information and assistance you can also write to the Treasury Department at the following address:

Department of the Treasury  
Attn: MPRA Office, Room 1001  
1500 Pennsylvania Avenue, NW  
Washington, DC 20220

### ***You can comment on the application to reduce benefits***

You can submit a comment on the application by going to [www.treasury.gov/mpra](http://www.treasury.gov/mpra). Comments may also be mailed to the Department of the Treasury, at the address listed above. All interested parties can make comments, and the comments will be publicly available.

### ***Retiree Representative***

If a plan has 10,000 or more participants, the Board of Trustees must select a retiree representative to advocate for the interests of retirees, beneficiaries, and deferred vested participants as part of this process. A plan is required to pay the reasonable expenses of the retiree representative.

The Board of Trustees is not required to select a retiree representative, because the Plan has fewer than 10,000 participants. The Board of Trustees has not chosen to select a retiree representative.

### ***Vote on the proposed benefit reduction***

If the application for the proposed reduction of benefits is approved by the Treasury Department, then you will have the opportunity to vote on the proposed reduction. Unless a majority of all participants and beneficiaries of the Plan vote to reject the reduction, the Treasury Department must allow the reduction of benefits to take effect. This means that not voting counts the same as a vote to approve the reduction.

You may contact PBGC's Participant and Plan Sponsor Advocate by mail at Pension Benefit Guaranty Corporation, Attn: Participant and Plan Sponsor Advocate, 1200 K St., NW, Washington DC 20005; by telephone at (202) 326-4448; or by e-mail at [advocate@PBGC.gov](mailto:advocate@PBGC.gov).

### ***Your right to see Plan documents***

You may want to review Plan documents to help you understand your rights and the proposed reduction to your benefits. The Plan administrator must respond to your request for the following documents within 30 days:

- The Plan document (including any amendments adopted to reflect an authorized reduction of benefits), trust agreement, and other documents governing the Plan (such as collective bargaining agreements).
- The Plan's most recent summary plan description (SPD or plan brochure) and any summary of material modifications.
- The Plan's Form 5500 annual reports, including audited financial statements, filed with the U.S. Department of Labor during the last six years.
- The annual funding notices furnished by the Plan during the last six years.
- Actuarial reports, including reports prepared in anticipation of the benefit reduction, furnished to the Plan within the last six years.
- The Plan's current rehabilitation plan, including contribution schedules and annual plan-sponsor determinations that all reasonable measures to avoid running out of money continue to be taken and that the Plan would run out of money if there were no benefit reductions.
- Any quarterly, semi-annual or annual financial reports prepared for the Plan by an investment manager, fiduciary or other advisor and furnished to the Plan within the last six years.

The Plan administrator may charge you the cost per page to the Plan for the cheapest way of copying documents, but cannot charge more than 25 cents per page. The Plan's Form 5500 Annual Return/Report of Employee Benefit Plan is also available free of charge at [www.dol.gov/ebsa/5500main.html](http://www.dol.gov/ebsa/5500main.html). Some of the documents also may be available for examination, without charge, at the Plan administrator's office, your worksite or union hall.

### ***Your right to challenge incorrect calculations***

If you think the Plan miscalculated the reduction to your benefits, then you have the right to submit a claim to the Plan to have the calculation corrected. The Plan's summary plan description ("SPD") tells you how to submit a claim. The SPD also describes your right to have a court review the Plan's final decision on your claim.

If you believe the information used to calculate your estimate at the end of this notice is wrong, please contact the Plan office at 700 Tower Drive, Suite 300, Troy, MI 48098-2808 or by telephone at (248) 813-9800.

## HOW YOUR MONTHLY PAYMENTS WILL BE AFFECTED

This estimate of the effect of the proposed reduction of benefits has been prepared for:

John Doe  
123 Main Street  
Detroit, Michigan 48205

Your current [monthly benefit / benefit payable at age 65] is \$1,000 per month. Under the proposed reduction, your [monthly benefit / benefit payable at age 65] will be reduced to \$786.50 per month beginning on January 1, 2018. [Upon your death, your spouse's monthly benefit would be \$500 per month. Under the proposed reduction, your spouse's benefit would be reduced to \$393.25 per month. If your spouse dies before you, your monthly benefit would pop up to \$1,100 per month. Under the proposed reduction, your monthly benefit would instead not pop up at all and remain at \$786.50.] *We may need language for the social security leveler if one hasn't dropped to the lower tier by January 1, 2017.*

The proposed reduction is permanent.

This is an estimate of the effect of the proposed reduction on your benefit under the Plan. It is not a final benefit calculation. This was done assuming that the proposed benefit reduction starts on January 1, 2018. If the benefit reduction starts later, the effect of the proposed reduction on your benefit might be different.

This estimate is based on the following information from Plan records:

- You have 20 years of credited service under the Plan.
- Your accrued benefit prior to January 1, 1988 was \$0.00.
- Your employer [is/was] Ryder.
- [Your date of termination is May 20, 2011.]
- You will be age 70 and 5 months as of January 31, 2018.
- [At retirement you elected to receive your benefit in the Joint and 50% Survivor form.]
- [Your spouse will be age 67 and 5 months as of January 31, 2018.]
- The portion of your benefit that is based on disability is \$0.00.

