



Risk Pooling Review Report

Introduction

As part of an effort to ensure that all actuarial policies, procedures and methods related to risk pooling are current and continue to best meet the Board's fiduciary duties and the intent of risk pooling, the Actuarial Office initiated a review of the risk pooling structure.

During the review, many potential concerns/issues were identified by staff. Staff analyzed each issue to determine if changes were needed and proposed a set of solutions.

Executive Summary

The Actuarial Office spent the last year reviewing risk pooling including all related Board actuarial policies, internal practices and procedures, laws and regulations to assess what has worked and what can be improved.

Overall, the review of risk pooling demonstrated that the key objectives of risk pooling have been realized. As designed, employer rate volatility caused by unexpected demographic events has been minimized for small employers.

The review revealed some improvements can be made related to the contribution rate new employers joining the risk pooling structure are currently required to pay. To improve the process, we are proposing amendments to an existing Board policy that will provide for a phase out over five years of the differences between the employer's individual rate and the employer contribution rate inside the risk pool.

The review also indicated that the recent movement toward lower levels of benefits that we have seen the last two years, combined with anticipated pension reform proposals, could have a significant impact on risk pools at CalPERS. At this time, we will wait until additional details regarding pension reform are available before we make recommendations in this area.

Background

Risk pooling is not a new concept at CalPERS. Over thirty years ago, all local miscellaneous employers were pooled into a single risk pool. In 1989, legislation was passed that discontinued Section 20815 of the Government Code and eliminated the public agency miscellaneous pool. The pension liabilities and assets for these employers were separated and smaller employers were no longer insured against the impact of unexpected demographic events on employer rates.

In the late 1990's, it became evident that some of our smaller employers could not bear the risk associated with their pension plan, especially the risk associated with unexpected demographic events. CalPERS administers over 2,000 separate pension plans for local agency employers. Of these 2,000 plans, over 700 are plans that cover less than 10 active lives.

When performing actuarial valuations, actuaries use assumptions to predict future employee behavior. The key for actuarial assumptions to work is to have large numbers. Actuarial assumptions do not work well for a plan with only 5 members. For this reason, between 1999 and 2002, CalPERS sponsored legislation to give statutory authority to the CalPERS Board to create risk pools and mandate participation for small employers. Regulations were necessary to implement risk pooling. Through regulations, participation in risk pools was mandated for all employers with less than 100 active members on any actuarial valuation date on or after June 30, 2003.

Risk Pooling was implemented effective with the June 30, 2003 actuarial valuations to protect small employers (those with less than 100 active members) against large fluctuations in employer contribution rates caused by unexpected demographic events.

Risk pooling has been in place for more than eight years. When considering this time period and the fact that the pension environment is changing, it was time to review risk pooling to ensure its effectiveness and identify opportunities for improvements.

The CalPERS 2011-2012 Business Plan included objective 2.1 specific to risk pooling. This report reveals the findings of that review and completes this objective.

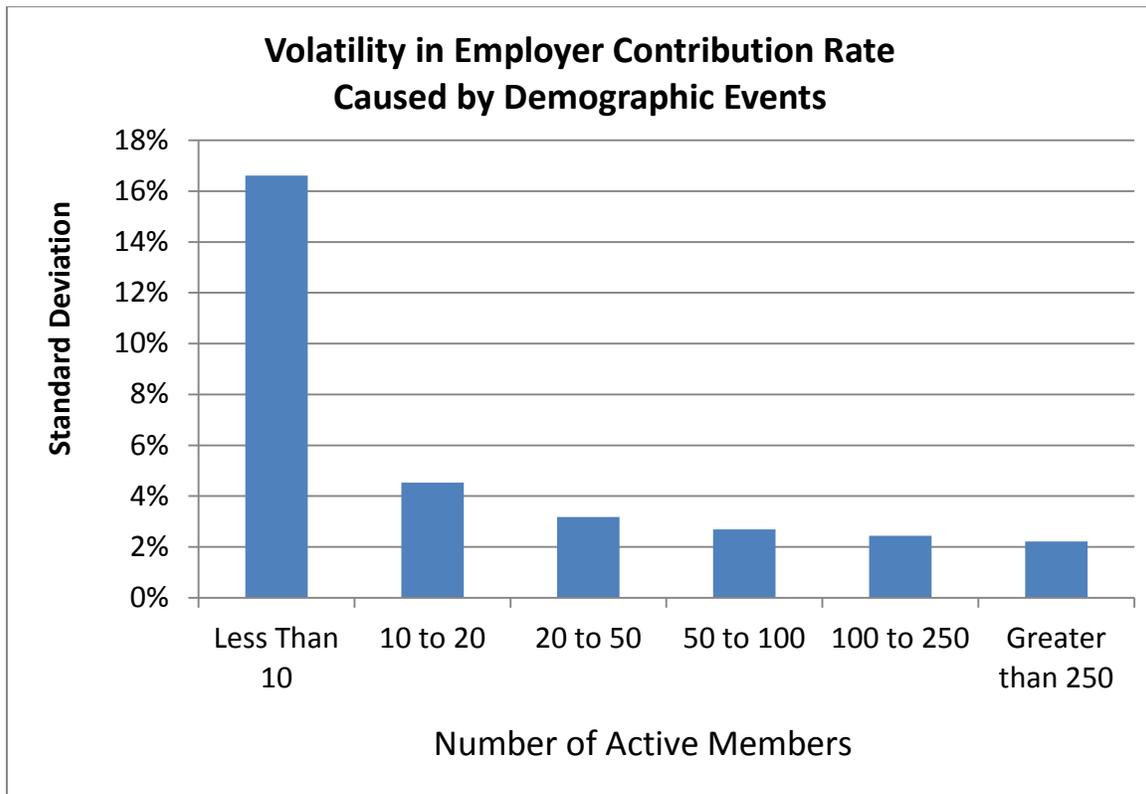
Analysis

The first part of the review focused on whether or not risk pooling had met its original intent of reducing volatility in employer contribution rates due to unexpected demographic events.

