

Mr. Levy said because this was a limited scope audit, there is not much information to compare high and low variation patterns. The system's response to have a June 30, 2006 evaluation done with the recommendations and with another actuarial firm is sensible.

Mr. Jorgensen summarized the agencies' response by saying that ASRS did agree with most of the findings. There were 2 recommendations where they explained why they felt the recommendations were not pertinent due to plan changes or other factors. PSPRS expressed concerns with several findings. They did agree with many findings but believe them to be immaterial with no big effect on the rate. They did agree to perform the parallel audits with the recommended changes to see what the impact would be.

Senator Burns said that he understood the PSPRS study as being a new actuarial study. He asked if it was going to be a parallel or new audit.

Mr. Jorgensen said PSPRS will do their study based on the June 30, 2006 valuation by the current actuary. They will contract with a separate actuary, independent from either party, who will run a parallel audit to make sure it all matches.

Representative Boone asked if the ASRS contribution rate was calculated annually or biennially.

Mr. Jorgensen said that there was a statutory change in 2006. It was a stepped rate in 2007 and it does begin to be an annual contribution rate in 2008.

Representative Boone asked if there could be a different rate for ASRS next year.

Mr. Jorgensen said there will be a different rate for 2008. ASRS is in the process of doing the valuation.

Representative Boone asked if it would be different from the original proposal.

Mr. Jorgensen said this would be the first year of the biennium, so it would be different than the previous biennial rate.

2. Employee Health Self-Insurance.

Mr. Bob Cosway, Consulting Actuary, Milliman, Inc., gave a slide presentation and handout of the actuarial audit findings ([Attachment 2](#)).

Representative Boone asked of premium sharing versus co-insurance, which service is most effective in terms of controlling cost over the long term with employees using the services.

Mr. Cosway replied that of the total healthcare costs, employees pay 2 ways, through a specified premium amount per month and through deductibles and copays. The total increases have not been looked at. Charging the premium is cost-shifting. In terms of behavior, the best way to reduce unnecessary utilization is to have employees pay at the point of service, so there is an economic decision. The benefits are relatively rich, but were not part of the study. The EPO has a modest copay for the physician. The trends throughout the country are to raise deductibles or go to a consumer directed plan.

Representative Boone asked if the state has an HSA option.

Mr. Cosway said that he was only aware of the EPO and PPO options.

Representative Boone stated that it would be good for the state to look at that option because it addresses the consumer driven approach to medical services. The HSA is an option worth considering. He asked if the state program has an outside stop loss coverage.

Mr. Cosway said that it does have specific stop loss coverage. Typically it would be at a fairly high amount.

Representative Boone asked if the program is considered to be fully funded; whereas if the program was stopped at the end of the policy year, there would be enough money coming in to pay the entire run-off liability without the state contributing any more money.

Mr. Cosway said that based on the projection from December 2005, there would be a \$34 million balance at the end of June 2007. The incurred by not reported (IBNR) liability changes over time but is fairly stable. The projection used to come up with the current contribution rate was not set as a target. The projections done in December would have ended up with a shortfall under the baseline. Currently, it may be close; but when you follow the past projections forward, it may not likely be enough to cover the IBNR liability.

Representative Boone stated that he was told that on a self-insured health plan a good rule of thumb is the run-off liability is approximately 20% of the total amount taken in. He understands that the state's liability seems to be a little low. Based upon the suggestion on the contingency reserve, it would get to about 20%. He asked if based on the premium of the subsidy for retirees and family by the active employee, the premium would be approximately 6% less if the retirees were not subsidized.

Mr. Cosway said the retiree funding was not part of the audit, but based on prior work, it seems like a reasonable percentage.

Senator Burns asked if the recommendation on the contingency is the same as other self-insured employers.

Mr. Cosway said that it varies. What you are trying to do is guard against having a shortfall in a year where you project premiums and they are not enough to cover the actual costs. The key issues are the likelihood of a shortfall happening with the conservative premium setting would have a less need for reserve; and, the significance of the shortfall. There is a wide variation on the contingency fund reserve in practice. He could work with staff on getting answers.

Representative Boone said the Arizona Department of Administration's (ADOA) response letter mentions fund sweeps on the explicit targets on the Health Insurance Trust Fund (HITF). He asked if the fund balance is swept.

Mr. Richard Stavneak, Director, JLBC Staff, stated that in the past there probably was money taken out of the HITF; but not in the recent budget.

Representative Boone asked based on past audits if there are more or less issues and concerns than other audits.

Mr. Cosway said that the issues are about the same but they are different because there is less historical experience upon which to base future rates. As the experience emerges, there will not be such reliance on the projections done at the beginning of the program. The contribution rates appear to be fairly reasonable and are not requiring major overhaul to keep the program in balance. There were no large problems which is similar to other audits.

Mr. Jorgensen summarized the agency response by saying that overall ADOA agreed with most of the recommendations or agreed to discuss the recommendations with their actuaries who would be implementing the items. The item of main concern was the contingency fund; they did not want to implement the additional contingency fund. They do try to target the IBNR liability amount.

3. Title XIX Capitation Rates.

Mr. Tom Handley, Lewis & Ellis, Inc., gave a slide presentation and handout of the actuarial audit findings ([Attachment 3](#)).

Representative Lopez asked if there is a way for a provider to inflate their administrative expenses by using the actual trend rather than the arbitrary trend.

Mr. Handley said the agencies are audited, so it could not be used as a means to inflate the trend. The overall expenses are known but may be allocated differently. The allocation of expenses is not looked at in great detail but an audit of the agency by an accounting firm could identify irregularities.

Senator Burns asked if it is typical of other agencies to use the actual administration costs as opposed to a fixed percentage of total costs.

Mr. Handley said that the intent of actual cost is to compare the changes to a standard. If the actual administrative costs increase 4% from one year to the next, then it would be a better benchmark to determine the actual cost going into the next year.

Senator Burns asked if it is a trend to use the actual cost or if the typical model is to use the percentage.

Mr. Handley said that both measures are looked at and a determination is based on what is the most reasonable basis for the projection. He does not know how many states use each measure.

Representative Lopez asked what the issue is regarding the missing data due to submission problems.

