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# **Retirement System for Employees of the City of Cincinnati**

Task Force Meeting  
March 2, 2010

Eric Gary, FSA, FCA, MAAA  
Ed Koebel, EA, FCA, MAAA





# Objectives

- Provide liabilities and funding requirements separately for pension and medical plans
  - Pension plan funding is primary
  - Solve for various funding goals
  - Define 401(h) subaccount
- Develop additional ideas for consideration
- Recognize need to develop transition plan
  - Stabilization is first priority, improvement is second



## Pension Plan Only

- Pension plan funding is primary
- Ideally, long-term pension plan funding goal is “100% Funded”
- Potential approaches to pension plan funding
  - Funded Ratio = 100% by 2038
    - “Funded Ratio” is the ratio of a plan’s assets to its liabilities
  - “Cash Infusion” on 1/1/2011
    - \$250 million
    - \$350 million
    - \$450 million



## Pension Plan Only

- Potential approaches to funding (continued)
  - Contribute 100% of the Annual Required Contribution (ARC)
    - $ARC = \text{Normal Cost} + \text{Amortized Unfunded Liability}$ 
      - 30yr amortization period
      - Open basis
      - Level dollar
    - Vulnerable to swings in the ARC from year to year
    - Similar to approach used by other Ohio plans (e.g., OPERS)
  - Stable Funded Ratio
    - Assets are keeping pace with liabilities
    - Possible interim solution



# Pension Plan Only

- All “Pension Plan Only” options assume:
  - Task Force 2 – Plan 1 pension benefit changes
    - Effective 1/1/2011, discontinue the \$7,500 death benefit
    - Effective 1/1/2011, change the COLA for future retirees to be tied to an inflation index that is capped at 3.0%
      - Index is CPI-U
      - For projection purposes, rate is assumed to be 2.50%
  - Pension assets as 12/31/2008
    - Actuarial Value = \$1,490,497,200
    - Market Value = \$1,242,081,000
    - Excludes 401(h) balances
  - 19.76% return on investments for 2009
  - Employee contributions increase to 9% of pay over four years beginning 1/1/2010
  - 5-yr asset smoothing



# Pension Plan Only

## *Compound COLA for Future Retirees*

- Option #1
  - Employer contributions increase to 19.00% of payroll for years 2011 and beyond
- Option #2 – 100% Funded Ratio in 2038
  - Employer contributions increase to 39.16% of payroll for years 2011 and beyond
- Option #2b – 100% Funded Ratio in 2038
  - Employer contributions increase to \$507 million for 2011
  - Employer contributions are 19.00% of payroll for years 2012 and beyond



# Pension Plan Only

## *Compound COLA for Future Retirees*



- Option #3 – Stable Funded Ratio
  - Employer contributions increase to 34.60% of payroll for years 2011 and beyond
- Option #3b – Stable Funded Ratio
  - Employer contributions increase to \$455 million in 2011
  - Employer contributions are 19.00% of payroll for years 2012 and beyond
- Option #4 – Pay 100% of ARC
  - Employer contributions equal valuation ARC for years 2011 and beyond
    - Two year lag



