Benefit Suspension Scenarios and Examples

Iron Workers Local 17 Pension Fund

March 12, 2015

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Potential Benefit Adjustments

1. Adjust benefits downward so that all average accrual rates are not more than $x

2. Adjust early retirement benefits so that all benefits are calculated using the current early retirement factors (with further reduction prior to age 58)
   A. Adjust early retirement benefits so that all benefits are calculated based on an average of actual early retirement factor used and current early retirement factors

3. Adjust credited service to not more than one year earned per year

4. Adjust credited service so that those with < 1,900 hours, but at least 1,200 hours, get full service

   Note: We found very few instances of partial credit among the sample retirees. However, we do not have sufficient data to determine the impact on non-retired participants. Due to this and administrative complexity, we did not use this adjustment

5. For each possible adjustment (1-4) above, reflect the fact that 10% of the benefit was already paid as a lump sum

Potential Benefit Adjustments—Combinations Reviewed

A. Item 1, reducing average accrual rate to $69, and item 5
B. No reduction in accrual rate, item 2 (current early retirement reduction), and item 5
C. Item 1, reducing average accrual rate to $81, item 2A (average of actual and current early retirement reduction), and item 5
D. Item 1, reducing average accrual rate to $78, item 3, and item 5

Note: The reductions to the average accrual rates shown are intended to be indicative of the level of reductions required for the Plan to remain solvent. They are intended to approximate the level of reductions shown as the "24% reduction" in the February 17th presentation. However, as these reductions have a greater impact on retirees and a relatively small impact on inactive vesteds and actives, the average reduction for retirees is greater than 24%.

Data for Sample Participants

	Age 5/1/16	Total Credited Service (CS)	CS at $50 Rate	Ave. Acc. Rate	CS More than 1/year	Early Ret. Factor (ERF) (pre/ post-2004)	Lump Sum	Joint and Survivor Factor (JSF)	Benefit
Retiree 1	73.7	45.00	0.00	$100.00	6.00	Unreduced	$450	86.0%	$3,483
Retiree 2	66.6	21.25	0.00	$85.50	0.00	64%	$110	N/A	$1,053
Retiree 3	67.4	15.00	2.50	$91.67	0.00	86%/80%	$110	88.0%	$937
Retiree 4	69.2	46.50	0.50	$99.46	9.00	Unreduced	$460	88.0%	$3,665
Retiree 5	67.2	35.50	10.00	$85.92	4.75	Unreduced	N/A	N/A	$3,050
IV*	62.0	15.75	1.75	$94.44	Unknown**	Unreduced	N/A	N/A	$1,488
Active*	63.0	17.25	11.00	$68.12	Unknown**	Unreduced	N/A	N/A	$1,175

**Assumed to retire at age 65 with a single life annuity*
***Assumed to be 0.00 for the illustration*

Potential Benefit Adjustments – Examples for Retiree 1

- Current Benefit:
  - $100 x 45 (CS) x 1.00 (ERF) - $450 (Lump Sum) = $4,050
  - $4,050 x 86.0% (JSF) = **$3,483**
- Scenario A ($69 accrual rate) :
  - $69 x 45 x 1.00 - $450 = $2,655
  - $2,655 x 86.0% = $**2,283**
- Scenario B (no change in accrual rate, current ERF):
  - $100 x 45 x 60.6% ($ERF_{current}$) - $450 = $2,277
  - $2,277 x 86.0% = **$1,958**
- Scenario C ($81 accrual rate, average of actual and current ERF):
  - $81 x 45 x 80.3% ($ERF_{average}$) - $450 = $2,477
  - $2,477 x 86.0% = **$2,130**
- Scenario D ($78 accrual rate, CS limited to 1 per year):
  - $78 x 39 ($CS_{revised}$) x 1.00 - $450 = $2,592
  - $2,592 x 86.0% = **$2,229**
- 110% PBGC Guaranteed Benefit
  - Average accrual rate = $3,483 / 39 ($CS_{revised}$) = $89.31
  - PBGC guaranteed accrual rate = $11 + 0.75 x min($33, $89.31 - $11) = $35.75
  - 110% x $35.75 x 39 = **$1,534**

Benefits for Sample Participants

	Current Benefit	Scenario A ($69 acc. rate)		Scenario B (current ERF)		Scenario C ($81 acc. rate, avg. ERF)		Scenario D ($78 acc. rate, CS 1/year)		110% PBGC Guarantee
	Amount	Amount	%	Amount	%	Amount	%	Amount	%	Amount
Retiree 1	$3,483	$2,283	66%	$1,958	56%	$2,130	61%	$2,229	64%	$1,534
Retiree 2	$1,053	$836	79%	$836	79%	$836	79%	$951	90%	$836
Retiree 3	$937	$677	72%	$645	69%	$685	73%	$778	83%	$590
Retiree 4	$3,665	$2,419	66%	$1,915	52%	$2,197	60%	$2,169	59%	$1,475
Retiree 5	$3,050	$2,450	80%	$3,050	100%	$2,876	94%	$2,399	79%	$1,209
IV	$1,488	$1,087	73%	$1,488	100%	$1,276	86%	$1,229	83%	$619
Active	$1,175	$1,175	100%	$1,175	100%	$1,175	100%	$1,175	100%	$678
Min. %*			66%		40%		56%		58%	
Max. %*			100%		100%		100%		100%	

**Based on all 31 sample participants.*
Note: Under all scenarios, the benefit has been reduced by the partial lump sum if applicable.

Benefits cannot be reduced below 110% of PBGC Guarantee

Appendix: Benefits for Sample Participants

	Current Benefit	Scenario A ($69 acc. rate)		Scenario B (current ERF)		Scenario C ($81 acc. rate, avg. ERF)		Scenario D ($78 acc. rate, CS 1/year)		110% PBGC Guarantee
	Amount	Amount	%	Amount	%	Amount	%	Amount	%	Amount
Retiree 1	$3,483	$2,283	66%	$1,958	56%	$2,130	61%	$2,229	64%	$1,534
Retiree 2	$1,053	$836	79%	$836	79%	$836	79%	$951	90%	$836
Retiree 3	$937	$677	72%	$645	69%	$685	73%	$778	83%	$590
Retiree 4	$3,665	$2,419	66%	$1,915	52%	$2,197	60%	$2,169	59%	$1,475
Retiree 5	$3,050	$2,450	80%	$3,050	100%	$2,876	94%	$2,399	79%	$1,209
Retiree 6	$623	$623	100%	$562	90%	$562	90%	$562	90%	$562
Retiree 7	$3,655	$2,950	81%	$1,465	40%	$2,424	66%	$2,906	79%	$1,465
Retiree 8	$4,025	$2,777	69%	$1,674	42%	$2,308	57%	$2,730	68%	$1,376
Retiree 9	$546	$546	100%	$504	92%	$504	92%	$546	100%	$504
Retiree 10	$4,813	$3,588	75%	$4,813	100%	$4,212	88%	$3,354	70%	$1,691
Retiree 11	$993	$728	73%	$728	73%	$728	73%	$728	73%	$728
Retiree 12	$968	$750	77%	$737	76%	$737	76%	$836	86%	$737
Retiree 13	$929	$610	66%	$780	84%	$673	72%	$703	76%	$413
Retiree 14	$1,048	$758	72%	$708	68%	$729	70%	$781	74%	$708
Retiree 15	$2,126	$1,462	69%	$1,936	91%	$1,587	75%	$1,587	75%	$983
Retiree 16	$858	$858	100%	$780	91%	$780	91%	$858	100%	$779
Retiree 17	$3,456	$2,385	69%	$1,949	56%	$2,189	63%	$2,477	72%	$1,445
Retiree 18	$1,343	$971	72%	$1,220	91%	$1,057	79%	$1,061	79%	$639
Retiree 19	$3,420	$2,760	81%	$1,395	41%	$2,281	67%	$2,672	78%	$1,347
Retiree 20	$3,341	$2,258	68%	$1,376	41%	$1,865	56%	$1,934	58%	$1,376
Retiree 21	$652	$652	100%	$596	91%	$596	91%	$642	99%	$596
Retiree 22	$1,302	$1,051	81%	$1,302	100%	$1,233	95%	$1,001	77%	$895
Retiree 23	$843	$843	100%	$737	87%	$737	87%	$743	88%	$737
Retiree 24	$326	$326	100%	$326	100%	$326	100%	$326	100%	$326
Retiree 25	$878	$673	77%	$878	100%	$790	90%	$761	87%	$383
Retiree 26	$696	$486	70%	$433	62%	$462	66%	$549	79%	$433
Retiree 27	$4,712	$3,372	72%	$4,700	100%	$3,949	84%	$3,284	70%	$1,652
Retiree 28	$553	$553	100%	$499	90%	$518	94%	$553	100%	$496
Retiree 29	$3,494	$2,545	73%	$3,494	100%	$2,988	86%	$2,691	77%	$1,563
IV	$1,488	$1,087	73%	$1,488	100%	$1,276	86%	$1,229	83%	$619
Active	$1,175	$1,175	100%	$1,175	100%	$1,175	100%	$1,175	100%	$678

Note: Under all scenarios, the benefit has been reduced by the partial lump sum if applicable. Benefits were calculated before any QDRO adjustment. Final benefits payable to the participant and alternate payee will be adjusted proportionally.

Appendix: Data on Pay Status Participants

Participants in Pay Status as of April 30, 2014	Counts	Total Current Monthly Benefit	Average Current Monthly Benefit	Able to Reduce Benefit?
Non-Disabled Pensioners				
Under age 75[1]	304	$687,317	$2,261	Yes
Age 75 – 79[1]	83	157,313	1,895	Yes[2]
Age 80 and over[1]	138	198,139	1,436	No
Total	525	$1,042,769	$1,986	
Disabled Pensioners[3]	351	$446,390	$1,272	No
Beneficiaries	202	$118,848	$588	Yes[4]
Total Pay Status	1,078	$1,608,007	$1,492	

[1]*As of May 1, 2016*
[2]*Benefit reduction must be prorated based on number of months between the month following the effective date of benefit suspension and participant's 80th birthday*
[3]*223 will be over Normal Retirement Age (65) as of May 1, 2016*
[4]*Amount of benefit reduction will most likely be small since the benefit amount for majority of beneficiaries is less than 110% of the PBGC guaranteed amount*

Additional Benefit Suspension Scenarios and Examples

Iron Workers Local 17 Pension Fund

April 20, 2015

Presented by: Megan K. Kelly, CEBS, Vice President and Benefits Consultant
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Potential Benefit Adjustments

1. Adjust benefits downward so that all average accrual rates are not more than $x

2. Adjust early retirement benefits so that all benefits are calculated using the current early retirement factors (with further reduction prior to age 58)
   A. Adjust early retirement benefits so that all benefits are calculated based on an average of actual early retirement factor used and current early retirement factors
   B. Adjust early retirement benefits for current pensioners who retired prior to age 62 on an unreduced pension

3. Adjust credited service to not more than one year earned per year

4. Adjust credited service so that those with < 1,900 hours, but at least 1,200 hours, get full service

   Note: We found very few instances of partial credit among the sample retirees. However, we do not have sufficient data to determine the impact on non-retired participants. Due to this and administrative complexity, we did not use this adjustment

5. For each possible adjustment (1-4) above, reflect the fact that 10% of the benefit was already paid as a lump sum

Potential Benefit Adjustments— New Combinations Reviewed

C. Reduce average accrual rate to $81 (item 1), recalculate benefits for current pensioners using the average of actual and current early retirement reduction factors (item 2A), and reflect lump sum previously paid (item 5)

D. Reduce average accrual rate to $78 (item 1), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

E. Reduce average accrual rate to $83 (item 1), reduce benefits by 3% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

F. Reduce average accrual rate to $81 (item 1), reduce benefits by 2% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

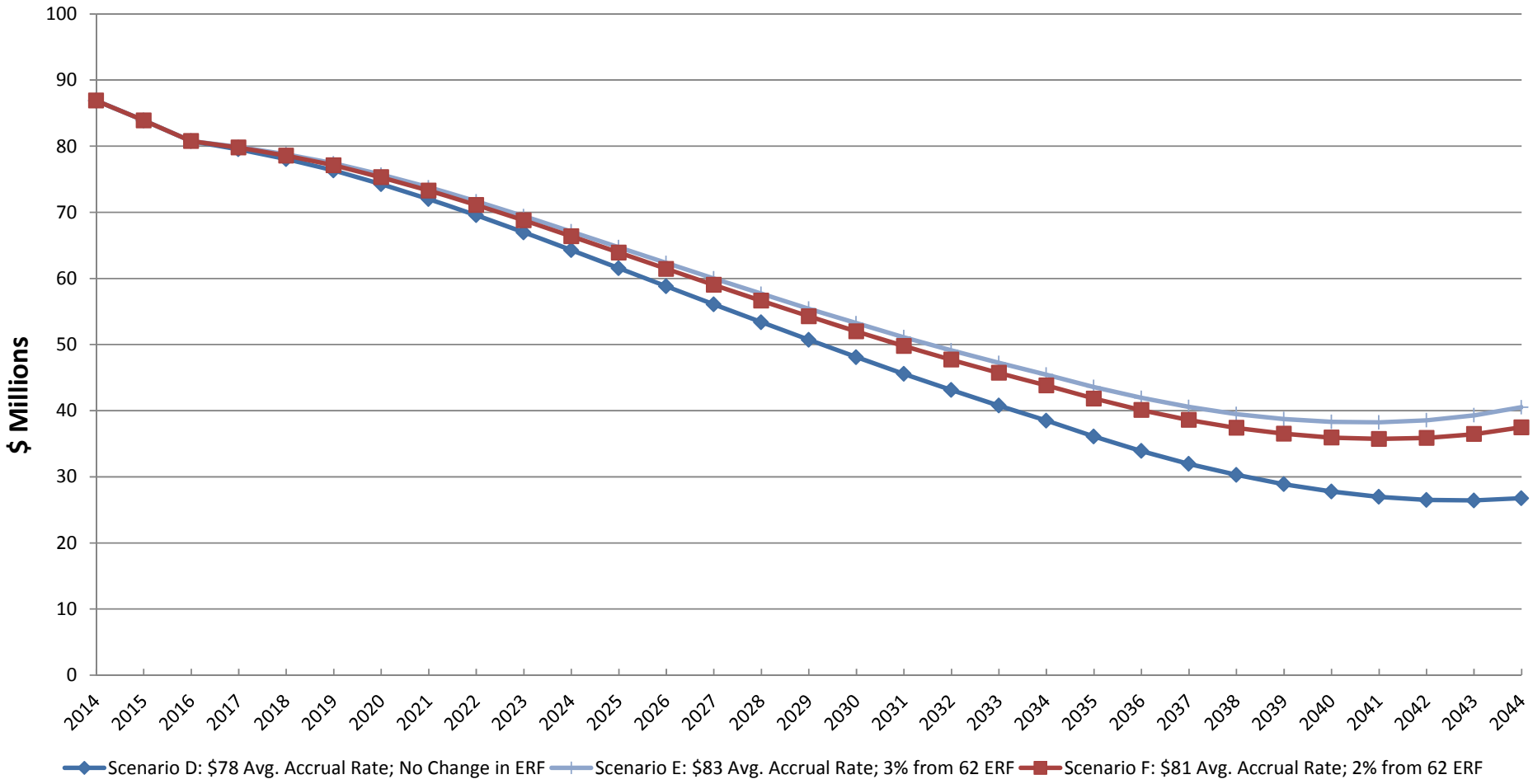
Note: Combinations C and D were shown in the March 13, 2015 presentation. In addition, we have revised the calculation of benefits under Combination D and the PBGC guaranteed benefit to exclude any banked credits that were awarded at retirement when no hours worked in the year of retirement (maximum of one). Combinations E and F also reflect this credited service adjustment.