Prior to implementing risk pooling, it was evident that small employers were subject to a large amount of risk. The risk was for a large increase in the required employer contribution rate caused by a demographic event. The demographic events that had the largest impact were usually work related disability, work related death and service retirement. Some employers at CalPERS faced increases in their contribution rates as high as 17% of payroll in a single year as a result of a work related disability. One employer experienced both a work related disability and a work related death over a three year period that caused its contribution rate to go from 10% of payroll to more than 200% of

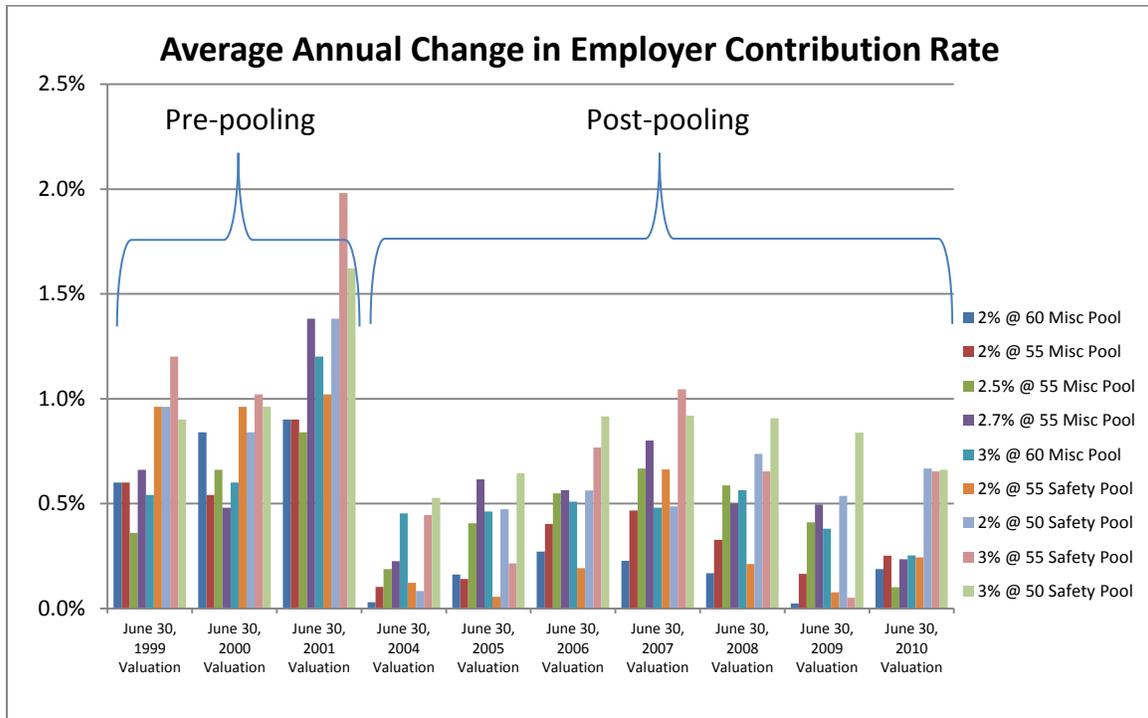
payroll. Service retirements resulted in increases in contribution rates of 3% to 4% of payroll for some employers that had only one active member.

A study performed in 2000 showed that smaller employers were subject to five to ten times more volatility in rates than larger employers. Below is a chart comparing the volatility of small employers to the volatility for larger employers. The volatility in this chart has been defined as the standard deviation of the gains and losses due to demographic events. Employers with less than ten active members have a standard deviation of more than 16%. This means that in any given year, there is a 67% chance that the gain and loss for an employer of that size will be more than 16% of the plan's liability.



As stated earlier, the first objective of the review of risk pooling was to verify that the implementation of risk pooling had in fact reduced the volatility in contribution rates caused by unexpected demographic events. When risk pools were created, each risk pool had more than 1,000 active members with a volatility of less than 2%. Volatility was expected to be less. As part of the review, we have compiled statistics regarding the average change in employer contribution rates caused by demographic events prior to risk pooling for the plans that were mandated in a risk pool. The plans were also grouped based on the risk pool they would have been required to join had risk pooling been in place at the time. When risk pooling was implemented, risk pools were created based on the most common benefit formula. Five miscellaneous risk pools were created and four

safety risk pools were created. The chart below compares the average change in employer contribution rates (as a percentage of payroll) prior to pooling and following pooling broken down by risk pools.



Note that the volatilities shown above for periods prior to June 30, 2004 have been reduced to ensure that a consistent amortization method was used for all years. This was necessary to ensure comparability over the period.

As can be seen in the chart above, risk pooling has met its main objective. As designed, unexpected demographic events now have a minimal effect on employer rates. The goal of lowering rate volatility for small employers has been achieved.

When the review of risk pooling began, several areas needing review were identified that could address, validate or disprove concerns regarding the administration of risk pooling. These concerns were divided into four areas. They are:

- Movement toward lower retirement benefits
- Joining a risk pool for the first time
- Anti-selection
- Valuation administration

1) Movement Toward Lower Benefits

The first concern relates to the recent movement by employers toward offering lower levels of pension benefits to new hires to achieve savings. Over the last

two years, the Actuarial Office has received approximately 1,500 cost analysis requests to quantify the potential savings that could result from the adoption of lower pension benefits for new hires. This is often referred to as creating a second tier. To date, employers have adopted over 200 new second tiers, most of them involving a lower benefit formula applicable to new hires.