# Pension Plan Only

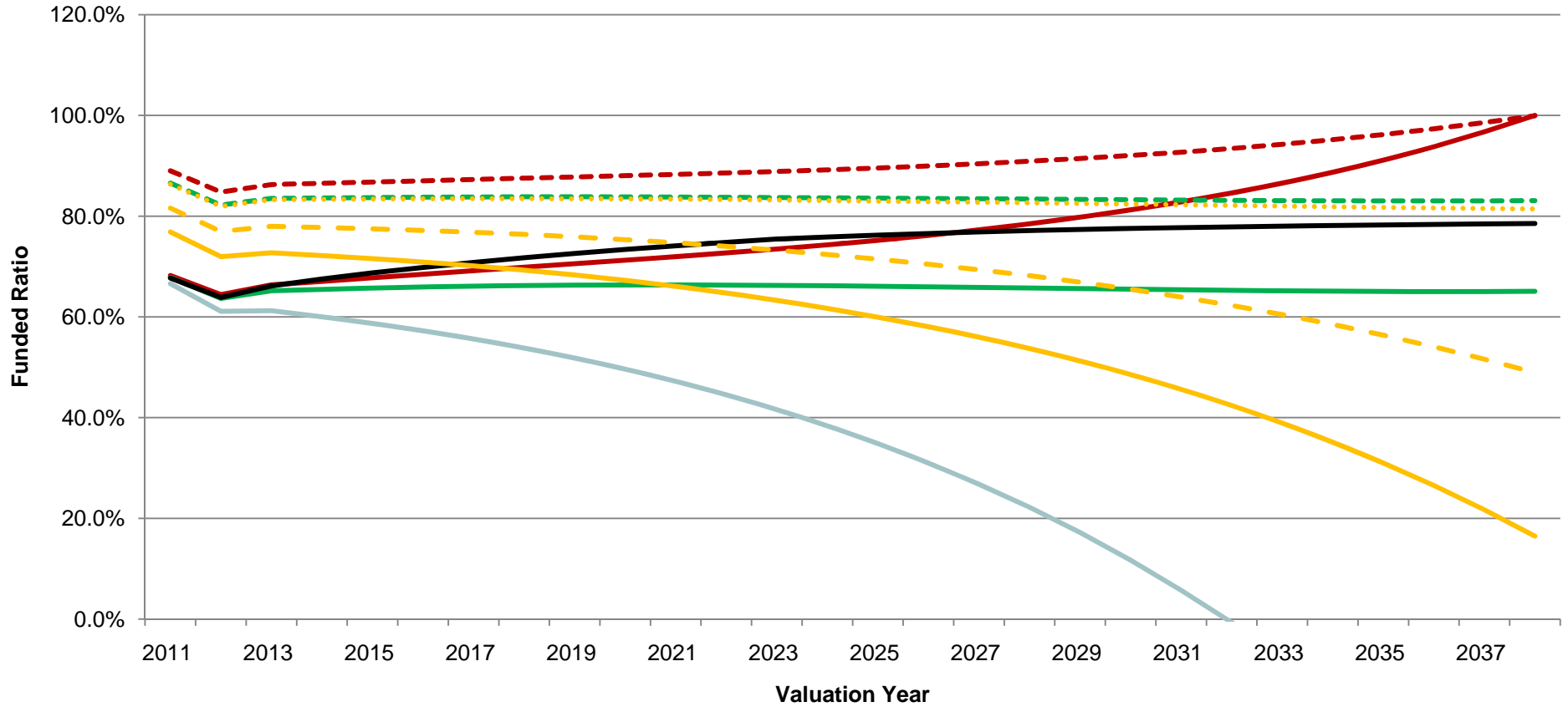
## *Compound COLA for Future Retirees*

- Option #5 – \$250 million “Cash Infusion”
  - Employer contributions increase to \$250 million in 2011
  - Employer contributions are 19.00% of payroll for years 2012 and beyond
- Option #5b – \$350 million “Cash Infusion”
  - Employer contributions increase to \$350 million in 2011
  - Employer contributions are 19.00% of payroll for years 2012 and beyond
- Option #5c – \$450 million “Cash Infusion”
  - Employer contributions increase to \$450 million in 2011
  - Employer contributions are 19.00% of payroll for years 2012 and beyond

# Cincinnati Retirement System

## 30-Year Projection of Funded Ratio

*Compound COLA for Future Retirees  
Pension Only @ 8.00%*



— TF2 Plan 1 - Option 1   
 — TF2 Plan 1 - Option 2   
 - - - TF2 Plan 1 - Option 2b  
— TF2 Plan 1 - Option 3   
 - - - TF2 Plan 1 - Option 3b   
 — TF2 Plan 1 - Option 4  
— TF2 Plan 1 - Option 5   
 - - - TF2 Plan 1 - Option 5b   
 ⋯ TF2 Plan 1 - Option 5c

**Projected Employee + Employer Contributions**  
*Pension Plan Only @ 8.00% - Compound COLA for Future Retirees*  
**Annual (\$ Millions)**

Year	Option 1	Option 2	Option 2b	Option 3	Option 3b	Option 4	Option 5	Option 5b	Option 5c
2011	46	80	521	72	469	69	264	364	464
2012	48	83	48	75	48	82	48	48	48
2013	50	85	50	77	50	94	50	50	50
2014	51	87	51	79	51	103	51	51	51
2015	52	89	52	80	52	100	52	52	52
2016	53	90	53	82	53	98	53	53	53
2017	53	92	53	83	53	97	53	53	53
2018	54	93	54	84	54	96	54	54	54
2019	55	94	55	85	55	95	55	55	55
2020	55	95	55	86	55	94	55	55	55
2021	56	97	56	87	56	93	56	56	56
2022	57	98	57	89	57	93	57	57	57
2023	58	99	58	90	58	93	58	58	58
2024	59	101	59	91	59	86	59	59	59
2025	60	102	60	93	60	86	60	60	60
2026	61	104	61	94	61	85	61	61	61
2027	62	106	62	96	62	85	62	62	62
2028	62	107	62	97	62	84	62	62	62
2029	63	109	63	98	63	84	63	63	63
2030	64	110	64	99	64	83	64	64	64
2031	65	111	65	100	65	83	65	65	65
2032	93	112	65	102	65	82	65	65	65
2033	245	113	66	103	66	82	66	66	66
2034	245	115	67	104	67	82	67	67	67
2035	246	116	67	105	67	81	67	67	67
2036	245	117	68	106	68	81	68	68	68
2037	245	118	69	107	69	81	69	69	69
2038	244	119	69	108	69	80	69	69	69

