



Kansas Public Employees Retirement System

KPERS Long-Term Funding

Joint Committee on Pensions, Investments and Benefits

▪ *November 17, 2009*

Introduction

- At the September meeting of the Joint Committee, KPERS presented an overview of the System's long-term funded status, including –
 - Key 2008 valuation results and the valuation's impact on employer contributions, funded status, UAL, and KPERS ARC rates/dates, by group
 - Illustrations of the impact of future investment return volatility on funded ratios
 - Preliminary projections of the impact of changing the employer contribution rate increase cap to 1% or 2%.
 - Summary of legal issues involved in plan design or employee contribution changes.
- Building on that preliminary analysis, KPERS will present the results of its ongoing study and analysis of various funding solution options for consideration by the Committee, including several legislative requests.
- The presentation will also provide information regarding defined contribution plans and projections of the impact of defined contribution plan options on the System's funding and on benefit levels.

Funding Solution Options

- KPERS has modeled the impact of a series of funding solution options involving changes to the cap on increases to the employer contribution rate, plan design elements, and the employee contribution rate.
- The assumptions used for the Baseline and for Options A through I are listed below. All projections assume a level 8% annual investment return.
- Criteria for evaluating these options include:
 - Affordability of the ARC rate in both the short term and over the long term.
 - The length of time before funded ratios return to a healthy level (80%).
 - The degree to which the option reduces UAL projections compared to the Baseline.

Basic Options:

- **Baseline:**
 - Employer Contribution Rate: Cap remains at 0.6%.
 - Employee Contribution Rate: No change.

Funding Solution Options (Continued)

- **Option A:**
 - Employer Contribution Rate: Increase cap to 1.0%, effective 7/1/10.
 - Employee Contribution Rate: No change.
- **Option B:**
 - Employer Contribution Rate: Increase cap to 2.0%, effective 7/1/10.
 - Employee Contribution Rate: No change.
- **Option C:**
 - Employer Contribution Rate: Increase cap to 1.0%, effective 7/1/10.
 - Employee Contribution Rate: Increase rate by .5% for both Tiers 1 and 2 in each of four years, beginning 7/1/10.
- **Option D:**
 - Employer Contribution Rate: Increase cap to 1.0%, effective 7/1/10.
 - Employee Contribution Rate: No change.
 - Multiplier: Reduce multiplier for both Tiers 1 and 2, from 1.75% to 1.5% for all future service, beginning 7/1/11.

Funding Solution Options (Continued)

Legislative Requests

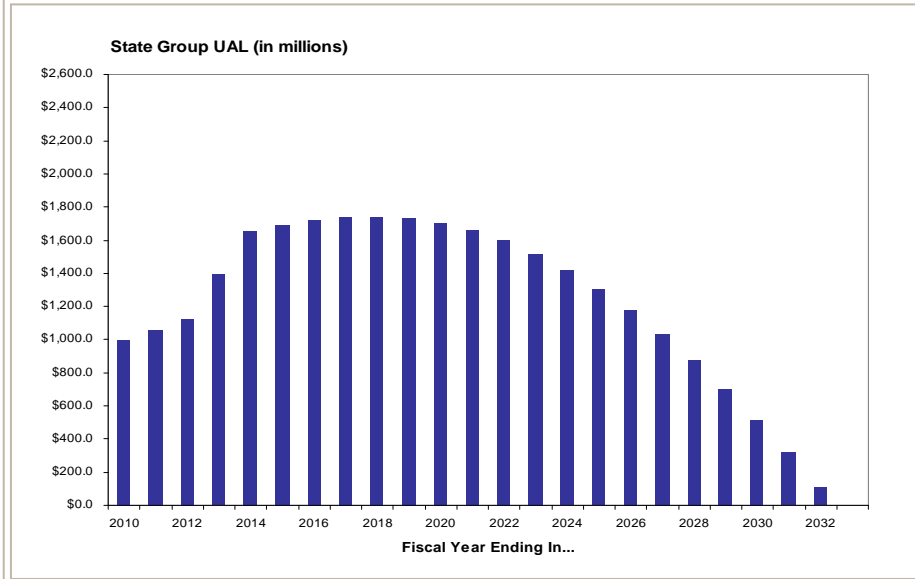
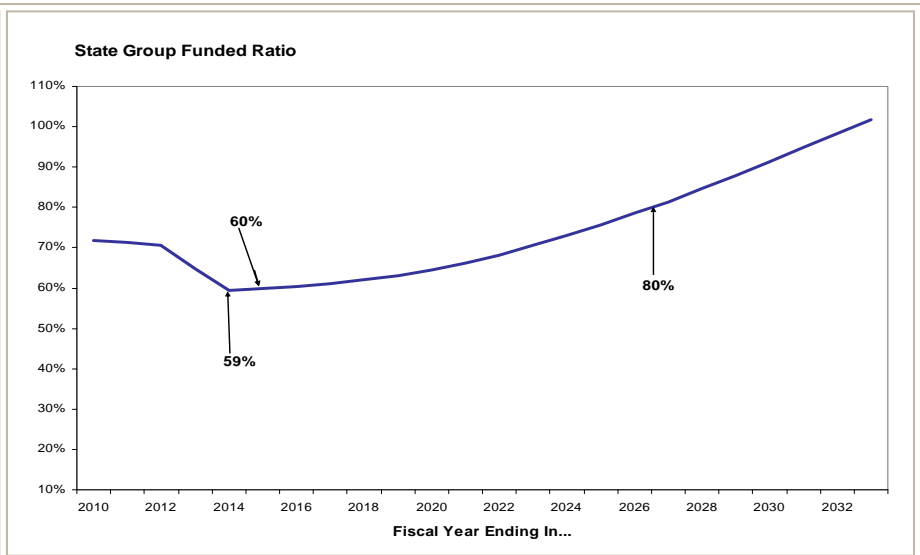
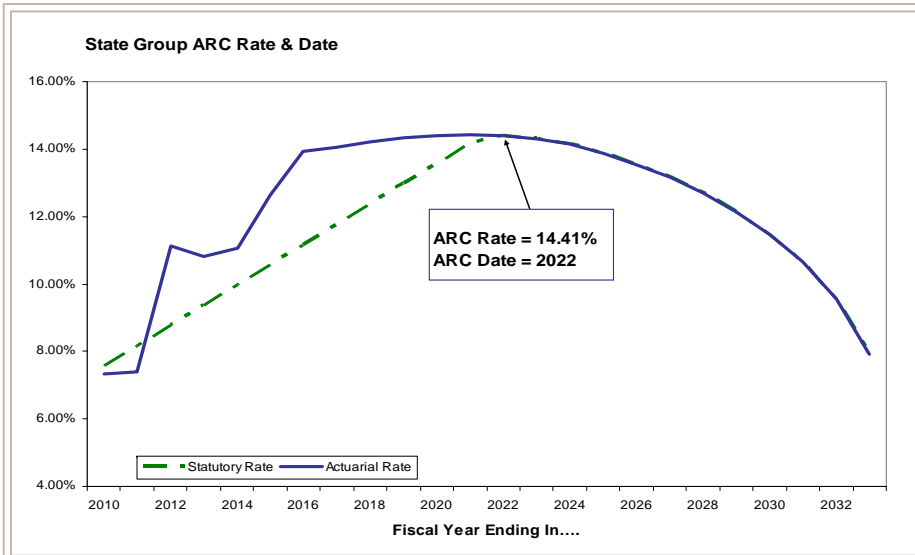
- **Option E:**
 - Employer Contribution Rate: Phase in cap increase with a .6% cap in FY '11; an .8% cap in FY '12; and a 1.0% cap in FY '13.
 - Employee Contribution Rate: No change.
- **Option F:**
 - Employer Contribution Rate: Increase cap to 1.0%, effective 7/1/10.
 - Employee Contribution Rate: Increase rate 1.0% for Tier I only, effective 7/1/10.
- **Option G:**
 - Employer Contribution Rate: Increase cap to 2.0%, effective 7/1/10.
 - Employee Contribution Rate: Increase rate 2.0% for Tier I only, effective 7/1/10.
- **Option H:**
 - Employer Contribution Rate: Increase cap to 1.0%, effective 7/1/10.
 - Employee Contribution Rate: Increase rate 1.0% for Tier I only, effective 7/1/10.
 - Benefit Multiplier: Increase multiplier to 1.85% for future service (Tier 1 only).

Funding Solution Options (Continued)

- **Option I:**
 - Employer Contribution Rate: Increase cap to 2.0%, effective 7/1/10.
 - Employee Contribution Rate: Increase rate 2.0% for Tier I only, effective 7/1/10.
 - Benefit Multiplier: Increase multiplier to 1.85% for future service (Tier 1 only).

State Group: Baseline Projections

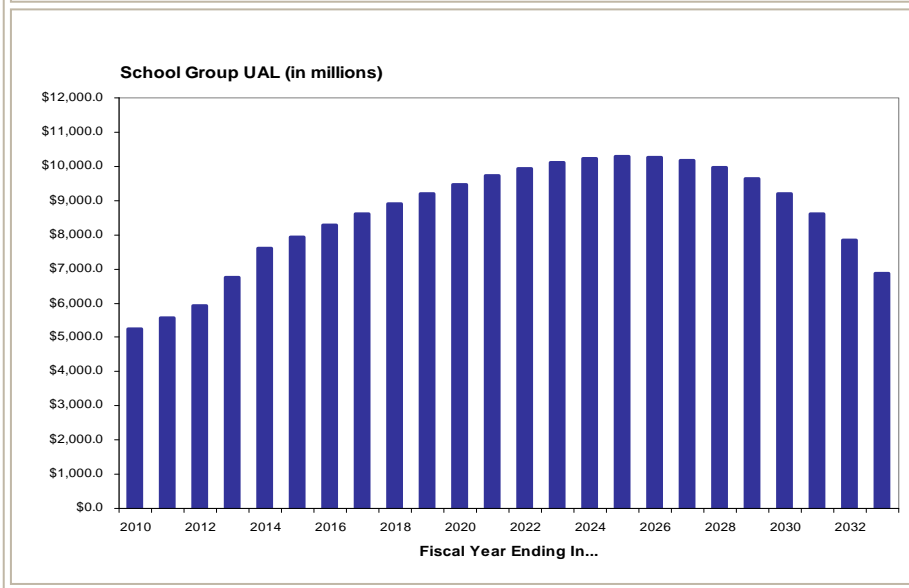
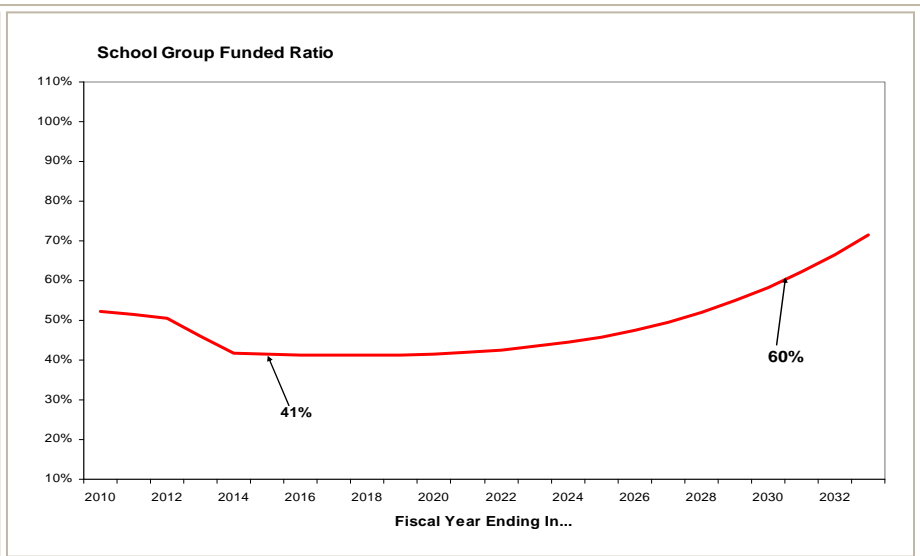
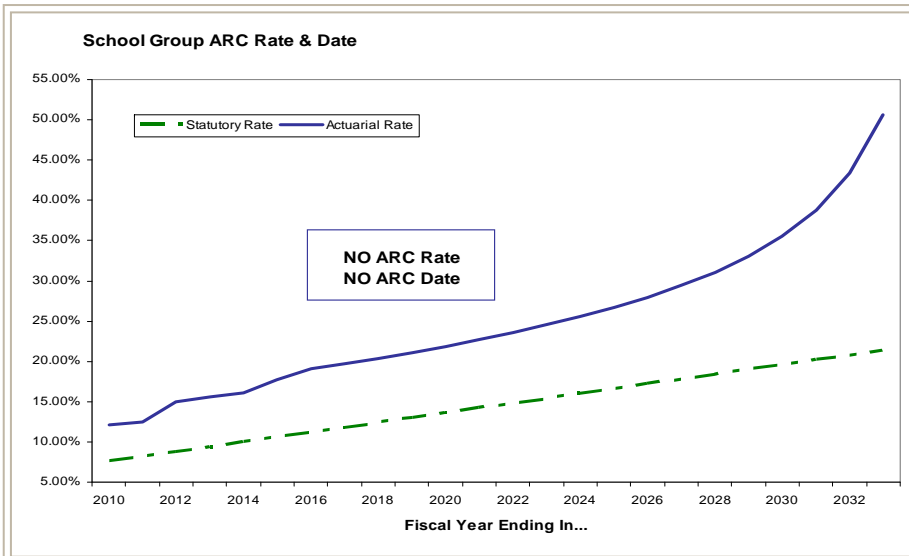
▪No change in the .6% employer rate increase cap.



- The projected ARC rate is nearly double the state/school rate paid by state agencies in FY 2010 (7.57%).
- The funded ratio reaches a low of 59% in FY 2014.
- It remains near 60% for an additional 5 years and only reaches 80% in FY 2027.
- The projected UAL rises by nearly 75% to \$1.74 billion in FY 2018.