The table below provides a breakdown of the number of second tier plans that have been adopted by local agency employers over the last two years. The table separates the information between miscellaneous plans and safety plans as well as by those that provided a lower benefit formula only, a lower final compensation or a reduction of both. As can be seen, most involved at least a reduction in the benefit formula.

Number of New Second Tiers Over the Last Two Years

	Lower Benefit Formula Only	Lower Final Compensation Only	Lower Benefit Formula & Lower Final Compensation
Miscellaneous Plans	68	6	51
Safety Plans	43	2	41

The movement toward lower benefit formulas for new hires creates several concerns for existing risk pools. The first concern is that over time some of the risk pools offering the more expensive benefit formulas may become closed to new hires. Of the 200 second tiers that involved lower benefit formula, 70% of the new second tiers for safety members now provide the 3% at age 55 benefit formula while about 70% of the new second tiers for miscellaneous members provide the 2% at age 60 formula.

Based on this information, the increasing number of second tiers is starting to impact the risk pools providing the higher benefit formula. There are currently five miscellaneous pools and four safety pools. The risk pools currently in danger of seeing a decrease in the number of new hires are:

- Miscellaneous 2.5% at 55 Pool
- Miscellaneous 2.7% at 55 Pool
- Miscellaneous 3% at 60 Pool
- Safety 3% at 50 Pool

A decrease in the number of new hires and ultimately a decrease in the number of active members in these risk pools will ultimately increase the ratio of retired members to active members. As the ratio increases the employer contribution rate for these risk pools will become more volatile due to the larger ratio of assets to payroll. Therefore, the first implication of the movement toward lower pension benefits for new hires is an increase in contribution rate volatility that works against the intent of risk pooling itself.

The migration toward second tier plans could potentially cause funding issues. Current Board Policies require amortization of unfunded liabilities and surplus to be done as a level percentage of payroll. That assumption now stands at 3.0% per year. Many employers currently participating in one of the risk pool for the higher formula have created second tier for new hires the last two years. As a result, these pools are likely to start seeing increases in payroll of less than assumed. Contributions for pools are collected as dollar amounts based on a payroll reported to CalPERS and based on the contribution rate established on the basis of a payroll figure that is two years old at the time of contribution. When a pool experiences a slower payroll growth than assumed, it can lead to an under funding of unfunded liabilities.

This potential for underfunding also creates a potential equity issue. Plans that do not adopt a lower tier and remain in the risk pools that provide the higher benefit formula will bear an increasing cost allocation (positive or negative) over time. Gains and losses of the entire pool are currently allocated based on payroll. As the number of new hires decline in each pool due to some employers providing lower benefits, those left in the pool represent a larger share of the pool based on their payroll and may have to contribute more toward these gains and losses than the employers that have a declining share in that pool.

It is important to realize that pension reform could exacerbate this issue if it were to close all current risk pools. Pension reform could require all new hires to be subject to a new benefit formula different than the ones currently available.

The Actuarial Office in its review of risk pooling has analyzed several potential solutions to address this area of concern. They are:

- Modify Board Amortization policies to change from a level percentage of payroll method to level dollar method
- Modify Board Amortization policies to change from a level percentage of payroll to a declining payroll for closed plans
- Collect contribution toward an unfunded liability as a dollar amount instead of a contribution rate
- Combine pools to create one miscellaneous pool and one safety pool

The Actuarial Office is not recommending specific solutions for these concerns at this time. Any pension reform proposals will be analyzed to determine its impact on risk pooling prior to implementing any decisions. The Actuarial Office will be performing a review of existing Board amortization and smoothing policies in December 2012. Depending on the outcome of pension reform, the Actuarial Office may recommend amendments to existing policies to address this area of concern.

2) New Employers Joining Risk Pools

The second concern relates to the contribution rate that employers are required to pay when joining a risk pool for the first time.

Currently all new employers must join a risk pool unless the Chief Actuary determines it would be detrimental to the risk pool. Equity and fairness concerns were raised over the fact that new employers were asked to contribute toward the existing unfunded liability of the pool at the time of joining the pool. A process was put in place when risk pooling was implemented that involved the creation of a side fund. Through this process, a side fund is created when an employer joins a risk pool for the first time to reflect the level of assets and liabilities of the plan joining the risk pool. That approach has worked well in addressing this potential equity and fairness issue in situations where employers contract with CalPERS and provide prior service to their members.

Take the example of a local agency wishing to contract with CalPERS and provide its employees with prior service. If this agency had never saved for any retirement benefit prior to this point they may not have any funds to transfer to CalPERS to help pay for these liabilities. In these situations, we would establish a side fund for this employer that would reflect their funded status (0% in this case) and also reflect the funded status of the pool. If the pool is 80% funded at that time, a side fund will be created equal to 80% of the liabilities for that plan to make sure that the employer pays for their liabilities. The remaining 20% would be paid by the employer through their required payment of the pool's unfunded liability.

The issue with this method is that it does not work well in situations where the plan joining the risk pool has no prior service, and therefore no liabilities.

The recent recession and its impact on the investment returns at CalPERS has exacerbated the problem. The large investment loss in 2008-2009 has caused the funded status of all risk pools to fall from their initial 100% funded levels to levels now ranging between 70% and 80%. Employers joining risk pools are required to pay toward the unfunded liability that resulted from the large investment loss even if they contracted with CalPERS following this event.