**Projected Employee + Employer Contributions**  
*Pension Plan Only @ 8.00% - Compound COLA for Future Retirees*  
**Cumulative (\$ Millions)**

Year	Option 1	Option 2	Option 2b	Option 3	Option 3b	Option 4	Option 5	Option 5b	Option 5c
2011	46	80	521	72	469	69	264	364	464
2012	93	162	568	147	516	151	311	411	511
2013	143	248	618	224	566	245	361	461	561
2014	194	335	669	303	617	348	412	512	612
2015	245	424	720	383	668	448	463	563	663
2016	298	514	773	465	721	545	516	616	716
2017	351	606	826	548	774	642	569	669	769
2018	405	699	880	632	828	738	623	723	823
2019	460	793	935	718	883	833	678	778	878
2020	515	888	990	804	938	927	733	833	933
2021	572	985	1,047	892	995	1,021	789	889	989
2022	628	1,083	1,103	980	1,051	1,114	846	946	1,046
2023	686	1,182	1,161	1,070	1,109	1,206	904	1,004	1,104
2024	745	1,283	1,220	1,161	1,168	1,292	963	1,063	1,163
2025	804	1,385	1,279	1,254	1,227	1,378	1,022	1,122	1,222
2026	865	1,489	1,340	1,348	1,288	1,463	1,083	1,183	1,283
2027	926	1,595	1,401	1,444	1,349	1,548	1,144	1,244	1,344
2028	989	1,702	1,464	1,541	1,412	1,632	1,207	1,307	1,407
2029	1,052	1,811	1,527	1,639	1,475	1,716	1,270	1,370	1,470
2030	1,116	1,921	1,590	1,739	1,539	1,799	1,333	1,433	1,533
2031	1,180	2,032	1,655	1,839	1,603	1,881	1,398	1,498	1,598
2032	1,273	2,144	1,720	1,941	1,668	1,963	1,463	1,563	1,663
2033	1,517	2,257	1,786	2,043	1,734	2,045	1,529	1,629	1,729
2034	1,763	2,372	1,853	2,147	1,801	2,127	1,596	1,696	1,796
2035	2,008	2,488	1,920	2,252	1,868	2,208	1,663	1,763	1,863
2036	2,254	2,605	1,988	2,358	1,937	2,289	1,731	1,831	1,931
2037	2,498	2,723	2,057	2,465	2,005	2,370	1,800	1,900	2,000
2038	2,742	2,843	2,126	2,573	2,075	2,450	1,869	1,969	2,069



# Pension Plan Only

*Simple COLA for Future Retirees*

- Option #1
  - Employer contributions increase to 19.00% of payroll for years 2011 and beyond
- Option #2 – 100% Funded Ratio in 2038
  - Employer contributions increase to 34.96% of payroll for years 2011 and beyond
- Option #2b – 100% Funded Ratio in 2038
  - Employer contributions increase to \$408 million for 2011
  - Employer contributions are 19.00% of payroll for years 2012 and beyond



# Pension Plan Only

*Simple COLA for Future Retirees*

- Option #3 – Stable Funded Ratio
  - Employer contributions increase to 30.80% of payroll for years 2011 and beyond
- Option #3b – Stable Funded Ratio
  - Employer contributions increase to \$353 million in 2011
  - Employer contributions are 19.00% of payroll for years 2012 and beyond
- Option #4 – Pay 100% of ARC
  - Employer contributions equal valuation ARC for years 2011 and beyond
    - Two year lag