School Group: Baseline Projections

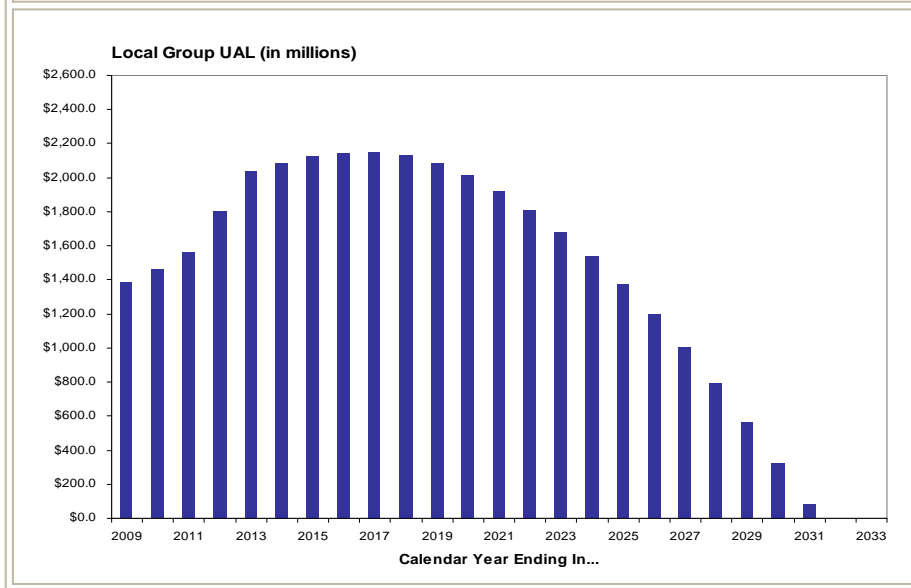
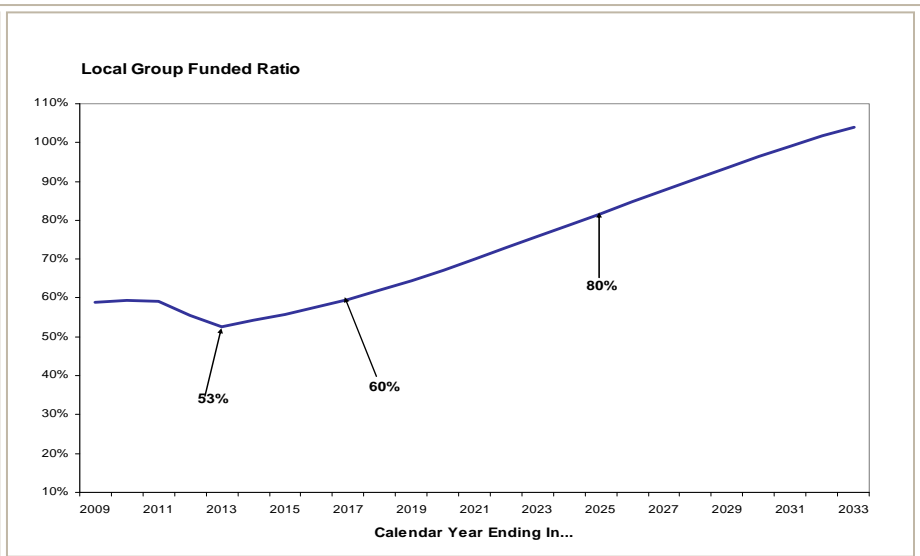
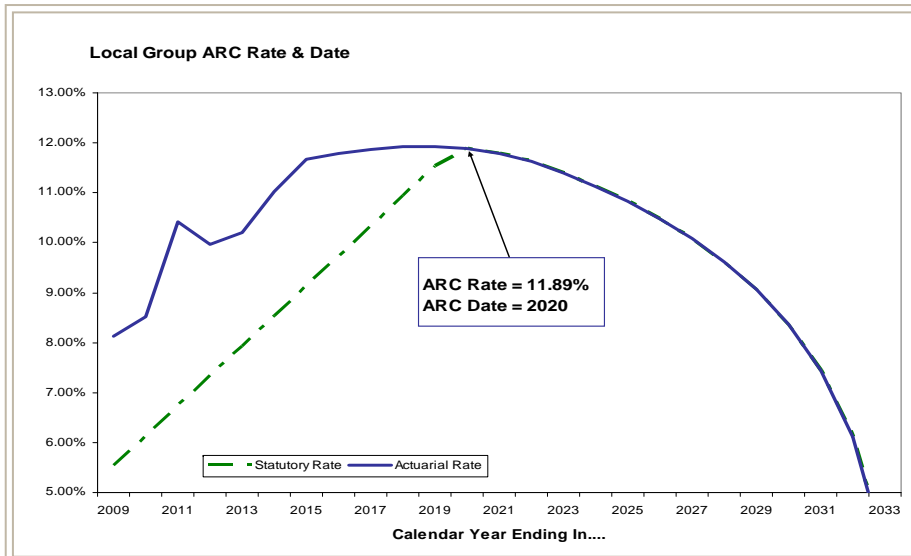
- No change in the .6% employer rate increase cap.



- The School Group is not in actuarial balance by 2033.
- The funded ratio reaches a low of 41% in FY 2015 and remains at 41-43% for 9 years.
- The funded ratio does not reach 60% until FY 2031 and only reaches 80% in FY 2035.
- The projected UAL nearly doubles to \$10.3 billion in FY 2025.

Local Group: Baseline Projections

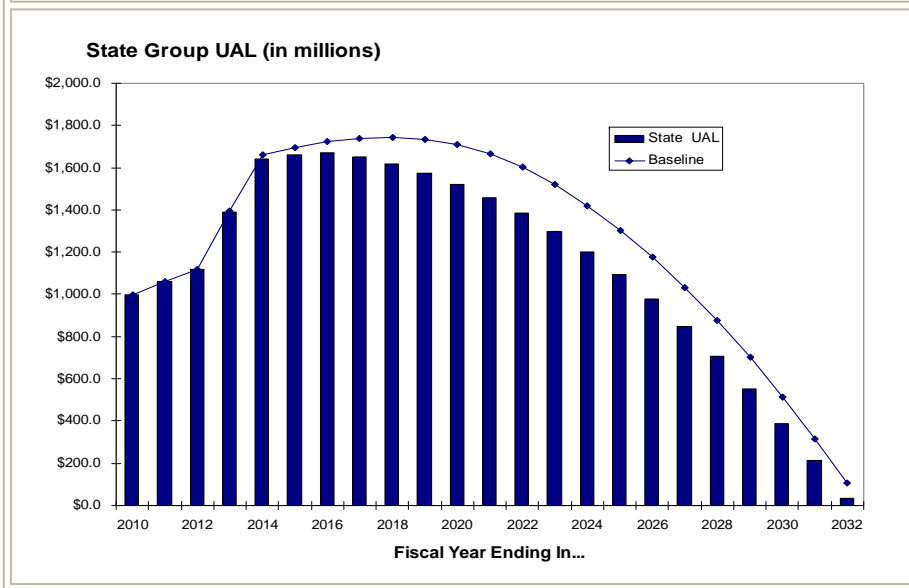
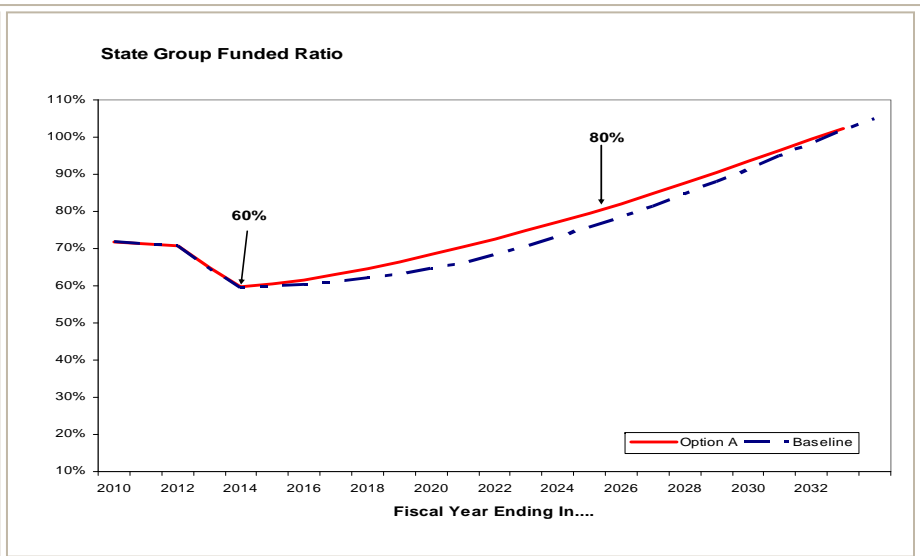
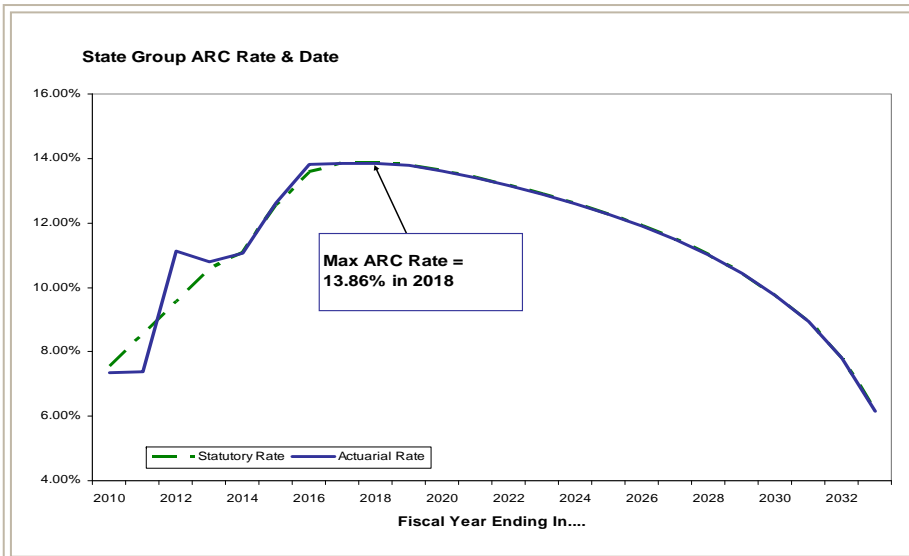
▪ **No change in the .6% employer rate increase cap.**



- The Local Group ARC rate is projected to double to 11.89% by CY 2020.
- Its projected funded ratio will fall to 53% by CY 2013, regaining 60% by CY 2017. The funded ratio is projected to reach 80% by CY 2025.
- The UAL is projected to increase by 55.4% to \$2.15 billion by CY 2017.

State Group: Option A

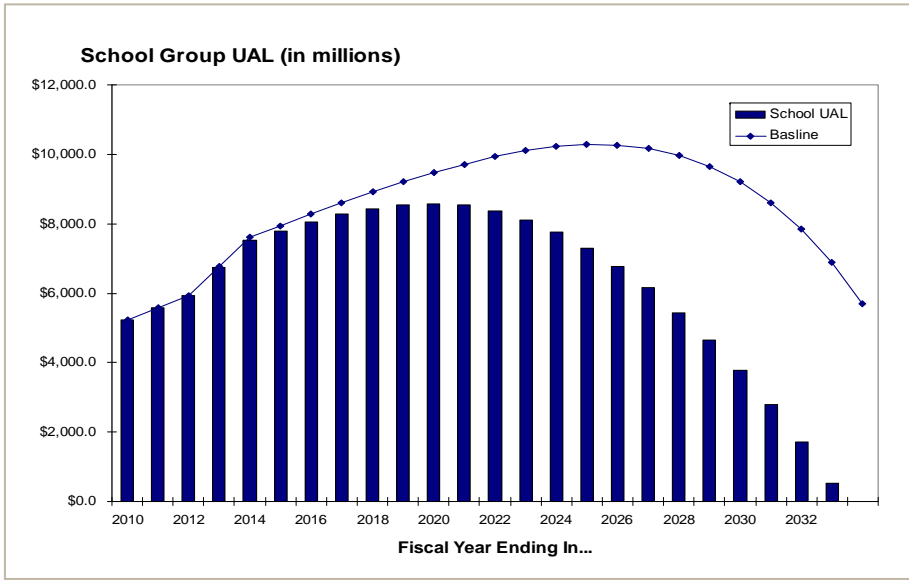
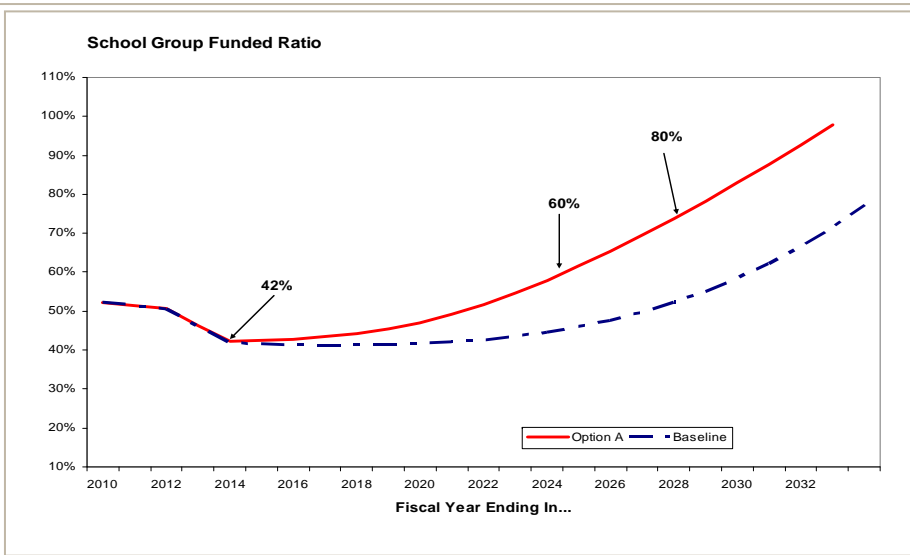
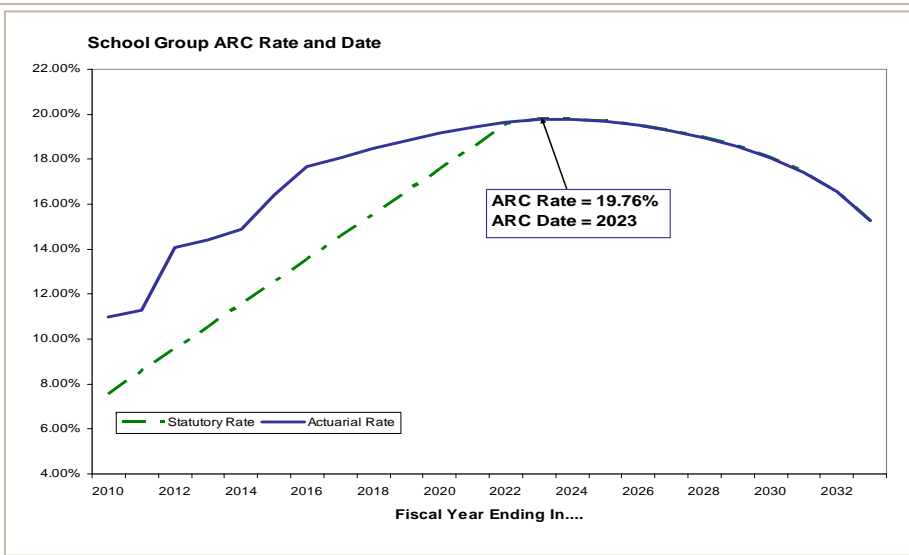
- Raise cap on employer rate increases to 1% in FY '11.



- The projected ARC rate rises to a maximum of nearly 14% by FY 2018.
- The funded ratio projections are similar to the baseline, reaching a low of 60% in FY 2014.
- The funded ratio recovers very gradually to 80% in FY 2025 – two years earlier than the baseline.
- The projected UAL rises to \$1.67 billion in FY 2016 – two years earlier and \$74.9 million less than the baseline.