Benefits for Sample Participants

	Current Benefit	Scenario C ($81 acc. rate, avg. ERF)		Scenario D ($78 acc. rate, CS 1/year)		Scenario E ($83 acc. rate, 3% from 62, CS 1/year)		Scenario F ($81 acc. rate, 2% from 62, CS 1/year)		110% PBGC Guarantee
	Amount	Amount	%	Amount	%	Amount	%	Amount	%	Amount
Retiree 1	$3,483	$2,130	61%	$2,229	64%	$2,111	61%	$2,144	62%	$1,534
Retiree 2	$1,053	$836	79%	$951	90%	$1,019	97%	$992	94%	$836
Retiree 3	$937	$685	73%	$778	83%	$834	89%	$812	87%	$590
Retiree 4	$3,665	$2,197	60%	$2,101	57%	$1,948	53%	$1,993	54%	$1,435
Retiree 5	$3,050	$2,876	94%	$2,379	78%	$2,532	83%	$2,471	81%	$1,199
Retiree 6	$623	$562	90%	$623	100%	$623	100%	$623	100%	$562
Retiree 7	$3,655	$2,424	66%	$2,847	78%	$2,401	66%	$2,548	70%	$1,435
Retiree 8	$4,025	$2,308	57%	$2,652	66%	$2,265	56%	$2,391	59%	$1,337
Retiree 9	$546	$504	92%	$546	100%	$546	100%	$546	100%	$504
Retiree 10	$4,813	$4,212	88%	$3,276	68%	$3,486	72%	$3,402	71%	$1,652
Retiree 11	$993	$698	70%	$698	70%	$709	71%	$698	70%	$698
Retiree 12	$968	$737	76%	$836	86%	$896	93%	$872	90%	$737
Retiree 13	$929	$673	72%	$703	76%	$754	81%	$733	79%	$413
Retiree 14	$1,048	$729	70%	$781	74%	$831	79%	$811	77%	$708
Retiree 15	$2,126	$1,587	75%	$1,587	75%	$1,699	80%	$1,654	78%	$983
Retiree 16	$858	$780	91%	$858	100%	$858	100%	$858	100%	$777
Retiree 17	$3,456	$2,189	63%	$2,409	70%	$2,256	65%	$2,302	67%	$1,406
Retiree 18	$1,343	$1,057	79%	$1,061	79%	$1,139	85%	$1,108	82%	$639
Retiree 19	$3,420	$2,281	67%	$2,652	78%	$2,251	66%	$2,382	70%	$1,337
Retiree 20	$3,341	$1,865	56%	$1,902	57%	$2,047	61%	$1,989	60%	$1,347
Retiree 21	$652	$595	91%	$652	100%	$652	100%	$652	100%	$595
Retiree 22	$1,302	$1,233	95%	$979	75%	$1,042	80%	$1,016	78%	$875
Retiree 23	$843	$708	84%	$843	100%	$843	100%	$843	100%	$708
Retiree 24	$326	$326	100%	$326	100%	$326	100%	$326	100%	$326
Retiree 25	$878	$790	90%	$761	87%	$809	92%	$790	90%	$383
Retiree 26	$696	$462	66%	$549	79%	$584	84%	$570	82%	$433
Retiree 27	$4,712	$3,949	84%	$3,206	68%	$3,412	72%	$3,329	71%	$1,612
Retiree 28	$553	$518	94%	$553	100%	$553	100%	$553	100%	$496
Retiree 29	$3,494	$2,988	86%	$2,640	76%	$2,810	80%	$2,742	78%	$1,534
IV	$1,488	$1,276	86%	$1,229	83%	$1,307	88%	$1,276	86%	$619
Active	$1,175	$1,175	100%	$1,175	100%	$1,175	100%	$1,175	100%	$678
Min. %			56%		57%		53%		54%	
Max. %			100%		100%		100%		100%	

Note: Under all scenarios, the benefit has been reduced by the partial lump sum if applicable. Benefits were calculated before any QDRO adjustment. Final benefits payable to the participant and alternate payee will be adjusted proportionally.

Projection of Assets



Note: Projections shown are based on preliminary estimates of the impact of the suspension designs and will be revised when additional data from the Fund Office is available.

Assumptions Used in Projections

- The projections shown are based on the May 1, 2014 actuarial valuation and the following additional assumptions:
  - 7.5% future market returns
  - 607 actives for all future years, with each active working an average of 1,700 hours per year (1.03 million hours)
  - Any suspension in benefits occurs on May 1, 2016
  - Benefits will be suspended based on the designs described in slide 3 or 110% of the PBGC guaranteed amount, whichever is greater, taking into consideration the following:
    - No suspension for pensioners over age 80 and pensioners receiving a disability pension
    - Pensioners between ages 75 and 80 get a pro-rated reduction
    - No suspension for current beneficiaries since service is unknown
    - Participants with unknown service, except for current beneficiaries, were reduced without consideration of their PBGC guaranteed amount as it cannot be determined
    - Impact of limiting credited service to 1 per year was estimated to be a 10% reduction to participants' benefits
  - Service pension will be eliminated effective May 1, 2016
  - Future benefit accrual rate remains at $50 per benefit credit
  - Contribution rate remains at $10.00 per hour

Assumptions Used in Projections *continued*

- Mortality assumptions change to RP-2014 Blue Collar Mortality Tables with generational projection using Scale MP-2014 for non-disabled participants, RP-2014 Disabled Retire Mortality Tables with generational projection using Scale MP-2014 for participants disabled on and after May 1, 1997, and a 50/50 blend of the two preceding mortality assumptions for participants disabled prior to May 1, 1997
- Effective May 1, 2016, the following assumptions will change:
  - Retirement rates for service pension are eliminated
  - Inactive vested participants will retire at age 60 if eligible
  - 40% of future retirees will elect the 50% joint and survivor form of payment and 60% will elect the single life annuity; this is based on the Plan's experience during 2004–2014
- Stevens Painton pays its withdrawal liability as assessed
- Administrative expenses increases by 10% for the May 1, 2015 Plan year and by 3% per year for all future years (additional increase in 2015 is due to the doubling of PBGC premiums under MEPRA)

Caveat regarding projections: *Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as estimates of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.*

Caveat regarding legal interpretations: *Segal does not practice law and, therefore, cannot and does not provide legal advice. Any statutory interpretations of PPA 2006 , PRA 2010 , and MEPRA 2014, including related IRS regulations and guidance presented or reflected in the presentations are subject to the review and opinion of Fund Counsel. Design of benefit suspension is solely the responsibility of the Trustees. Any sample designs contained in this presentation are intended to assist the Trustees and do not imply any recommendation by Segal.*

Additional Benefit Suspension Scenarios and Examples – Updated May 15, 2015

Iron Workers Local 17 Pension Fund

May 15, 2015

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Recap of May 5, 2015 Call

- Additional benefit suspension scenarios, which were a combination of the following, were discussed:
  - Reduce the average accrual rate,
  - Reduce benefits from age 62 for current pensioners who retired on Service Pension,
  - Adjust credited service to not more than one credit per year, and
  - Reflect lump sums previously paid
- Segal has been instructed to refine projections based on the pensioner data provided by the Fund Office
  - Segal has also provided the Fund Office with a listing of active and inactive vested participants for the Fund Office to provide detailed service information
- The Trustees proposed two new suspension scenarios (G and H) as follows:
  - Reduce the average accrual rate to $75,
  - Reduce benefits by 1% per year from age 62 for current pensioners who retired on Service Pension,
  - Adjust credited service to not more than one credit per year (Scenario G),
  - No adjustment to credited service (Scenario H),
  - Reflect lump sums previously paid, and
  - Maintain the Service Pension for participants retiring after April 30, 2016

Potential Benefit Adjustments

1. Adjust benefits downward so that all average accrual rates are not more than $x

2. Adjust early retirement benefits so that all benefits are calculated using the current early retirement factors (with further reduction prior to age 58)
   A. Adjust early retirement benefits so that all benefits are calculated based on an average of actual early retirement factor used and current early retirement factors
   B. Adjust the unreduced portion of the early retirement benefits for current pensioners who retired prior to age 62 (Service Pension)

3. Adjust credited service to not more than one year earned per year

4. Adjust credited service so that those with < 1,900 hours, but at least 1,200 hours, get full service

   Note: We found very few instances of partial credit among the sample retirees. However, we do not have sufficient data to determine the impact on non-retired participants. Due to this and administrative complexity, we did not use this adjustment

5. For each possible adjustment (1-4) above, reflect the fact that 10% of the benefit was already paid as a lump sum

Potential Benefit Adjustments— New Combinations Reviewed

Prior Scenarios (A-C) were considered before focus shifted to the following:

D. Reduce average accrual rate to $78 (item 1), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

E. Reduce average accrual rate to $83 (item 1), reduce benefits by 3% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

F. Reduce average accrual rate to $81 (item 1), reduce benefits by 2% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

G. Reduce average accrual rate to $75 (item 1), reduce benefits by 1% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

H. Reduce average accrual rate to $75 (item 1), reduce benefits by 1% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), no adjustment to credited service, and reflect lump sum previously paid (item 5)

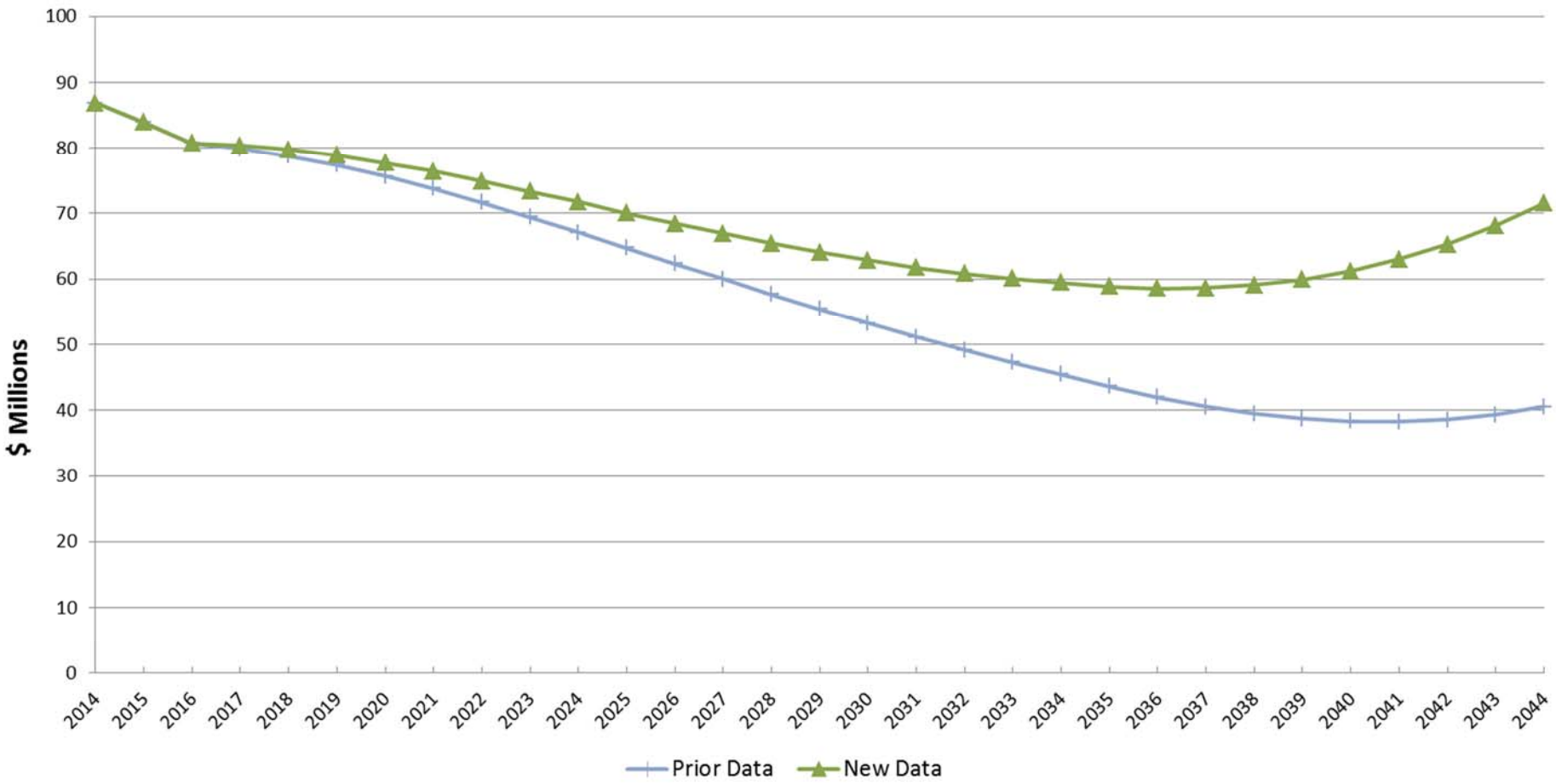
Potential Benefit Adjustments— Summary of Scenarios D-H

Scenario	(Item 1) Average Accrual Rate	(Item 2B) ERF for Service Pension Under 62 (% per year)	(Item 3) Reduce Credited Service to 1/year?	(Item 5) Reflect Partial Lump Sum?	Service Pension for Future Retirees?
Scenario D	$78	0%	Yes	Yes	No
Scenario E	$83	3%	Yes	Yes	No
Scenario F	$81	2%	Yes	Yes	No
Scenario G	$75	1%	Yes	Yes	Yes*
Scenario H	$75	1%	No	Yes	Yes*

**Only to those retiring after age 62 with 30 years of vesting service*

Scenarios D – F were previously modeled. The following page shows the effects of updated data on one of these (Scenario E) to show the overall magnitude on the projections. The chart based on the new scenarios (G – H) reflect only the new data.

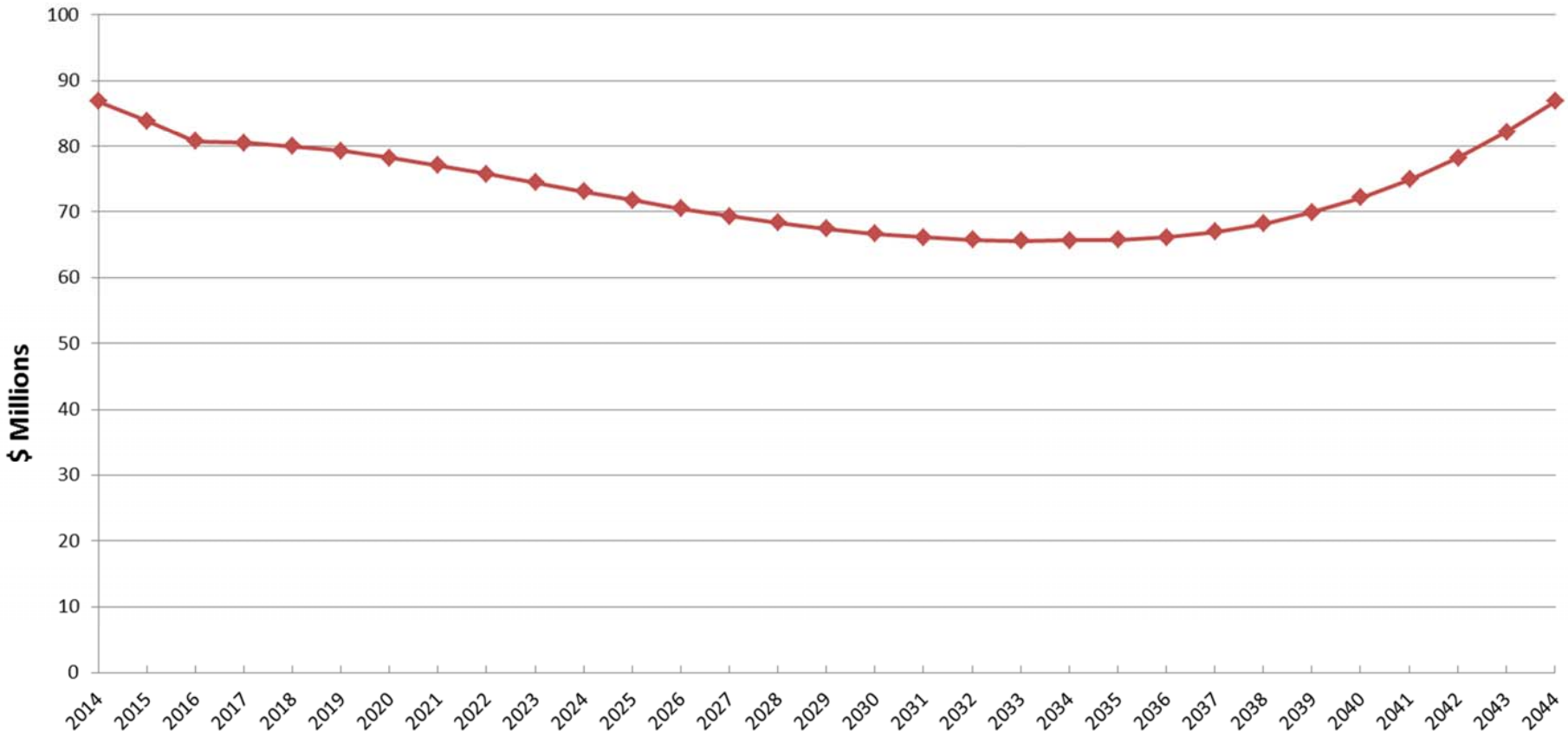
Projection of Assets Based on New Pensioner Data



After adjusting for updated pensioner data provided by the Fund Office, the lowest projected market value of assets increases from $38 million to $59 million.