Mr. Handley said data exists for reporting by month of service rather than just the year; however, the system has not been programmed to extract and make the data available for the actuaries to do the pricing. It is just a matter of doing the necessary programming, which the agencies are looking into doing. The other problem with the encounter data is fairly typical and not unique to Arizona. It is not reported on a timely basis or not at all. The actuary projections are based on the combination of the encounter data and the financial data. Even though the encounter data may not be good, the financial data was reasonable and accurate to make reasonable judgments on the projected rates and costs.

Representative Lopez asked how a pharmacy trend could be managed at a lower level.

Mr. Handley said that with prescription drugs, by looking at the percentage distribution of generic versus brand drugs, the level of therapeutic equivalents rather than the more costly drugs, and detail the program to see what is being prescribed and their low cost alternatives.

Representative Lopez expressed her concern with managing pharmacy rates with children of high need.

Senator Burns asked how the actuarial soundness is affected if an agency includes a policy that is not a federal requirement.

Mr. Handley said that the requirement of the actuarial soundness is to the federally mandated benefits. The overall rates, costs and methodology used are looked at in reviewing the overall actuarial soundness. In the analysis, the rates that were provided did not differentiate between mandated and non-mandated benefits.

Representative Boone said the total capitation rate included existing coverage mandated by federal or added by the state level. He asked if the suggestion is to break down the components.

Mr. Handley said yes, the recommendation is to split them in the future.

Representative Boone asked if the capitation rate was looked at in light of what the state covers and not the federal minimum.

Mr. Handley said yes, the total program was included in the review.

Representative Boone said he understands that the state provides more than the minimum federal requirement for AHCCCS Acute Care.

Mr. Stavneak said there are optional services for items such as prescription drugs.

Senator Burns asked how these audits compare to other audits and if there are more or less issues and concerns than other audits.

Mr. Handley replied that the methodology is appropriate and the rates meet the definition of actuarial soundness. There are some issues in the data that were identified that should be considered. In terms of the rates for the state, they seem consistent with other states.

Mr. Jorgensen summarized the agency responses by saying that AHCCCS concurred with the findings and will consider each recommendation. The actual implementation of the recommendations will depend on the costs to the program and the availability of resources. Most of the components of the recommendations for DES deal with AHCCCS doing the work for them; but they will work with AHCCCS to address the concerns. DHS disagrees with the findings that administration should be funded per member per month and felt that the flat percentage based on their experience works. They also disagree to including trend information in the capitation rate report because they felt it would be costly.

Mr. Chris Petkiewicz, Chief Financial Officer, Department of Health Services, Behavioral Health, stated that the reason they disagree with the administration portion is because their contract allows the Regional Behavioral Health Authority (RBHA) a 7% administration fee. Before calculating allowable profit, 7.5% is taken off the 100% to calculate the maximum profit of 4%. This is why they could not have a change in percentage.

Senator Burns asked how long the contract is.

Mr. Petkiewicz replied that Maricopa County ends this year with an option to renew for 2 one-year periods. The others end in 1-1/2 years.

Mr. Mike Nordstrom, Actuary, Mercer Government Human Services Consulting, stated that the trend factors are provided by categories of service for pharmacy, hospital in-patient and out-patient, and other different categories. They are provided to AHCCCS administration as part of their review of the capitation rate development. They are also provided to Children's Rehabilitative Services, DHS Administration, and the contractor. The certification letters serve many audiences with varying levels of experience. Including trend information in the letter would increase cost to serve a limited purpose. Trend information is available for review and could be provided to the Committee if requested.

Mr. Nordstrom referred back to the question regarding the percentage versus fixed method and stated that the most common approach within the states among Mercer's clients is using the percentage of the premium. They also look at the contractor cost over time as a historical reference to the capitation rates. The 7-1/2% in the contract is within a reasonable range.

Senator Burns said the 7% charged by the RBHA sounds like a different administrative cost than the agency's administrative cost for running the program.

Ms. Shelli Silver, Assistant Director, AHCCCS Division of Health Care Services, said that the response letter sent to the audit is for Acute Care, Arizona Long Term Care System (ALTCS), Comprehensive Medical and Dental Programs (CMDP), and Department of Economic Security Division of Developmental Disabilities (DDD) programs, for which AHCCCS develops the capitation rate. The capitation rates are worth over \$5 billion, so the audit was welcomed. They were pleased with the reports from Lewis and Ellis finding the rates to be reasonable. The recommendations were fairly minor and the agency agreed with the majority of the recommendations.

There were a few administrative things that were of concern, such as rebasing the rates every 3 years instead of 5 years. There is an administrative cost to rebase those rates. There was a contract with Mercer to set capitation rates; however, the actuarial staff was brought in-house to save money. The actuarial staff of 2 is very busy and to rebase on a more frequent basis, they would need to expand the unit. Overall, AHCCCS' encounter data is nationally renowned. The database is very rich and very well developed. Centers for Medicare and Medicaid Services (CMS) require an annual study tied to federal funding, the error rates needs to be kept above a certain threshold to maintain the funding. The study shows the data 90% complete and 90% accurate, with a collection of 3.5 million encounters per month. There are isolated instances with the encounter data that was brought up in the individual audits due to some system issues. Overall, the encounter data is in terrific shape. The remaining issues have been addressed. The capitation rates are reviewed by CMS before implementation to the contract; they have to meet the federal requirements of actuarially sound rates. The certifications have been received from CMS annually. On the issue of mandated versus non-mandated benefits, the a Legislature made a change requiring AHCCCS to report to the Committee any policy changes that effect the capitation rates outside of mandates.

Senator Burns asked how many Actuaries would be needed to have 3-year rebase cycles.

Ms. Silver replied that they did not look at how much they would have to expand the unit; however, it would probably need an additional 1 or 2 actuaries. Currently there is 1 actuary staffed. The process to build rates is about a 6-month process, whereas, in a renewal year, the process is about 3 months to set the rates.

Senator Burns asked if there would be a cost savings if a 3-year cycle is recommended over a 5-year cycle.

Mr. Handley replied that a 3-year cycle may not result in a cost savings. The reason for the rebase is to get a more accurate and equitable rate consistent with the underlying costs. The recommendation for 3 years was more appropriate because 5 years may be too long of a period. They are aware of the staffing issues involved with this recommendation.

Representative Boone asked if the issue of the encounter data was that it did not have the month of service.