School Group: Option A

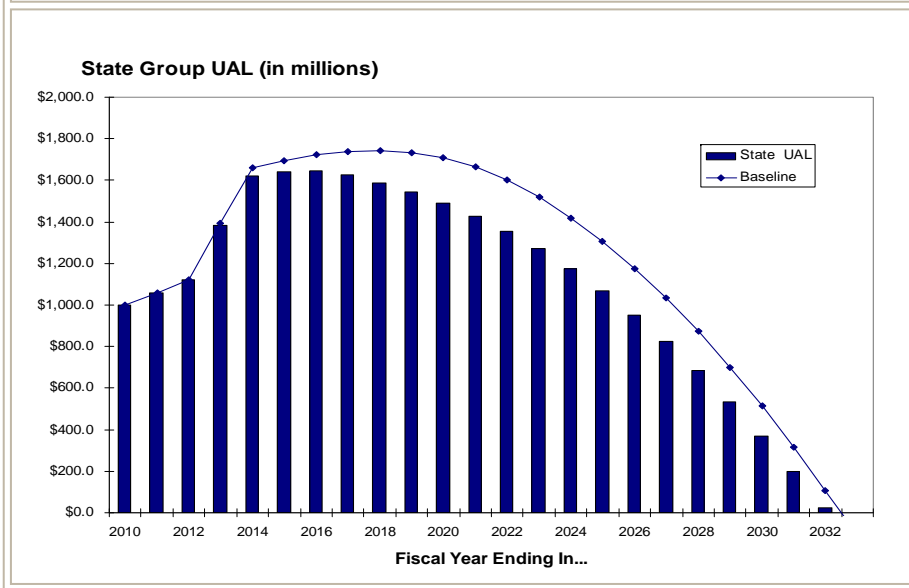
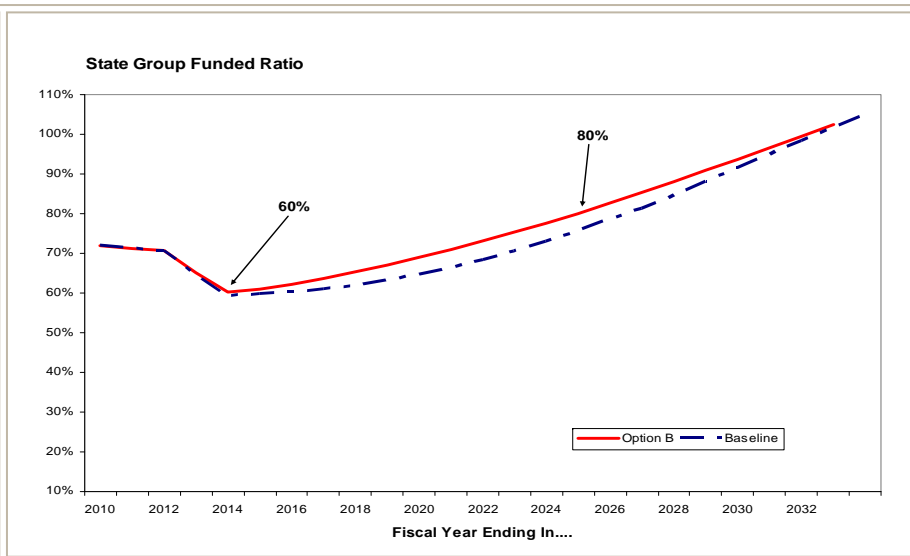
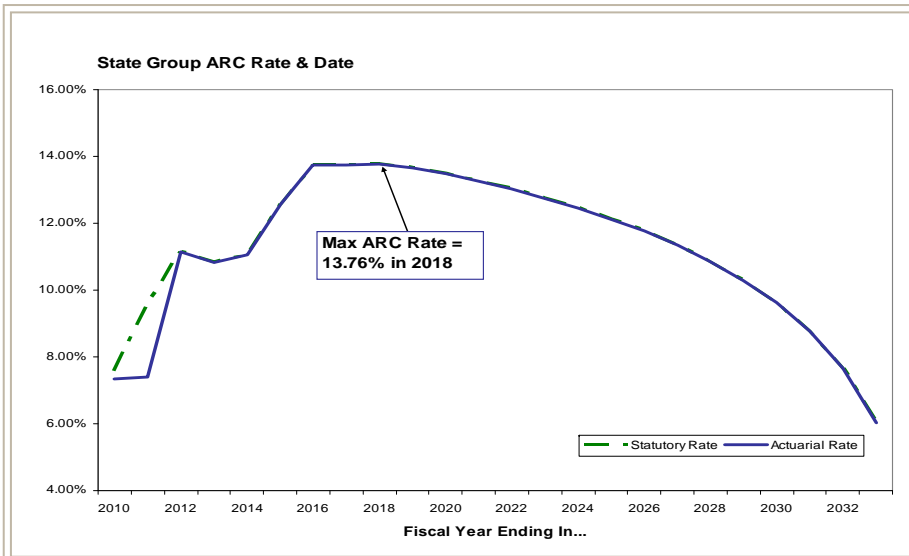
- Raise cap on employer rate increases to 1% in FY '11.



- A 1% cap on employer rate pulls the School Group back into actuarial balance by FY 2023, but at a rate of 19.76%.
- The funded ratio is depressed for an extended period of time, falling to 42% in FY 2014 and remaining below 50% for another 7 years.
- The funded ratio continues increasing slowly to 60% in 2025 and to 80% by FY 2030.
- The projected UAL peaks at \$8.6 billion in FY 2020 – five years earlier and \$1.7 billion less than the baseline.

State Group: Option B

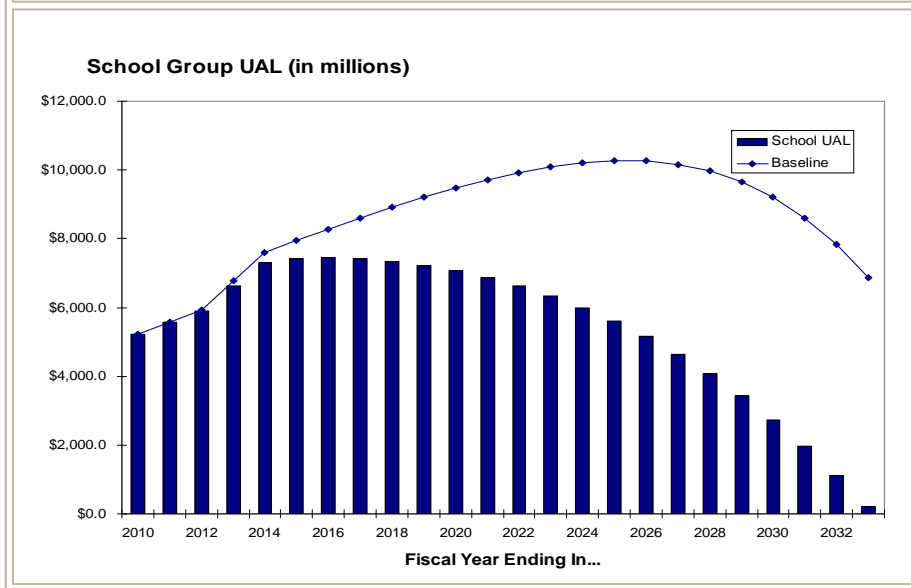
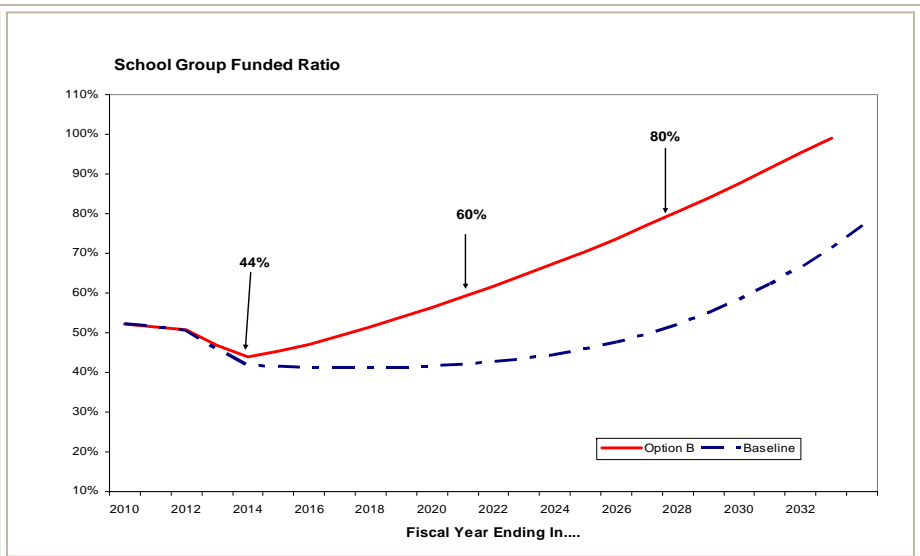
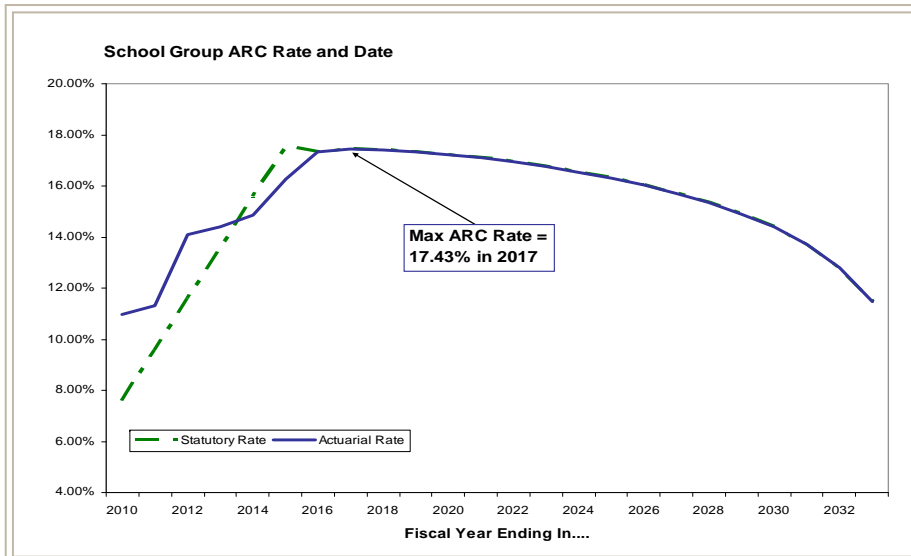
- Raise cap on employer rate increases to 2% in FY '11.



- While the State Group remains at its ARC rate throughout, the ARC rate continues to rise to a high of 13.76% in FY 2018.
- The funded ratio projections are almost identical to a 1% cap – they also fall to 60% in FY 2014 and recover very gradually to 80% in FY 2025.
- The projected UAL rises to \$1.64 billion in FY 2016– two years earlier and \$100 million less than the baseline.

School Group: Option B

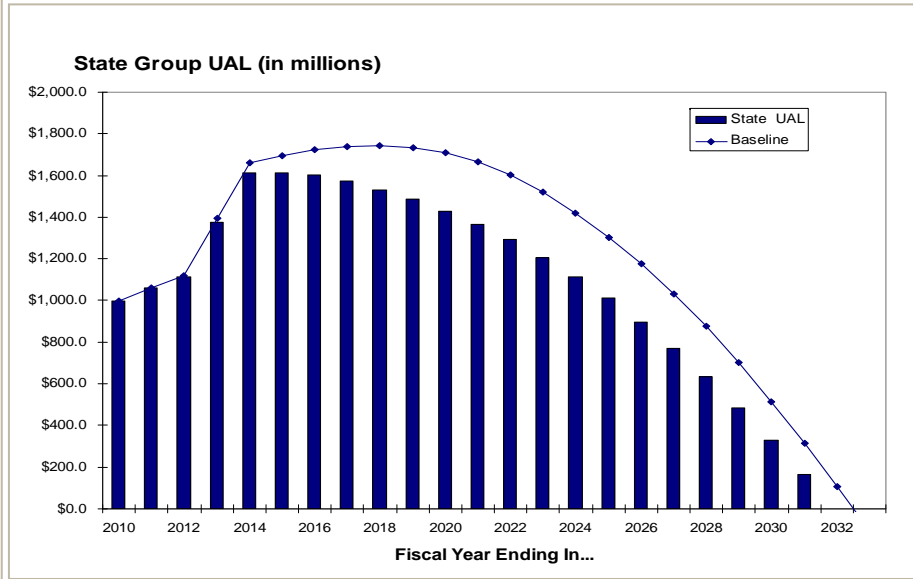
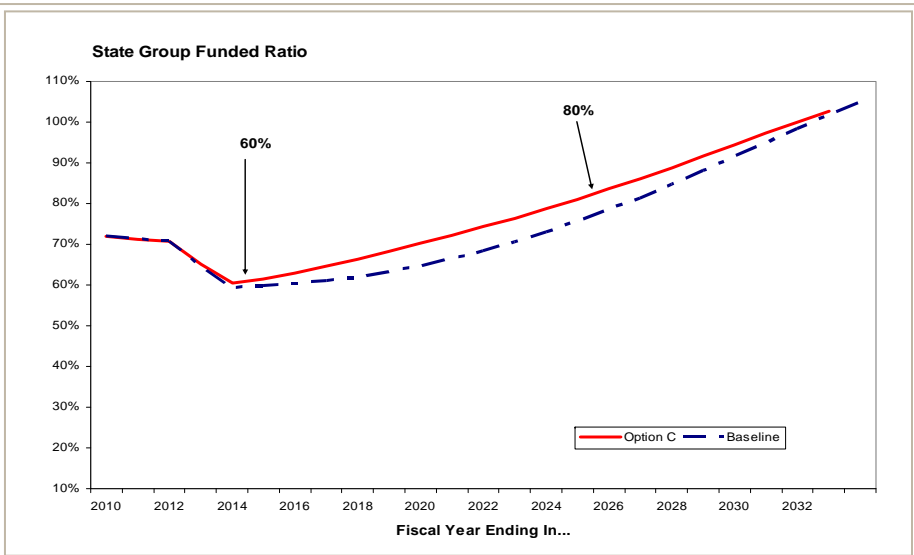
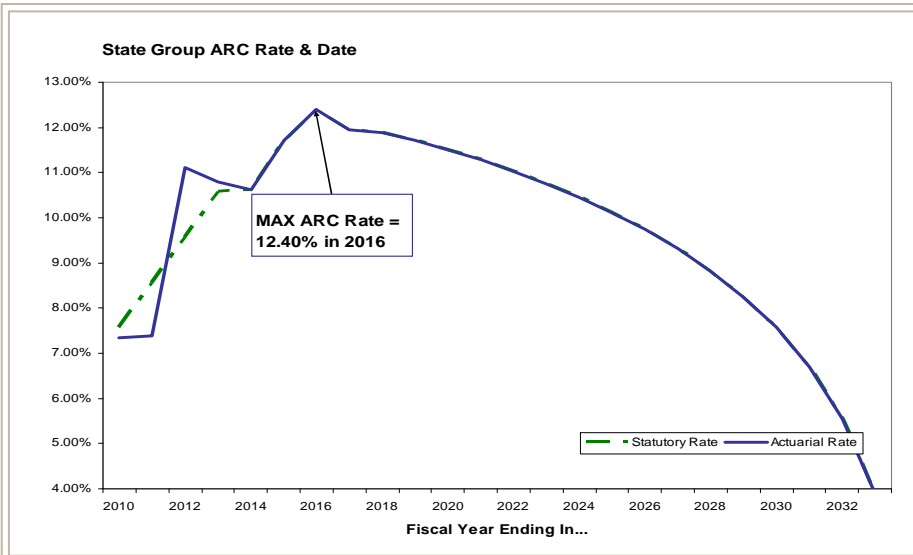
- Raise cap on employer rate increases to 2% in FY '11.



- With a 2% cap, employer contributions rise to the maximum ARC rate in less than 10 years -- 17.43% in FY 2017.
- The low point of the funded ratio projections is 44% in FY 2014, which is similar to the 1% cap.
- The funded ratio reaches 60% in FY 2022 – almost 10 years sooner than under the baseline – and 80% by FY 2028.
- Similarly, the projected UAL peaks almost 10 years earlier than under the baseline at \$7.5 billion – a decrease of \$2.8 billion.