# Pension Plan Only

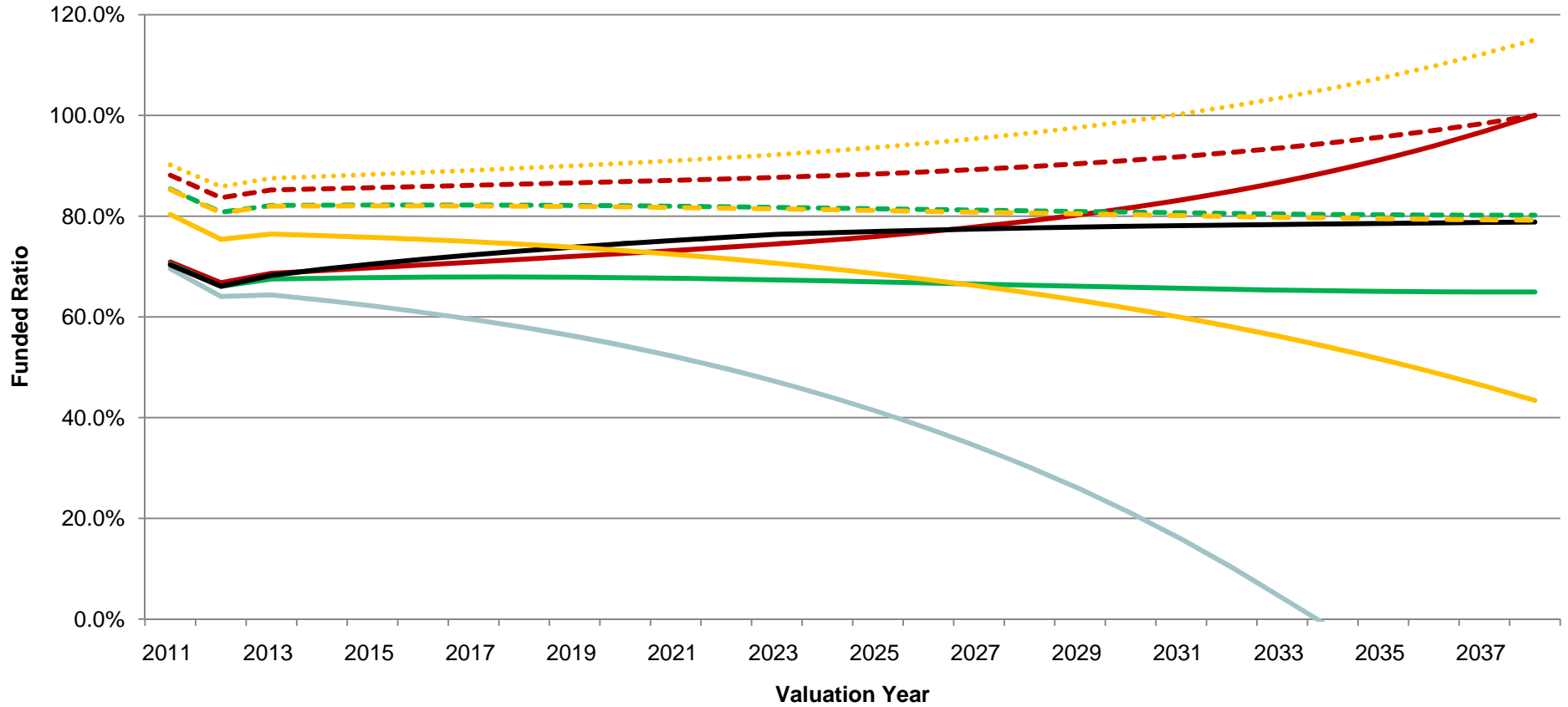
*Simple COLA for Future Retirees*

- Option #5 – \$250 million “Cash Infusion”
  - Employer contributions increase to \$250 million in 2011
  - Employer contributions are 19.00% of payroll for years 2012 and beyond
- Option #5b – \$350 million “Cash Infusion”
  - Employer contributions increase to \$350 million in 2011
  - Employer contributions are 19.00% of payroll for years 2012 and beyond
- Option #5c – \$450 million “Cash Infusion”
  - Employer contributions increase to \$450 million in 2011
  - Employer contributions are 19.00% of payroll for years 2012 and beyond

# Cincinnati Retirement System

## 30-Year Projection of Funded Ratio

*Simple COLA for Future Retirees*  
*Pension Only @ 8.00%*



- TF2 Plan 1 - Option 1    TF2 Plan 1 - Option 2    TF2 Plan 1 - Option 2b
- TF2 Plan 1 - Option 3    TF2 Plan 1 - Option 3b    TF2 Plan 1 - Option 4
- TF2 Plan 1 - Option 5    TF2 Plan 1 - Option 5b    TF2 Plan 1 - Option 5c