Ms. Silver replied that it was an issue. The data source called The Data Book is used as the basis for all the capitation rates. The program was designed to extract year of service. They do have month of service, but it is on an old system. They are waiting on the programmers to make the changes to the system. The request is submitted and will probably be complete in the cycle following the next cycle. The next preliminary capitation rate estimate will be presented in March 2007. However, the changes to the data request will not be made for another year.

4. Risk Management.

Mr. Mujtaba Dattoo, Actuarial Practice Leader, ARM Tech, gave a slide presentation and handout of the actuarial audit findings ([Attachment 4](#)).

Senator Burns asked if the recommendation of capping the premium charges is for smaller agencies only.

Mr. Dattoo replied that it could be applied to both smaller and larger agencies. He recommends that it apply to all agencies.

Senator Burns asked for clarification on the recommendation since the risk factors are higher on some agencies than others.

Mr. Dattoo said the recommendation is for all agencies.

Senator Burns said that if a specific cap was not used, but using a smoothing of the rate increase based on the leveling of the spike would work.

Mr. Datoos agreed and said there are various approaches.

Senator Burns said the Department of Administration recently reported that they have a fund balance of \$18 million in the risk management program and \$16 million in the property and liability program. He asked if is either too large or too small of a reserve.

Mr. Datoos said that from the actuarial report as of June 30, 2005, the ultimate cost for the program was about \$1.2 billion, which includes all the claims the state would have to pay out. There is about \$300 million still outstanding for those claims. An amount in the range of \$33 million would be within 12% of the \$300 million. Based on standard actuarial practice, that would be within 70% confidence level that is enough to cover the contingency need. The \$16-\$18 million is within a reasonable range.

Senator Burns asked how this audit compares to other audits done and if there are more or less issues and concerns than other audits.

Mr. Datoos said he has done audits on several states and replied that Arizona is very well served by its vendors. The report has complete integrity and is very well documented.

Mr. Jorgensen summarized the agency response by saying that, overall, the agency has agreed to implement or discuss the recommendations with the new actuary that will do the FY 2007 report. The current contract with Milliman ends in FY 2006 and will need to be re-bid. The concern was on setting the caps because the agency felt that it could diminish the goal of being responsive to the experience of each agency.

Representative Boone said he understands the recommendation is to be more of a smoothing effect so that an individual agency would still have an impact based upon their own losses, but it would be capped so there would be a smoothing effect rather than a large fluctuation year to year.

Mr. Jorgensen said that the cap would be either an increase or decrease.

Representative Boone said that the individual agency would be impacted based upon its actions, but kept within a range.

Mr. Stavneak said that agencies are given the dollar funding they need to meet their charge. The smoothing has a bigger role when you absorb. When you don't, if they experience a large increase, then money gets taken out of their fund to pay for the increase.

The meeting adjourned at 3:55 p.m.

Respectfully submitted:

Yvette Medina, Secretary

Richard Stavneak, Director

Senator Robert Burns, Chairman

NOTE: A full tape recording of this meeting is available at the JLBC Staff Office, 1716 West Adams.



STATE OF ARIZONA JOINT LEGISLATIVE BUDGET COMMITTEE



PRESENTATION OF ACTUARIAL AUDIT FINDINGS

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October 24, 2006



Introduction

➤ Findings based on a limited-scope audit

- Not a full replication of the results
- Review of key components in the valuation process
- To provide assurance that liabilities and costs of the Plans are reasonable

➤ Actuarial Experience Study Audits:

- ASRS Actuarial Experience Study for the five-year period ended June 30, 2002
- PSPRS Actuarial Experience Study for the five-year period ended June 30, 2003

Actuarial Valuation Audits:

- ASRS June 30, 2005 Actuarial Valuation
- PSPRS June 30, 2005 Actuarial Valuation
- Corrections Officer (PSPRS) June 30, 2005 Actuarial Valuation
- Elected Officials (PSPRS) June 30, 2005 Actuarial Valuation

Experience Study Audit Services

I. Data Review

II. Methods Review

- *Process Review (Decrement timing, Exposures and Counts)*
- *Actuarial Assumption Review*
- *Methodology (No probabilities are omitted)*

III. Recommendation Review

- *Reasonableness*
- *Methodology*

Actuarial Valuation Audit Services

I. Data Review and Reconciliation

II. Test Lives Review

- *Methodology*

III. Method and Assumptions Review

- *Funding Method Review*
- *Actuarial Assumption Review*
- *Methodology*

IV. Report Review

- *Methodology*

ASRS Experience Study Audit Findings

- The procedures determined by the consulting actuary are appropriate and reliable.
- Retained actuary's recommendations on demographic assumptions are:
 - Consistent with the results of the experience analysis, and
 - Appropriate and reasonable based upon generally accepted actuarial standards and practices
- The economic assumptions should be evaluated individually for reasonableness.

PSPRS Experience Study Audit Findings

- The period of the study was on a calendar year basis, not a plan year basis as indicated in the report title.
- Age and service rounding was inconsistent between the experience study and the valuation.
- We recommend an analysis of post retirement mortality and gender specific mortality.
- We recommend a review of the retirement and DROP experience under the current provisions.
- The economic assumptions are at the high end compared to other large systems (e.g. 5.50% inflation). They should be evaluated individually for reasonableness. There should be a separate explicit assumption for administrative (i.e. non-investment) expenses.

PSPRS Experience Study Audit Findings (cont.)

- We recommend a full scope audit (“parallel”), hence a full replication of the experience study and process. We understand that PSPRS may do this as part of a June 30, 2006 experience study.
- We were not asked to review the experience studies for the Corrections Officer or Elected Officials’ Plans.

ASRS Valuation Audit Findings

- The procedures and costs determined by the consulting actuary are appropriate and reliable.
- We matched all test lives with a high degree of accuracy.
- The actuarial assumptions and methods are reasonable and within the public sector norm.

ASRS Valuation Audit Recommendations

- The duplicates should be confirmed to eliminate potentially redundant data.
- Missing data items should be investigated through more data questions and answers between ASRS and the retained actuary.
- The data reconciliation process should include the confirmation of counts between ASRS and the retained actuary.
- The “Bounce Back” (Pop-Up) assumption load should be reviewed against actuarial equivalence.
- There are slight corrections to plan provisions and assumptions summarized in the report.
- The gain/loss analysis by demographic source (retirement, withdrawal, disability and death) should be shown in the report.