State Group: Option C

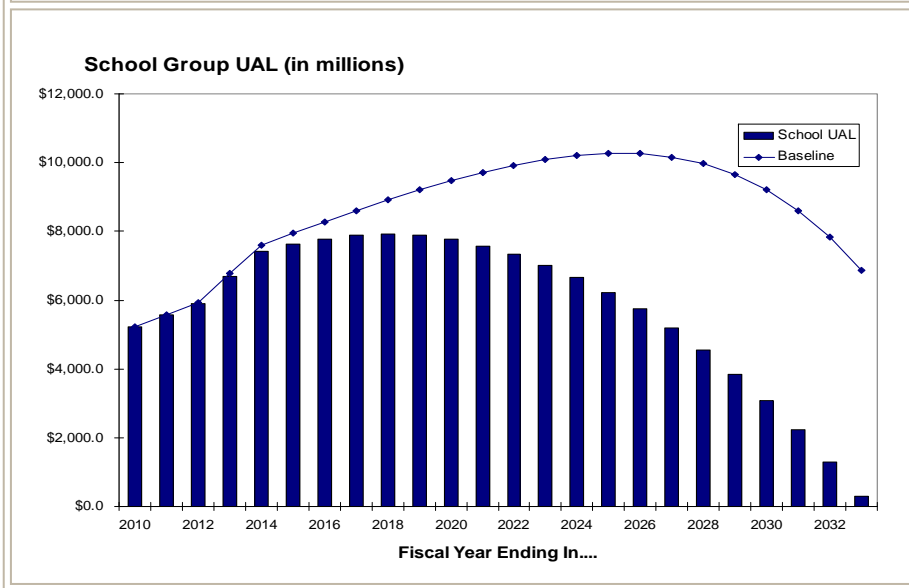
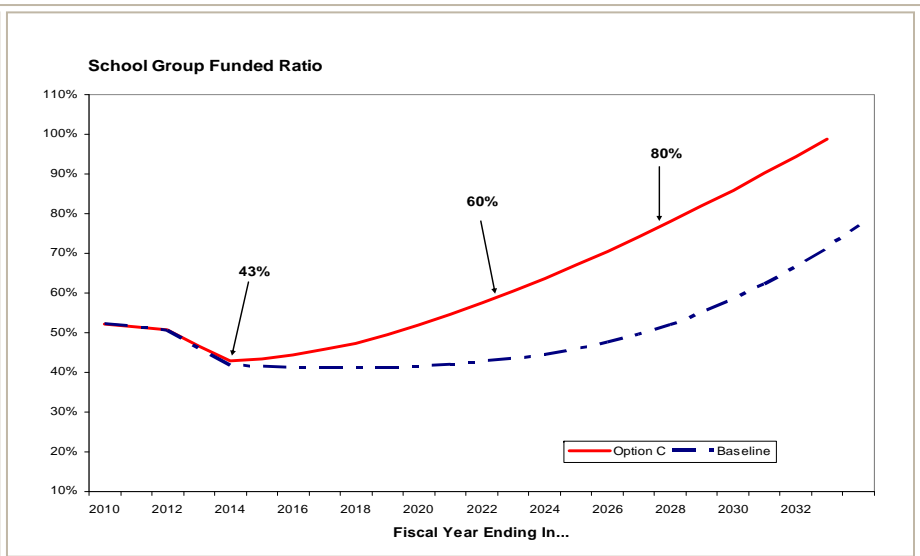
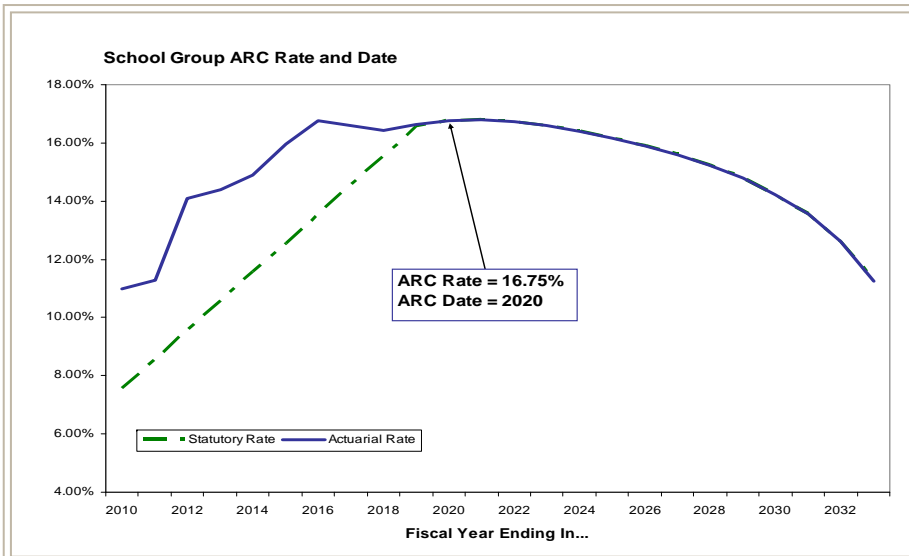
▪ Raise cap on employer rate increases to 1% in FY '11. Increase member contributions by .5% in each of four years, beginning FY 2011.



- With the phased addition of 2% in additional member contributions, the projected ARC rate peaks at 12.40% in FY 2016. (The maximum ARC rate is 13.86% in FY 2018 for the 1% cap alone.)
- Funded ratio projections are in the same range as those for the 1% cap option.
- The UAL projections are slightly lower than the 1% cap option, peaking a year earlier at \$1.61 billion and \$131 million less than the baseline.

School Group: Option C

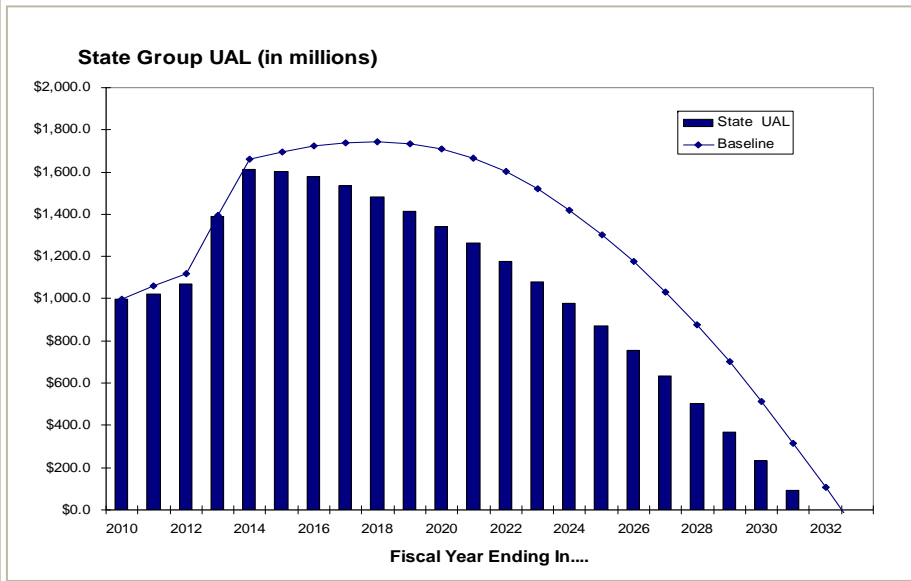
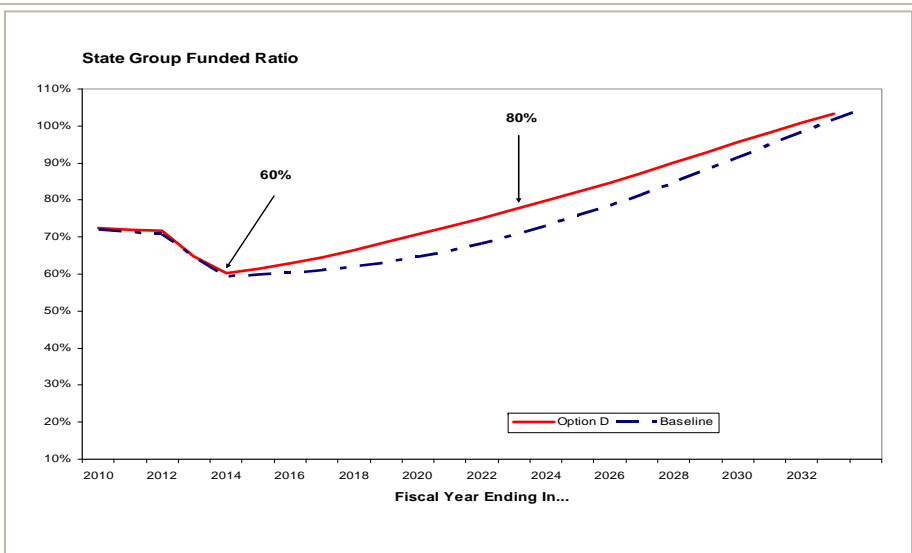
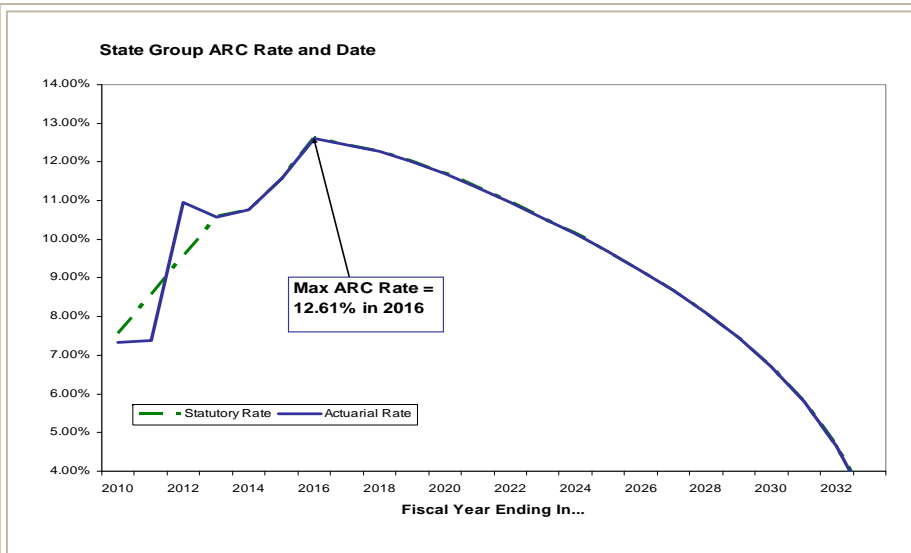
- Raise cap on employer rate increases to 1% in FY '11. Increase member contributions by .5% in each of four years, beginning FY 2011.



- The ARC rate and date drops from 19.76% in FY 2023 with the 1% cap to 16.75% in FY 2020 if a phased-in 2% member contribution increase is added.
- The low point of the funded ratio projections is similar to the 1% cap option. A 60% funded ratio is reached in FY 2023 – two years earlier than the 1% option. An 80% funded ratio is projected in FY 2029.
- With the additional member contributions, the projected UAL peaks two years earlier – in FY 2018 at \$7.9 billion or \$2.4 billion less than the baseline.

State Group: Option D

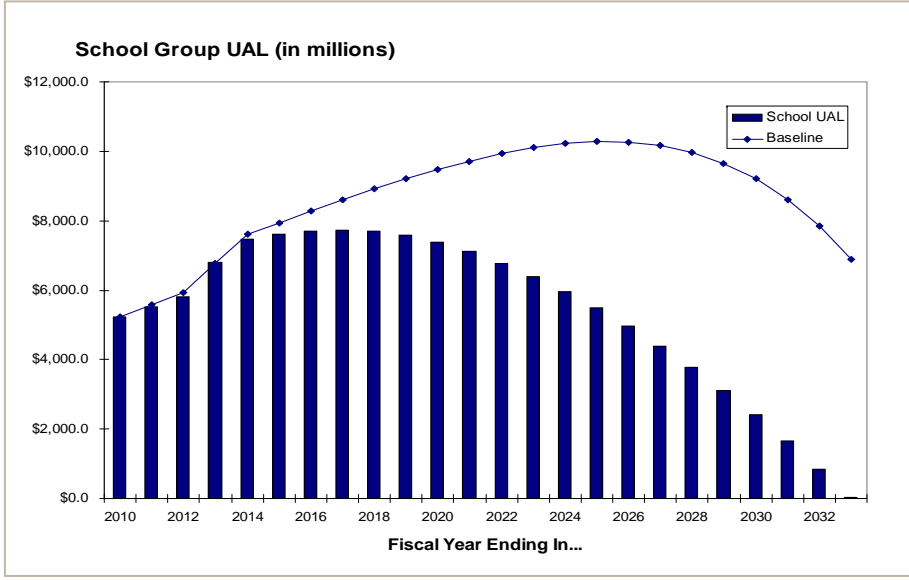
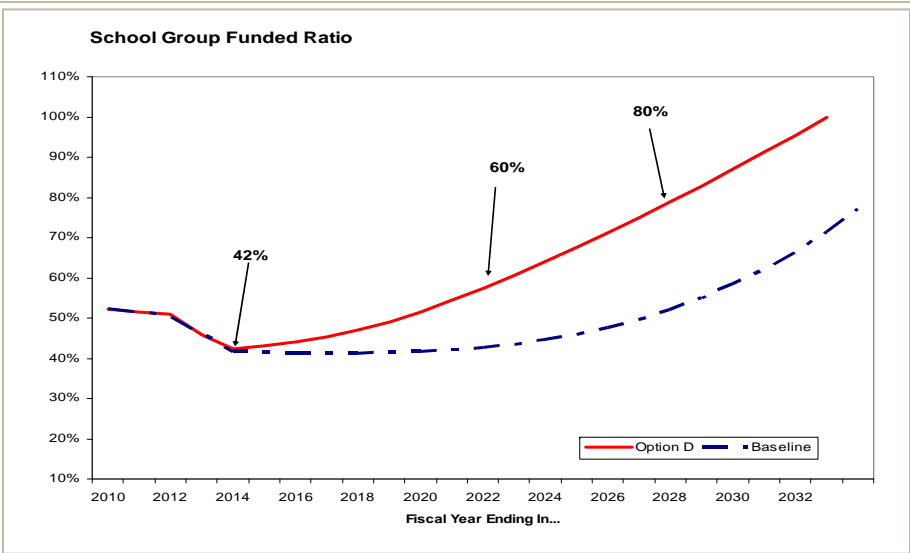
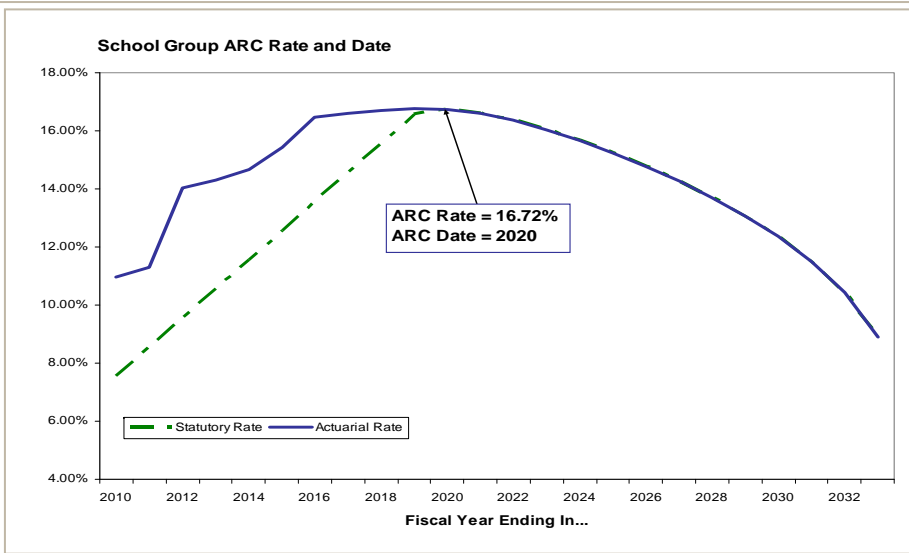
- Raise cap on employer rate increases to 1% in FY '11. Decrease multiplier from 1.75% to 1.5% for future service in FY 2012.