The question became why should a new employer be required to pay for past losses of the pool?

The Actuarial Office in its review of risk pooling has analyzed two potential solutions to address this area of concern. They are:

- Allocate the investment and demographic experience of the pool to each plans side fund on an annual basis
 - Phase out of the difference between the rate the employer would pay inside and outside of risk pooling
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The first solution would have entailed making all risk pools 100% funded each year by allocating the experience gains and losses to the individual employer side fund. This approach would add complexity to the administration of the system but more importantly could result in an increase in contribution rate volatility for employers.

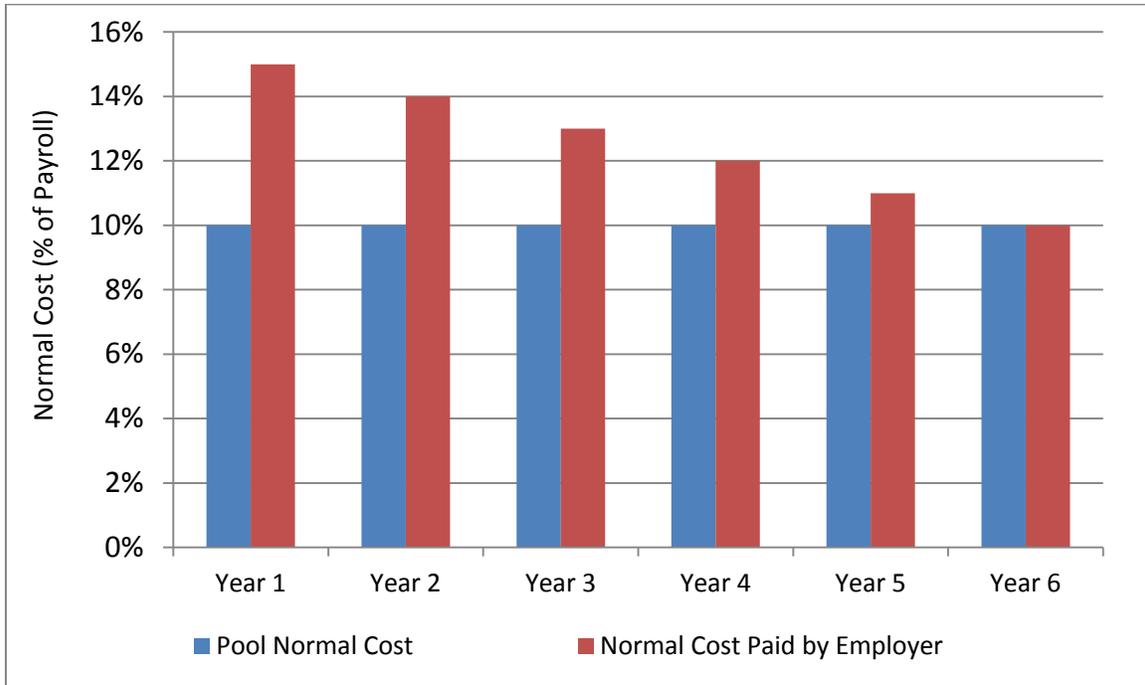
The second solution involved phasing-out over five years the differences between the contribution rate the employer would be required to pay inside a risk pool and the individual employer contribution rate outside of pooling. This approach reduces greatly the equity and fairness issues. An important aspect to consider is the fact that employers most affected by the current practice are those who contract with CalPERS with no prior service. Having no prior service generally means that the age at hire is much higher for purposes of performing an actuarial valuation.

One component of the contribution rate that employers have to pay is called the normal cost. The normal cost can be viewed as the cost related to one year of service accrual. The normal cost is affected greatly by the age at hire. The higher the age at hire, the higher the normal cost. Therefore, employers contracting with CalPERS with no prior service tend to have a higher normal cost than the pool's normal costs. These employers have no liabilities at the time of contract since none of the members have prior service. If these employers were not joining a risk pool, they would have no contribution requirement toward an unfunded liability.

By phase out of the difference between the rate employers would pay inside and outside of risk pooling over five years, employers that provide no prior service will generally end up paying a lower normal cost in the pool but a higher payment toward the unfunded liability. The review of risk pooling led to the conclusion that the most effective way to address this area of concern was to adopt a phase out approach.

When risk pooling was implemented, Board Resolution No. 04-02-AESD was adopted as a way to minimize the initial impact on contribution rates for employers mandated to participate in a risk pool. The Resolution required that any differences between the normal cost of the individual plan and the normal cost of the pool be phased out over 5 years.

To better see how this phase out worked, let's look at the situation where the pool normal cost was 10% of payroll and the individual plan had a normal cost of 15%. In this situation the employer was first asked to pay a normal cost of 15% in the first year and reduced by 1% each of the next 5 years until it was ultimately paying 10%. Below is a chart illustrating how the normal cost phase out worked.



Staff propose amending this Board policy to allow for a phase out over five years the difference between the rate employers would pay inside and outside of risk pooling. The phase out would act in a manner similar to the existing policy as shown in the above chart. This recommendation is part of the Board item.

3) Anti-Selection

The third concern relates to anti-selection. Anti-selection in this case refers to an employer acting in a certain way that would benefit them and be a detriment to other employers participating in the same risk pool. An example of anti-selection would be a questionable work related disability where an employer elects to approve the disability despite reservations because the cost impact will be shared by all employers of the pool. Another example of anti-selection would be an employer granting a large salary increase knowing that the impact on the unfunded liability of the pension plan would be shared by all employers of the pool.