**Projected Employee + Employer Contributions**  
*Pension Plan Only @ 8.00% - Simple COLA for Future Retirees*  
 Annual (\$ Millions)

Year	Option 1	Option 2	Option 2b	Option 3	Option 3b	Option 4	Option 5	Option 5b	Option 5c
2011	46	73	422	66	366	61	264	364	464
2012	48	75	48	68	48	73	48	48	48
2013	50	78	50	71	50	85	50	50	50
2014	51	80	51	72	51	95	51	51	51
2015	52	81	52	73	52	91	52	52	52
2016	53	82	53	75	53	90	53	53	53
2017	53	84	53	76	53	89	53	53	53
2018	54	85	54	77	54	88	54	54	54
2019	55	86	55	78	55	87	55	55	55
2020	55	87	55	79	55	86	55	55	55
2021	56	88	56	80	56	86	56	56	56
2022	57	89	57	81	57	85	57	57	57
2023	58	91	58	82	58	85	58	58	58
2024	59	92	59	83	59	79	59	59	59
2025	60	93	60	85	60	78	60	60	60
2026	61	95	61	86	61	78	61	61	61
2027	62	97	62	87	62	78	62	62	62
2028	62	98	62	89	62	77	62	62	62
2029	63	99	63	90	63	77	63	63	63
2030	64	100	64	91	64	76	64	64	64
2031	65	101	65	92	65	76	65	65	65
2032	65	102	65	93	65	76	65	65	65
2033	66	104	66	94	66	75	66	66	66
2034	125	105	67	95	67	75	67	67	67
2035	225	106	67	96	67	75	67	67	67
2036	224	107	68	97	68	75	68	68	68
2037	222	108	69	98	69	74	69	69	69
2038	221	109	69	98	69	74	69	69	69

**Projected Employee + Employer Contributions**  
*Pension Plan Only @ 8.00% - Simple COLA for Future Retirees*  
**Cumulative (\$ Millions)**

<b>Year</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 2b</b>	<b>Option 3</b>	<b>Option 3b</b>	<b>Option 4</b>	<b>Option 5</b>	<b>Option 5b</b>	<b>Option 5c</b>
2011	46	73	422	66	366	61	264	364	464
2012	93	148	469	134	414	134	311	411	511
2013	143	226	519	204	464	219	361	461	561
2014	194	305	570	276	514	314	412	512	612
2015	245	387	621	350	566	405	463	563	663
2016	298	469	674	424	618	495	516	616	716
2017	351	553	727	500	672	584	569	669	769
2018	405	638	781	577	726	672	623	723	823
2019	460	724	836	655	781	759	678	778	878
2020	515	811	891	734	836	846	733	833	933
2021	572	899	948	814	892	932	789	889	989
2022	628	988	1,004	894	949	1,017	846	946	1,046
2023	686	1,079	1,062	976	1,007	1,102	904	1,004	1,104
2024	745	1,171	1,121	1,060	1,065	1,181	963	1,063	1,163
2025	804	1,264	1,180	1,144	1,125	1,259	1,022	1,122	1,222
2026	865	1,359	1,241	1,230	1,185	1,337	1,083	1,183	1,283
2027	926	1,456	1,302	1,318	1,247	1,415	1,144	1,244	1,344
2028	989	1,554	1,365	1,406	1,309	1,493	1,207	1,307	1,407
2029	1,052	1,653	1,428	1,496	1,372	1,569	1,270	1,370	1,470
2030	1,116	1,753	1,492	1,587	1,436	1,646	1,333	1,433	1,533
2031	1,180	1,854	1,556	1,679	1,501	1,722	1,398	1,498	1,598
2032	1,245	1,957	1,621	1,771	1,566	1,797	1,463	1,563	1,663
2033	1,311	2,060	1,687	1,865	1,632	1,873	1,529	1,629	1,729
2034	1,437	2,165	1,754	1,960	1,699	1,948	1,596	1,696	1,796
2035	1,661	2,271	1,821	2,056	1,766	2,023	1,663	1,763	1,863
2036	1,885	2,378	1,889	2,153	1,834	2,098	1,731	1,831	1,931
2037	2,107	2,486	1,958	2,250	1,903	2,172	1,800	1,900	2,000
2038	2,328	2,594	2,028	2,349	1,972	2,246	1,869	1,969	2,069