PSPRS (All plans) Valuation Audit Findings

- We discovered numerous areas of concern in the liabilities being valued.
- Test life review:
 - Actives resulted in significant differences for all plans.
 - Deferred Vested resulted in significant differences for the Corrections Officer Plan, and matched with a high degree of accuracy for the PSPRS and Elected Officials' Plans.
 - Pay Status Recipients matched with a high degree of accuracy for all plans.
- We have concerns with the actuarial assumptions and methods, including the determination of benefits and application of assumptions in the actuarial model.
- We noted that the timing of decrements was not consistent with the determination of the Final Average Salary.
- The Health Insurance Premium Subsidy should be reviewed during the next study.
- Plan provisions and actuarial assumptions were not always accurately stated in the reports.

PSPRS (All Plans)

Valuation Audit Recommendations

- Appropriate corrections should be made to the liability and benefit calculations.
- The DROP experience should be reviewed (PSPRS).
- Experience should be studied on retirement rates for members with less than 20 years of service (PSPRS).
- The gain/loss analysis by demographic source (retirement, withdrawal, disability and death) should be shown in the reports.
- The effect of term limits for Elected Officials should be reviewed with regards to appropriate assumptions for withdrawal and/or retirement.
- We recommend a full scope audit (“parallel”), hence a full replication of the valuation results and process. We understand that PSPRS may do this as part of the June 30, 2006 valuation.

Active Test Life Comparison – ASRS and PSPRS

ACTIVES:	ASRS (New Entrant)		PSPRS (Fire Low)		Corrections Officer (New Entrant)		Elected Officials (Age 28/Svc 2yrs)	
	Buck	Segal	Rodwan	Segal	Rodwan	Segal	Rodwan	Segal
Present Value of Benefits								
CURRENT AGE:								
Death	\$80	\$79	\$1,371	\$2,474	\$216	\$472	\$275	\$284
Disability	68	70	2,670	7,191	287	1,107	200	206
Withdrawal	1,575	1,556	3,079	2,249	5,926	8,106	5,410	4,003
Retirement	1,334	1,348	151,332	155,335	15,623	15,852	10,456	10,920
Total PVB (Current Age)	\$3,057	\$3,053	\$158,452	\$167,249	\$22,052	\$25,537	\$16,341	\$15,413
Ratio of Segal/Buck								
Present Value of Benefits:								
CURRENT AGE:								
Death		98.75%		180.45%		218.52%		103.27%
Disability		102.94%		269.33%		385.71%		103.00%
Withdrawal		98.79%		73.04%		136.79%		73.99%
Retirement		101.05%		102.65%		101.47%		104.44%
Total PVB (Current Age)		99.87%		105.55%		115.80%		94.32%

- PSPRS Police and Fire units were divided into four assumption groups, based on their expected rates of active member withdrawals. Generally larger, urban units have lower withdrawal rates (labeled Low) and small, rural units have higher withdrawal rates (labeled High).

Appendix

- Valuation audit test life comparisons

ASRS June 30, 2005 Valuation - Actives

ACTIVES:	Active (New Entrant)		Active (Hired between ages 25 - 35)		Active (Hired between ages 52 - 54)		Active (Hired between ages 55 - 70)	
	Buck	Segal	Buck	Segal	Buck	Segal	Buck	Segal
Present Value of Benefits								
CURRENT AGE:								
Death	\$80	\$79	N/A	N/A	N/A	N/A	N/A	N/A
Disability	68	70	N/A	N/A	N/A	N/A	N/A	N/A
Withdrawal	1,575	1,556	N/A	N/A	N/A	N/A	N/A	N/A
Retirement	1,334	1,348	42,554	42,953	73,896	74,817	32,499	32,958
Total PVB (Current Age)	\$3,057	\$3,053	\$42,554	\$42,953	\$73,896	\$74,817	\$32,499	\$32,958
Ratio of Segal/Buck								
Present Value of Benefits:								
CURRENT AGE:								
Death		98.75%		N/A		N/A		N/A
Disability		102.94%		N/A		N/A		N/A
Withdrawal		98.79%		N/A		N/A		N/A
Retirement		101.05%		100.94%		101.25%		101.41%
Total PVB (Current Age)		99.87%		100.94%		101.25%		101.41%

ASRS June 30, 2005 Valuation - Inactives

Inactives	Retiree 1: Life Only		Retiree 2: 100% Joint & Survivor		Retiree 3: 66.67% Joint & Survivor		Retiree 4: 50% Joint & Survivor	
	Buck	Segal	Buck	Segal	Buck	Segal	Buck	Segal
Total PVB	\$497,402	\$499,280	\$549,948	\$550,220	\$28,715	\$28,548	\$69,443	\$70,636
Ratio of Segal/Buck								
Total PVB	100.38%		100.05%		99.42%		101.72%	
Inactives	Retiree 5: 5 yr Certain & Life		Retiree 6: 10 yr Certain & Life		Retiree 7: 15 yr Certain & Life		Deferred Vested	
	Buck	Segal	Buck	Segal	Buck	Segal	Buck	Segal
Total PVB	\$160,462	\$160,478	\$117,751	\$118,279	\$32,281	\$32,226	\$89,096	\$88,646
Ratio of Segal/Buck								
Total PVB	100.01%		100.45%		99.83%		99.49%	
Inactives	Beneficiary		Disabled		Retiree <65 w/health supplement		Retiree >65 w/health supplement	
	Buck	Segal	Buck	Segal	Buck	Segal	Buck	Segal
Total PVB	\$206,276	\$207,890	\$34,031	\$34,176	\$16,771	\$16,833	\$14,880	\$14,888
Ratio of Segal/Buck								
Total PVB	100.78%		100.43%		100.37%		100.06%	

PSPRS June 30, 2005 Valuation - Actives

ACTIVES:	Active (Fire Low)		Active (Police High)	
	Rodwan	Segal	Rodwan	Segal
Present Value of Benefits				
CURRENT AGE:				
Death	\$1,371	\$2,474	N/A	N/A
Disability	2,670	7,191	N/A	N/A
Withdrawal	3,079	2,249	N/A	N/A
Retirement	151,332	155,335	\$63,275	\$69,892
Total PVB (Current Age)	\$158,452	\$167,249	\$63,275	\$69,892
ENTRY AGE:				
Death	\$1,371	\$2,474	N/A	N/A
Disability	2,670	7,191	N/A	N/A
Withdrawal	3,079	2,249	N/A	N/A
Retirement	151,332	155,335	\$24,017	\$26,528
Total PVB (Entry Age)	\$158,452	\$167,249	\$24,017	\$26,528
RATIO OF SEGAL/RODWAN				
Present Value of Benefits:				
CURRENT AGE:				
Death		180.45%		N/A
Disability		269.33%		N/A
Withdrawal		73.04%		N/A
Retirement		102.65%		110.46%
Total PVB (Current Age)		105.55%		110.46%
ENTRY AGE:				
Death		180.45%		N/A
Disability		269.33%		N/A
Withdrawal		73.04%		N/A
Retirement		102.65%		110.46%
Total PVB (Entry Age)		105.55%		110.46%

- Police and Fire units were divided into four assumption groups, based on their expected rates of active member withdrawals. Generally larger, urban units have lower withdrawal rates (labeled Low) and small, rural units have higher withdrawal rates (labeled High).