### PBGC Guaranteed Benefits

If the Plan does not have enough money to pay benefits, your monthly benefit would be no larger than the amount guaranteed by PBGC. The amount of your monthly benefit guaranteed by PBGC is estimated to be \$715.00 per month.



# Real Time Pension Model

## IAM Motor City Pension Fund

Approximate Results Based on 7/1/2016 Valuation Report

PV Asset Chart

ASSUMPTIONS

PPA Extension (y/n) and year	no	2017	
2nd PPA Extension (y/n) and year	no	2017	
	Yr	Old	New
ERISA Rate Change	2017	7.50%	7.50%
Hypothetical Experience for PYE	Return	Hours	
- 6/30/2017 (ROR override)	7.93%	5,788	
- 6/30/2018	6.60%	5,788	
- 6/30/2019	6.60%	5,788	
- 6/30/2020	6.60%	5,788	
- thereafter*	6.60%	5,788	

PLAN PROVISIONS

	Old	New
Pre-amendment Formula Change	1.00	1.00
Post-amendment Formula Change	1.00	1.00
Freeze Accruals	0	(num of yrs)
Retiree Increase		(% incr)
Retiree Lump Sum	390,590	(\$ total)
Year of Change	2018	
Base Benefits (eff 7/1/2018)	Fixed - Max Rtd	

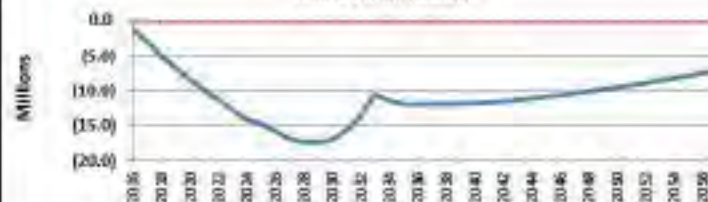
CONTRIBUTIONS

Cert Yr	Credited	Non-Credited
7/2016		
7/2017		
7/2018		
7/2019		
7/2020		
7/2021		
7/2022		
7/2023		

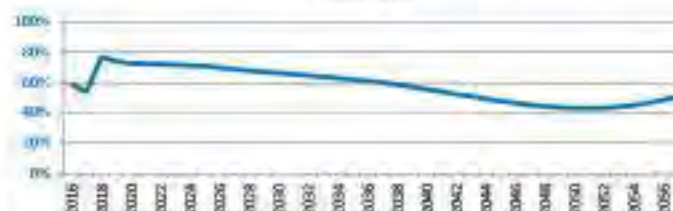
PPA Status



ERISA Credit Balance



Funded Ratio



Key:

- safe
- endangered
- seriously endangered
- critical
- critical and declining
- safe "special rule"
- baseline status

Key:

- credit balance (\$mm)
- baseline CB (\$mm)
- deficiency

With MEPRA rules

Key:

- funded ratio (%)
- baseline ratio (%)

First year of no unfunded vested benefits: N/A  
 Year plan is projected to become insolvent (PYB): 2018  
 Minimum credit balance: -17,358,000  
 Year of minimum credit balance: 2029  
 Return for PYE 6/30/2027 and thereafter assumed to be 7.50%  
 Open group projections included  
 Relief provisions recognized: 10-year asset smoothing, 130% MV corridor

Start Year Plan Acceptable? Improvement Period

Funding Improvement Plan		10
Rehabilitation Plan		10

**IAM Motor City Pension**  
**Summary of Benefit Suspension Study Results**

		Average Accrued Benefit			Percent Reduction	
Group	Number	Current	With 65% Red.	With Max Red.	With 65% Red.	With Max Red.
<u>Actives at Age 65</u>						
Had 65% Reduction Originally	15	1,730.79	605.78	531.54	65.0%	69.3%
Had Max Reduction Already	122	605.32	393.18	393.18	35.0%	35.0%
Already Below Max Reduction	4	113.97	113.97	113.97	0.0%	0.0%
Total	141	711.11	407.87	399.97	42.6%	43.8%
<u>Inactive Vested at Age 60</u>						
Had 65% Reduction Originally	8	1,202.60	420.91	342.86	65.0%	71.5%
Had Max Reduction Already	291	614.97	413.02	413.02	32.8%	32.8%
Already Below Max Reduction	73	133.13	133.13	133.13	0.0%	0.0%
Total	372	533.05	358.28	356.59	32.8%	33.1%
<u>In Pay Status</u>						
Had 65% Reduction Originally	25	3,122.13	1,140.54	960.22	63.5%	69.2%
Had Max Reduction Already	361	1,393.26	808.24	808.24	42.0%	42.0%
Already Below Max Reduction	81	148.95	148.95	148.95	0.0%	0.0%
Age 80+/Disabled, Fully Protected	171	790.99	790.99	790.99	0.0%	0.0%
Total	638	1,141.61	732.93	725.87	35.8%	36.4%