For the purpose of the risk pool review, several perceived areas of anti-selection were selected and have been reviewed. They include the following:

- Salary increases
- Prepayment of annual employer contributions
- Work related disability i.e. Industrial Disability Retirements (IDR)
- Charges for benefit improvements

Salary Increases

When performing actuarial valuations to establish funding requirements for pension plans, including risk pools, actuaries make assumptions regarding the anticipated salary increases individual will receive each year. These assumptions are rarely realized on a year to year basis but generally hold true over the long term.

In a risk pool, when individuals or groups of individuals receive pay increases larger than those predicted by the actuarial assumptions, actuarial losses occur. These losses generally result in higher contribution for all of the employers participating in that pool.

A concern over this issue arose last year in light of compensation amounts paid to some officials working for the City of Bell. This concern led CalPERS in late 2010 to review members with compensation earnable over the Internal Revenue Code 401(a)(17) compensation limit (at that time) of \$245,000. While a number of reporting discrepancies were discovered during this review, they were not widespread and were addressed through the normal administrative process.

As part of this risk pooling review, actuarial staff again performed an analysis of salary levels and increases. It was discovered that some employers in some years granted higher than expected salary increases. However, other than two local agency employers which were the subject of special audits, there was no pattern of employers regularly and consistently providing higher than expected salary increases. As a result, staff believes the issue is not material.

In addition, high compensation amounts do not necessarily mean that other employers in the same risk pool have to pay more as a result. All contribution requirements set by CalPERS are set as a percentage of payroll. If an employer pays its employees twice as much as employees of a different agency in the same risk pool, this employer has to pay twice as much toward both the normal cost of the pool and also toward the unfunded liability of the pool.

The other aspect to consider is that in many instances an employer may grant a one-time large salary increase after multiple years in which no salary increases were granted due to budget reasons. In these situations, the years where no salary increases were granted would have resulted in an actuarial gain lowering the cost for everyone in the pool followed by a loss in the one year where the salary increase was granted. Over the long run, this issue is not material and these experience gains and losses have a tendency to cancel each other.

A practice of granting large pay increases late in a member's career would result in experience losses and this possibility remains a significant concern. However, staff believes that the most appropriate way to address this concern is by continued emphasis on compensation review.

It is important to understand that since reciprocity between employers and retirement systems allows members to have their retirement benefits based on their highest compensation from any employer, the issue of salary increases and its impact on pension plan's liabilities affects more than just the risk pools.

Finally, excessive compensation increases, especially late in an individual's career, is a potential problem to former employers of the members, not just to other employers in the same risk pool. For this reason, the best solution to any remaining concern about excessive compensation should be handled system wide or state wide.

It is worth noting that Assembly Bill 1184 was introduced in 2011 in an attempt to address the issue of excessive compensation granted by one employer that impacts the liabilities of another employer. AB 1184 is currently on the inactive file but its subject matter is under consideration by the Joint Legislative Conference Committee on Public Employee Pensions and could be part of an upcoming pension reform proposal.

Prepayment of Annual Employer Contributions

When the Actuarial Office establishes the employer contribution requirement each year, a contribution rate is set for each employer. The contribution rate is established as a percentage of payroll. Since CalPERS does not know what an agency's payroll will be at the time of setting the contribution rate, it must make an assumption as to what the payroll will be in that fiscal year. Because of the delay between the valuation date and the fiscal year for which the rate is established, an agency's payroll has to be projected for almost three years to set the rate. Put another way, when employers eventually contribute on the basis of the rate set by the Actuarial Office, the payroll used to set that rate is almost three years old.

Even though the contribution requirement is set as a percentage of payroll, employers have the option of pre-paying the expected annual employer contributions in a lump sum amount. An interest deduction is provided to employers who prepay their annual employer contributions to reflect the greater time those funds are available to be invested. The lump sum amount required to pre-pay the annual contribution is provided each year to the employer as part of the annual actuarial valuation report prepared by the Actuarial Office and it is also available through the myCalPERS system.

Usually the agency has an indication of whether their actual payroll will be higher or lower than the projected payroll from our actuarial valuations. This indicator can lead to anti-selection. Therefore, a concern arose over the fact that employers could choose to pre-pay their annual contribution requirement only in years when the employer could determine that the prepayment amount would be significantly lower than the amount required if they were to contribute on the basis of the contribution rate and their actual payroll. For example, the concern

was that an employer for which the payroll was estimated to be \$1 million in our actuarial valuation would chose to pre-pay because their actual payroll turned out to be higher at \$1.2 million.

Normally, if an agency's payroll is higher than our projected payroll, they would achieve savings to the detriment of other employers in the pool by pre-paying the annual contributions. Conversely, if an agency's payroll is lower than our projected payroll, the employer would contribute more by pre-paying to the benefit of the other employers of the pool.

Staff reviewed this issue and found no evidence that this issue was material. The review showed that the payroll of employers pre-paying was sometimes higher and sometimes lower than the projected payroll. The review showed no evidence that only employers that anticipated their actual payroll to be higher would pre-pay their annual contribution. Even though the review showed the issue was immaterial, it is possible that some employers have prepaid their contributions knowing that the projected payroll used in the actuarial valuation was lower than their actual payroll and pre-paid in an attempt to achieve greater savings to the detriment of other employers in the pool.

A possible solution to this issue would be to modify the way contributions are collected from employers. A proposal under consideration is to continue to charge a contribution rate for the normal cost component of the rate. Charging the normal cost as a rate is appropriate since it is for future service accrual and should be based on actual payroll. The proposal would be to change the way we charge for the unfunded liability/surplus. Employers would no longer contribute toward an unfunded liability/surplus as a percentage of payroll but instead be billed a specific dollar amount. This would alleviate the possibility of anti-selection.