PSPRS June 30, 2005 Valuation - Inactives

Inactives	Deferred Vested		Retiree 1		Retiree 2	
	Rodwan	Segal	Rodwan	Segal	Rodwan	Segal
Total PVB	\$40,791	\$40,791	\$376,356	\$376,356	\$259,798	\$259,756
RATIO OF SEGAL/RODWAN						
Total PVB	100.00%		100.00%		99.98%	

Inactives	Disabled Retiree		Beneficiary		QDRO	
	Rodwan	Segal	Rodwan	Segal	Rodwan	Segal
Total PVB	\$458,421	\$458,442	\$200,741	\$200,782	\$12,283	\$12,308
RATIO OF SEGAL/RODWAN						
Total PVB	100.00%		100.02%		100.20%	

Corrections Officer June 30, 2005 Valuation - Actives

ACTIVES:	Active (New Entrant)		Active (Hired After Age 30)		Active (Hired After Age 45)	
	Rodwan	Segal	Rodwan	Segal	Rodwan	Segal
Present Value of Benefits						
CURRENT AGE:						
Death	\$216	\$472	N/A	N/A	N/A	N/A
Disability	287	1,107	N/A	N/A	N/A	N/A
Withdrawal	5,926	8,106	N/A	N/A	N/A	N/A
Retirement	15,623	15,852	\$52,700	\$54,061	\$20,374	\$25,542
Total PVB (Current Age)	\$22,052	\$25,537	\$52,700	\$54,061	\$20,374	\$25,542
ENTRY AGE:						
Death	\$216	\$472	N/A	N/A	N/A	N/A
Disability	287	1,107	N/A	N/A	N/A	N/A
Withdrawal	5,926	8,106	N/A	N/A	N/A	N/A
Retirement	15,623	15,852	\$10,895	\$11,176	\$13,956	\$17,496
Total PVB (Entry Age)	\$22,052	\$25,537	\$10,895	\$11,176	\$13,956	\$17,496
RATIO OF SEGAL/RODWAN						
Present Value of Benefits:						
CURRENT AGE:						
Death		218.52%		N/A		N/A
Disability		385.71%		N/A		N/A
Withdrawal		136.79%		N/A		N/A
Retirement		101.47%		102.58%		125.37%
Total PVB (Current Age)		115.80%		102.58%		125.37%
ENTRY AGE:						
Death		218.52%		N/A		N/A
Disability		385.71%		N/A		N/A
Withdrawal		136.79%		N/A		N/A
Retirement		101.47%		102.58%		125.37%
Total PVB (Entry Age)		115.80%		102.58%		125.37%

Corrections Officer June 30, 2005 Valuation - Inactives

Inactives	Deferred Vested		Retiree 1		Retiree 2	
	Rodwan	Segal	Rodwan	Segal	Rodwan	Segal
Total PVB	\$43,315	\$37,115	\$272,800	\$272,832	\$296,682	\$296,572
RATIO OF SEGAL/RODWAN						
Total PVB	85.69%		100.01%		99.96%	

Inactives	Disabled Retiree		Beneficiary		Child Beneficiary	
	Rodwan	Segal	Rodwan	Segal	Rodwan	Segal
Total PVB	\$189,039	\$189,039	\$111,564	\$111,536	\$73,070	\$72,928
RATIO OF SEGAL/RODWAN						
Total PVB	100.00%		99.97%		99.81%	

Elected Officials June 30, 2005 Valuation - Actives

ACTIVES:	Active (Age 28/ Svc 2yrs)		Active (Hired After Age 38)		Active (Hired After Age 56)	
	Rodwan	Segal	Rodwan	Segal	Rodwan	Segal
Present Value of Benefits						
CURRENT AGE:						
Death	\$275	\$284	N/A	N/A	N/A	N/A
Disability	200	206	N/A	N/A	N/A	N/A
Withdrawal	5,410	4,003	N/A	N/A	N/A	N/A
Retirement	10,456	10,920	\$271,874	\$284,823	\$40,333	\$42,746
Total PVB (Current Age)	\$16,341	\$15,413	\$271,874	\$284,823	\$40,333	\$42,746
ENTRY AGE:						
Death	\$200	\$216	N/A	N/A	N/A	N/A
Disability	145	158	N/A	N/A	N/A	N/A
Withdrawal	3,882	2,872	N/A	N/A	N/A	N/A
Retirement	7,502	7,835	\$194,200	\$203,449	\$28,126	\$29,809
Total PVB (Entry Age)	\$11,729	\$11,081	\$194,200	\$203,449	\$28,126	\$29,809
RATIO OF SEGAL/RODWAN						
Present Value of Benefits:						
CURRENT AGE:						
Death		103.27%		N/A		N/A
Disability		103.00%		N/A		N/A
Withdrawal		73.99%		N/A		N/A
Retirement		104.44%		104.76%		105.98%
Total PVB (Current Age)		94.32%		104.76%		105.98%
ENTRY AGE:						
Death		108.00%		N/A		N/A
Disability		108.97%		N/A		N/A
Withdrawal		73.98%		N/A		N/A
Retirement		104.44%		104.76%		105.98%
Total PVB (Entry Age)		94.48%		104.76%		105.98%

Elected Officials June 30, 2005 Valuation - Inactives

Inactives	Deferred Vested		Retiree 1		Retiree 2	
	Rodwan	Segal	Rodwan	Segal	Rodwan	Segal
Total PVB	\$82,554	\$82,771	\$258,543	\$258,581	\$690,431	\$681,679
RATIO OF SEGAL/RODWAN						
Total PVB	100.26%		100.01%		98.73%	

Inactives	Disabled Retiree		Beneficiary	
	Rodwan	Segal	Rodwan	Segal
Total PVB	\$427,559	\$421,534	\$10,134	\$10,153
RATIO OF SEGAL/RODWAN				
Total PVB	98.59%		100.19%	

Questions

➤ Question/Answer Forum

Actuarial Audit of Arizona Department of Administration Employee Health Insurance System

- Milliman, Inc.
 - Largest health actuarial consulting group in the US.
 - Extensive experience working with state insurance programs.
- Lead Actuary: Robert Cosway
 - Fellow, Society of Actuaries.
 - Member, American Academy of Actuaries.
 - 26 years of healthcare and public employer experience.