Note: The above projection is based on Scenario E. Effect to new data to Scenarios D and F is approximately the same as the illustration

Projection of Assets Based on New Pensioner Data –
Scenario G ($75 Avg. Accrual Rate; 1% ERF from 62; Reduce Credited Service)



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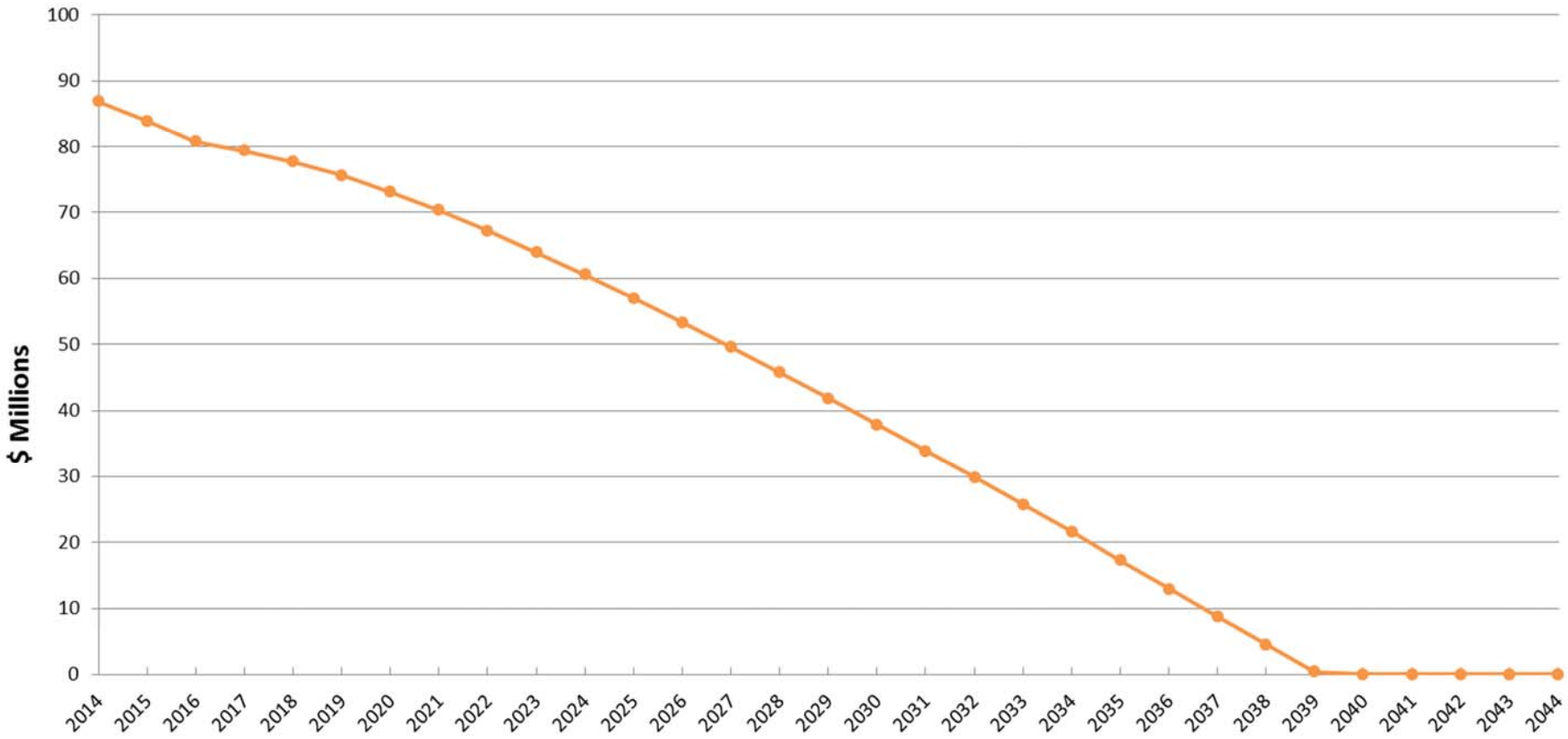
Projection of Assets Based on New Pensioner Data –
Scenario H ($75 Avg. Accrual Rate; 1% ERF from 62; No Reduction to Credited Service)



Reducing the average accrual rate to $65 would increase projected assets to the levels projected under Scenario G.

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Benefits for Sample Participants

	Current Benefit	Scenario D ($78 acc. rate, CS 1/year)		Scenario E ($83 acc. rate, 3% from 62, CS 1/year)		Scenario F ($81 acc. rate, 2% from 62, CS 1/year)		Scenario G ($75 acc. rate, 1% from 62, CS 1/year)		Scenario H ($75 acc. rate, 1% from 62)	
	Amount	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Retiree 1	$4,050	$2,534	63%	$2,399	59%	$2,437	60%	$2,321	57%	$2,810	69%
Retiree 2	$1,163	$1,036	89%	$1,102	95%	$1,076	92%	$996	86%	$1,020	88%
Retiree 3	$938	$778	83%	$834	89%	$812	87%	$745	79%	$745	79%
Retiree 4	$4,165	$2,387	57%	$2,214	53%	$2,265	54%	$2,170	52%	$2,891	69%
Retiree 5	$3,050	$2,379	78%	$2,532	83%	$2,471	81%	$2,288	75%	$2,663	87%
Retiree 6	$624	$560	90%	$560	90%	$560	90%	$560	90%	$623	100%
Retiree 7	$3,665	$2,847	78%	$2,401	66%	$2,548	70%	$2,548	70%	$2,984	81%
Retiree 8	$4,025	$2,633	65%	$2,248	56%	$2,374	59%	$2,365	59%	$2,820	70%
Retiree 9	$546	$546	100%	$546	100%	$546	100%	$546	100%	$546	100%
Retiree 10	$4,813	$3,276	68%	$3,486	72%	$3,402	71%	$3,150	65%	$3,900	81%
Retiree 11	$993	$698	70%	$709	71%	$698	70%	$698	70%	$785	79%
Retiree 12	$1,105	$954	86%	$1,023	93%	$995	90%	$913	83%	$941	85%
Retiree 13	$929	$703	76%	$754	81%	$733	79%	$672	72%	$672	72%
Retiree 14	$1,048	$781	74%	$831	79%	$811	77%	$751	72%	$824	79%
Retiree 15	$2,126	$1,442	68%	$1,545	73%	$1,504	71%	$1,380	65%	$1,457	69%
Retiree 16	$858	$777	91%	$777	91%	$777	91%	$777	91%	$780	91%
Retiree 17	$3,456	$2,409	70%	$2,256	65%	$2,302	67%	$2,224	64%	$2,488	72%
Retiree 18	$1,343	$961	72%	$1,033	77%	$1,004	75%	$919	68%	$968	72%
Retiree 19	$3,430	$2,652	77%	$2,251	66%	$2,382	69%	$2,378	69%	$2,798	82%
Retiree 20	$3,815	$2,171	57%	$1,847	48%	$1,952	51%	$1,924	50%	$2,644	69%
Retiree 21	$751	$726	97%	$726	97%	$726	97%	$726	97%	$740	99%
Retiree 22	$1,302	$979	75%	$1,042	80%	$1,016	78%	$941	72%	$1,142	88%
Retiree 23	$843	$718	85%	$718	85%	$718	85%	$718	85%	$843	100%
Retiree 24	$337	$326	97%	$326	97%	$326	97%	$326	97%	$326	97%
Retiree 25	$878	$761	87%	$809	92%	$790	90%	$731	83%	$731	83%
Retiree 26	$696	$524	75%	$558	80%	$544	78%	$504	72%	$528	76%
Retiree 27	$4,242	$2,728	64%	$2,933	69%	$2,851	67%	$2,605	61%	$3,186	75%
Retiree 28	$553	$536	97%	$536	97%	$536	97%	$536	97%	$536	97%
Retiree 29	$3,494	$2,640	76%	$2,810	80%	$2,742	78%	$2,539	73%	$2,767	79%
IV	$1,488	$1,229	83%	$1,307	88%	$1,276	86%	$1,181	79%	$1,181	79%
Active	$1,175	$1,175	100%	$1,175	100%	$1,175	100%	$1,175	100%	$1,175	100%
Min. %			57%		48%		51%		50%		69%
Max. %			100%		100%		100%		100%		100%

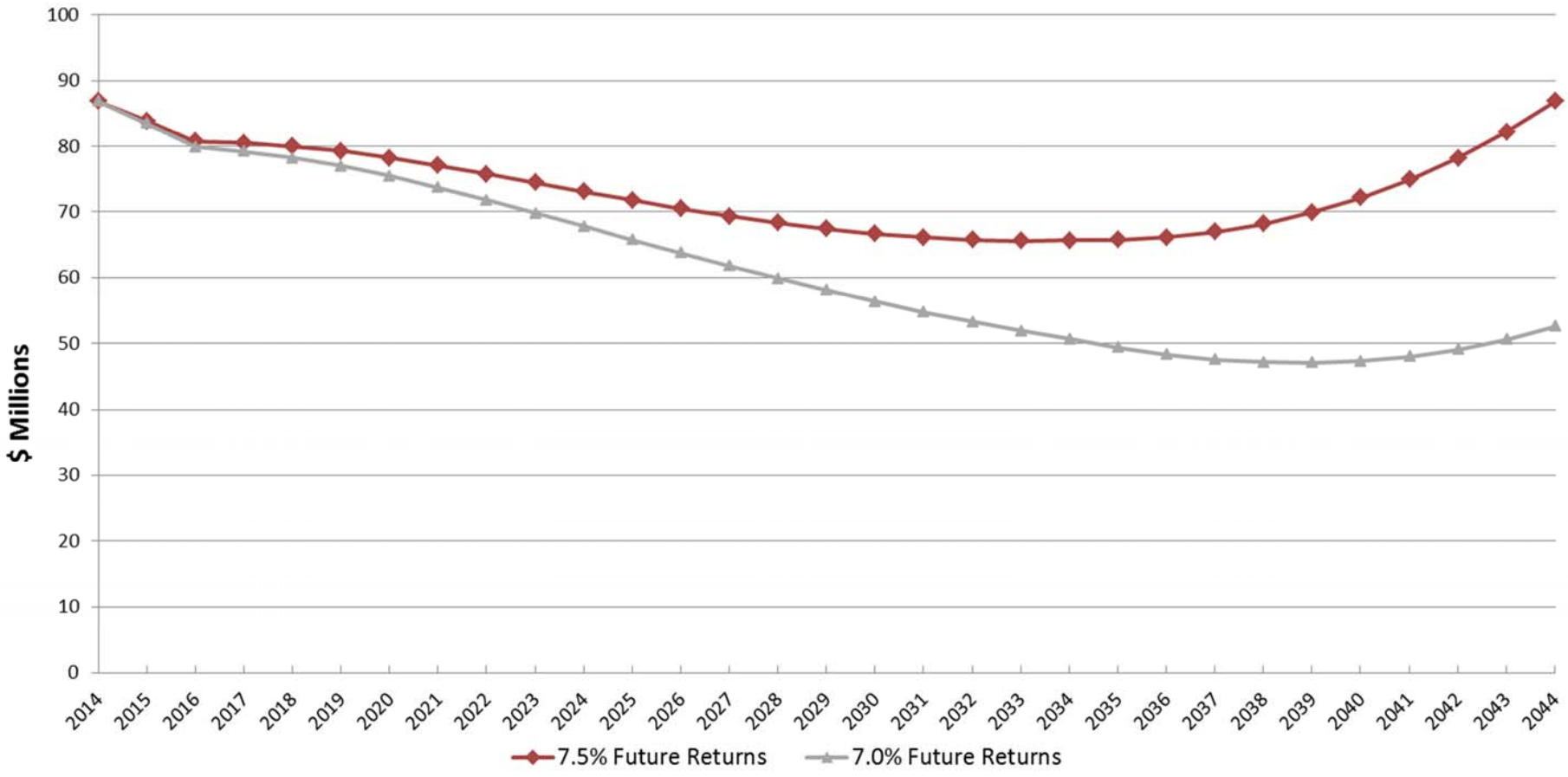
Note: Under all scenarios, the benefit has been reduced by the partial lump sum if applicable. Benefits were calculated before any QDRO adjustment. Final benefits payable to the participant and alternate payee will be adjusted proportionally.

Preliminary Experience for 2014-2015 Plan Year

- Contribution Income
  - Fund Office provided preliminary employer contribution income of $12.25 million, compared to $10.32 million expected
  - Additional $1.93 million in assets
- Investment Income
  - Investment Consultant provided preliminary rate of return of 7.3%, compared to 7.5% expected
  - 0.2% shortfall represents approximately $170,000
- Preliminary experience, not yet recognized, will improve projections

Investment Return Sensitivity –

Scenario G ($75 Avg. Accrual Rate; 1% ERF from 62; Reduce Credited Service)



Assumptions Used in Projections

- The projections shown are based on the May 1, 2014 actuarial valuation and the following additional assumptions:
  - 7.5% future market returns, unless stated otherwise
  - 607 actives for all future years, with each active working an average of 1,700 hours per year (1.03 million hours)
  - Any suspension in benefits occurs on May 1, 2016 and no suspenions are applied to beneficiaries and disabled retirees, in pay status as of the effective date
  - Benefits will be suspended based on the designs described in presentation or 110% of the PBGC guaranteed amount, whichever is greater, taking into consideration the following:
    - No suspension for pensioners over age 80 and pensioners receiving a disability pension
    - Pensioners between ages 75 and 80 get a pro-rated reduction
    - No suspension for current beneficiaries since service is unknown
    - Participants with unknown service, except for current beneficiaries, were reduced without consideration of their PBGC guaranteed amount as it cannot be determined
    - For those without a detailed breakdown of credited service, the impact of limiting credited service to 1 per year was estimated to be a 10% reduction to participants' benefits (Scenarios D, E, F, and G)
  - For Scenarios D, E, and F, the Service Pension will be eliminated for future retirees effective May 1, 2016
  - Future benefit accrual rate remains at $50 per benefit credit
  - Contribution rate remains at $10.00 per hour

Assumptions Used in Projections *continued*

- Mortality assumptions change to RP-2014 Blue Collar Mortality Tables with generational projection using Scale MP-2014 for non-disabled participants, RP-2014 Disabled Retire Mortality Tables with generational projection using Scale MP-2014 for participants disabled on and after May 1, 1997, and a 50/50 blend of the two preceding mortality assumptions for participants disabled prior to May 1, 1997
- Effective May 1, 2016, the following assumptions will change:
  - For Scenarios D, E, and F, the retirement rates for Service Pension are eliminated
  - Inactive vested participants will retire at age 60 if eligible
  - 40% of future retirees will elect the 50% joint and survivor form of payment and 60% will elect the single life annuity; this is based on the Plan's experience during 2004–2014
- Stevens Painton pays its withdrawal liability as assessed
- Administrative expenses increases by 10% for the May 1, 2015 Plan year and by 3% per year for all future years (additional increase in 2015 is due to the doubling of PBGC premiums under MEPRA)

Caveat regarding projections: *Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as estimates of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.*

Caveat regarding legal interpretations: *Segal does not practice law and, therefore, cannot and does not provide legal advice. Any statutory interpretations of PPA 2006, PRA 2010, and MEPRA 2014, including related IRS regulations and guidance presented or reflected in the presentations are subject to the review and opinion of Fund Counsel. Design of benefit suspension is solely the responsibility of the Trustees. Any sample designs contained in this presentation are intended to assist the Trustees and do not imply any recommendation by Segal.*

Analysis of Benefit Suspension Designs

Iron Workers Local 17 Pension Fund

June 9, 2015

Presented by: Megan K. Kelly, CEBS, Vice President and Benefits Consultant
Harold S. Cooper, FSA, MAAA, EA, Vice President and Actuary

This document has been prepared by Segal Consulting for the benefit of the Board of Trustees of the Iron Workers Local 17 Pension Fund. This document should not be shared, copied, or quoted, in whole or in part, without the consent of Segal Consulting, except to the extent otherwise required by law. As with all issues involving the interpretation or application of laws, Trustees should rely on the advice of Fund Counsel in interpreting and applying the Multiemployer Pension Reform Act of 2014. The actuarial calculations were completed under the supervision of Henry Wong, ASA, MAAA, FCA, EA.