- The 1% employer cap with a 1.5% multiplier results in a maximum ARC rate of 12.61% in FY 2016 – 1.25% lower and two years earlier than the maximum ARC rate for a 1.0% cap alone.
- Funded ratio projections are similar to the 1% cap option, with both dropping to 60% by FY 2014. However, with the 1.5% multiplier, the State Group is projected to be 80% funded in FY 2024 – a year sooner than with the 1% cap option.
- The projected UAL peaks at \$1.61 billion in FY 2014 – two years earlier than the 1% cap option and \$131 million less than the baseline.

School Group: Option D

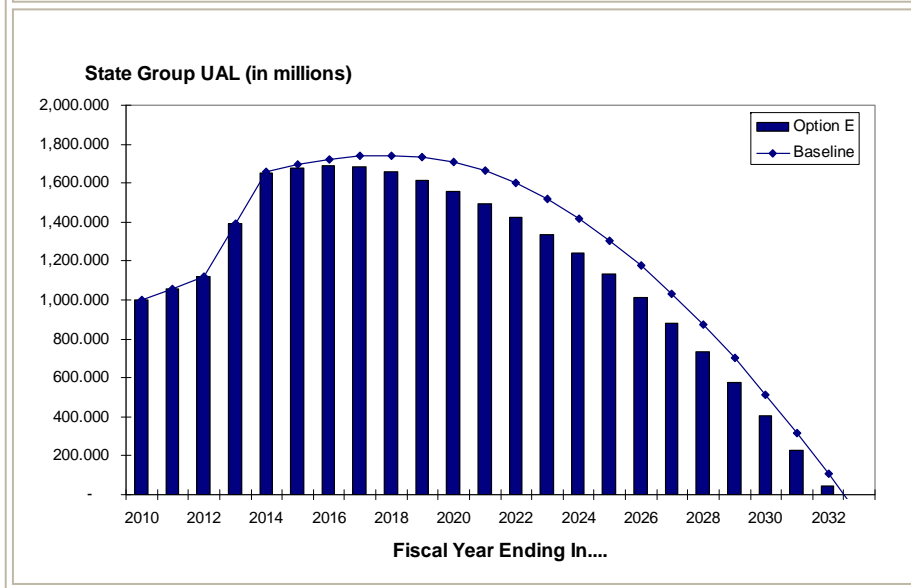
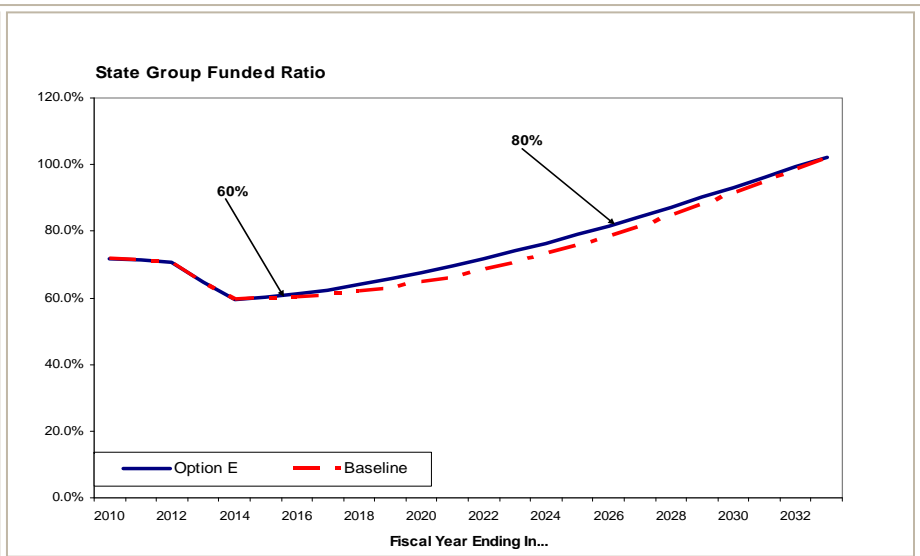
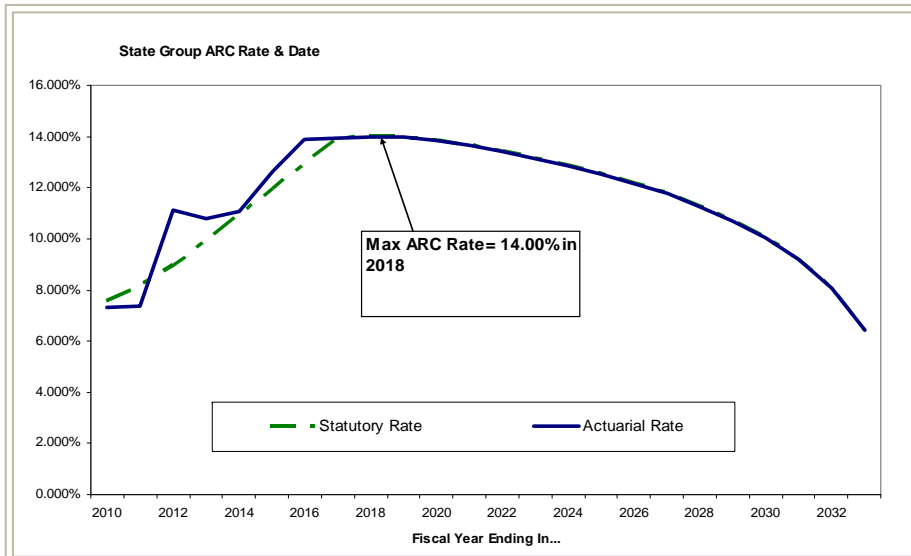
▪ Raise cap on employer rate increases to 1% in FY '11. Decrease multiplier from 1.75% to 1.5% for future service in FY 2012.



- The ARC rate of 16.72% is 3.04% less than the ARC rate for the 1% cap option, and the ARC date is reached three years earlier in FY 2020.
- After falling to 42% funded in FY 2014, the funded ratio is projected to reach 60% in FY 2023 and 80% six years later in FY 2029. Funded ratios for the 1% cap option are projected to attain 60% and 80% funded levels more slowly -- by FY 2025 and FY 2030 respectively.
- The UAL reaches \$7.73 billion in FY 2017, which is around 10% lower than the 1% cap option and \$2.6 billion less than the baseline.

State Group: Option E

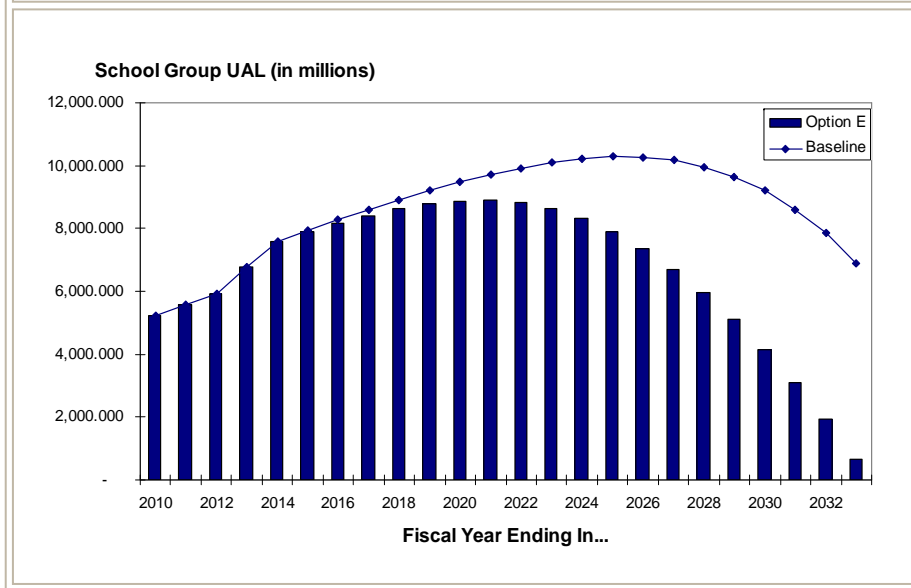
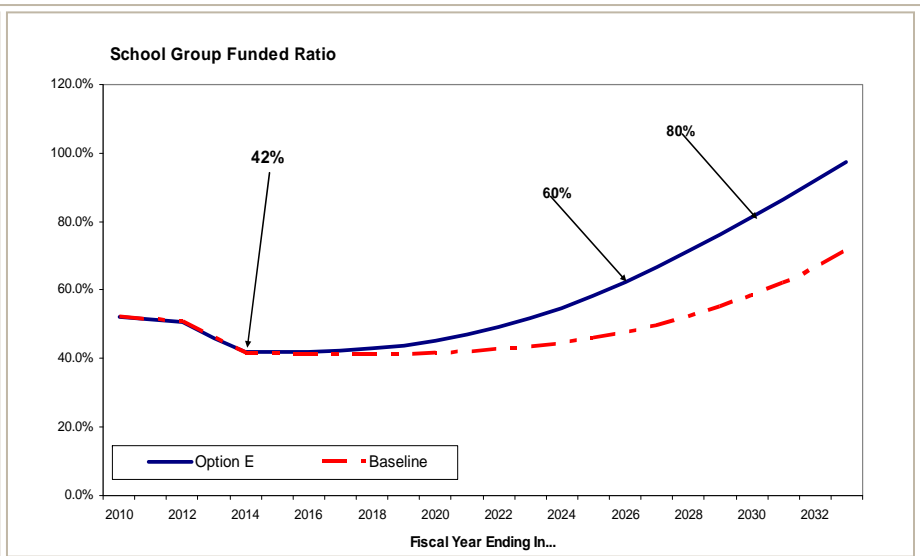
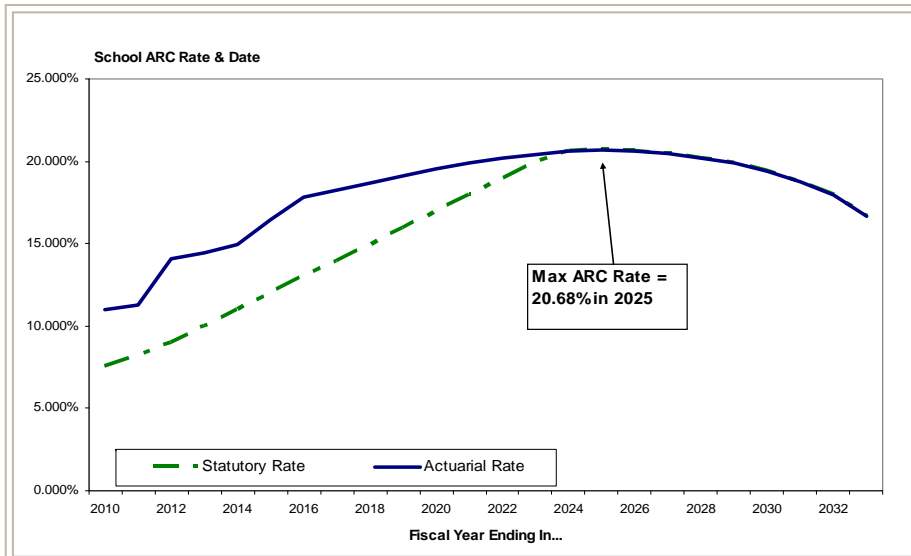
- “Phased-in” rate increase cap-- .6% cap in FY 2011, .8% cap in FY 2012, and 1.0% cap in FY 2013.



- The projected ARC rate rises to a maximum of 14% in FY 2018
- The funded ratio projections are similar to the baseline, reaching a low of 60% in FY 2014.
- The funded ratio recovers very gradually to 80% in FY 2026 – one year earlier than the baseline.
- The projected UAL rises to \$1.69 billion in FY 2015 – two years earlier and \$53.5 million less than the baseline.

School Group: Option E

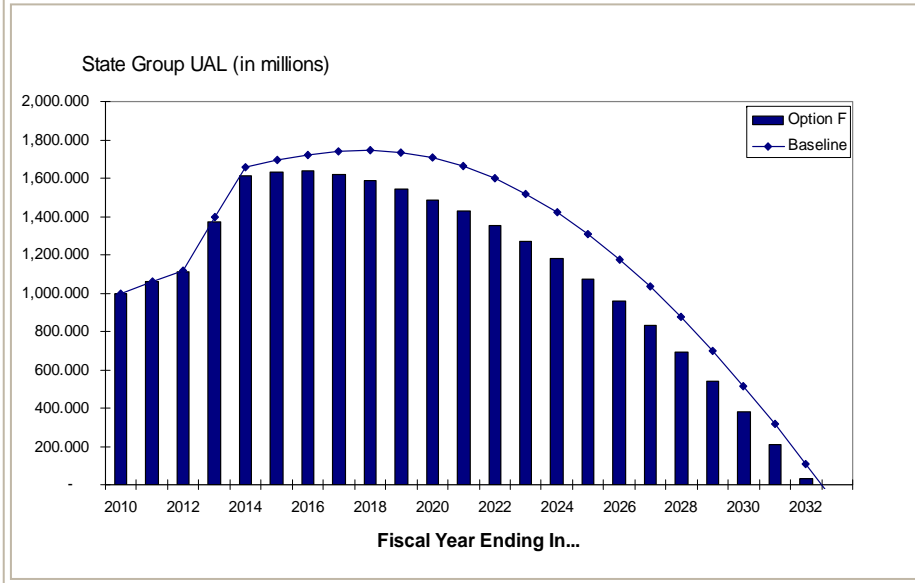
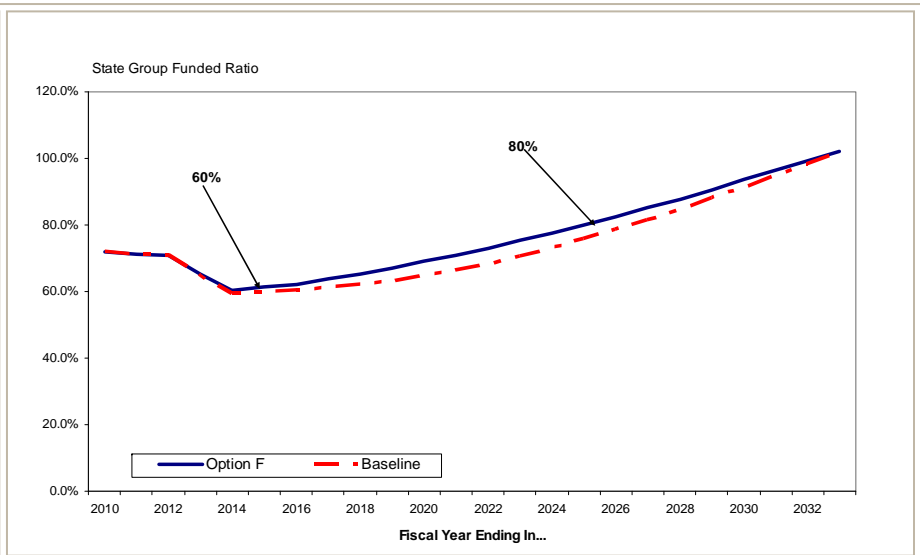
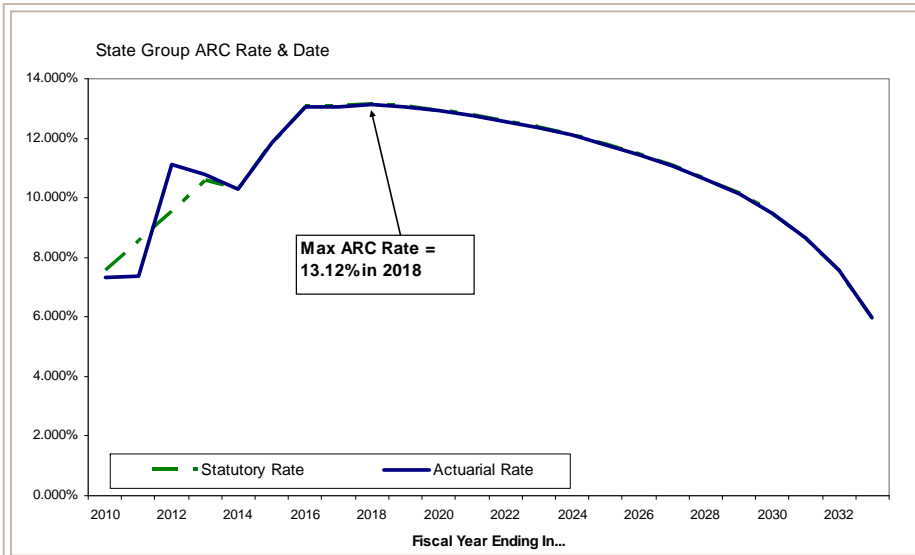
- “Phased-in” rate increase cap-- .6% cap in FY 2011, .8% cap in FY 2012, and 1.0% cap in FY 2013.