Actuarial Audit of Arizona Department of Administration Employee Health Insurance System

- Arizona Joint Legislative Budget Committee Retained Milliman to Review:
 - Fiscal Years 2006-07 Preliminary Budget Projections.
 - Methods used to set the State and Employee Premium Rates for plan year 10/05-09/06.
 - Methods and assumptions used to estimate incurred but not paid (IBNP) liability as of 03/31/2006.
 - Provide comments on 10/06-09/07 rates.



Conclusions and Recommendations

- Budget Projection Approach:
 - Reviewed Mercer's 12/29/05 report.
 - Generally reasonable; provided some suggestions for ADOA.
 - Recommend smoothing of future monthly claims projections.
 - Medical trend assumptions are reasonable.
 - Recommend that sources of trend and other key assumptions be more completely documented in future.



Methods for State/Employee Premium Rate Setting for Plan Year 2006 (and 2007)

- Rate structure by plan option and area unchanged.
- Increase in Total Premium Rates equaled amount needed to fund projected paid expenses, plus an ending period balance (HITF Fund).
- Employee premiums unchanged.



Conclusions and Recommendations

- Set explicit targets for HITF Fund Balance.
- Be aware of impact of leaving employee premiums unchanged.



HITF Fund Balance

- Cumulative Excess of premium revenue over health care and administrative expenses.
- Recommend that ADOA set explicit targets.
- Target should be at least IBNP liability.
 - Approximately \$50 million as of 3/31/06.
- Recommend including additional contingency amount in target HITF Balance.
 - 10% of annual claims costs.
 - Approximately \$46 million, based on projected FY2006 paid claims.
- 6/30/07 HITF balance under baseline FY07 budget projection (dated 12/29/05) was \$33.7 million.



Incurred but not Paid (IBNP) Liability

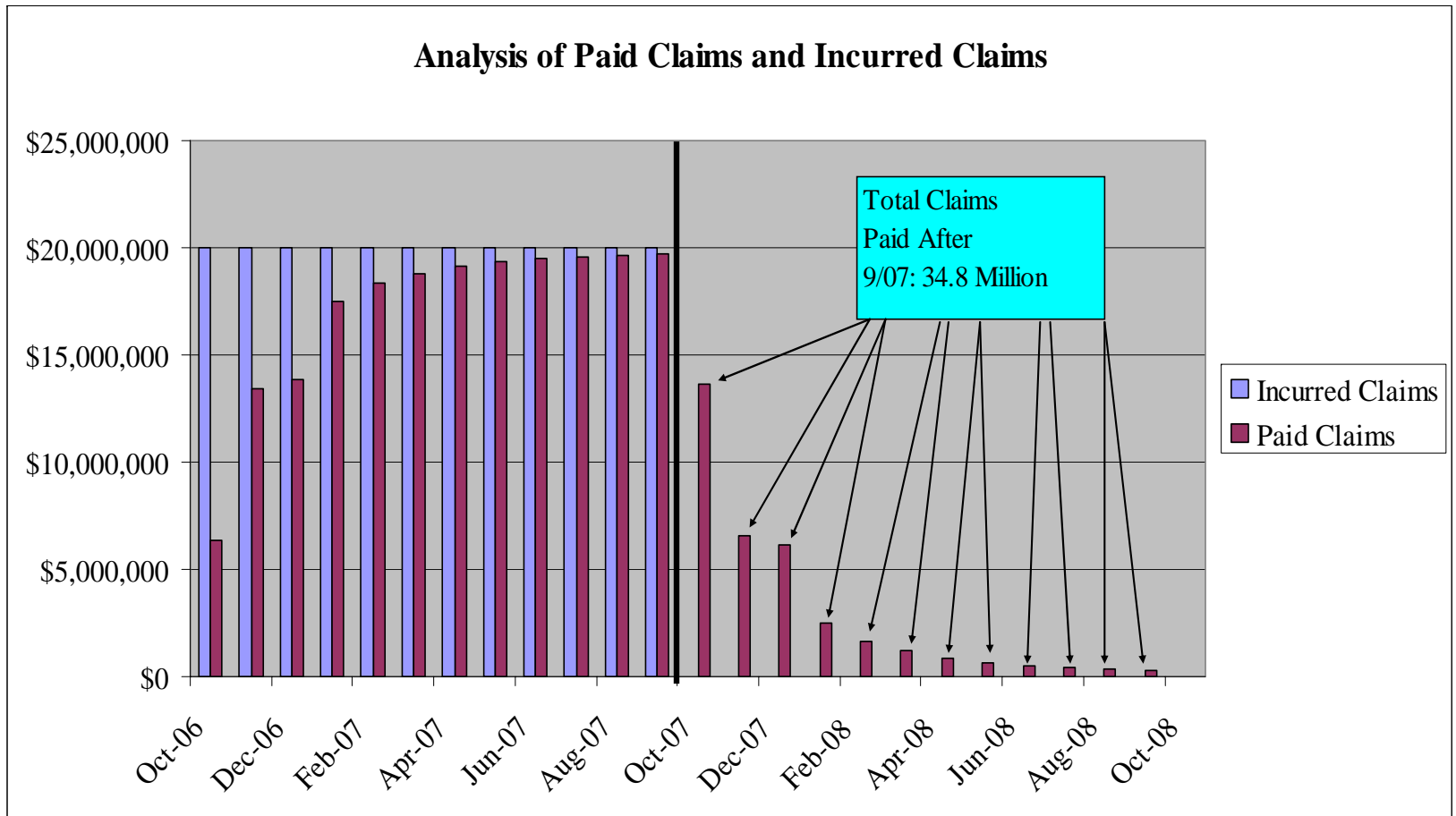
- Size of liability must be estimated, but the liability is real
- Illustration based on:
 - \$20 Million monthly incurred claims (Hypothetical)
 - HBS historical claims lags between incurral and payment
 - As of 9/30/07, if plan stopped, or converted to insured funding, state would still owe \$34.8 million (1.7 months of claims)



IBNP Illustration



Analysis of Paid Claims and Incurred Claims



Additional Contingency Amount in HITF

- Can cover insufficiencies if actual costs exceed premiums in a year.
- Need depends on:
 - Level of conservatism in premiums.
 - Consequences of a budget short fall.