Segal Consulting

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Recap of May 15, 2015 Call

- Discussed impact of updated pensioner data provided by Fund Office
  - Updated pensioner data improved projections
  - Updated non-pensioner data not yet available
- Showed projections of Scenarios G and H
  - G and H comprised of:
    - Reducing the average accrual rate to $75,
    - Reducing benefits by 1% per year from age 62 for current pensioners who retired on Service Pension,
    - Adjusting credited service to not more than one credit per year (Scenario G),
    - Not adjusting credited service (Scenario H),
    - Reflecting lump sums previously paid, and
    - Maintaining the Service Pension for participants retiring after April 30, 2016
  - Scenario G was projected to maintain solvency, while the reductions under Scenario H were not enough to maintain solvency
- Developed new Scenario I
  - Same as Scenario G, except no reduction for current pensioners who retired on Service Pension

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Contents of Today's Presentation

- Deterministic projections of Plan assets under Scenarios E, G, and I reflecting preliminary investment return (7.3%) and contribution income ($12.25 million) for the year ended April 30, 2015 and assuming either 7.5% or 7.0% future market returns
- Stochastic projections of Plan assets under Scenarios G and I based on the Plan's investment allocations and Segal Rogerscasey's capital market assumptions

Potential Benefit Adjustments

1. Adjust benefits downward so that all average accrual rates are not more than $x

2. Adjust early retirement benefits so that all benefits are calculated using the current early retirement factors (with further reduction prior to age 58)
   A. Adjust early retirement benefits so that all benefits are calculated based on an average of actual early retirement factor used and current early retirement factors
   B. Adjust the unreduced portion of the early retirement benefits for current pensioners who retired prior to age 62 (Service Pension)

3. Adjust credited service to not more than one year earned per year

4. Adjust credited service so that those with < 1,900 hours, but at least 1,200 hours, get full service

   Note: We found very few instances of partial credit among the sample retirees. However, we do not have sufficient data to determine the impact on non-retired participants. Due to this and administrative complexity, we did not use this adjustment.

5. For each possible adjustment (1-4) above, reflect the fact that 10% of the benefit was already paid as a lump sum to certain pensioners

Potential Benefit Adjustments — New Combinations Reviewed

Prior Scenarios (A-C) were considered before focus shifted to the following:

D. Reduce average accrual rate to $78 (item 1), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

E. Reduce average accrual rate to $83 (item 1), reduce benefits by 3% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

F. Reduce average accrual rate to $81 (item 1), reduce benefits by 2% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

G. Reduce average accrual rate to $75 (item 1), reduce benefits by 1% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

H. Reduce average accrual rate to $75 (item 1), reduce benefits by 1% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), no adjustment to credited service, and reflect lump sum previously paid (item 5)

I. Reduce average accrual rate to $75 (item 1), no reduction for current pensioners who retired on Service Pension, adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

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Potential Benefit Adjustments — Summary of Scenarios D - I

Scenario	(Item 1) Average Accrual Rate	(Item 2B) ERF for Service Pension Under 62 (% per year)	(Item 3) Reduce Credited Service to 1/year?	(Item 5) Reflect Partial Lump Sum?	Service Pension for Future Retirees?
Scenario D	$78	0%	Yes	Yes	No
Scenario E	$83	3%	Yes	Yes	No
Scenario F	$81	2%	Yes	Yes	No
Scenario G	$75	1%	Yes	Yes	Yes*
Scenario H	$75	1%	No	Yes	Yes*
Scenario I	$75	0%	Yes	Yes	Yes*

**Only to those retiring after age 62 with 30 years of vesting service*

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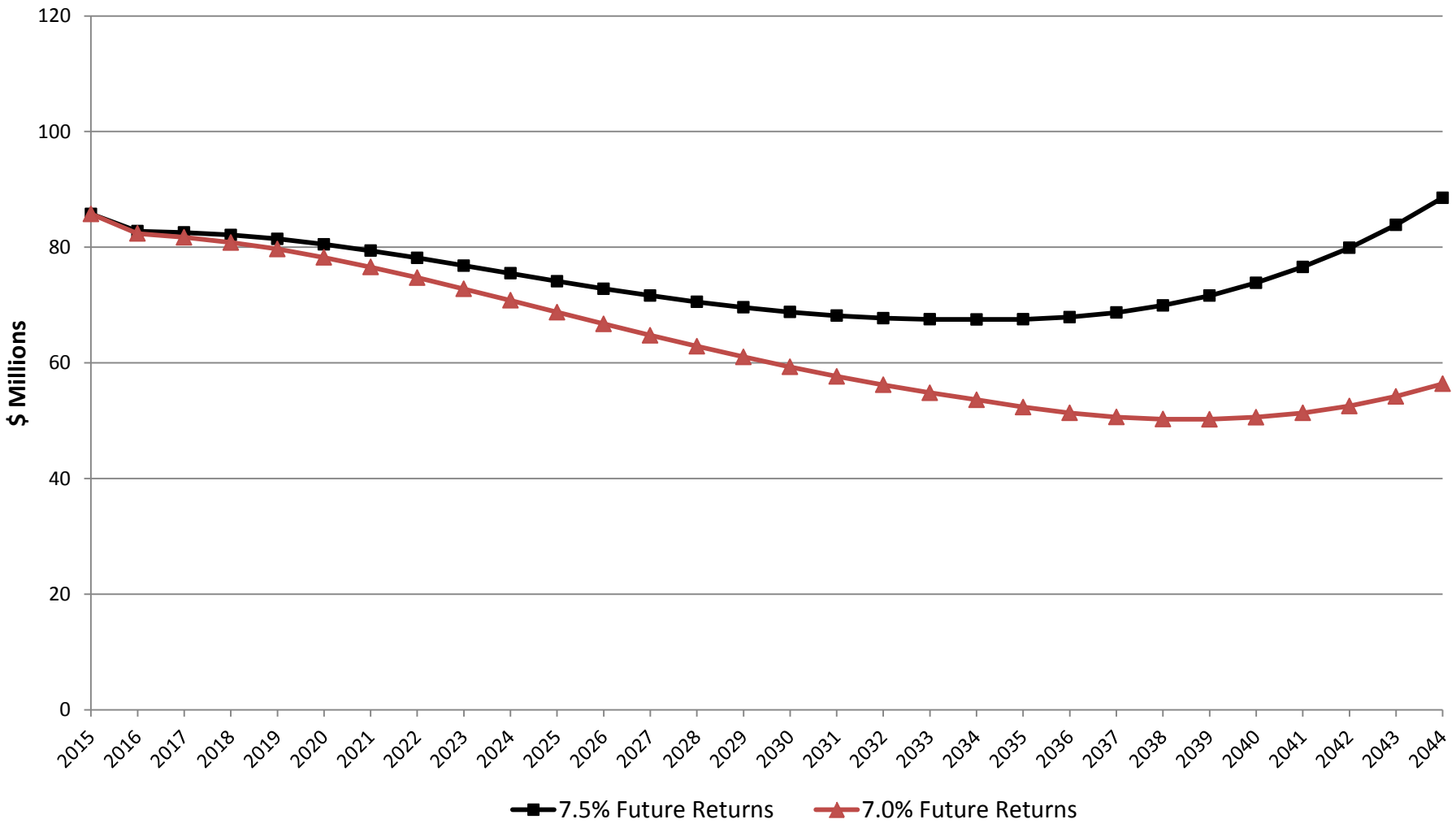
Benefits for Sample Participants

	Current Benefit	Scenario E ($83 acc. rate, 3% from 62, CS 1/year)		Scenario F ($81 acc. rate, 2% from 62, CS 1/year)		Scenario G ($75 acc. rate, 1% from 62, CS 1/year)		Scenario H ($75 acc. rate, 1% from 62)		Scenario I ($75 acc. rate, CS 1/year)	
	Amount	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Retiree 1	$4,050	$2,399	59%	$2,437	60%	$2,321	57%	$2,810	69%	$2,419	60%
Retiree 2	$1,163	$1,102	95%	$1,076	92%	$996	86%	$1,020	88%	$996	86%
Retiree 3	$938	$834	89%	$812	87%	$745	79%	$745	79%	$745	79%
Retiree 4	$4,165	$2,214	53%	$2,265	54%	$2,170	52%	$2,891	69%	$2,278	55%
Retiree 5	$3,050	$2,532	83%	$2,471	81%	$2,288	75%	$2,663	87%	$2,288	75%
Retiree 6	$624	$560	90%	$560	90%	$560	90%	$623	100%	$560	90%
Retiree 7	$3,665	$2,401	66%	$2,548	70%	$2,548	70%	$2,984	81%	$2,738	75%
Retiree 8	$4,025	$2,248	56%	$2,374	59%	$2,365	59%	$2,820	70%	$2,531	63%
Retiree 9	$546	$546	100%	$546	100%	$546	100%	$546	100%	$546	100%
Retiree 10	$4,813	$3,486	72%	$3,402	71%	$3,150	65%	$3,900	81%	$3,150	65%
Retiree 11	$993	$709	71%	$698	70%	$698	70%	$785	79%	$698	70%
Retiree 12	$1,105	$1,023	93%	$995	90%	$913	83%	$941	85%	$913	83%
Retiree 13	$929	$754	81%	$733	79%	$672	72%	$672	72%	$672	72%
Retiree 14	$1,048	$831	79%	$811	77%	$751	72%	$824	79%	$751	72%
Retiree 15	$2,126	$1,545	73%	$1,504	71%	$1,380	65%	$1,457	69%	$1,380	65%
Retiree 16	$858	$777	91%	$777	91%	$777	91%	$780	91%	$777	91%
Retiree 17	$3,456	$2,256	65%	$2,302	67%	$2,224	64%	$2,488	72%	$2,317	67%
Retiree 18	$1,343	$1,033	77%	$1,004	75%	$919	68%	$968	72%	$919	68%
Retiree 19	$3,430	$2,251	66%	$2,382	69%	$2,378	69%	$2,798	82%	$2,550	74%
Retiree 20	$3,815	$1,847	48%	$1,952	51%	$1,924	50%	$2,644	69%	$2,071	54%
Retiree 21	$751	$726	97%	$726	97%	$726	97%	$740	99%	$726	97%
Retiree 22	$1,302	$1,042	80%	$1,016	78%	$941	72%	$1,142	88%	$941	72%
Retiree 23	$843	$718	85%	$718	85%	$718	85%	$843	100%	$718	85%
Retiree 24	$337	$326	97%	$326	97%	$326	97%	$326	97%	$326	97%
Retiree 25	$878	$809	92%	$790	90%	$731	83%	$731	83%	$731	83%
Retiree 26	$696	$558	80%	$544	78%	$504	72%	$528	76%	$504	72%
Retiree 27	$4,242	$2,933	69%	$2,851	67%	$2,605	61%	$3,186	75%	$2,605	61%
Retiree 28	$553	$536	97%	$536	97%	$536	97%	$536	97%	$536	97%
Retiree 29	$3,494	$2,810	80%	$2,742	78%	$2,539	73%	$2,767	79%	$2,539	73%
IV	$1,488	$1,307	88%	$1,276	86%	$1,181	79%	$1,181	79%	$1,181	79%
Active	$1,175	$1,175	100%	$1,175	100%	$1,175	100%	$1,175	100%	$1,175	100%
Min. %			48%		51%		50%		69%		54%
Max. %			100%		100%		100%		100%		100%

Note: Under all scenarios, the benefit has been reduced by the partial lump sum if applicable. Benefits were calculated before any QDRO adjustment. Final benefits payable to the participant and alternate payee will be adjusted proportionally.

Deterministic Projections — Plan Assets

Scenario E ($83 Avg. Accrual Rate; 3% ERF from 62 for Service Pension; Reduce Credited Service)



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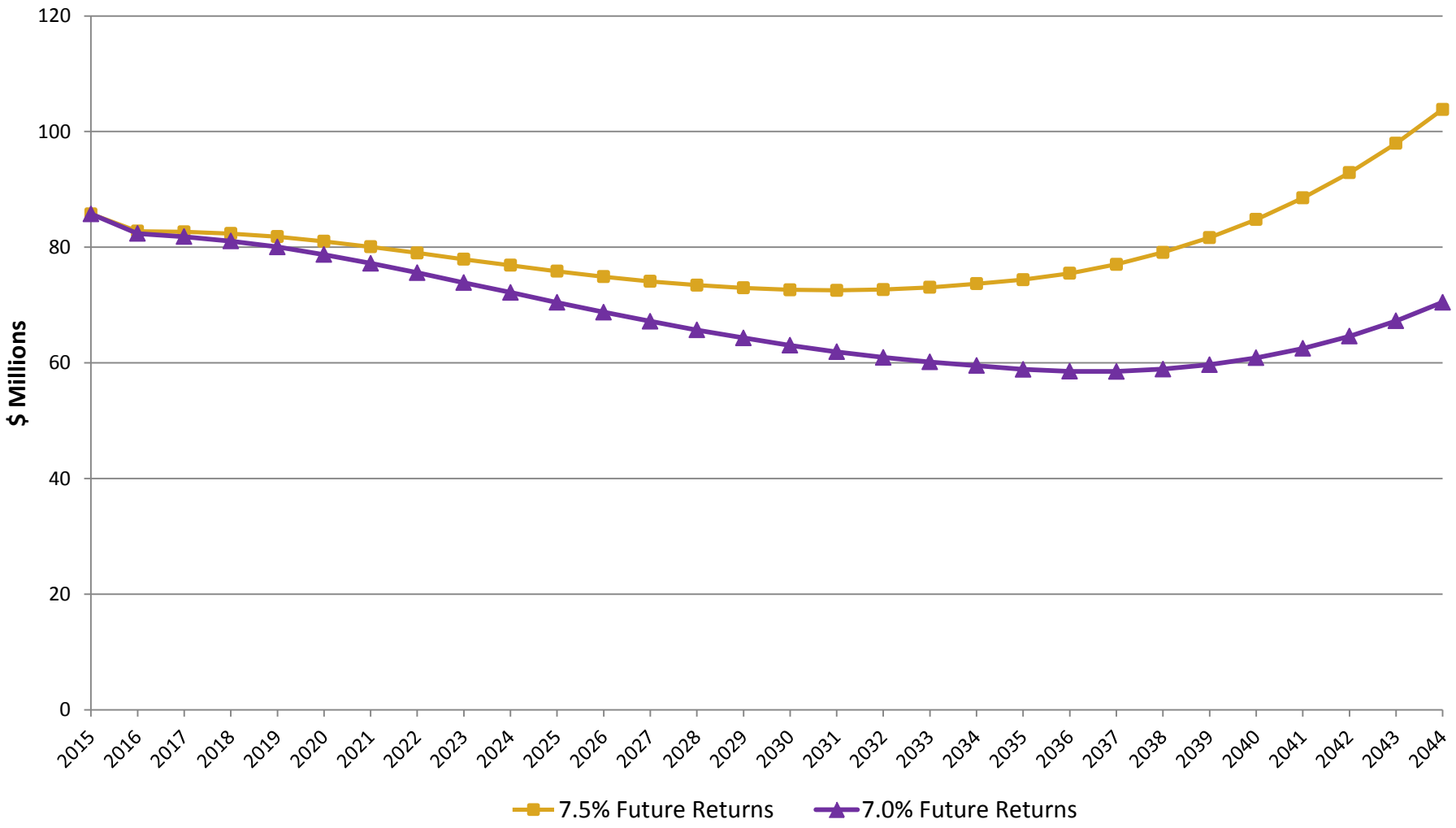
Deterministic Projections — Plan Assets

Scenario G ($75 Avg. Accrual Rate; 1% ERF from 62 for Service Pension; Reduce Credited Service)