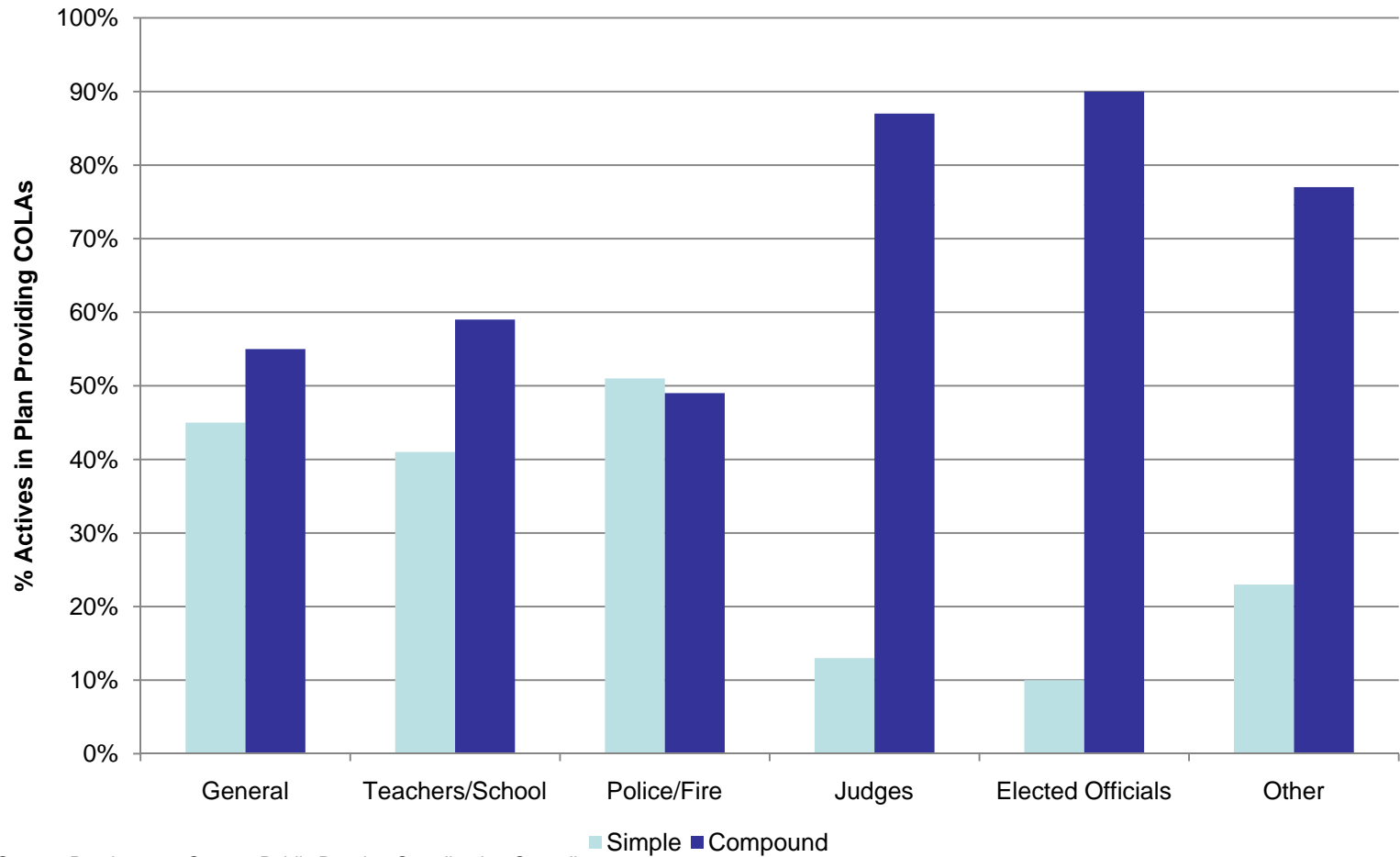
**Projected Benefit Payments**  
*Pension Plan Only @ 8.00%*  
*Annual (\$ Millions)*

<b>Year</b>	<b>Compound COLA</b>	<b>Simple COLA</b>
2011	143	143
2012	148	148
2013	154	153
2014	159	159
2015	165	164
2016	171	169
2017	177	175
2018	184	181
2019	190	186
2020	197	192
2021	203	198
2022	210	203
2023	215	207
2024	220	211
2025	224	214
2026	228	217
2027	231	219
2028	234	220
2029	237	222
2030	240	223
2031	242	225
2032	244	225
2033	245	225
2034	245	225
2035	246	225
2036	245	224
2037	245	222
2038	244	221