- A phased cap increase pulls the School Group back into actuarial balance by FY 2025 at a rate of 20.68% -- two years later and 1% higher than Option A.
- The funded ratio is depressed for an extended period of time, falling 42% in FY 2014 and remaining below 50% for another 8 years.
- The funded ratio continues increasing to 60% in FY 2026 and to 80% by FY 2030.
- The projected UAL peaks at \$8.9 billion in FY 2020 – four years earlier and \$1.39 billion less than the baseline.

State Group: Option F

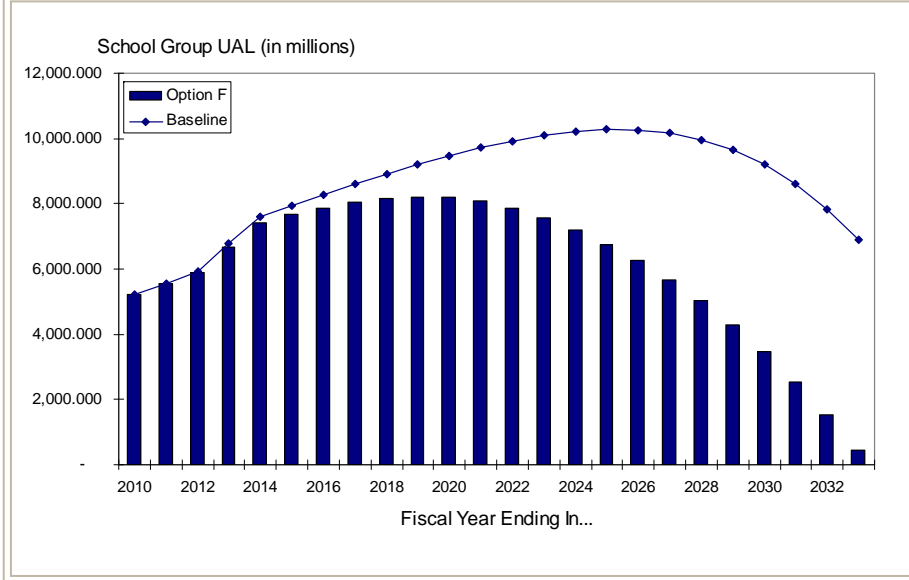
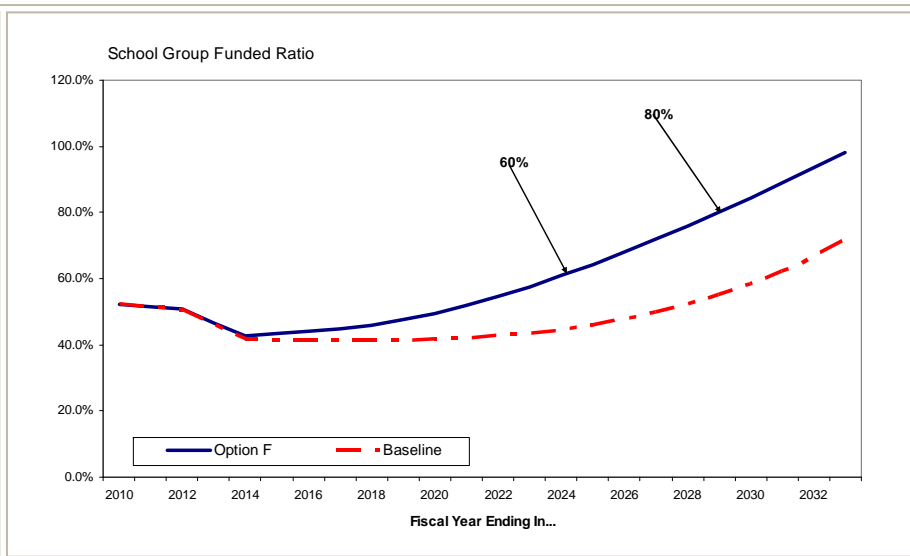
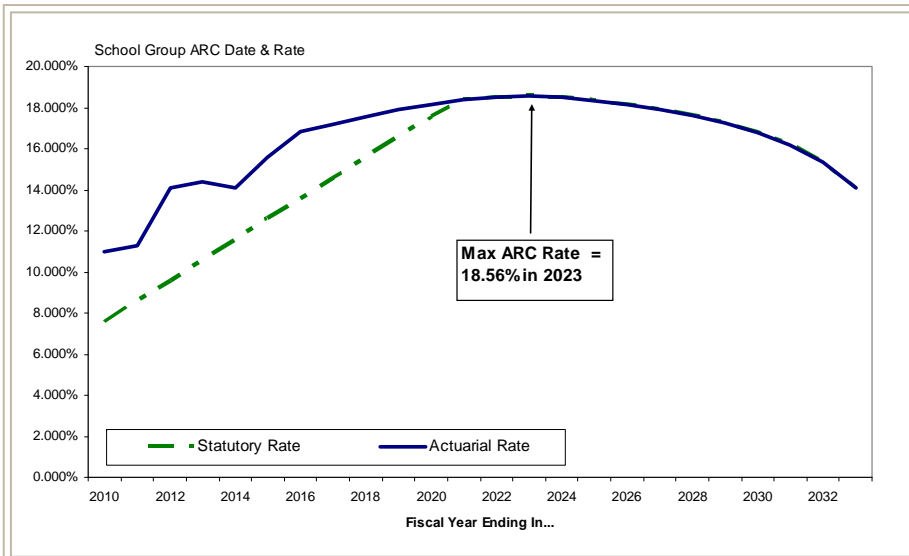
- Raise cap on employer rate increases to 1% in FY '11. Raise Tier I employee rate by 1% in FY '11.



- The projected ARC rate rises to a maximum of 13.12% in FY 2018.
- The funded ratio projections are similar to the baseline, reaching a low of 60% in FY 2014.
- The funded ratio recovers very gradually to 80% in FY 2025 – two years earlier than the baseline.
- The projected UAL peaks at \$1.64 billion in FY 2016 – two years earlier and \$108.3 million less than the baseline.

School Group: Option F

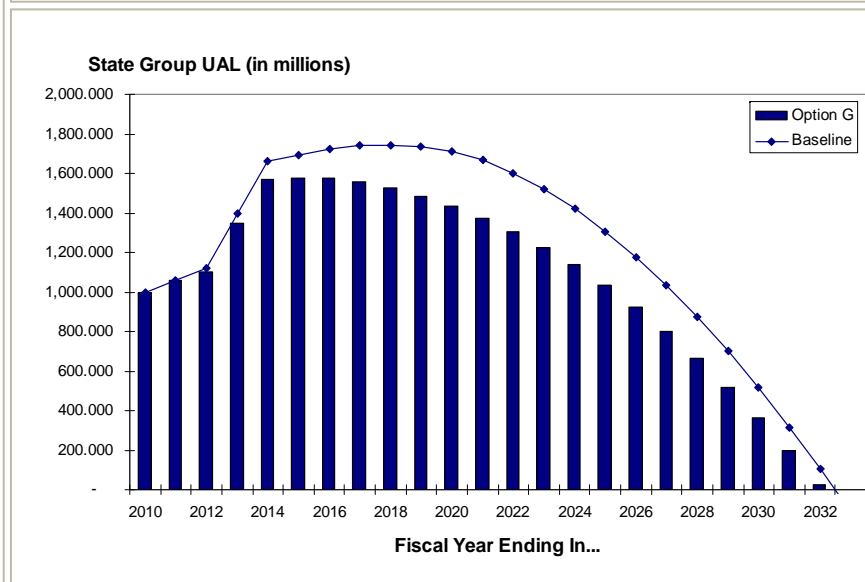
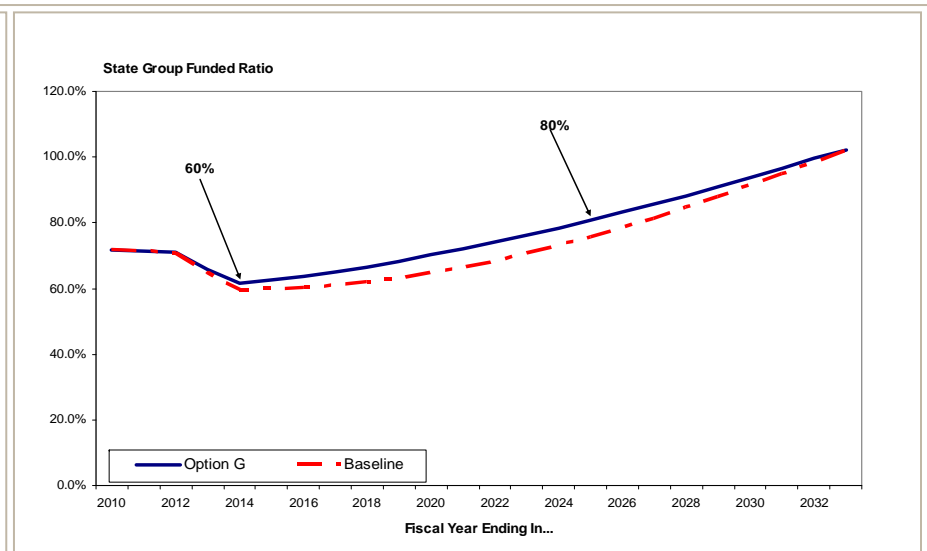
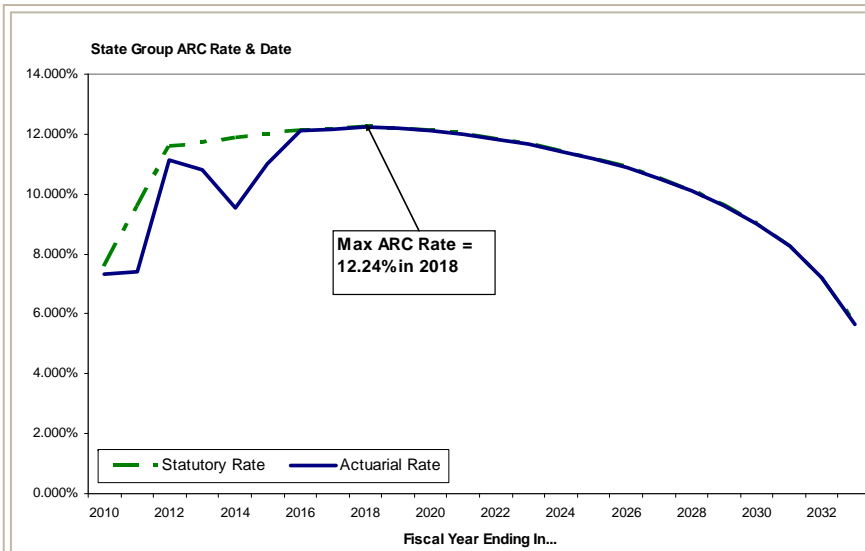
- Raise cap on employer rate increases to 1% in FY '11. Raise Tier I employee rate by 1% in FY '11.



- The projected ARC rate rises to a maximum of 18.56% in FY 2023 – two years earlier and 1.2% less than Option A.
- The funded ratio reaches a low of 43% in FY 2014 and remains below 50% for another 6 years.
- The funded ratio reaches 60% in FY 2024 and 80% in 2029.
- The projected UAL peaks at 8.2 billion in FY 2019—six years earlier and 2.1 billion less than the baseline.

State Group: Option G

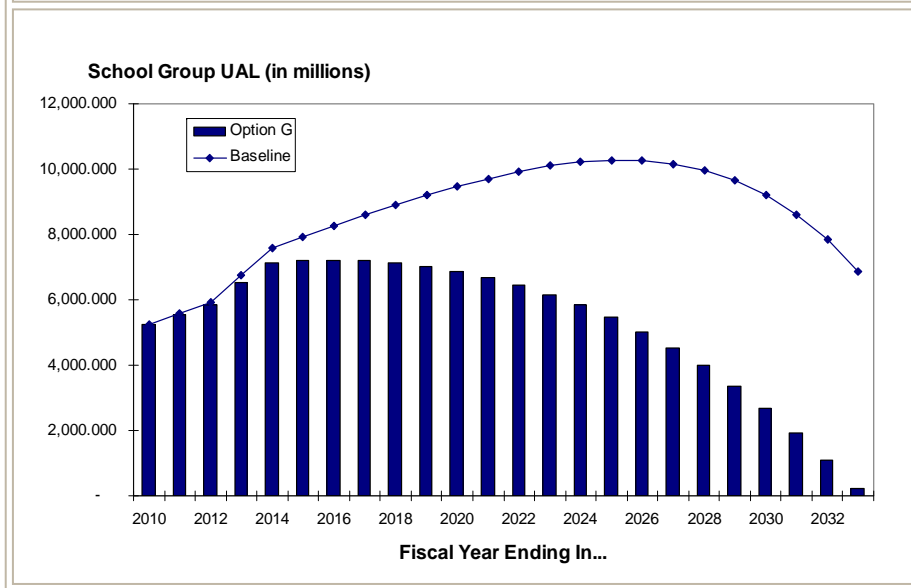
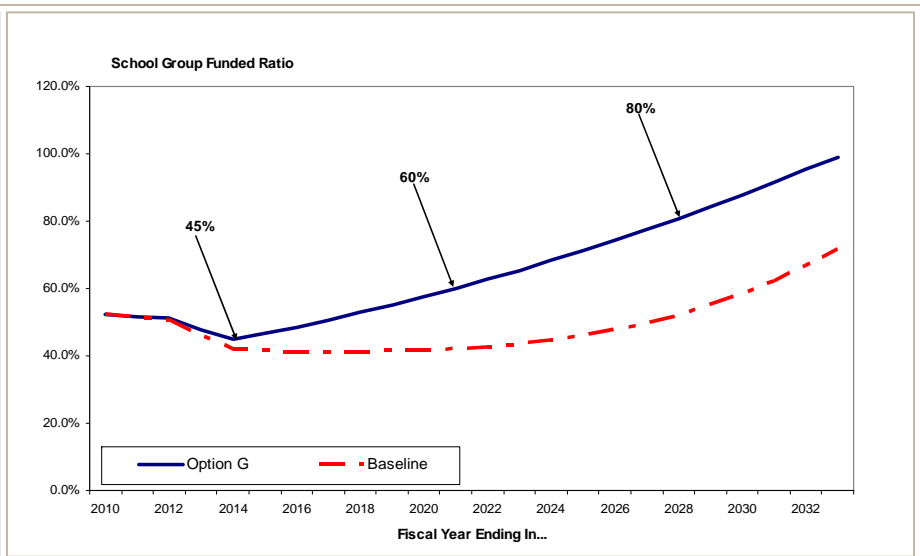
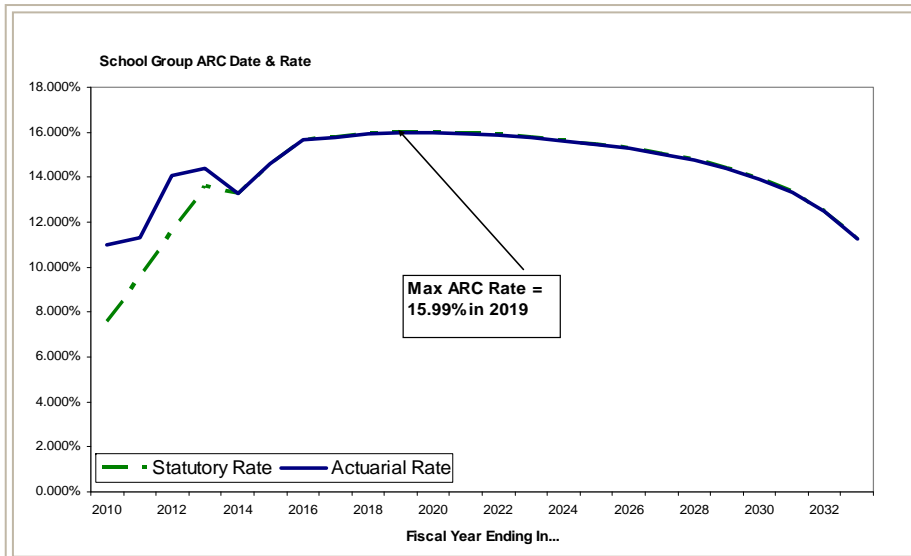
- Raise cap on employer rate increases to 2.0% in FY '11. Raise Tier I employee rate by 2.0% in FY '11.