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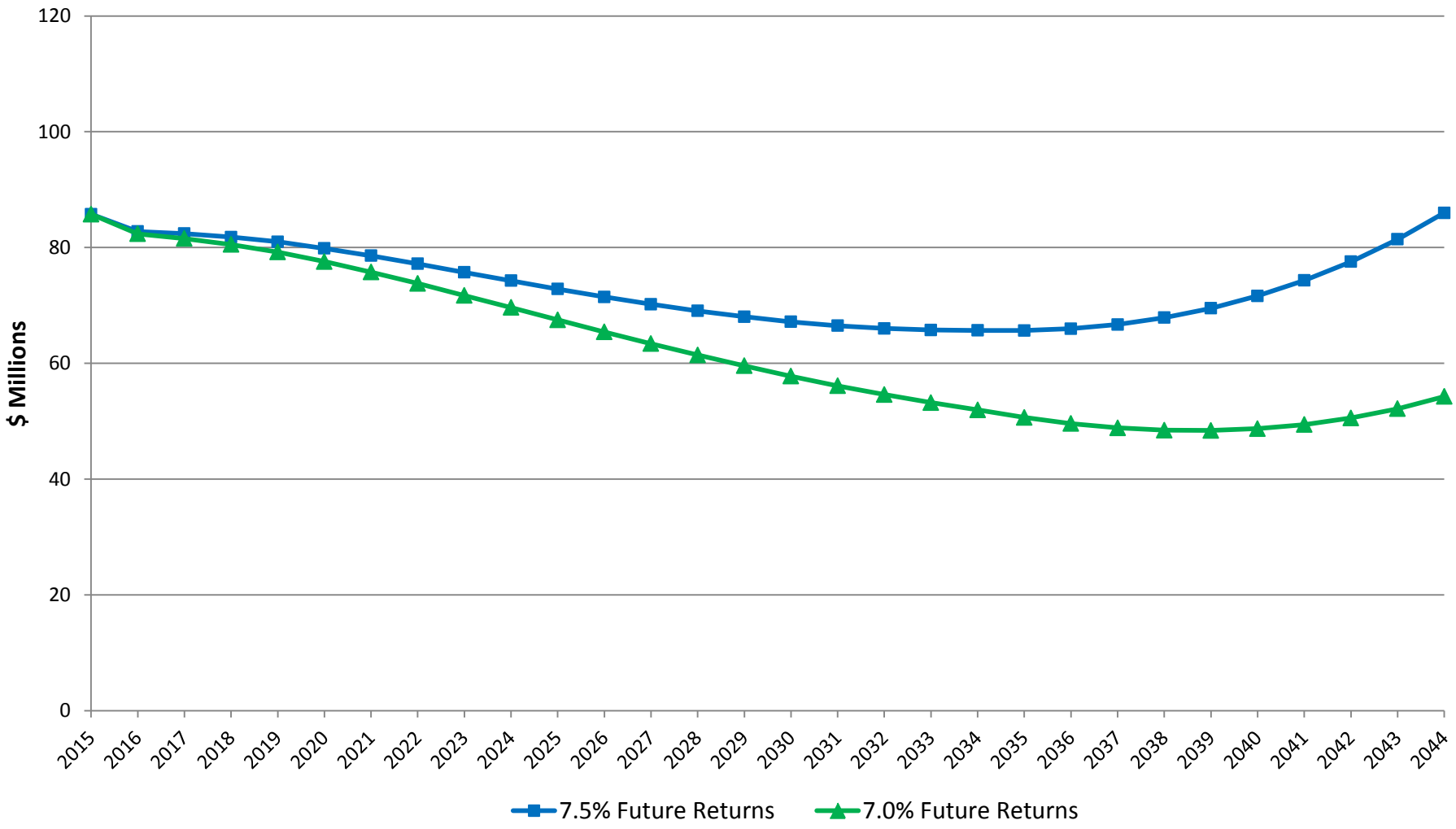
Deterministic Projections — Plan Assets

Scenario I ($75 Avg. Accrual Rate; ERF Unchanged; Reduce Credited Service)



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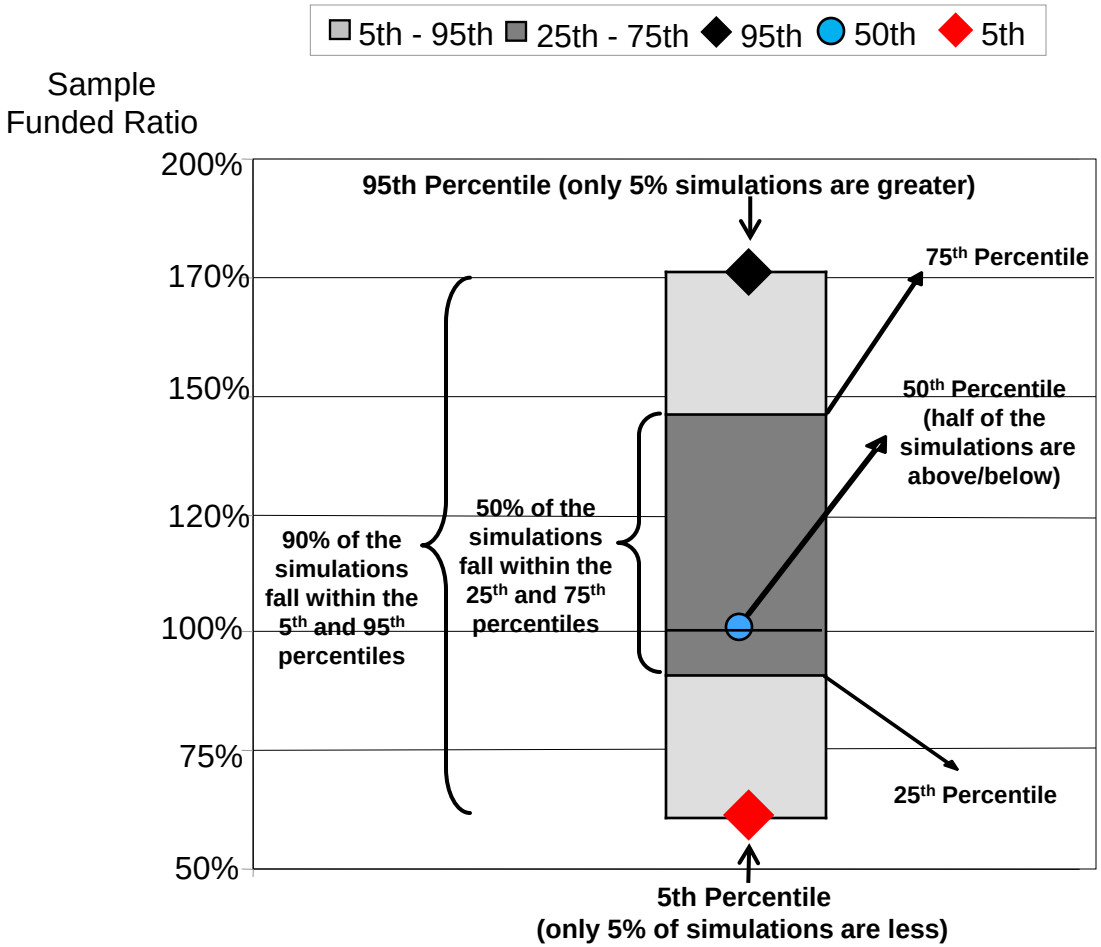
Stochastic Analysis Overview

- **Deterministic modeling** assumes a fixed asset return (7.5% and 7.0% used in this analysis) each year and does not reflect the impact of asset volatility
- **Stochastic modeling** looks at a range of possible asset return scenarios over time and is based on capital market assumptions of expected returns/standard deviations for various asset classes and correlations between asset classes
  - Creates thousands of scenarios (10,000 simulations in this analysis) for rates of return (based on current asset mix) over projection period
  - Shows how the plan would perform in each of these scenarios
  - Determines distribution of outcomes for Plan assets
  - Provides both the best estimate value (50th percentile or median) and a range of other possible values, including probabilities of outcomes

Stochastic Analysis Overview

- The data is grouped into percentiles and summarized as a range



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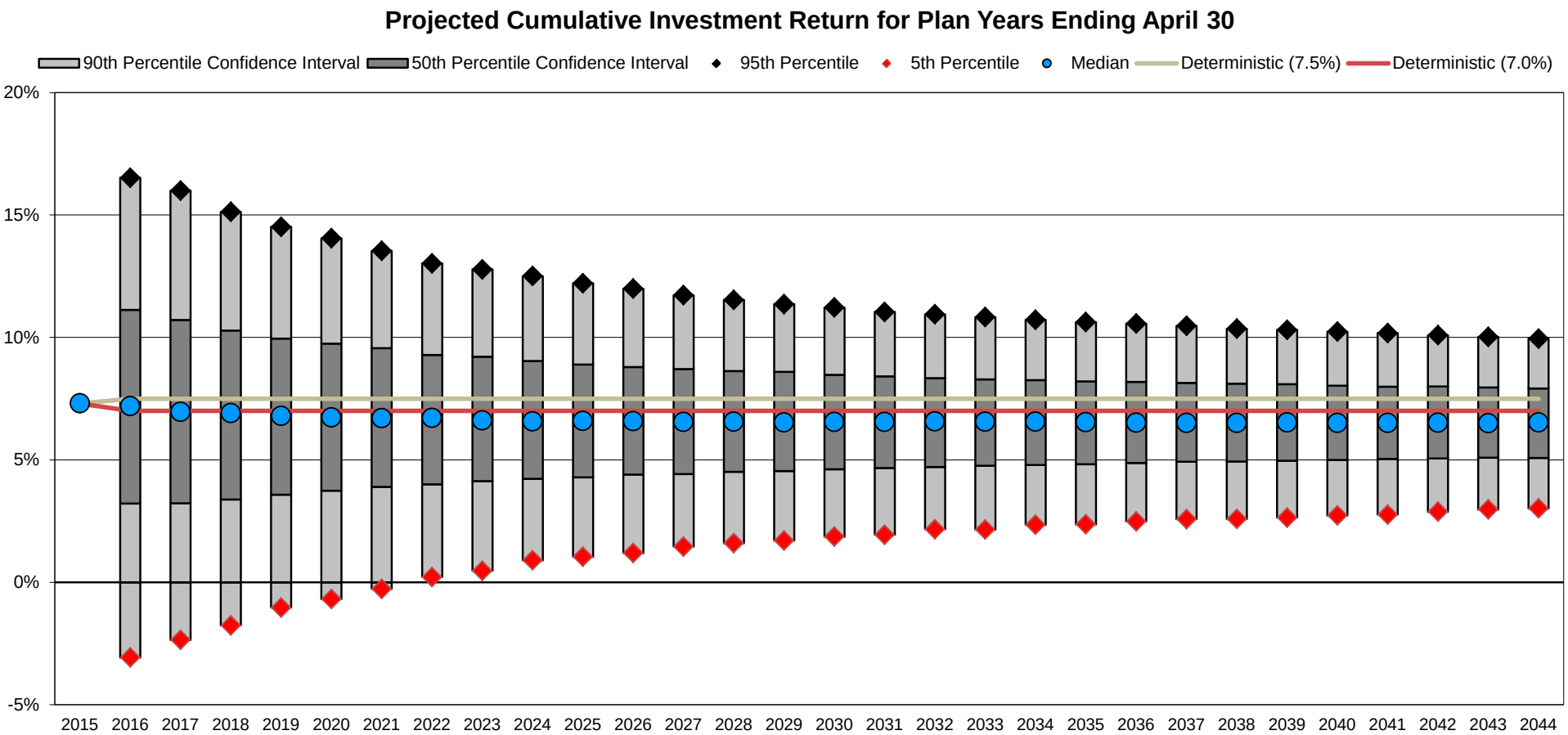
- Summarize results as a range:
  - **Best Case**—Better cases would occur only 5% of the time (above 95th percentile in this example)
  - **Worst Case**—Worse cases would occur only 5% of the time (below 5th percentile in this example)
  - **Most Likely**—Cases better or worse (50th percentile) are equally likely

Stochastic Projections

Expected Investment Return Based on Current Allocations and Segal Rogercasey's Capital Market Assumptions

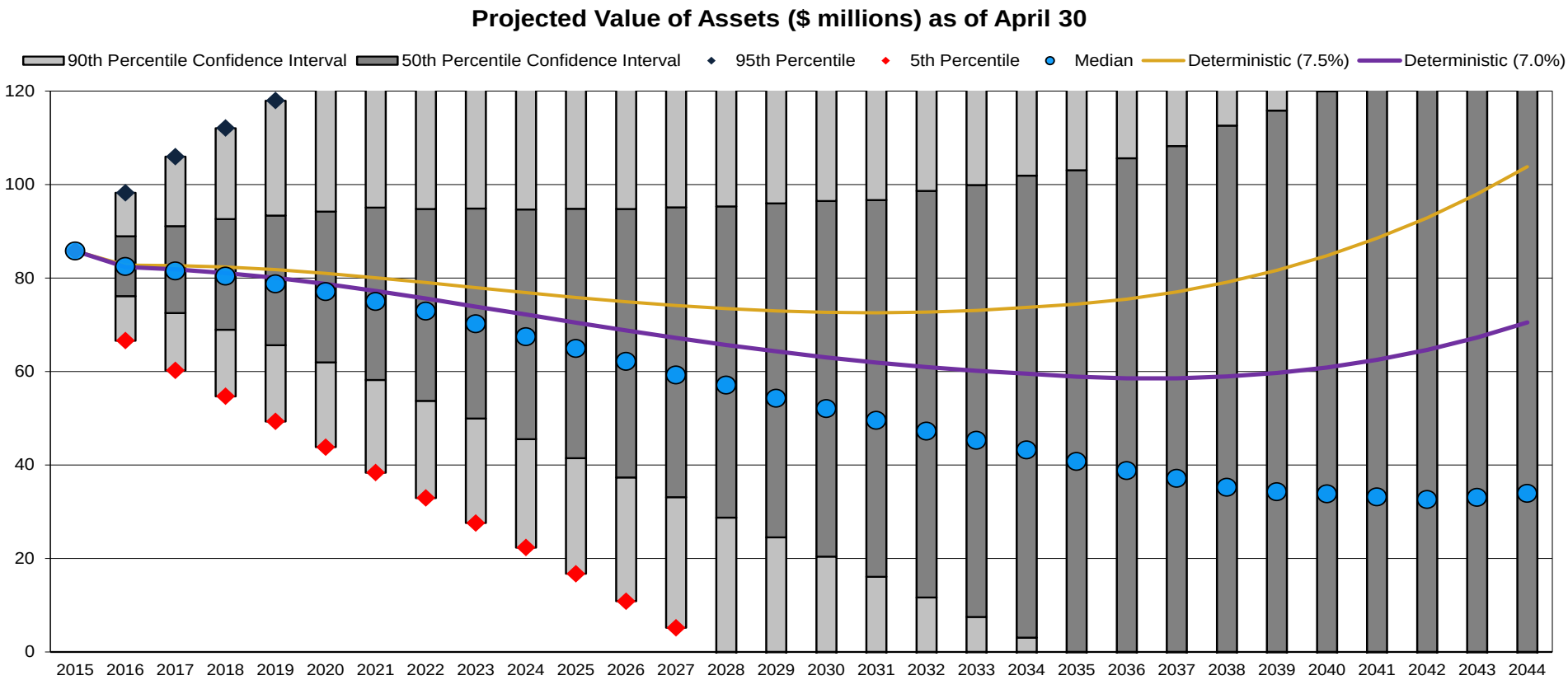
Projected Cumulative Investment Return for Plan Years Ending April 30



95th	7.3%	16.5%	16.0%	15.1%	14.5%	14.0%	13.5%	13.0%	12.8%	12.5%	12.2%	12.0%	11.7%	11.5%	11.4%	11.2%	11.0%	10.9%	10.8%	10.7%	10.6%	10.6%	10.5%	10.4%	10.3%	10.2%	10.2%	10.1%	10.0%	9.9%
75th	7.3%	11.1%	10.7%	10.3%	10.0%	9.8%	9.6%	9.3%	9.2%	9.0%	8.9%	8.8%	8.7%	8.6%	8.6%	8.5%	8.4%	8.3%	8.3%	8.3%	8.2%	8.2%	8.1%	8.1%	8.1%	8.0%	8.0%	8.0%	8.0%	7.9%
50th	7.3%	7.2%	7.0%	6.9%	6.8%	6.7%	6.7%	6.7%	6.6%	6.6%	6.6%	6.6%	6.5%	6.6%	6.5%	6.5%	6.5%	6.6%	6.6%	6.6%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
25th	7.3%	3.2%	3.2%	3.4%	3.6%	3.7%	3.9%	4.0%	4.1%	4.2%	4.3%	4.4%	4.4%	4.5%	4.5%	4.6%	4.7%	4.7%	4.8%	4.8%	4.8%	4.9%	4.9%	4.9%	5.0%	5.0%	5.0%	5.1%	5.1%	5.1%
5th	7.3%	-3.1%	-2.4%	-1.8%	-1.0%	-0.7%	-0.3%	0.2%	0.5%	0.9%	1.0%	1.2%	1.5%	1.6%	1.7%	1.9%	1.9%	2.2%	2.2%	2.3%	2.4%	2.5%	2.6%	2.6%	2.6%	2.7%	2.8%	2.9%	3.0%	3.0%
7.5%	7.3%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
7.0%	7.3%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%