# Pension Plan Only

## Simple and Compound COLAs



Source: Pendat 2000 Survey, Public Pension Coordinating Council



## Medical Plan Only

- Medical plan funding is secondary
- Long-term medical plan funding goal is solvency
  - Need to determine target solvency period
  - No additional employer or employee contributions



# Medical Plan Only

- All “Medical Plan Only” options assume:
  - No employee or employer contributions
    - Investment income is only source of additional funds
      - May need to consider a more conservative investment policy and resulting lower target rate of return
      - Results provided at 6.50% (as of 1/1/2011) and 8.00%
  - Medical assets as 12/31/2008
    - Actuarial Value = \$688,869,600
    - Market Value = \$574,058,000
  - 19.76% return on investments for 2009
  - 401(h) subaccount assets cannot be transferred



# Medical Plan Only



- Option #1
  - No employee or employer contributions
  - Current benefit levels (1<sup>st</sup> Task Force)



## Medical Plan Only

- Option #2
  - No employee or employer contributions
  - Current benefit levels (1<sup>st</sup> Task Force), except:
    - Effective 1/1/2011, those who retired prior to 9/1/2007 will move to the 80/20 plan
    - Effective 1/1/2011, discontinue the Medicare Part B premium subsidy for Medicare eligible dependents
    - Effective 1/1/2011, 100% cost share for vision and dental benefits for all participants (retirees and their dependents)



# Medical Plan Only

## ➤ Option #3

- No employee or employer contributions
- Current benefit levels (1<sup>st</sup> Task Force), except:
  - Effective 1/1/2011, scale back the dependent subsidy for medical and Rx over four years (25% each year)
    - Dependents still have access to plan
    - Premium equivalents are based upon retiree costs only (no commingling with actives) and are to be based upon Medicare eligibility
  - Effective 1/1/2011, discontinue the Medicare Part B premium subsidy for Medicare eligible dependents
  - Effective 1/1/2011, 100% cost share for vision and dental benefits for dependents