Conclusions and Recommendations

- Incurred But Not Paid (IBNP) Estimates.
 - Mercer's approach is consistent with actuarial standards.
 - Milliman's estimates are higher (\$47.1 vs \$43.3 million).
 - Recommend different completion factor method.



Conclusions and Recommendations

- Data Reliance.
 - ADOA and Mercer relied on a variety of data sources.
 - Milliman did not perform an audit of this data.
 - Recommend that future reports make an explicit statement about data reliance, and whether data was audited.
 - Separate audit should be performed of any data suppliers for which there are concerns.



Conclusions and Recommendations

- Reasonableness of total Benefit Options Premiums.
 - 2006 Plan Year premiums are generally higher than Milliman surveys of HMOs & PPOs in AZ.
 - Especially true for Benefit Options PPO, but ADOA/Mercer analysis confirms PPO enrollees are much sicker than average.
 - Recommend continued comparison of AZ Premiums to HMO/PPO marketplace.



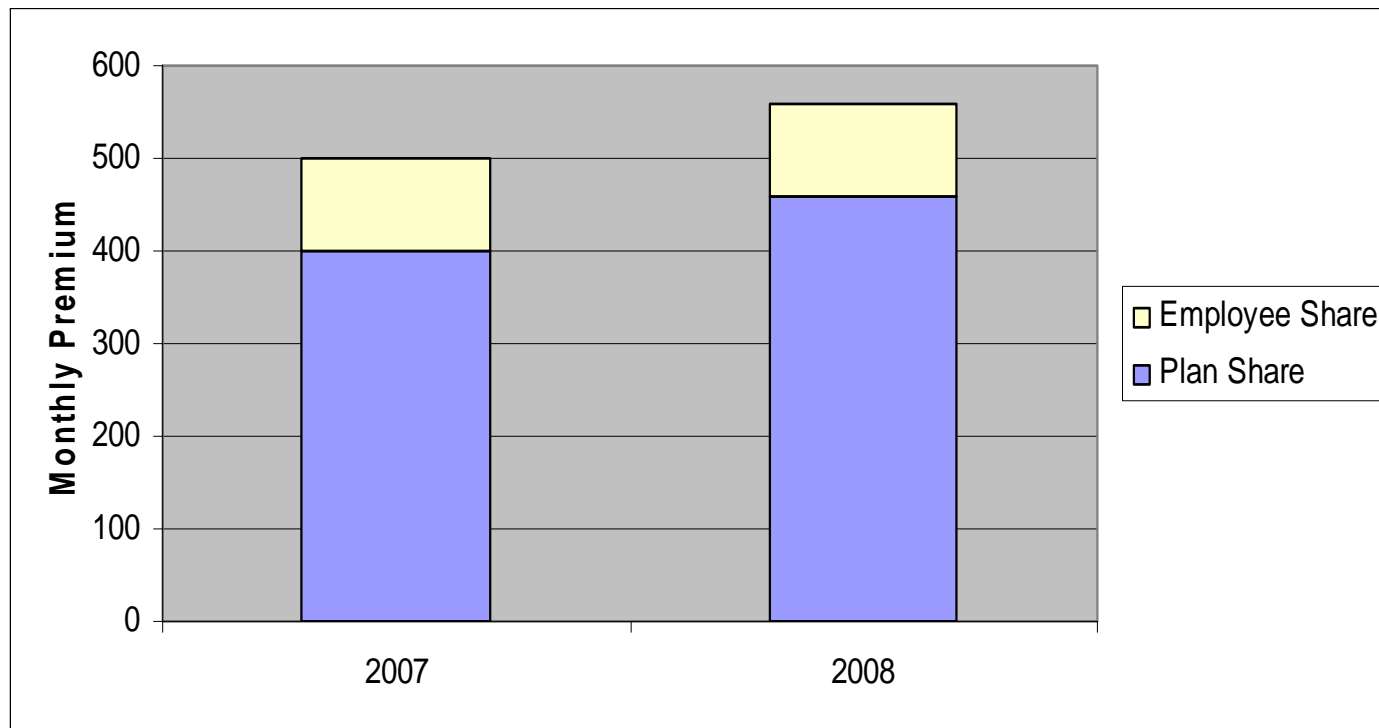
Conclusions and Recommendations

- Employee Premium Strategy.
 - Currently employees pay a higher premium for PPO than EPO coverage.
 - PPO employees are sicker than EPO employees (adverse selection).
 - ADOA analysis suggests that EPO is the lowest cost plan, even if adverse selection is factored out.
 - Recommend that this issue be reviewed regularly, and that changes to employee premium strategy be implemented when appropriate.



Impact of Fixing Employee Premiums

■ Example



- Overall premium increase is 12% (\$500 to \$560)
- Employee's share stays at \$100
- State's costs increase 15% (\$400 to \$460)



Conclusion

- ADOA/Mercer using reasonable methods/assumptions, but recommend increased documentation.
- Continue to monitor claims experience, make changes to premiums, plan designs, or vendor contracts as needed.