Stochastic Projections

Scenario G ($75 Avg. Accrual Rate; 1% ERF from 62 for Service Pension; Reduce Credited Service)

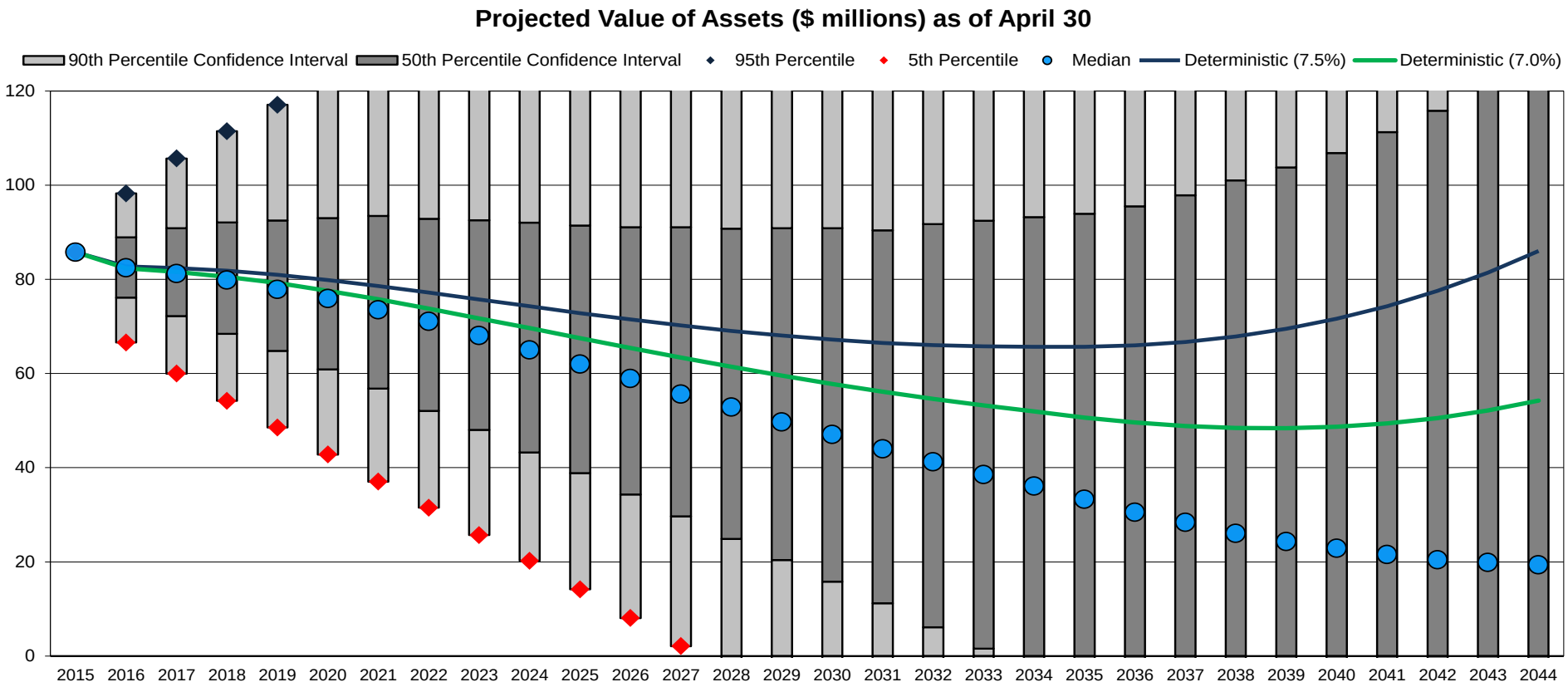


95th	86	98	106	112	118	124	129	134	139	144	151	158	164	171	176	185	192	202	214	227	240	255	270	287	304	326	349	370	397	417
75th	86	89	91	93	93	94	95	95	95	95	95	95	95	95	96	96	97	99	100	102	103	106	108	113	116	120	125	131	138	146
50th	86	82	81	80	79	77	75	73	70	67	65	62	59	57	54	52	50	47	45	43	41	39	37	35	34	34	33	33	33	34
25th	86	76	72	69	66	62	58	54	50	45	41	37	33	29	24	20	16	12	7	3	--	--	--	--	--	--	--	--	--	--
5th	86	67	60	55	49	44	38	33	28	22	17	11	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7.5%	86	83	83	82	82	81	80	79	78	77	76	75	74	73	73	73	73	73	73	74	74	75	77	79	82	85	89	93	98	104
7.0%	86	82	82	81	80	79	77	76	74	72	70	69	67	66	64	63	62	61	60	60	59	59	59	59	60	61	63	65	67	70

The Stochastic projections show that there is a 39% probability that the Plan will become insolvent over the next 30 years under this scenario.

Stochastic Projections

Scenario I ($75 Avg. Accrual Rate; ERF Unchanged; Reduce Credited Service)



95th	86	98	106	111	117	123	127	131	136	141	147	153	159	165	170	179	184	194	204	217	228	243	256	272	287	307	328	347	375	392
75th	86	89	91	92	93	93	93	93	93	92	91	91	91	91	91	91	90	92	92	93	94	95	98	101	104	107	111	116	123	128
50th	86	82	81	80	78	76	73	71	68	65	62	59	56	53	50	47	44	41	39	36	33	30	28	26	24	23	22	20	20	19
25th	86	76	72	68	65	61	57	52	48	43	39	34	30	25	20	16	11	6	2	--	--	--	--	--	--	--	--	--	--	--
5th	86	67	60	54	49	43	37	31	26	20	14	8	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7.5%	86	83	82	82	81	80	79	77	76	74	73	71	70	69	68	67	66	66	66	66	66	66	67	68	70	72	74	78	81	86
7.0%	86	82	82	81	79	78	76	74	72	70	68	65	63	61	60	58	56	55	53	52	51	50	49	48	48	49	49	51	52	54

The Stochastic projections show that there is a 44% probability that the Plan will become insolvent over the next 30 years under this scenario.

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Appendix

Assumptions Used in Projections

- The projections shown are based on the May 1, 2014 actuarial valuation and the following additional assumptions:
  - 7.3% market return for Plan year ended April 30, 2015
  - Deterministic projections used 7.5% or 7.0% for market returns after April 30, 2015
  - Stochastic projections of market returns are based on the Plan's investment allocations as provided by the Plan's Investment Manager (45% U.S. Equities, 15% International Equities, 27% Fixed Income, and 13% Equity Oriented Real State) and Segal Rogercasey's capital market assumptions over a 15-year time horizon (described in slide 18)
  - Regular employer contributions of $12.25 million for the Plan year ended April 30, 2015
  - 607 actives for all years after April 30, 2015, with each active working an average of 1,700 hours per year (1.03 million hours)
  - Benefits will be suspended based on the designs described in presentation or 110% of the PBGC guaranteed amount, whichever is greater, taking into consideration the following:
    - Any suspension in benefits occurs on May 1, 2016
    - No suspension for pensioners over age 80 as of the effective date and disabled retirees
    - Pro-rated suspension for pensioners between ages 75 and 80 as of the effective date
    - No suspension for current beneficiaries since service is unknown
    - Participants with unknown service were reduced without consideration of their PBGC guaranteed amount as it cannot be determined
    - For those without a detailed breakdown of credited service, the impact of limiting credited service to 1 per year was estimated to be a 10% reduction to participants' benefits (Scenarios D, E, F, G, and I)
  - For Scenarios D, E, and F, the Service Pension will be eliminated for future retirees effective May 1, 2016
  - Future benefit accrual rate remains at $50 per benefit credit
  - Contribution rate remains at $10.00 per hour

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Appendix

Assumptions Used in Projections *continued*

- Mortality assumptions change to RP-2014 Blue Collar Mortality Tables with generational projection using Scale MP-2014 for non-disabled participants, RP-2014 Disabled Retire Mortality Tables with generational projection using Scale MP-2014 for participants disabled on and after May 1, 1997, and a 50/50 blend of the two preceding mortality assumptions for participants disabled prior to May 1, 1997
- Effective May 1, 2016, the following assumptions will change:
  - Inactive vested participants will retire at age 60 if eligible
  - 40% of future retirees will elect the 50% joint and survivor form of payment and 60% will elect the single life annuity; this is based on the Plan's experience during 2004–2014
  - For Scenarios D, E, and F, the retirement rates for Service Pension are eliminated
- Stevens Painton pays its withdrawal liability as assessed
- Administrative expenses increases by 10% for the May 1, 2015 Plan year and by 3% per year for all future years (additional increase in 2015 is due to the doubling of PBGC premiums under MPRA)

Caveat regarding projections: *Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as estimates of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.*

Caveat regarding legal interpretations: *Segal does not practice law and, therefore, cannot and does not provide legal advice. Any statutory interpretations of PPA 2006, PRA 2010, and MPRA 2014, including related IRS regulations and guidance presented or reflected in the presentations are subject to the review and opinion of Fund Counsel. Design of benefit suspension is solely the responsibility of the Trustees. Any sample designs contained in this presentation are intended to assist the Trustees and do not imply any recommendation by Segal.*

Appendix

Segal Rogercasey's Capital Market Assumptions – Expected Return, Volatility, and Correlation Between Investment Categories

Investment Category	Allocation	Expected Return (15-Year Time Horizon)	Volatility (Standard Deviation)
U.S. Equities	45%	8.7%	18.5%
International Equities (Developed)	15%	9.4%	21.0%
Fixed Income	27%	3.6%	5.0%
Equity Oriented Real Estate	13%	6.5%	12.0%

Correlation Between Investment Categories

Investment Category	U.S. Equities	International Equities (Developed)	Fixed Income	Equity Oriented Real Estate
U.S. Equities	1.00			
International Equities (Developed)	0.88	1.00		
Fixed Income	0.06	0.14	1.00	
Equity Oriented Real Estate	0.26	0.19	-0.25	1.00

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Analysis of Benefit Suspension Designs *continued*

Iron Workers Local 17 Pension Fund

August 7, 2015

Presented by: Megan K. Kelly, CEBS, Vice President and Benefits Consultant
Harold S. Cooper, FSA, MAAA, EA, Vice President and Actuary

This document has been prepared by Segal Consulting for the benefit of the Board of Trustees of the Iron Workers Local 17 Pension Fund. This document should not be shared, copied, or quoted, in whole or in part, without the consent of Segal Consulting, except to the extent otherwise required by law. As with all issues involving the interpretation or application of laws, Trustees should rely on the advice of Fund Counsel in interpreting and applying the Multiemployer Pension Reform Act of 2014. The actuarial calculations were completed under the supervision of Henry Wong, ASA, MAAA, FCA, EA.

Segal Consulting

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Recap of July 7, 2015 Presentation

- Showed deterministic and stochastic projections of suspension designs
- Focused on Scenarios G and I, where average accrual rate is reduced to no less than $75, current Service Pension recipients' benefit is reduced by an early retirement factor (Scenario G) or not reduced (Scenario I), credited service is limited to not more than one per year, lump sums paid are reflected, and Service Pension is maintained for future retirees

Contents of Today's Presentation

- Discuss proposed regulations with respect to benefit suspensions
- Review updated deterministic projections reflecting:
  - Financial data used for the May 1, 2015 Actuarial Status (Zone) Certification
  - Trustees' industry activity provided for the 2015 Zone Certification
  - November 1, 2016 effective date for benefit suspension *(previously modeled May 1, 2016 effective date)*
  - 6.5% future investment returns to match median expected return based on the Plan's investment allocations and the investment consultant's capital market assumptions over an average 15-year horizon (*previously assumed 7.5% and 7.0% for deterministic projections)*
  - With and without future withdrawal liability income from Stevens Painton *(previously only showed projections including future withdrawal liability income)*
  - Proposed benefit suspension regulations, specifically the 5% "materially in excess" rule
- Review Stochastic projection for updated suspension design

Proposed Regulations

- Projected solvency ratio must be at least 1.0 by the end of the extended period on a deterministic basis
  - Solvency ratio is plan's available resources (assets) as of beginning of plan year ÷ benefit payments for the plan year
  - Extended period is defined as at least 30 plan years
- For plans with over 10,000 participants, stochastic projections must show that the probability of remaining solvent throughout the extended period is over 50%
  - This requirement does not apply to the Iron Workers Local 17 Pension Fund
- If the projected funded percentage is less than 100% by the end of the extended period, then deterministic projection must not show a decrease in the solvency ratio or available resources during the last five years of the extended period
- If the dollar amount of benefit suspended for each participant and beneficiary is reduced by 5% and the plan is still projected to remain solvent, the level of suspension is deemed to be materially in excess of level necessary to avoid insolvency (i.e., suspension must be re-designed for smaller suspension in benefits)

Proposed Regulations *continued*

- Implication on current suspension designs
  - Each suspension design must meet the 5% rule and show increasing assets in last five years of the "extended period"
    - Updated projections in this presentation show 50-year projections of the Plan's assets to ensure that both requirements are met
  - Assuming that Stevens Painton continue making its withdrawal liability payments, Scenarios G and I would be considered "materially in excess" under the 5% rule, which means that the amount of suspension needs to be reduced (e.g., increase average accrual rate)
- Cash flow projections included in application must reflect asset values as of the end of the most recent calendar quarter
  - Applications between 10/1/2015 – 12/31/2015 must use 9/30/2015 asset value

Potential Benefit Adjustments

1. Adjust benefits downward so that all average accrual rates are not more than $x

2. Adjust early retirement benefits so that all benefits are calculated using the current early retirement factors (with further reduction prior to age 58)
   A. Adjust early retirement benefits so that all benefits are calculated based on an average of actual early retirement factor used and current early retirement factors *(not actively being considered)*
   B. Adjust the unreduced portion of the early retirement benefits for current pensioners who retired prior to age 62 (Service Pension)

3. Adjust credited service to not more than one year earned per year

4. Adjust credited service so that those with < 1,900 hours, but at least 1,200 hours, get full service *(not actively being considered)*

5. For each possible adjustment (1-4) above, reflect the fact that 10% of the benefit was already paid as a lump sum to certain pensioners

Potential Benefit Adjustments — Combinations Reviewed

Prior Scenarios (A-F) were considered before focus shifted to the following:

G. Reduce average accrual rate to $75 (item 1), reduce benefits by 1% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

H. Reduce average accrual rate to $75 (item 1), reduce benefits by 1% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), no adjustment to credited service, and reflect lump sum previously paid (item 5)

I. Reduce average accrual rate to $75 (item 1), no early retirement reduction for current pensioners who retired on Service Pension, adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

J. Reduce average accrual rate to $77 (item 1), no early retirement reduction for current pensioners who retired on Service Pension, adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

K. Reduce average accrual rate to $80 (item 1), reduce benefits by 1.5% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

L. Reduce average accrual rate to $75 (item 1), reduce benefits by 0.5% per year from age 62 for current pensioners who retired on Service Pension prior to age 62 (item 2B), adjust credited service to not more than one credited service per year (item 3), and reflect lump sum previously paid (item 5)

Scenario H was previously shown to not be enough of a suspension for the Plan to remain solvent, and Scenarios G and I would not meet the 5% rule under the proposed regulations with future withdrawal liability payments. As such, Scenarios J, K, and L were developed. Scenario L was developed assuming no future withdrawal liability payments.