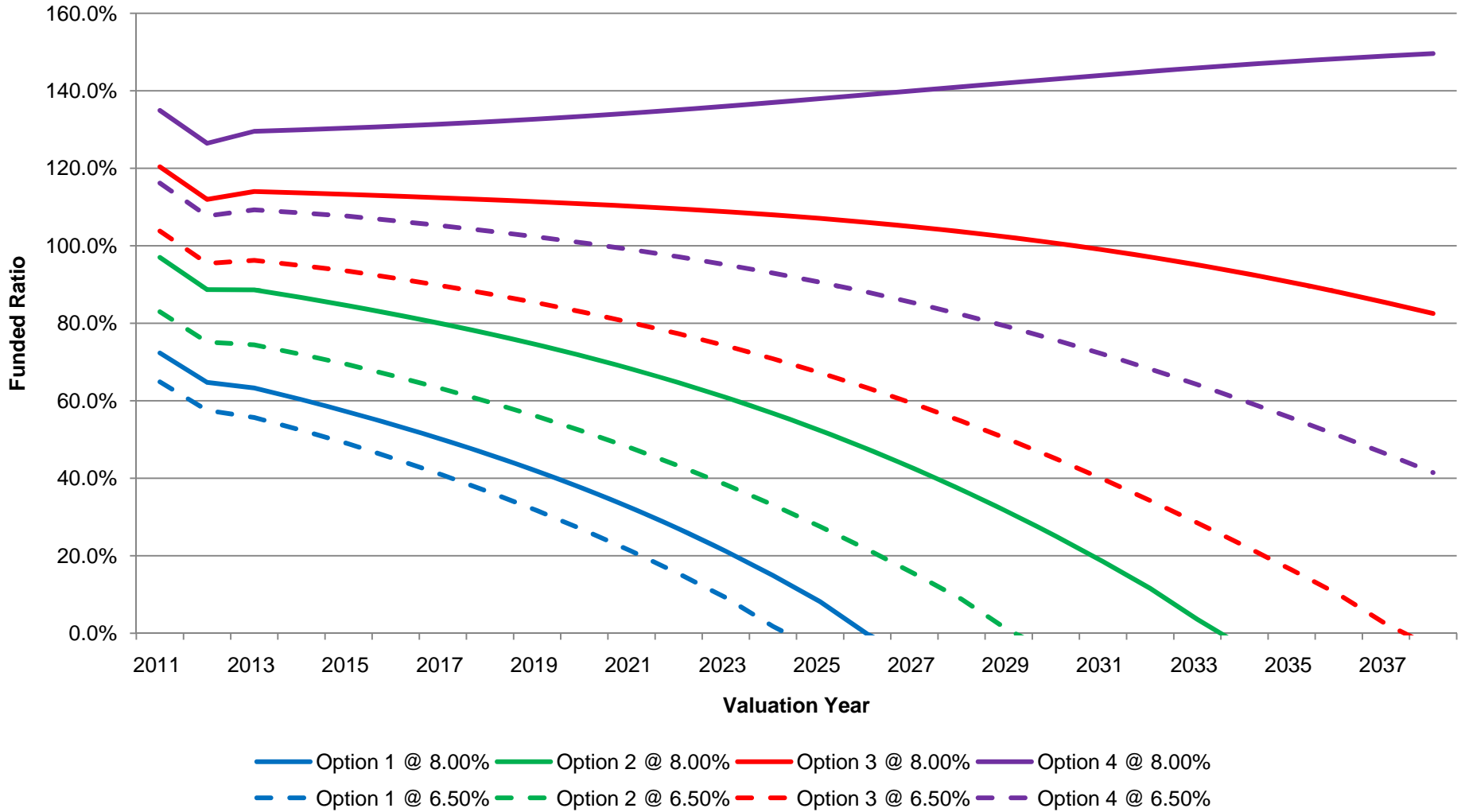
# Medical Plan Only

## ➤ Option #4

- No employee or employer contributions
- Current benefit levels (1<sup>st</sup> Task Force), except:
  - Effective 1/1/2011, those who retired prior to 9/1/2007 will move to the 80/20 plan
  - Effective 1/1/2011, scale back the dependent subsidy for medical and Rx over four years (25% each year)
    - Dependents still have access to plan
    - Premium equivalents are based upon retiree costs only (no commingling with actives) and are to be based upon Medicare eligibility
  - Effective 1/1/2011, discontinue the Medicare Part B premium subsidy for Medicare eligible dependents
  - Effective 1/1/2011, 100% cost share for vision and dental benefits for dependents

# Cincinnati Retirement System 30-Year Projection of Funded Ratio

*Medical Only*



**Projected Medical Benefit Payments**  
*Medical Plan Only*  
*Annual (\$ Millions)*

<b>Year</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>	<b>Option 4</b>
2011	54.2	43.2	48.6	42.0
2012	57.2	45.8	46.9	40.7
2013	60.0	48.1	44.7	38.9
2014	62.2	50.1	41.5	36.3
2015	64.5	52.1	42.6	37.4
2016	66.2	53.7	43.3	38.3
2017	67.9	55.2	44.2	39.3
2018	69.6	56.7	45.3	40.4
2019	71.5	58.2	46.2	41.5
2020	73.7	60.2	47.6	42.9
2021	75.7	62.0	48.5	43.9
2022	77.6	63.6	49.5	44.9
2023	79.3	65.0	50.3	45.8
2024	81.0	66.3	51.1	46.6
2025	82.3	67.4	51.6	47.2
2026	83.4	68.2	52.1	47.8
2027	84.2	68.8	52.3	48.1
2028	84.9	69.3	52.5	48.4
2029	85.3	69.5	52.3	48.4
2030	85.9	70.0	52.5	48.7
2031	86.7	70.7	52.8	49.2
2032	87.0	70.9	52.8	49.4
2033	87.0	71.0	52.6	49.3
2034	87.5	71.6	52.6	49.6
2035	87.8	71.9	52.7	49.8
2036	87.8	72.1	52.7	50.0
2037	88.0	72.5	52.7	50.2
2038	88.2	72.9	52.8	50.5



# Projection Assumptions

- 12/31/2008 Valuation Basis
  - 5-yr asset smoothing
- 2009 Investment Return to Date
  - Positive 2009 – assumed 19.76% return
  - Assume 8.00% thereafter (except where specified)
    - This rate may decline as the portfolio is rebalanced to meet short-term cash needs
- First Task Force Changes (effective 1/1/2010)
  - Amortization period changed to 30 years
  - Increase in employee contribution percentages
  - New tier pension changes
    - Reduced benefit formula
    - Increased retirement eligibility
- Health care participation
  - Participation decreases as cost share increases



## Additional Ideas for Consideration

- Eliminate the CRS loan provision
- Legal review of 401(h)(4) Non-Diversification Requirement
  - Corpus
  - Investment income



# Comments



- The Task Force may need to develop a transition approach to stabilize the CRS financial situation
  - It may not be feasible to find an acceptable solution, at this time, that addresses the extent of the problem over a 30 year period
  - Solution may be in the form of phased approaches over a set period of years