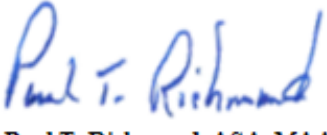


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ACTUARIAL NOTE HB 61**

<p>House Bill 61 HLS 12RS-327 Enrolled</p> <p>Author: Representative J. Kevin Pearson Date: June 1, 2012</p> <p>LLA Note HB 61.05</p> <p>Organizations Affected: Louisiana State Employees' Retirement System (LASERS) Teachers' Retirement System of Louisiana (TRSL) Louisiana School Employees Retirement System (LSERS)</p> <p>EN INCREASE APV</p>	<p>The Note was prepared by the Actuarial Services Department of the Office of the Legislative Auditor.</p> <div style="text-align: center;">  Paul T. Richmond, ASA, MAAA, EA Manager Actuarial Services </div>
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Bill Header: RETIREMENT /STATE SYSTEMS: Provides for a cash balance plan for certain state employees

Cost Summary:

Actuarial Cost/(Savings) to Retirement Systems and OGB	Increase
Total Five Year Fiscal Cost	
Expenditures	Increase
Revenues	Increase

Estimated Actuarial Impact:

The chart below shows the estimated increase/(decrease) in the actuarial value of benefits, if any, attributable to the proposed legislation. Note: it includes the present value cost of fiscal costs associated with benefit changes. It does **not** include present value costs associated with administration or other fiscal concerns.

<u>Actuarial Cost (Savings) to:</u>	<u>Increase (Decrease) in The Actuarial Present Value</u>
All Louisiana Public Retirement Systems	Increase
Other Post Retirement Benefits	Decrease
Total	Increase

Estimated Fiscal Impact:

The chart below shows the estimated fiscal impact of the proposed legislation. This represents the effect on cash flows for government entities including the retirement systems and the Office of Group Benefits.

EXPENDITURES	2012-13	2013-14	2014-15	2015-16	2016-2017	5 Year Total
State General Fund	\$ 0	Increase	Increase	Increase	Increase	Increase
Agy Self Generated	600,000	0	0	0	0	600,000
Stat Deds/Other	0	0	0	0	0	0
Federal Funds	0	0	0	0	0	0
Local Funds	0	0	0	0	0	0
Annual Total	\$ 600,000	Increase	Increase	Increase	Increase	Increase

REVENUES	2012-13	2013-14	2014-15	2015-16	2016-2017	5 Year Total
State General Fund	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Agy Self Generated	0	Increase	Increase	Increase	Increase	Increase
Stat Deds/Other	0	0	0	0	0	0
Federal Funds	0	0	0	0	0	0
Local Funds	0	0	0	0	0	0
Annual Total	\$ 0	Increase	Increase	Increase	Increase	Increase

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Bill Information:

Current Law – Proposed Law

HB 61 generally pertains to rank and file members of LASERS and members of TRSL employed in higher education who will be first employed on or after July 1, 2013. These members will be referred to as Post 2013 members.

Under current law, Post 2013 members will participate in a traditional defined benefit pension plan (DB plan) providing retirement benefits based on years of credited service and final average compensation. With the enactment of HB 61, Post 2013 members will participate in a hybrid defined benefit plan called a cash balance plan (CB plan). Although the CB plan is technically a defined benefit plan, it will look like a defined contribution plan, or 401(k) plan, to employees. The proposed CB plan generally provides larger benefits and greater benefit portability for those who leave state employment before attaining traditional retirement ages. However, benefits will be smaller for those who work a full career with the state and retire during the traditional range of retirement ages. Benefits will also be smaller for those who are first employed by the state in mid to late career.

Benefit Provisions

The benefit structure under current law is compared below with benefit rules that will apply under the proposed CB plan.

Plan Provisions	Current Law	HB 61
Employee Contributions	8.0% of pay	8.0% of pay
Initial Benefit Value on Hire Date	0 years of service and \$0 benefits	A cash balance (CB) account of \$0.
Final Average Compensation (FAC)	Average of Earned Compensation over the highest 60 months of consecutive employment.	Not applicable.
Annual Benefit Accrual	<p>A member's benefit grows with an additional year of service credit and with an amount reflecting the extent to which his current income, if larger than the prior year, affects service credits earned in each prior year. The actual growth in benefit accrual is shown by the following formula.</p> $2.5\% \times \text{Current FAC}$ <p>Plus</p> $2.5\% \times (\text{Service} - 1 \text{ year}) \times \Delta\text{FAC}$ <p>Where $\Delta\text{FAC} = \text{current FAC} - \text{prior year FAC}$</p>	<p>A member's cash balance account grows with interest and pay credits on a monthly basis as long as he is in active employment. Pay and interest credits are defined below.</p> $\text{Monthly Pay Credits} = 12\% \times \text{Earned Monthly Compensation}$ $\text{Monthly Interest Credits} = [\text{Member's CB account at the end of the prior year} + \text{Monthly Pay Credits}] \times \text{prorated Interest Rate}$ <p>The Interest Rate is equal to the rate of return on the actuarial value of assets for each year less 100 basis points.</p> <p>Interest Credits are granted through the last day of the month prior to termination of employment.</p>
Benefits payable upon termination of employment before retirement	<p>Less than 5 Years of Service</p> <ul style="list-style-type: none"> • A refund of employee contributions without interest <p>5 or More Years of Service</p> <ul style="list-style-type: none"> • The member's accrued benefit payable at normal retirement age, or • If the member so elects, a refund of employee contributions without interest. 	<p>Less than 5 Years of Service</p> <ul style="list-style-type: none"> • A refund of employee contributions without interest. <p>5 or More Year of Service</p> <ul style="list-style-type: none"> • A lump sum benefit equal to the member's CB account on the date of his termination of employment, or • Alternatively, the member may elect to leave his lump sum amount in the plan to be converted to an annuity at age 60. No Interest Credits are provided from the time the member leaves employment until he attains age 60.