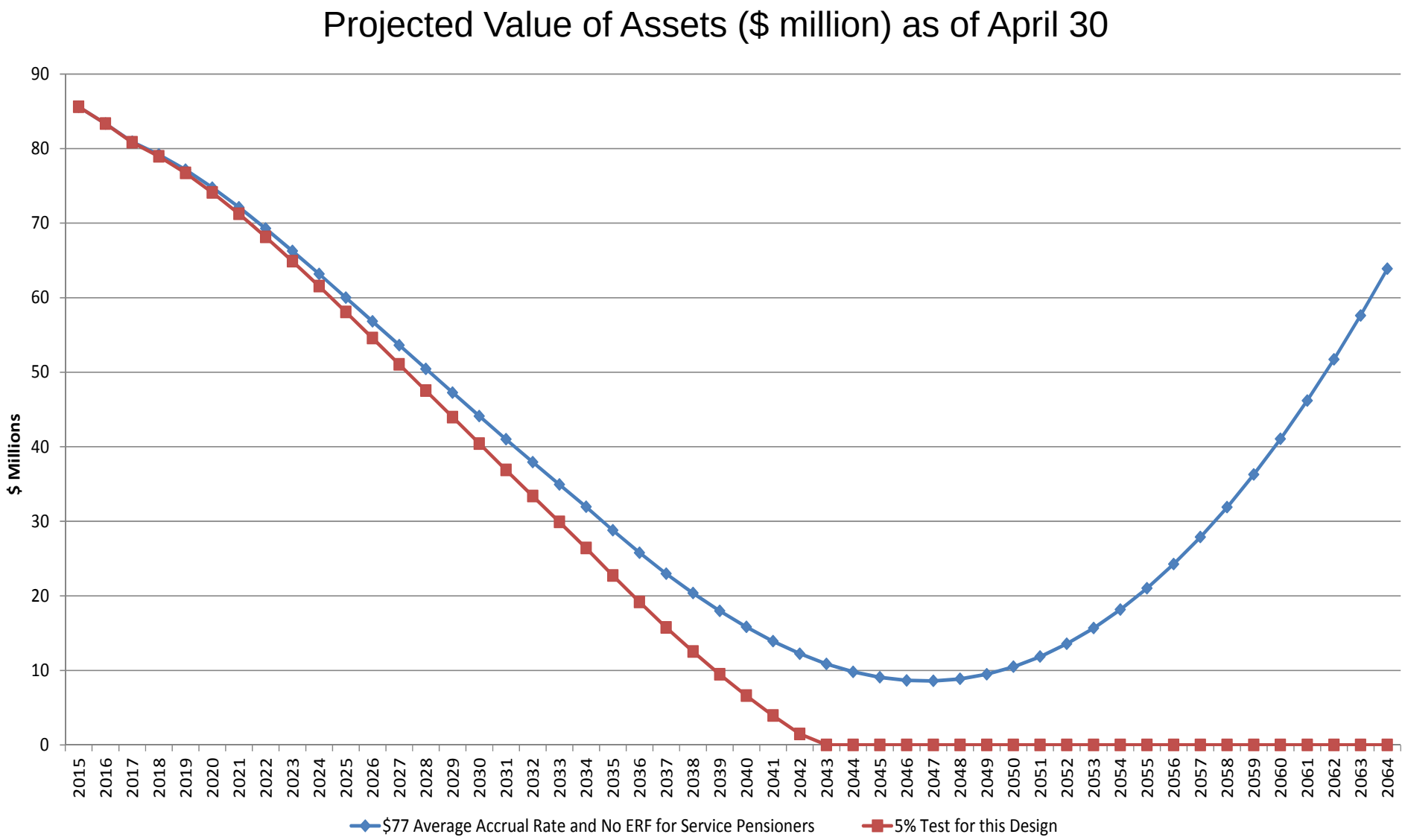
Potential Benefit Adjustments — Summary of Scenarios G - L

Scenario	(Item 1) Average Accrual Rate	(Item 2B) ERF for Service Pension Under 62 (% per year)	(Item 3) Reduce Credited Service to 1/year?	(Item 5) Reflect Partial Lump Sum?	Service Pension for Future Retirees?
Scenario G	$75	1.0%	Yes	Yes	Yes*
Scenario H	$75	1.0%	No	Yes	Yes*
Scenario I	$75	0.0%	Yes	Yes	Yes*
Scenario J	$77	0.0%	Yes	Yes	Yes*
Scenario K	$80	1.5%	Yes	Yes	Yes*
Scenario L	$75	0.5%	Yes	Yes	Yes*

**Only to those retiring after age 62 with 30 years of vesting service*

Deterministic Projections — Plan Assets incl. Future Withdrawal Liability Pmts.

Scenario J ($77 Average Accrual Rate; ERF Unchanged; Reduce Credited Service)



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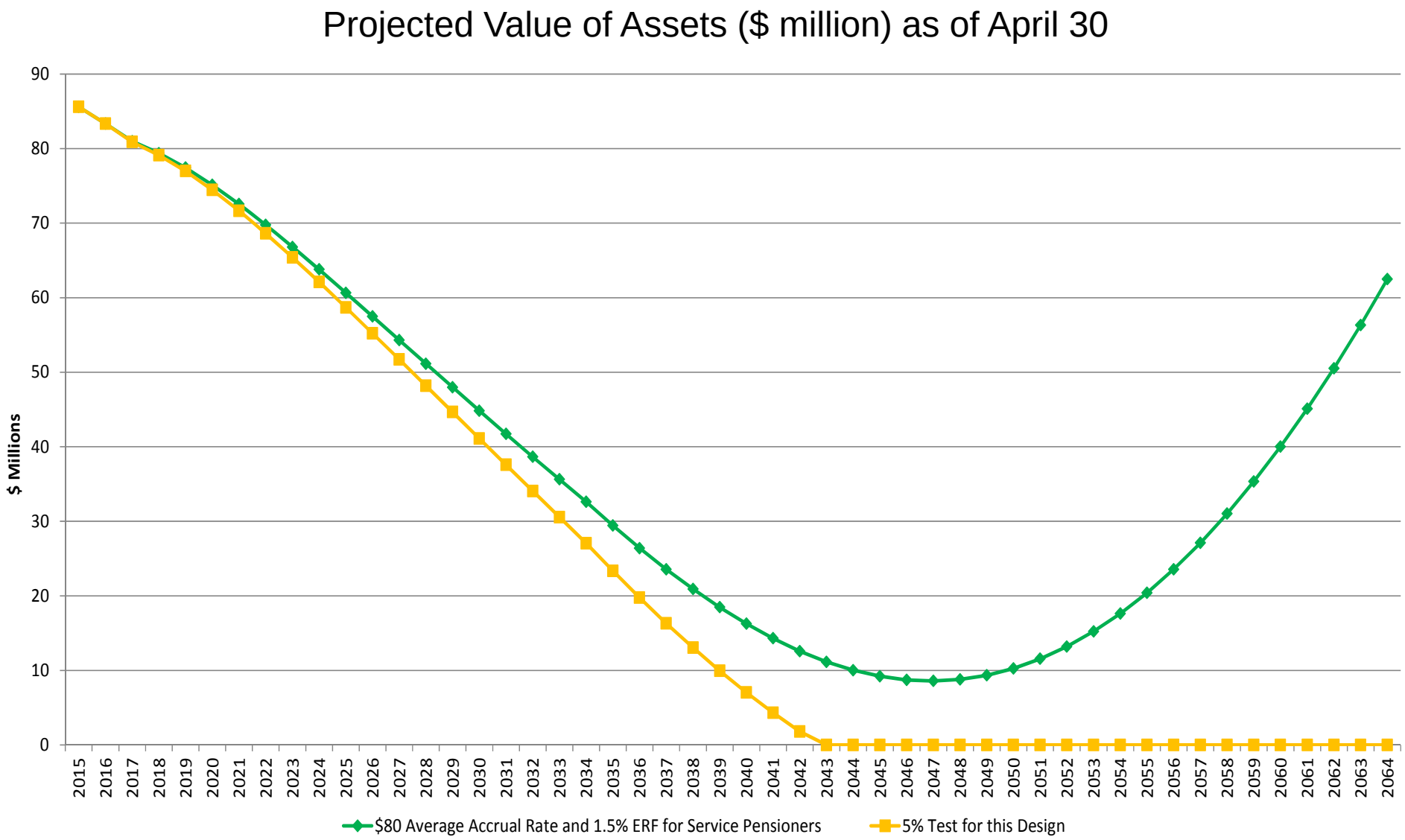
Deterministic Projections — Plan Assets incl. Future Withdrawal Liability Pmts.

Scenario K ($80 Average Accrual Rate; 1.5% ERF; Reduce Credited Service)



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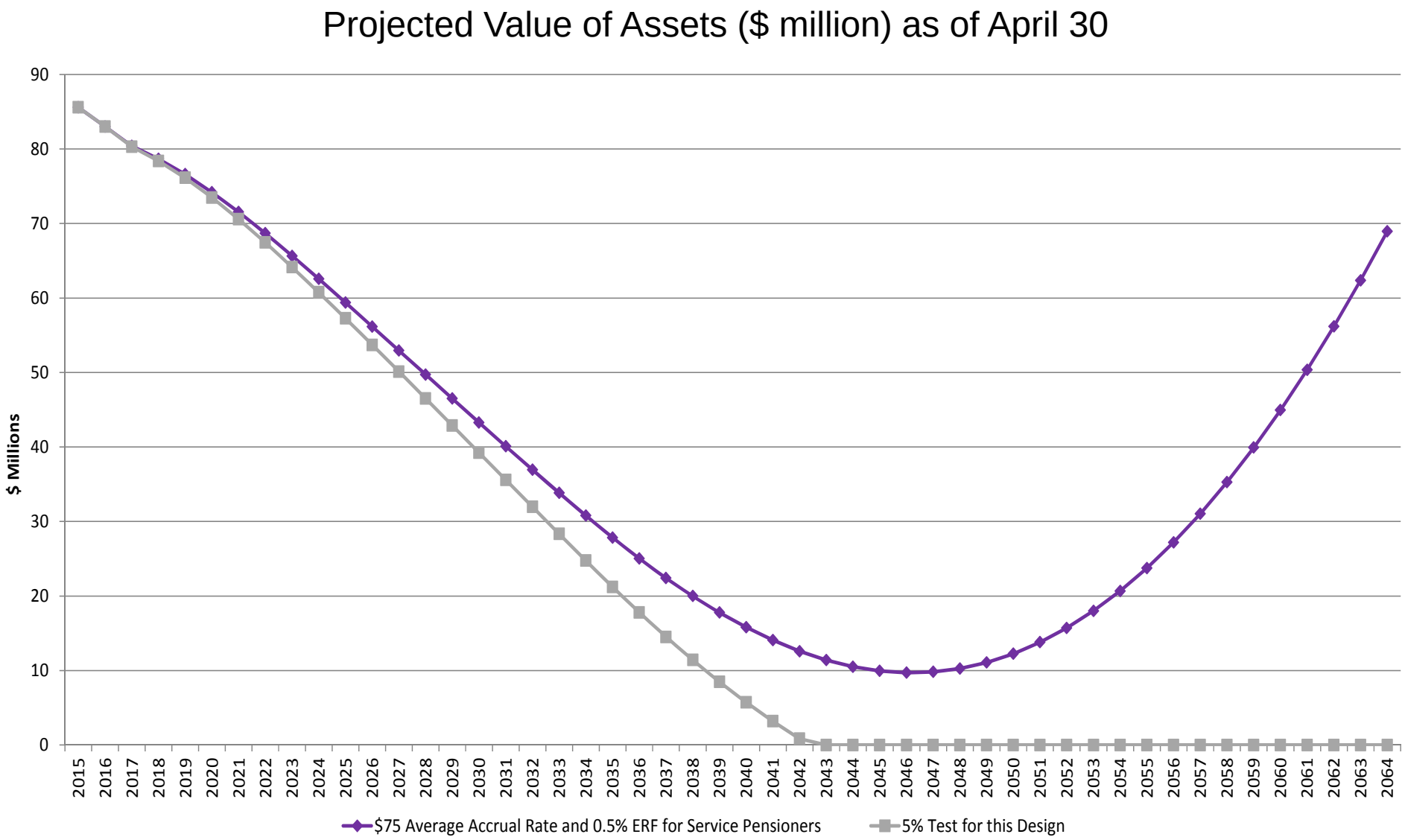
Deterministic Projections — Plan Assets excl. Future Withdrawal Liability Pmts.

Scenario L ($75 Average Accrual Rate; 0.5% ERF; Reduce Credited Service)



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Benefits for Sample Participants

	Current Benefit	Scenario J ($77 avg. accrual rate, CS 1/year)		Scenario K ($80 avg. accrual rate, 1.5% from 62, CS 1/year)		Scenario L ($75 avg. accrual rate, 0.5% from 62, CS 1/year)	
	Amount	Amount	% of current	Amount	% of current	Amount	% of current
Retiree 1	$4,050	$2,495	62%	$2,453	61%	$2,370	59%
Retiree 2	$1,163	$1,023	88%	$1,062	91%	$996	86%
Retiree 3	$938	$767	82%	$801	85%	$745	79%
Retiree 4	$4,165	$2,351	56%	$2,288	55%	$2,224	53%
Retiree 5	$3,050	$2,349	77%	$2,440	80%	$2,288	75%
Retiree 6	$624	$560	90%	$560	90%	$560	90%
Retiree 7	$3,665	$2,811	77%	$2,617	71%	$2,643	72%
Retiree 8	$4,025	$2,599	65%	$2,433	60%	$2,448	61%
Retiree 9	$546	$546	100%	$546	100%	$546	100%
Retiree 10	$4,813	$3,234	67%	$3,360	70%	$3,150	65%
Retiree 11	$993	$698	70%	$698	70%	$698	70%
Retiree 12	$1,105	$940	85%	$982	89%	$913	83%
Retiree 13	$929	$692	75%	$723	78%	$672	72%
Retiree 14	$1,048	$771	74%	$801	76%	$751	72%
Retiree 15	$2,126	$1,421	67%	$1,483	70%	$1,380	65%
Retiree 16	$858	$777	91%	$777	91%	$777	91%
Retiree 17	$3,456	$2,378	69%	$2,323	67%	$2,270	66%
Retiree 18	$1,343	$947	71%	$990	74%	$919	68%
Retiree 19	$3,430	$2,618	76%	$2,445	71%	$2,464	72%
Retiree 20	$3,815	$2,138	56%	$2,001	52%	$1,998	52%
Retiree 21	$751	$726	97%	$726	97%	$726	97%
Retiree 22	$1,302	$966	74%	$1,004	77%	$941	72%
Retiree 23	$843	$718	85%	$718	85%	$718	85%
Retiree 24	$337	$326	97%	$326	97%	$326	97%
Retiree 25	$878	$751	86%	$780	89%	$731	83%
Retiree 26	$696	$517	74%	$538	77%	$504	72%
Retiree 27	$4,242	$2,687	63%	$2,810	66%	$2,605	61%
Retiree 28	$553	$536	97%	$536	97%	$536	97%
Retiree 29	$3,494	$2,607	75%	$2,708	78%	$2,539	73%
IV	$1,488	$1,213	82%	$1,260	85%	$1,181	79%
Active	$1,175	$1,175	100%	$1,175	100%	$1,175	100%
Min. %			56%		52%		52%
Max. %			100%		100%		100%

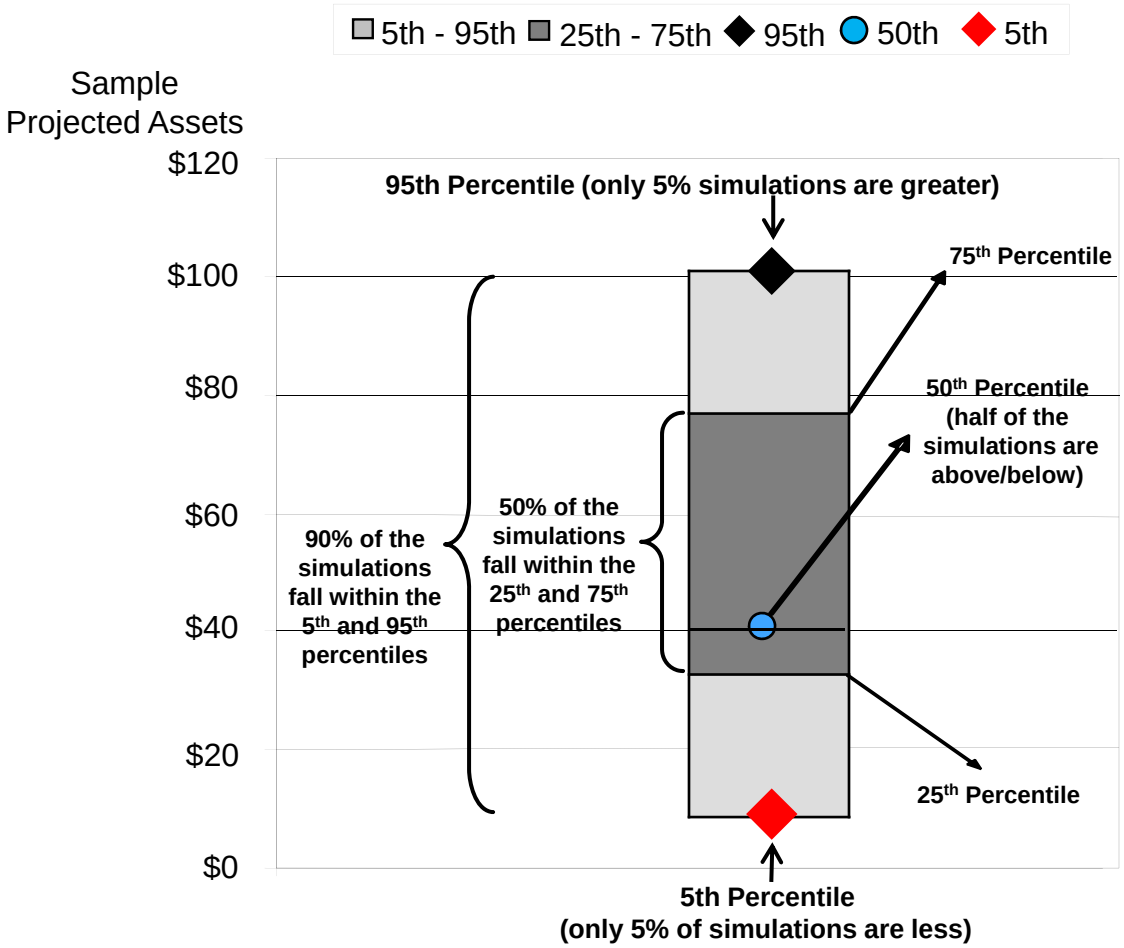
Note: Under all scenarios, the benefit has been reduced by the partial lump sum if applicable. Benefits were calculated before any QDRO adjustment. Final benefits payable to the participant and alternate payee will be adjusted proportionally.