Before moving down the path of setting part of the contribution requirement as a dollar amount, we intend to survey the employer community to see if this change is feasible. We have heard of issues from some employers regarding the difficulty it may cause them in allocating cost to various departments. Over the next few months, we will reach out to a large group of employers to see if this idea would be acceptable. In addition, we will have to identify changes that may be needed to the myCalPERS system.

Industrial Disability Retirements (IDR)

When performing actuarial valuations to establish funding requirements for pension plans, including risk pools, actuaries make assumptions regarding the anticipated incidence of industrial disability retirement. These assumptions are rarely realized on a year to year basis but generally hold true over the long term.

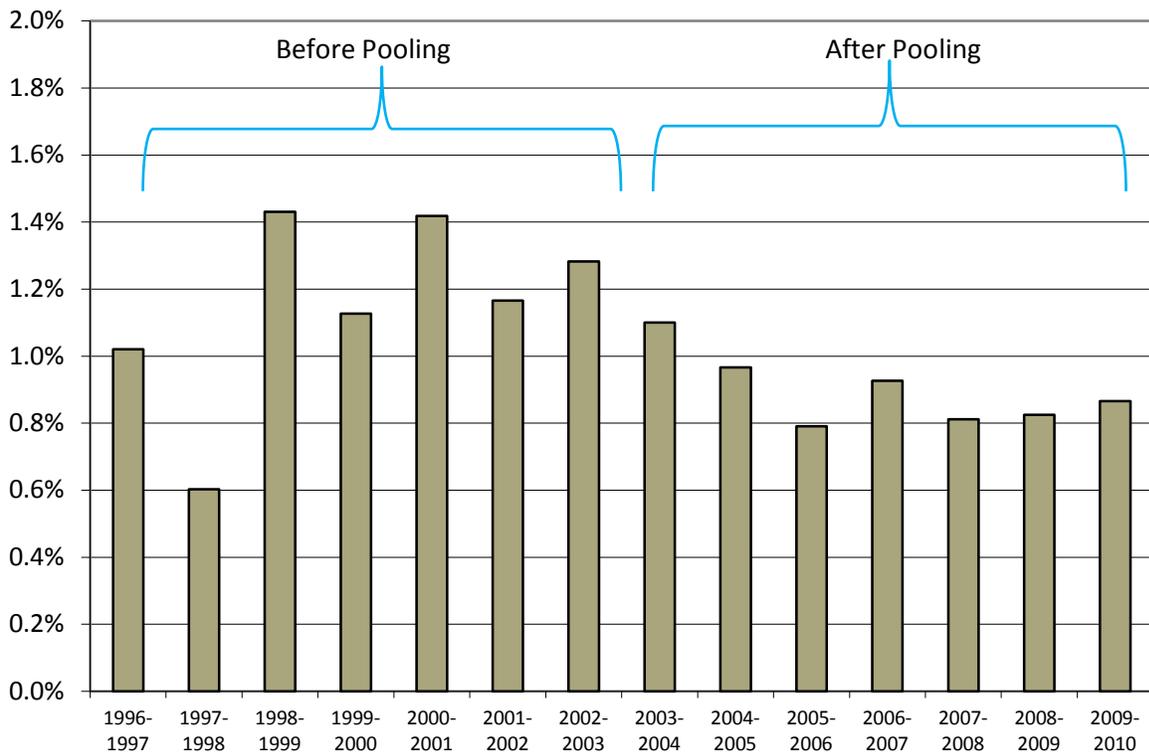
In a risk pool, when individuals or groups of individuals are granted industrial disability more frequently than those predicted by the actuarial assumptions,

actuarial losses occur and these losses are spread amongst all of the employers participating in that pool. When risk pooling was implemented, one of the main concerns from employers was over the issue of industrial disability. There was a concern in the employer community that creating risk pools may lead to an increase in the number of retirement applications for industrial disability.

Contrary to State employers (for whom CalPERS make the determination), local agency employers are responsible for deciding whether or not an employee became disabled on the job (industrial disability). In risk pools, all employers share the adverse cost of an IDR. There was a concern that employers could use IDR as a tool to eliminate “problem employees”. Staff performed a review of this issue and found no evidence that this issue was material. In fact, staff found that the number of IDRs dropped since the implementation of pooling. In addition, the number of employees who were at risk (in safety positions) after the implementation of pooling increased approximately 33%. In fact, the rate of industrial disability has dropped over the last few years.

The chart below shows the percentage of active safety members who began receiving an industrial disability retirement benefit over the last 14 years. It compares the 7 years prior to pooling to the 7 years after pooling. As can be seen in the chart, the percentage of disabilities after the implementation of pooling dropped compared to before pooling.

**Industrial Disability Retirement for Pooled Plans
as a Percent of Total Active Local Safety Members**



Staff will continue to monitor the incidence of IDRs on an annual basis so that action can be taken if this issue becomes material.

Charges for benefit improvements

During the Risk Pooling Review Process, a concern was raised related to the possibility that some employers may have been under-charged when they adopted certain benefit improvements.

The three types of amendments that were of concern were:

- Golden handshakes
- Benefit formula improvements
- Cost-of-Living-Adjustments (COLA)

Through contract amendment, employers can offer a benefit known as a “Golden Handshake”. Employees receive an additional two years of service credit if they retire during a window period selected by the employer. The employer is charged a fee for this option. The fee is equivalent to the increase in the present value of benefits for the two years of service. The employer’s side fund is adjusted to reflect this fee.

This incentive to retire early for the employee can create early retirement losses to the pool. This loss is difficult to measure since to properly identify the loss, one would have to know how many employees would have retired regardless of the golden handshake. The members who would have retired anyway would not have created an early retirement loss while the members who were enticed to retire as a result of the golden handshake would create an early retirement loss.