- The projected ARC rate rises to a maximum of 12.24% in FY 2018 – four years earlier and 2% less than the baseline.
- The funded ratio projections are similar to the baseline, reaching a low of 62% in FY 2014.
- The funded ratio recovers very gradually to 80% in FY 2025 –two years earlier than the baseline.
- The projected UAL peaks at \$1.58 billion in FY 2016 – two years earlier and \$166.1 million less than the baseline.

School Group: Option G

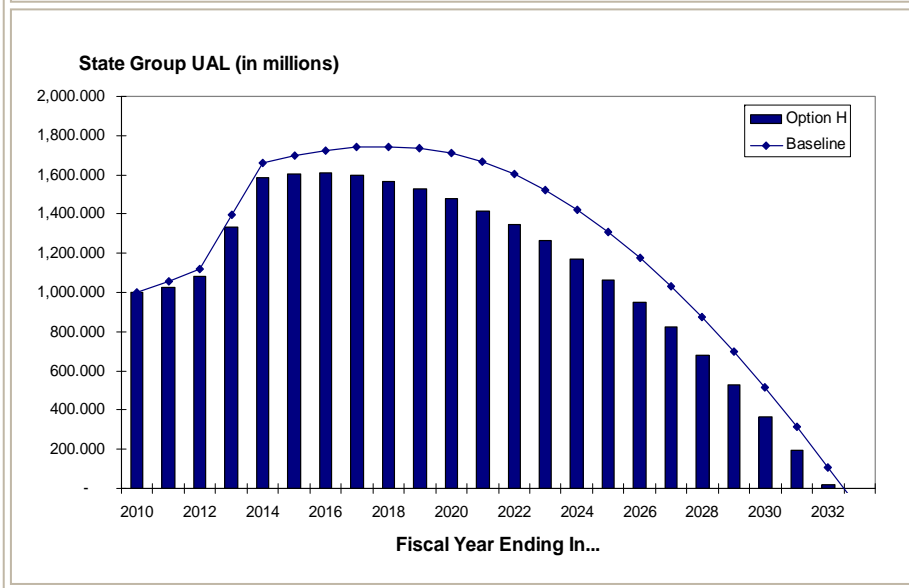
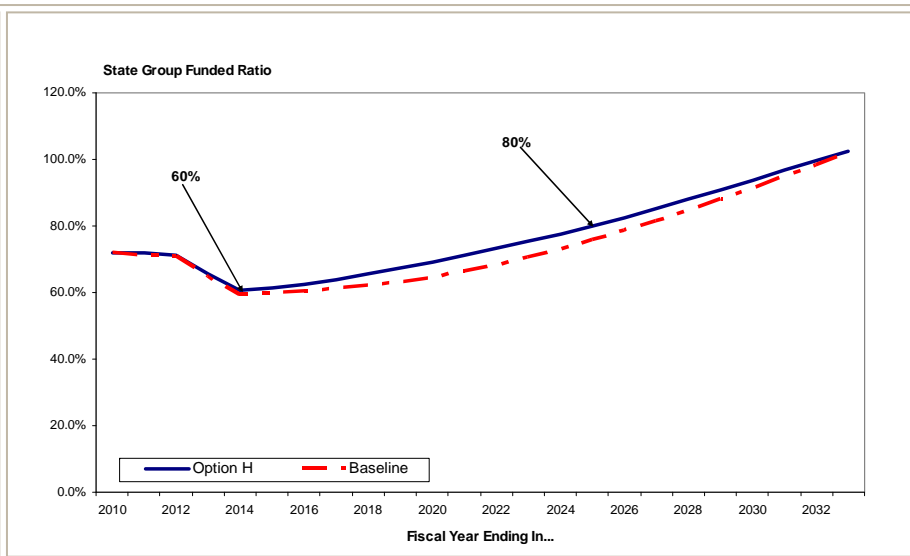
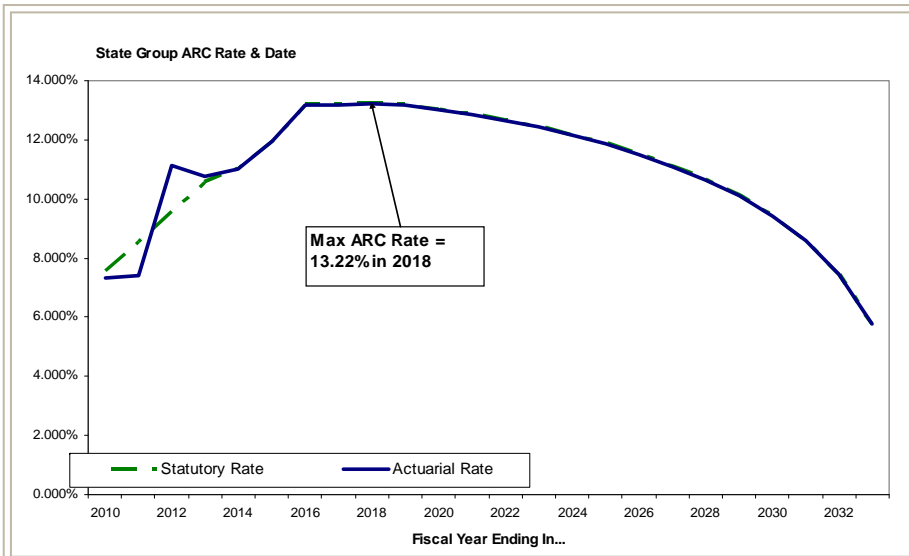
- Raise cap on employer rate increases to 2.0% in FY '11. Raise Tier I employee rate by 2.0% in FY '11.



- The projected ARC rate rises to a maximum of 15.99% in FY 2019 – about 1.5% less than Option B without the employee rate increase.
- The funded ratio falls to a low of 45% in FY 2014 remains below 50% for another two years.
- The funded ratio reaches 60% in FY 2021 and 80% by 2028.
- The projected UAL peaks at \$7.2 billion in FY 2016 – nine years earlier and \$3.1 billion less than the baseline.

State Group: Option H

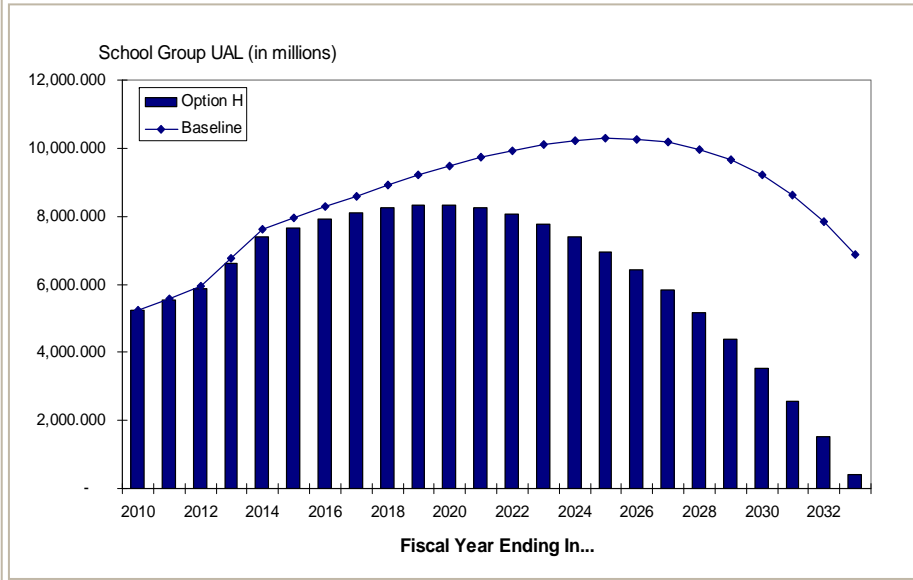
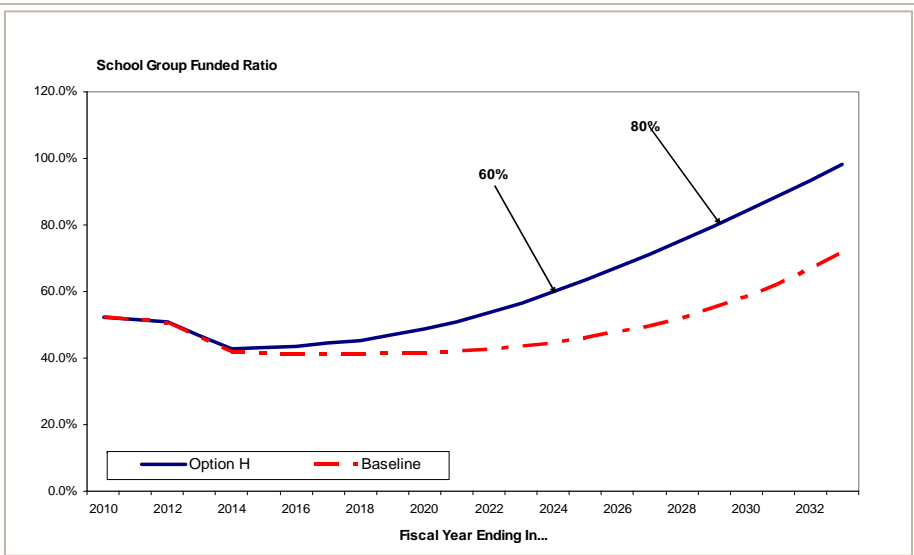
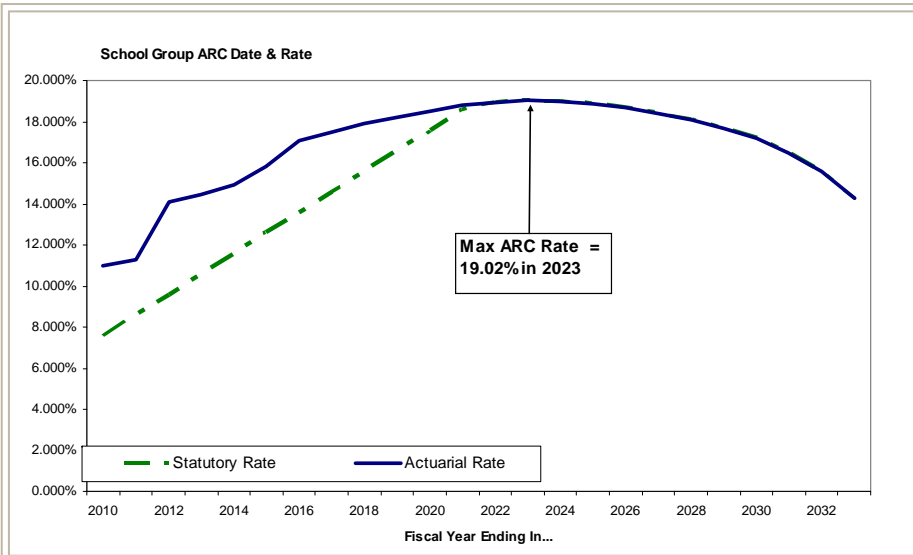
- Raise cap on employer rate increases to 1.0% in FY '11. Raise Tier I employee rate by 1.0% in FY '11. Increase Tier I multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 13.22% in FY 2018 – very similar to Option F without the multiplier increase.
- The funded ratio projections are similar to the baseline, reaching a low of 61% in FY 2014.
- The funded ratio recovers gradually to 80% in FY 2025 – two years earlier than the baseline.
- The projected UAL peaks at \$1.61 billion in FY 2016 – two years earlier and \$134.5 million less than the baseline.