Stochastic Analysis Overview

- **Deterministic modeling** assumes a fixed asset return (6.5% used in this presentation) each year and does not reflect the impact of asset volatility
- **Stochastic modeling** looks at a range of possible asset return scenarios over time and is based on capital market assumptions of expected returns/standard deviations for various asset classes and correlations between asset classes
  - Creates thousands of scenarios (10,000 simulations in this analysis) for rates of return (based on current asset mix) over projection period
  - Shows how the plan would perform in each of these scenarios
  - Determines distribution of outcomes for Plan assets
  - Provides both the best estimate value (50th percentile or median) and a range of other possible values, including probabilities of outcomes

Stochastic Analysis Overview

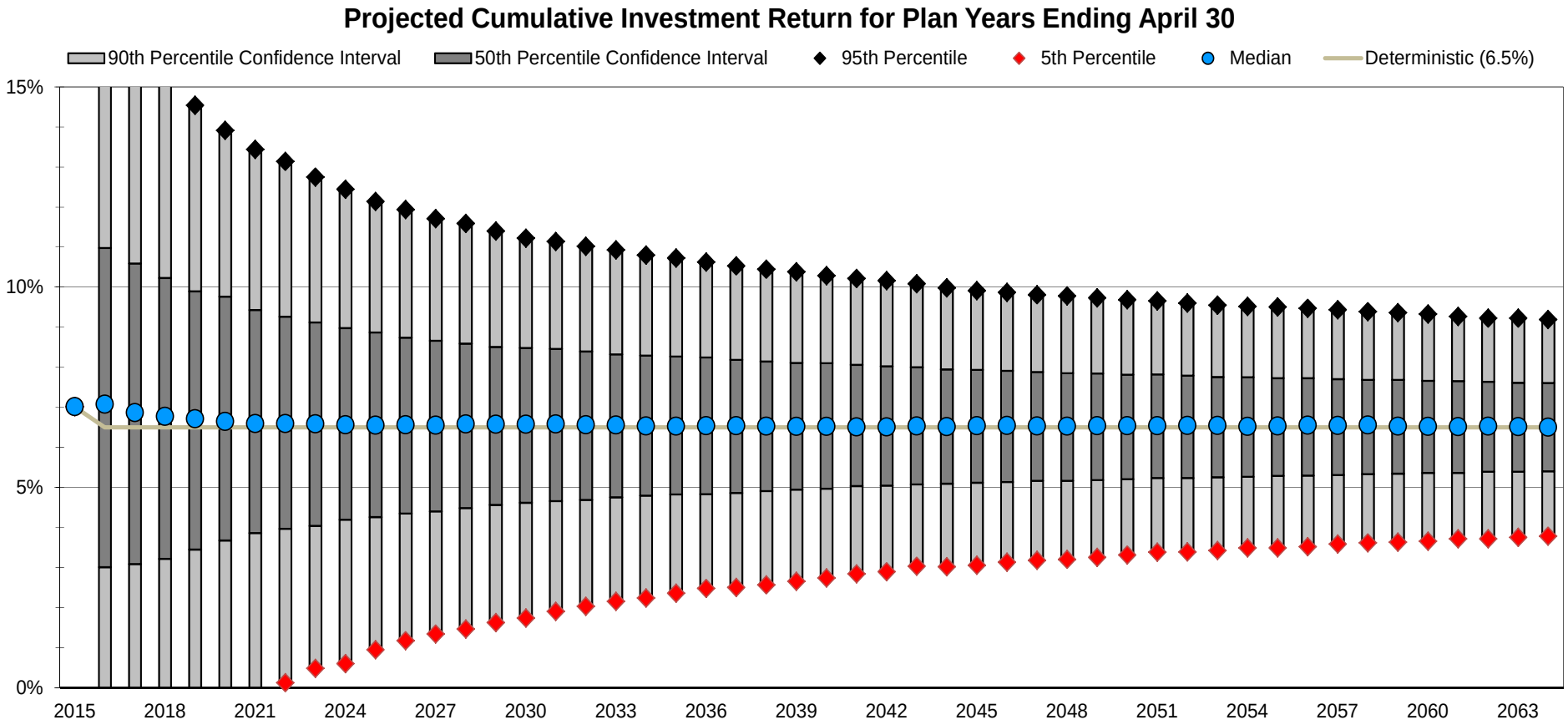
- The data is grouped into percentiles and summarized as a range



- Summarize results as a range:
  - **Best Case**—Better cases would occur only 5% of the time (above 95th percentile in this example)
  - **Worst Case**—Worse cases would occur only 5% of the time (below 5th percentile in this example)
  - **Most Likely**—Cases better or worse (50th percentile) are equally likely

Stochastic Projections

Expected Investment Return Based on Current Allocations and Segal Rogercasey's Capital Market Assumptions



95th	7.0%	15.2%	13.4%	12.4%	11.7%	11.2%	10.9%	10.6%	10.4%	10.2%	9.9%	9.8%	9.7%	9.5%	9.4%	9.3%	9.2%
75th	7.0%	10.2%	9.4%	9.0%	8.7%	8.5%	8.3%	8.2%	8.1%	8.0%	7.9%	7.9%	7.8%	7.7%	7.7%	7.7%	7.6%
50th	7.0%	6.8%	6.6%	6.6%	6.5%	6.6%	6.6%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
25th	7.0%	3.2%	3.9%	4.2%	4.4%	4.6%	4.7%	4.8%	4.9%	5.0%	5.1%	5.2%	5.2%	5.3%	5.3%	5.4%	5.4%
5th	7.0%	-1.9%	-0.3%	0.6%	1.3%	1.7%	2.2%	2.5%	2.7%	2.9%	3.1%	3.2%	3.4%	3.5%	3.6%	3.7%	3.7%
Det.	7.0%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%

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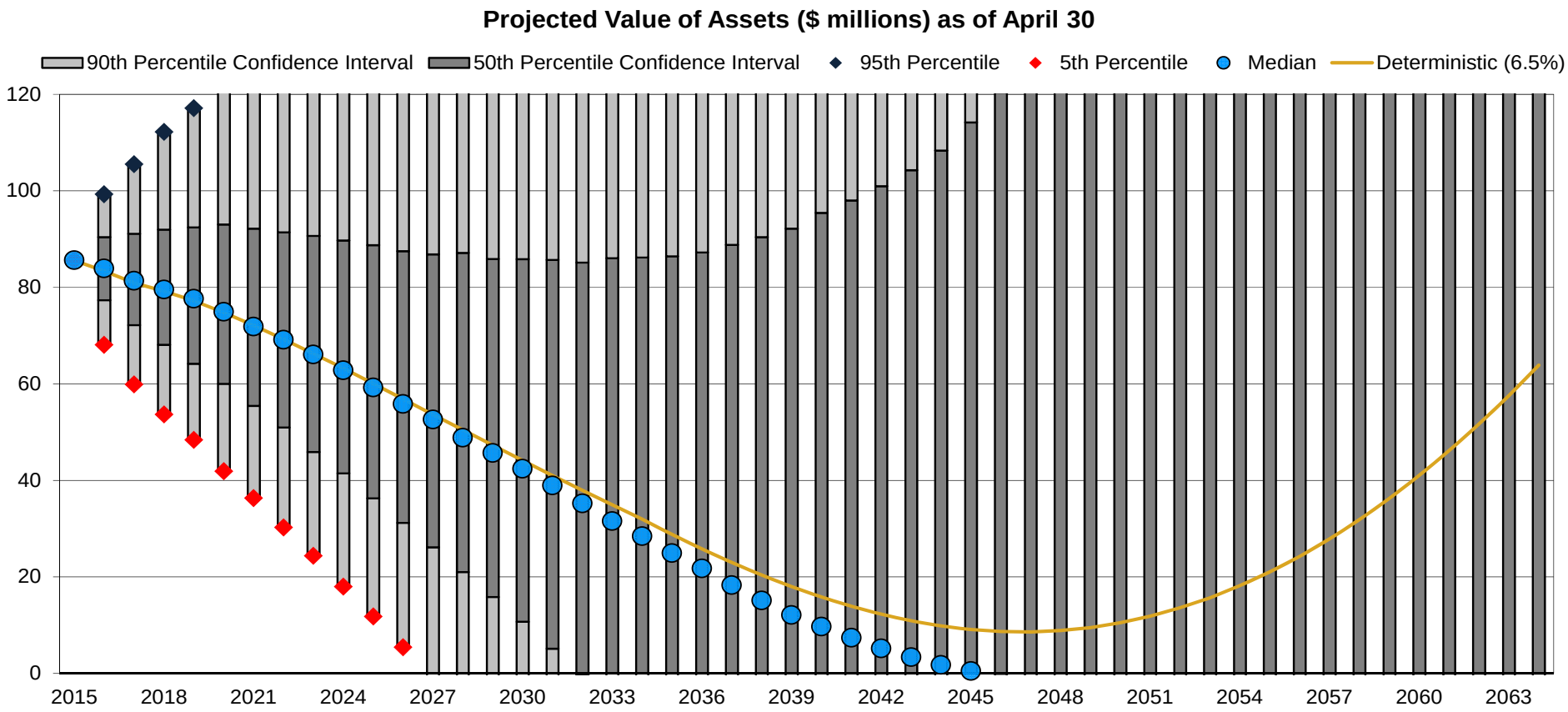
Stochastic Projections

Scenario J ($77 Average Accrual Rate; ERF Unchanged, Reduce Credited Service)



95th	86	112	126	138	154	175	201	235	278	335	400	500	610	760	947	1,161	1,471
75th	86	92	92	90	87	86	86	87	92	101	114	137	164	202	249	309	375
50th	86	80	72	63	53	42	32	22	12	5	0	--	--	--	--	--	--
25th	86	68	55	41	26	11	--	--	--	--	--	--	--	--	--	--	--
5th	86	54	36	18	--	--	--	--	--	--	--	--	--	--	--	--	--
Det.	86	79	72	63	54	44	35	26	18	12	9	9	12	18	28	41	58

The Stochastic projections show that there is a 50.4% probability that the Plan will become insolvent over the next 50 years under this scenario.

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Appendix
Assumptions Used in Projections

- The projections shown are based on the May 1, 2014 actuarial valuation and the following additional assumptions:
  - Value of Plan assets as of April 30, 2015 was $85.6 million (excluding withdrawal liability receivable) as reported in the unaudited financial statement provided by the Fund Administrator for purposes of the 2015 Zone Certification
    - Contribution income, benefit payments, and administrative expenses for the Plan year ended April 30, 2015 used for the projections also match the amounts reported in that statement
  - Deterministic projections are based on 6.5% for market returns after April 30, 2015
  - Stochastic projections of market returns are based on the Plan's investment allocations as provided by the Plan's Investment Manager (45% U.S. Equities, 15% International Equities, 27% Fixed Income, and 13% Equity Oriented Real State) and Segal Rogercasey's capital market assumptions over a 15-year time horizon (described in slide 19)
  - Number of active participants in future years is based on 1.20 million hours (706 actives) for the Plan year beginning May 1, 2015, 1.06 million hours (624 actives) for the Plan year beginning May 1, 2017, and then 607 actives each year thereafter. Each active is assumed to work an average of 1,700 hours each year.
  - Benefits will be suspended based on the designs described in presentation or 110% of the PBGC guaranteed amount, whichever is greater, taking into consideration the following:
    - Any suspension in benefits occurs on November 1, 2016
    - No suspension for pensioners over age 80 as of the effective date and disabled retirees
    - Pro-rated suspension for pensioners between ages 75 and 80 as of the effective date
    - No suspension for current beneficiaries since service is unknown
    - Participants with unknown service were reduced without consideration of their PBGC guaranteed amount as it cannot be determined
    - For those without a detailed breakdown of credited service, the impact of limiting credited service to 1 per year was estimated to be a 10% reduction to participants' benefits (all scenarios in this presentation, except for Scenario H)

Appendix
Assumptions Used in Projections *continued*

- Future benefit accrual rate remains at $50 per benefit credit
- Contribution rate remains at $10.00 per hour
- Mortality assumptions change to RP-2014 Blue Collar Mortality Tables with generational projection using Scale MP-2014 for non-disabled participants, RP-2014 Disabled Retire Mortality Tables with generational projection using Scale MP-2014 for participants disabled on and after May 1, 1997, and a 50/50 blend of the two preceding mortality assumptions for participants disabled prior to May 1, 1997
- Effective May 1, 2016, the following assumptions will change:
  - Inactive vested participants will retire at age 60 if eligible
  - 40% of future retirees will elect the 50% joint and survivor form of payment and 60% will elect the single life annuity; this is based on the Plan's experience during 2004–2014
- Stevens Painton pays its withdrawal liability as assessed, unless noted otherwise
- Administrative expenses are assumed to be $575,000 for the Plan year beginning May 1, 2015, $425,000 for the Plan year beginning May 1, 2016, and increased by 3% per year thereafter

Caveat regarding projections: *Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as estimates of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.*

Caveat regarding legal interpretations: *Segal does not practice law and, therefore, cannot and does not provide legal advice. Any statutory interpretations of PPA 2006, PRA 2010, and MPRA 2014, including related IRS regulations and guidance presented or reflected in the presentations are subject to the review and opinion of Fund Counsel. Design of benefit suspension is solely the responsibility of the Trustees. Any sample designs contained in this presentation are intended to assist the Trustees and do not imply any recommendation by Segal.*

Appendix

Segal Rogercasey's Capital Market Assumptions – Expected Return, Volatility, and Correlation Between Investment Categories

Investment Category	Allocation	Expected Return (15-Year Time Horizon)	Volatility (Standard Deviation)
U.S. Equities	45%	8.7%	18.5%
International Equities (Developed)	15%	9.4%	21.0%
Fixed Income	27%	3.6%	5.0%
Equity Oriented Real Estate	13%	6.5%	12.0%

Correlation Between Investment Categories

Investment Category	U.S. Equities	International Equities (Developed)	Fixed Income	Equity Oriented Real Estate
U.S. Equities	1.00			
International Equities (Developed)	0.88	1.00		
Fixed Income	0.06	0.14	1.00	
Equity Oriented Real Estate	0.26	0.19	-0.25	1.00