The review performed by staff was inconclusive due to the lack of data. At this time, we are not recommending any changes to existing practices related to golden handshake. Staff will review this issue again as a part of the next experience study expected in early 2014.

The next area of concern relates to benefit formula improvements. Local agency employers have the option of amending their contract with CalPERS by enhancing the benefit formula. For an example, an agency can increase the benefit formula from the 2% at age 60 Formula to the 2% at age 55 Formula.

This amendment process usually takes several months to execute. In addition, agencies usually collectively bargain before starting the process to amend their contract. This means employees usually know that a formula change may be forthcoming. Because of this knowledge, employees who were planning to retire may choose to wait to retire until the higher benefit is in effect. There was a concern that for employers adopting higher formulas for their members that it lead to a decrease in the number of retirements prior to the benefit improvement followed by an increase in retirement applications in the months following the improvement.

Risk pooling was designed to ensure that when an employer improves benefits that the employer pays for the increase in cost. This is done in two parts. First, the employer is required to pay a higher normal cost to pay for the accrual of future service credit. In addition, the side fund of the employer is adjusted to reflect the increase in liability that resulted from the benefit improvement. The concern was that the amount charged to the side fund did not include the potential liability loss that could result from the shift in retirement applications described above.

The review performed by staff was inconclusive. In addition, in the current environment, very few employers are considering benefit improvements. At this time, we are not recommending any changes to existing practices related to benefit formula improvements. This is an issue affecting all plans at CalPERS, not only risk pools. Staff will review this issue again as a part of the next experience study expected in early 2014.

The final area of concern related to charges for benefit improvement relates to Cost-of-living-Adjustments, or COLAs. The standard COLA provided by employers who contract with CalPERS is 2%. A local agency employer has the ability to amend its contract with CalPERS and provide for an enhanced COLA. The options are 3%, 4%, and 5%.

When performing actuarial valuations to establish funding requirements for pension plans, actuaries have to make an assumption regarding future price inflation. In March 2012, the CalPERS Board adopted an inflation assumption of 2.75%.

Since the 2.75% inflation assumption is less than all of the three optional COLAs, the cost for the 4% and 5% COLA options are the same as the 3% option. Common sense tells us that the 4% and 5% COLA options is more expensive than the 3% option. This issue impacts all plans at CalPERS and not only the risk pools. For a non-pooled plan, any actuarial losses due to inflation being greater than expected with either the 4% or 5% COLA will be ultimately paid by the non-pooled employer. However, actuarial losses in a pool that would occur when the inflation is higher than assumed will be spread among all of the employers in the pool.

To address this issue, the Actuarial Office intends to implement surcharges that would apply to employers that have contracted for a higher COLA. This surcharge will be developed using a stochastic model that will take into account the probability of higher inflation occurring in the future. This will ensure that employers that provide these higher COLAs properly pre-fund for this benefit. Over the next year staff will be performing the necessary analysis to implement cost surcharges for higher COLAs.

4) Valuation Administration

The fourth and final concern that was reviewed is referred to as valuation administration. Put another way, we reviewed the internal practices and calculations that had been used since risk pooling was implemented to determine if any improvements could be made.

As a result of the review, minor changes and improvements will be made in three main areas of the administration of risk pooling. They are:

- Establishment of side fund for plans joining risk pools
- Plans transferring between pools
- Changes in circumstances that affect the payment toward the side fund

Establishment of Side Funds for Plans Joining Risk Pools

New agencies who wish to contract with CalPERS must do so on the basis on an initial actuarial valuation. This initial actuarial valuation provides the employer with cost information related to the benefits for which the employer is inquiring. The actuarial valuation takes into account the results of the most current risk pool's annual valuation as well as the participant and asset information provided to CalPERS by the employer.

The initial valuation is currently used to determine the plan's side fund (the unfunded liability or surplus) based on the plan's demographic and payroll information. This side fund has a direct impact on the employer's contribution rate they would have to pay upon contracting with CalPERS. From this initial valuation the agency makes a decision to contract with CalPERS or not. Once the agency has decided to contract with CalPERS, contributions begin flowing into the system and assets and liabilities begin to accrue.

Under existing practice, the plan's demographics and assets are not measured again for a period that can in some cases be as long as a year and one-half later. To illustrate, consider an agency that contracts with CalPERS on July 15th of a given year. An initial new agency actuarial valuation is required prior to be able to contract with CalPERS. Under current procedures, a new agency actuarial valuation is good for 90 days. When considering the amount of time needed to perform a valuation, this means the data upon which the initial valuation is based can be 180 days old (CalPERS turnaround time of the valuation completion is 90 days and the agency's window of contracting ability on that initial valuation is 90 days). In this example, the employer contracting on July 15th could have had a valuation based on data as of January 31st. By contracting on July 15th, it also means that the first time the employer will be included in out actuarial valuations will be the following June 30th, almost 18 months after the initial actuarial valuation date.

Currently, when a new employer is included in the risk pool actuarial valuation for the first time, the side fund is re-established based on data reported and extracted from systems as of the valuation date i.e. June 30th. This side fund can be materially different than the side fund based on the initial valuation data, especially in cases where the time period that has elapsed is more than 1 year.