School Group: Option H

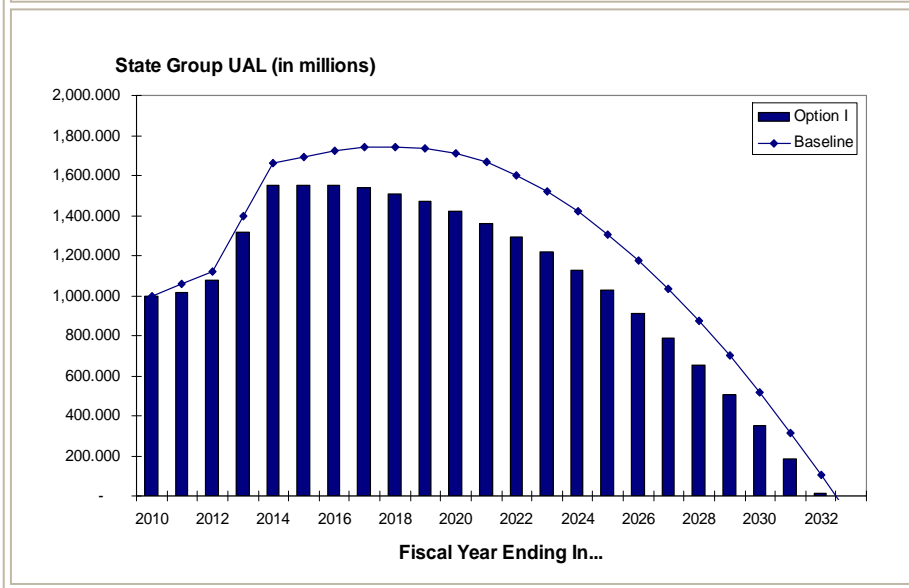
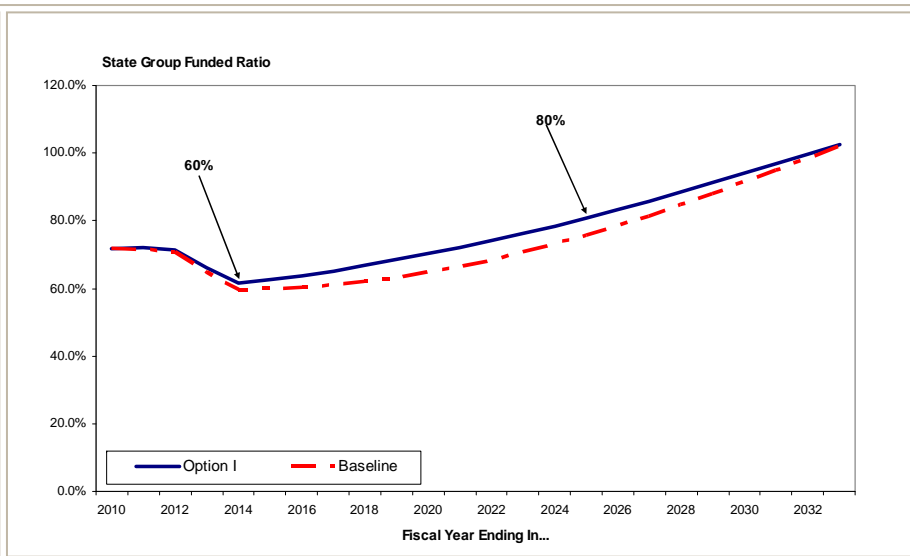
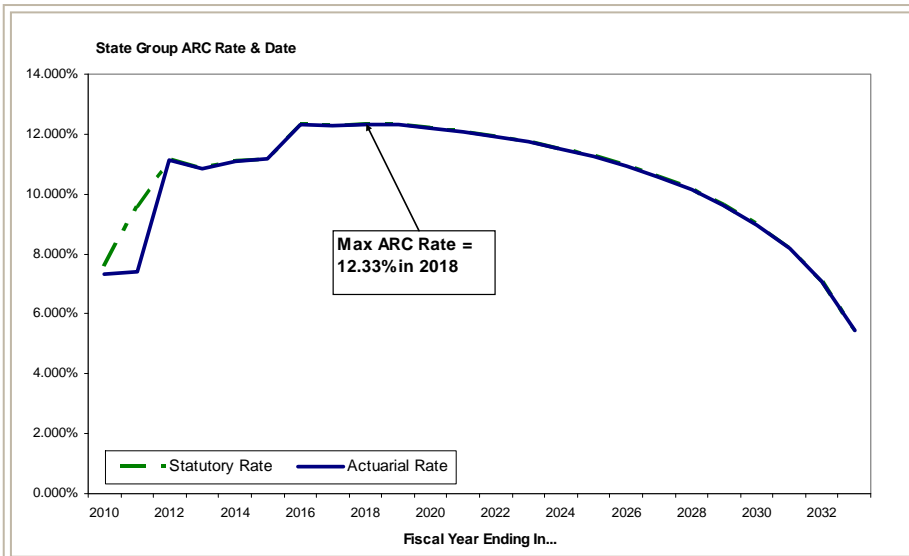
▪ Raise cap on employer rate increases to 1.0% in FY '11. Raise Tier I employee rate by 1.0% in FY '11. Increase Tier I multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 19.02% in FY 2023 – about .5% more than Option F without the multiplier increase.
- The funded ratio reaches a low of 43% in FY 2014 and remains below 50% for another 6 years.
- The funded ratio recovers to 60% in FY 2024 and 80% in 2030.
- The projected UAL peaks at \$8.3 billion in FY 2020 – five years earlier and \$1.96 billion less than the baseline.

State Group: Option I

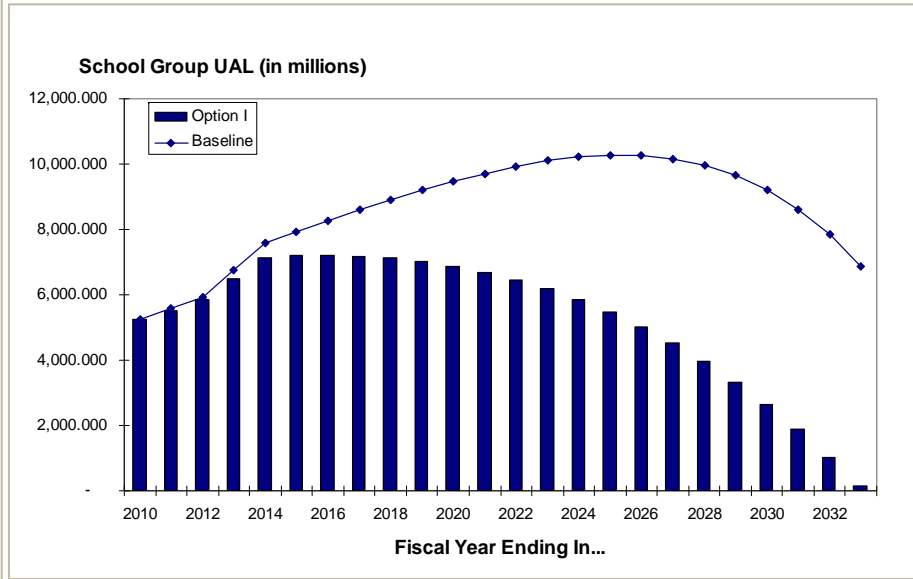
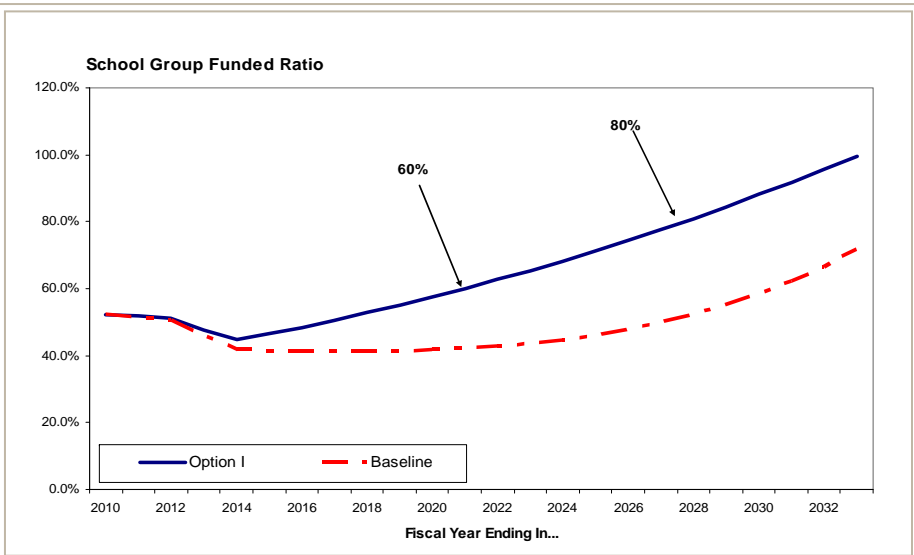
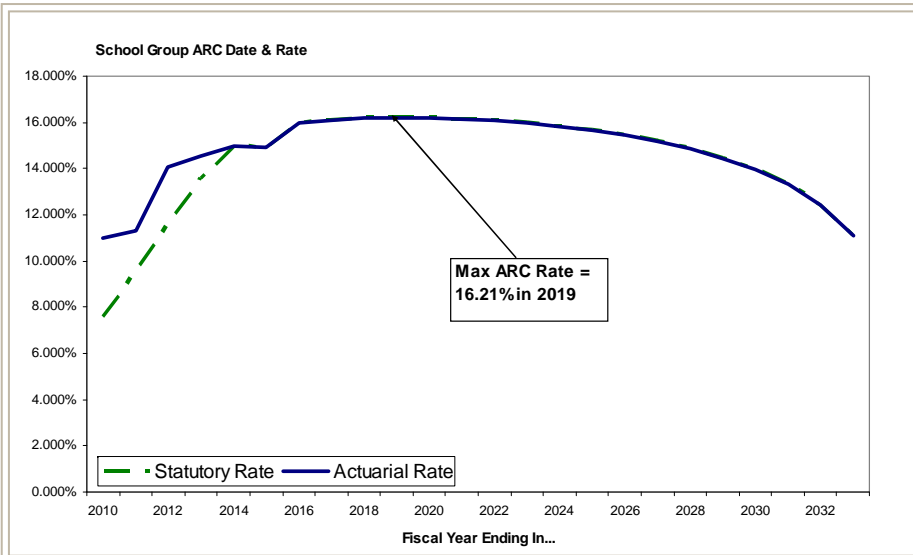
- Raise cap on employer rate increases to 2.0% in FY '11. Raise Tier I employee rate by 2.0% in FY '11. Increase Tier I multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 12.33% in FY 2018 – very similar to Option G without the multiplier increase.
- The funded ratio projections are similar to the baseline, reaching a low of 62% in FY 2014.
- The funded ratio recovers very gradually to 80% in FY 2025 – two years earlier than the baseline and similar to Option G.
- The projected UAL peaks at \$1.6 billion in FY 2016 – similar to Option G without the multiplier increase.

School Group: Option I

- Raise cap on employer rate increases to 2.0% in FY '11. Raise Tier I employee rate by 2.0% in FY '11. Increase Tier I multiplier to 1.85% for future service.



- The projected ARC rate rises to a maximum of 16.21% in FY 2019 – slightly higher than Option G without the multiplier increase.
- The funded ratio falls to a low of 45% in FY 2014 and remains below 50% for another two years.
- The funded ratio reaches 60% in FY 2021 and 80% by FY 2028.
- The projected UAL peaks at \$7.2 billion in FY 2016 – similar to option G without the multiplier increase.

Effects of Raising Contribution Cap

Option A* Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option A</u>	<u>Additional ER Contributions</u>
FY 2011 Increase in Employer Contributions	\$39.35	\$57.64	\$18.29
FY 2011 Total Employer Contributions	\$373.57	\$391.86	\$18.29
FY 2015 Increase in Employer Contributions	\$44.80	\$67.48	\$22.68
FY 2015 Total Employer Contributions	\$538.96	\$640.95	\$101.99
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$25,492.03	\$1,514.37

Option B** Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option B</u>	<u>Additional ER Contributions</u>
FY 2011 Increase in Employer Contributions	\$39.35	\$103.37	\$64.02
FY 2011 Total Employer Contributions	\$373.57	\$437.59	\$64.02
FY 2015 Increase in Employer Contributions	\$44.80	\$124.17	\$79.37
FY 2015 Total Employer Contributions	\$538.96	\$895.90	\$356.94
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$23,369.52	(\$608.14)

*Raise cap on employer rate increases to 1.0% in FY 2011.

**Raise cap on employer rate increases to 2.0% in FY 2011.

Effects of Raising Contribution Cap

Option C* Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option C</u>	<u>Additional ER Contributions</u>
FY 2011 Increase in Employer Contributions	\$39.35	\$57.64	\$18.29
FY 2011 Total Employer Contributions	\$373.57	\$391.86	\$18.29
FY 2015 Increase in Employer Contributions	\$44.80	\$67.48	\$22.68
FY 2015 Total Employer Contributions	\$538.96	\$640.95	\$101.99
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$21,936.48	(\$2,041.18)

Option D** Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option D</u>	<u>Additional ER Contributions</u>
FY 2011 Increase in Employer Contributions	\$39.35	\$57.64	\$18.29
FY 2011 Total Employer Contributions	\$373.57	\$391.86	\$18.29
FY 2015 Increase in Employer Contributions	\$44.80	\$67.48	\$22.68
FY 2015 Total Employer Contributions	\$538.96	\$640.95	\$101.99
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$20,556.82	(\$3,420.83)

* Raise cap on employer rate increases to 1% in FY '11. Increase employee rate by .5% for both Tier 1 and 2 in each of four years, beginning FY 2011.

**Raise cap on employer rate increases to 1% in FY '11. Decrease multiplier from 1.75% to 1.5% for future service in FY 2012.

Effects of Raising Contribution Cap

Option E* Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option E</u>	<u>Additional ER Contributions</u>
FY 2011 Increase in Employer Contributions	\$39.35	\$39.35	-
FY 2011 Total Employer Contributions	\$373.57	\$373.57	-
FY 2015 Increase in Employer Contributions	\$44.80	\$66.62	\$21.82
FY 2015 Total Employer Contributions	\$538.96	\$610.35	\$71.39
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$26,120.29	\$2,142.63

Option F** Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option F</u>	<u>Additional ER Contributions</u>
FY 2011 Increase in Employer Contributions	\$39.35	\$57.64	\$18.29
FY 2011 Total Employer Contributions	\$373.57	\$391.86	\$18.29
FY 2015 Increase in Employer Contributions	\$44.80	\$67.48	\$22.68
FY 2015 Total Employer Contributions	\$538.96	\$640.95	\$101.99
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$24,295.68	\$318.03

*"Phased-in" rate increase cap-- .6% cap in FY 2011, .8% cap in FY 2012, and 1.0% cap in FY 2013.

**Raise cap on employer rate increases to 1% in FY '11. Raise Tier I employee rate by 1% in FY '11.

Effects of Raising Contribution Cap

Option G* Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option G</u>	<u>Additional ER Contributions</u>
FY 2011 Increase in Employer Contributions	\$39.35	\$103.37	\$64.02
FY 2011 Total Employer Contributions	\$373.57	\$437.59	\$64.02
FY 2015 Increase in Employer Contributions	\$44.80	\$88.85	\$44.05
FY 2015 Total Employer Contributions	\$538.96	\$745.58	\$206.62
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$22,044.96	(\$1,932.70)

Option H** Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option H</u>	<u>Additional ER Contributions</u>
FY 2011 Increase in Employer Contributions	\$39.35	\$57.64	\$18.29
FY 2011 Total Employer Contributions	\$373.57	\$391.86	\$18.29
FY 2015 Increase in Employer Contributions	\$44.80	\$67.48	\$22.68
FY 2015 Total Employer Contributions	\$538.96	\$640.95	\$101.99
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$24,689.52	\$711.87

*Raise cap on employer rate increases to 2.0% in FY '11. Raise Tier I employee rate by 2.0% in FY '11.

**Raise cap on employer rate increases to 1.0% in FY '11. Raise Tier I employee rate by 1.0% in FY '11. Increase Tier I multiplier to 1.85% for future service.

Effects of Raising Contribution Cap

Option I* Estimated Effect on the State and School Group (in millions)

	<u>0.6% Cap</u>	<u>Option I</u>	<u>Additional ER Contributions</u>
FY 2011 Increase in Employer Contributions	\$39.35	\$103.37	\$64.02
FY 2011 Total Employer Contributions	\$373.57	\$437.59	\$64.02
FY 2015 Increase in Employer Contributions	\$44.80	\$17.68	(\$27.12)
FY 2015 Total Employer Contributions	\$538.96	\$760.85	\$221.89
Total Employer Contributions: FY 2010-2033	\$23,977.65	\$22,301.89	(\$1,675.77)

*Raise cap on employer rate increases to 2.0% in FY '11. Raise Tier I employee rate by 2.0% in FY '11. Increase Tier I multiplier to 1.85% for future service.

Observations Regarding Options

- A review of all options illustrates various trade-offs and limitations:
 - Increases in employer contributions, while necessary, will not substantially affect the funded ratio for a number of years until compounding of investment earnings has the opportunity to grow the new assets relative to liabilities.
 - While an employee contribution increase or a reduction in the multiplier appears to have a meaningful impact on key measures, legal issues associated with such changes may limit their use.
 - The only ways to quickly improve the funded ratio are either through a major injection of money in the early years (such as through pension obligation bonds) or through large, sustained investment returns in the near term.
- KPERS is seeking feedback from the Joint Committee regarding these options or others the Committee may wish to consider.