Actuarial Audit of
Health Care Programs
for the Arizona Joint Legislative
Budget Committee

Tom Handley Karen Elsom
Lewis & Ellis Inc.
Actuaries and Consultants

Programs Reviewed

- Arizona Health Care Cost Containment System (AHCCCS)
- The Department of Health Services' Behavioral Health Care and Children's Rehabilitative Services
- Arizona Department of Economic Security Division of Developmental Disabilities / Long Term Care

Review Methodology

- Determine validity of data
- Determine reasonableness and appropriateness of plan assumptions
- Determine consistency of assumptions and methods between current and prior years
- Determine compliance with regulations and accepted practice

Actuarial Standards of Practice

- ASOP 8 - Regulatory Filings for Health Plan Entities
- ASOP 23 - Data Quality
- ASOP 25 – Credibility Procedures
- ASOP 31 – Documentation in Health Benefit Plan Ratemaking
- ASOP 41 – Actuarial Communications

General Findings

- Encounter Data
 - Missing data due to submission problems
 - Working to resolve problems
 - Accessibility – For specified Programs, can only access data on Contract Year of Service basis
- Provider Administrative Expense Issues
 - Current
 - Flat percentage of Net Capitation Rates
 - Inappropriate Allocations to plans
 - Proposed
 - Per Member Per Month (PMPM) adjusted Annually
 - Agreed upon Methodology for Allocation levels for certain Programs

General Findings (Con't)

- Federally Mandated Benefits
 - Program Actuary should identify costs for federally mandated benefits separately from other included benefits

Findings AHCCCS ALTCS

- Encounter Data
 - Reporting – Can only access data by Contract year of service and not by Month of Service
- Provider Administrative Expenses
 - Current – PMPM Trended at 5%
 - Proposed – Use actual trend, not arbitrary 5%
- Trend
 - Current – Uses Overall Factors
 - Proposed – Reflect Utilization and Change in Unit Cost separately

Findings AHCCCS Acute Care

- Encounter Data
 - Reporting - Can only access data by Contract year of service and not by Month of Service
- Provider Administrative Expenses
 - Current - Flat Percentage of Net Claim Costs
 - Proposed – PMPM adjusted annually
- Baseline Repricing
 - Current – Every 5 years
 - Proposed – Every 3 years

Findings AHCCCS CMDP

- Encounter Data
 - Problems - Missing Data due to submission problems
 - Reporting - Can only access data by Contract year of service and not by Month of Service
- Trend
 - Because of reporting issues noted, cannot develop trends using monthly data

Findings DHS Behavioral Health

- Encounter Data
 - Systems problems led to missing data for certain regions
- Provider Administrative Expenses
 - Current - Flat Percentage of Net Capitation Rates
 - Proposed – PMPM adjusted annually

Findings DHS Children's Rehabilitative Services

- Use of Encounter Data to develop Capitation rates instead of prior year rate update
- Trends
 - Include list of trends by COS in report
 - Monitor Pharmacy Trends and use to manage to lower level
- Provider Administrative Expenses
 - Current – Size relationship to Phoenix Area
 - Proposed – PMPM by Region adjusted annually

Findings DES DDD/LTC

- Capitation Rates are an update from prior Contract Year
- Encounter Data – significant amounts of missing data
- Administration Expenses
 - Monitor Actuals and Compare to amts included
- Share of Cost
 - Track Actuals to determine better estimate

Actuarial Soundness

- Definition - Rates that:
 - have been developed in accordance with generally accepted actuarial principles and practices
 - are appropriate for the populations to be covered, and the services to be furnished under the contract; and
 - have been certified by actuaries who meet the qualification standards established by the American Academy of Actuaries and follow the practice standards established by the Actuarial Standards Board.
- Benefits to be included are only those required to be covered by the Federal regulations
- How does this apply?

Questions?

ARIZONA JOINT LEGISLATIVE
BUDGET COMMITTEE



**Actuarial Audit of the
Arizona Self-Insured
Programs**

October 24, 2006

Phoenix, Arizona

Presented by
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Scope of Work

- Provide actuarial audit (peer review) of
 - Liabilities of the self-insured programs
 - Contribution strategy of the self-insured programs
- State contracts with vendor, Milliman, who provides above services

Overall Review of Work

- Review reasonability, actuarial methods and accuracy of reports produced by Milliman
- Review methods and appropriateness of funding strategy and related issues

Conclusion Actuarial Reports

- We found the work provided the state by Milliman:
 - Conclusions are reasonable
 - Meets standards of the profession
 - Casualty Actuarial Society
 - Results are accurate
- Minor recommendations
 - Will improve report
 - Does not alter conclusions

Recommendations Actuarial Reports

- List large claims which received special adjustments – improves documentation
- Add a method to develop general liability losses using “limited” losses – may smooth volatility
- Develop contingency margins for property and liability coverages separately – these coverages behave differently, so impact may be different
- Consider contingency reserves for environmental claims – only known claims reflected – late reported claims not included

Funding Strategy Background

- Allocate funds to departments based on
 - Exposure
 - Loss (claims) experience
- Designed to generate required overall funding
- Uses industry standards and best practices

Funding Strategy Conclusions

- We found the rates and strategy:
 - Easy to understand
 - Simple to administer
 - See recommendation for WC
 - Balances responsiveness with stability
 - Uses appropriate exposure base to rate each program
 - Ties in with actuarially projected needed funding
 - Premiums produced by agencies early enough to meet biennial budget process

Funding Strategy

Conclusion – Responsiveness & Stability

- We found the plan is balanced between responsiveness and stability
 - *Responsiveness* - Contribution varies with loss experience
 - Agencies with poor loss experience are penalized
 - Agencies with good loss experience are rewarded
 - *Stability* – contributions stable from year-to-year
 - Balance achieved by
 - Number of years of loss experience (3 to 5 years)
 - Limit the impact of large losses (\$100,000 for Liability, no caps for property)
 - Use of credibility weights – a statistical measure of volume of data

Funding Strategy

Conclusion – Exposure Bases

- The rating plan uses appropriate exposure bases
 - That correlate with losses
 - Workers compensation – Payroll
 - General Liability – FTE
 - Property – Total Insured Value (TIV)
 - Auto – Number of Vehicles
 - Are readily available and verifiable

Funding Strategy

Conclusion – Special Situations

- The rating plan handles special and new situations appropriately:
 - New agencies
 - allocation based 100% on exposures
 - Environmental claims
 - based 100% on exposures – tend to be volatile and sparse
 - Agencies with no exposure, but with losses
 - allocated 100% of losses

Funding Strategy Recommendations

- **Workers Compensation Funding Allocation:**
 - **Currently: Based on NCCI plan**
 - Complex calculations (easy to apply in spreadsheets)
 - Parameters based on broad Arizona industries experience that may not reflect risk characteristics unique to the State
 - **Recommend: Develop allocation based on the program's own claims experience**
 - Simpler to understand
 - Allows flexibility to adjust for parameters
- **Cap premium changes from year-to-year – minimizes fluctuations in agencies' contributions**