The issue with the existing practice relates to whether employers that have contracted with CalPERS and are mandated to participate in a risk pool are protected against unexpected demographic events from the day they contract with CalPERS. As shown above, the time period between the contract date and the first valuation date can be as long as 18 months. Many demographic events can occur between the new agency valuation and the first annual actuarial valuation cycle. Members can, for example, retire, leave employment, become disabled or die. Under current practice, new employers are not pooled until the first annual valuation. This means the demographic experience of the employer is not pooled until the following June 30th. Any actuarial gains or losses that occurred between the contract date and the first annual valuation are reflected in the new side fund that is determined during their first annual actuarial valuation. This side fund can differ significantly from the side fund provided as an estimate in the initial new agency valuation. Therefore, these new employers are at risk of seeing a large fluctuation in the rate following the first annual valuation.

As part of the risk pooling review, various options were explored to mitigate this issue. With the expected ability to extract demographic and payroll data from myCalPERS as of any date, a new approach to new agency will be implemented over the next few months. The new approach will consist of performing another actuarial valuation shortly after an employer contracts with CalPERS. This valuation will include membership and asset information on the date of contract. The side fund for the agency will be established based on this valuation. Using this approach will ensure that the side fund reflects the plan's funded status at the time of joining the pool and does not impact other employers of the pool. It will also ensure that new employers are pooled and protected from unexpected demographic events from the day they contract with CalPERS.

This new approach is expected to take a few months in order for staff to develop a method of extracting all necessary information from myCalPERS soon after a new employer has contracted with CalPERS.

Plans Transferring Between Pools

In order to determine new contribution rates when a plan adopts a benefit improvement, complex actuarial calculations are required. The existing practice involves projecting assets balances and pension liabilities of the entire risk pool both prior to the proposed benefit improvement and after the proposed improvement. This process is not transparent to employers and is very complicated to communicate. The review of risk pooling led to the development of a simpler method that is more consistent with the current methodology in place

for plans that do not participate in a risk pool. This new method will result in rates that are not materially different than the current method, reduce the current administrative burden and make it easier to communicate to employers.

Staff will be implementing this new calculation methodology immediately.

Changes in Circumstances that Affect the Payment toward the Side Fund

There are currently 11 risk pools at CalPERS. Nine of these pools are for plans which contain active members. They are based on benefit formula. There are five miscellaneous pools and four safety pools. There is one inactive pool for agencies that maintain their contract with CalPERS but for which the plans contain no active working members. There is the terminated agency pool which contains plans that have terminated their contract with CalPERS.

Each June 30th CalPERS actuaries examine each plan for membership movement for purposes of the annual valuation process. When a plan that was in an active pool has all active members terminate or retire and no longer has any active members, it is moved to the inactive pool. If a plan is in the inactive pool and hires a new person then that plan must be moved to an active pool that corresponds to the benefit formula contained in the contract.

In each annual valuation cycle there are several pooled plans that change from an active pool to the inactive pool and vice versa. This is normal as hiring and turnover may result in an active membership change from positive membership to zero and vice versa.

A concern was raised when a plan that was active becomes inactive. In this situation, a contribution shortfall occurs that is currently being absorbed by the pool of the active plan. To elaborate, the contribution rate of any employer in a pool is composed of multiple components. There is a component for future service accrual referred to as the normal cost. When an employer becomes inactive, it is appropriate to no longer collect any contributions toward the normal cost since no employees are accruing service. There is also a component for the payment toward any unfunded liability or surplus. For most pooled employers, they have a contribution toward the pool's unfunded liability and a contribution toward their side fund. These contributions should continue even after a plan goes inactive. When these contributions stop, the result is actuarial losses to the pool. Under current procedures, contributions can stop for period of up to 24 months. This is due to the fact we have a 24 months delay between our valuation date and the effective date of the contribution rate established by these valuations.

To address this issue, staff will immediately implement new procedures to ensure that the plan's side funds appropriately reflect the actual payments toward either the side fund of the plan or the pool's unfunded liability/surplus for those plans that transfer between the active pools and the inactive pool and vice versa.

Conclusion

The Actuarial Office performed a review of the risk pooling structure in an effort to ensure that all actuarial policies, procedures and methods related to risk pooling are current and continue to best meet the Board's fiduciary duties and the intent of risk pooling.

Overall, the review of risk pooling demonstrated that the key objective of risk pooling has been realized. As designed, employer rate volatility caused by unexpected demographic events has been minimized for small employers.

Additionally, staff identified several areas that required adjustments to help address, validate or disprove concerns regarding the administration of risk pooling. These concerns were divided into four different areas. They were:

- Movement toward lower retirement benefits
- Joining a risk pool for the first time
- Anti-selection
- Valuation administration

The first concern relates to the recent movement by employers toward offering lower pension benefits to new hires to achieve savings. The implications are greater volatility in contribution rates for employers that remain in risk pools and the potential for inadequate funding. As stated in the report, several ideas have been studied already that could help solve some of these issues and include for example changes to existing amortization policy as well as potentially combining risk pools. However, before implementing any changes we will have to review the details of any pension reform proposal to determine its impact on risk pooling.

The second concern relates to the contribution rate that employers are required to pay when joining a risk pool for the first time. The Actuarial Office in its review of risk pooling has analyzed several potential solutions to address this area of concern. To address this concern, we are proposing amendments to an existing Board policy that will allow for a phase out of the differences between the employer's individual rate and the pool's contribution rate over a five year period.

The next concern relates to anti-selection. Overall, none of the areas studied, including the more controversial area of salary increases granted by employers, revealed a pattern of anti-selection or revealed a need for a change. Therefore, no changes are being recommended, although continued vigilance is needed in several areas.

The last area of the review is referred to as valuation administration. This area included a review of the methodologies and calculations that have been used since risk pooling was created to identify improvements or efficiencies. As a result of the review, we will be making minor changes and improvements related to three main areas of the administration of risk pooling discussed in this report.