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Plan Provisions	Current Law	HB 61
Benefits payable upon becoming disabled before retirement	<p>Less than 10 years of service:</p> <ul style="list-style-type: none"> • Benefits are the same as the member would receive had he terminated employment for reasons other than disability. <p>With 10 or more years of service:</p> <ul style="list-style-type: none"> • The member's accrued monthly pension payable immediately without actuarial reduction. 	<p>A disabled member may elect to receive:</p> <ol style="list-style-type: none"> 1. A lump sum benefit equal to the member's CB account balance on his date of termination of employment, OR 2. The benefit that would be payable to the member had he been a participant in the Tier 1 defined benefit plan instead of the cash balance plan
Benefits payable upon death before retirement	<p>A monthly benefit for the member's family similar to the benefits the family would have received had he been a participant in Social Security.</p>	<p>A surviving spouse with no dependent children may receive:</p> <ol style="list-style-type: none"> 1. A lump sum benefit equal to the member's CB amount balance on his date of death, OR 2. The benefit that would be payable to the survivor has the member been a participant in the Tier 1 defined benefit plan instead of the cash balance plan. <p>If a member dies with surviving children, regardless of whether or not he has a surviving spouse, the only benefit that is payable is the benefit that would have been payable to survivors had the member been a participant in the Tier 1 defined benefit plan instead of the cash balance plan.</p>
Benefits payable upon normal retirement from service.	<p>Eligibility for normal retirement benefits:</p> <ul style="list-style-type: none"> • 5 years of service at age 60. <p>Retirement Benefit:</p> <ul style="list-style-type: none"> • Unreduced accrued monthly pension benefit. 	<p>Eligibility for normal retirement benefits:</p> <ul style="list-style-type: none"> • 5 years of service at age 60 <p>Retirement Benefit</p> <ul style="list-style-type: none"> • A monthly annuity that is the actuarial equivalent of the lump sum amount that he would otherwise be able to receive upon termination of employment.

Other benefit provisions of HB 61 are summarized below:

1. LASERS, TRSL and LSERS will each establish the CB plan summarized above.
2. Post 2013 rank and file members of LASERS will be required to participate in the LASERS CB plan.
3. Post 2013 higher education members of TRSL not electing to participate in the Optional Retirement Program will be required to participate in the TRSL CB plan.
4. Any rank and file member of LASERS, any member of TRSL and any member of LSERS, first employed on or after July 1, 2013 (Post 2013 member) who is not required to become a CB plan member may voluntarily elect to become a participant of the CB plans of LASERS, TRSL and LSERS respectively.
5. The following rules apply to a CB plan member who leaves employment and then subsequently returns to employment requiring participation in the CB plan of the same retirement system he participated in under his prior employment.
 - a. A CB plan member who has received a distribution of his CB account who is then re-employed in a position requiring membership in a CB plan will start over as a new member.
 - b. A CB plan member who has not received a distribution of his CB account will be treated as a continuing member.
6. The following rules apply to a CB plan member who leaves employment and then subsequently returns to employment requiring participation in the CB plan of another system.
 - a. A person employed in a position covered by the CB plan of one system who is then employed in a position covered by the CB plan of another system can elect a distribution of his CB account and start over as a new member under the new system.
 - b. Such a person may also elect to have his CB account transferred to the new system. His CB account will be transferred and his eligibility service credits will also be transferred.

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7. The following rules apply to a CB plan member who leaves employment and then subsequently returns to employment requiring participation in the DB plan of another system.
 - a. A person employed in a position covered by the CB plan of one system who is then employed in a position covered by the DB plan of another system can elect a distribution of his CB account and start over as a new member under the new system.
 - b. A CB plan member will be able to claim CB plan service credits under a new retirement system in accordance with the reciprocity rules of R.S. 11:142.
8. Retired members of the CB plan who elect to receive an annuity upon retirement will not be eligible for cost of living adjustments unless the member had elected a reduced actuarially equivalent optional form of benefit that automatically provides systematic annual benefit increases.

Actuarial Funding

Rules for funding the retirement systems will change under HB 61 as summarized below.

1. Assets associated with the CB plan will be comingled with all other assets of each retirement system. Assets in the aggregate will be invested in accordance with the investment policies established by each retirement system.
2. The LASERS CB plan will be treated as another sub plan of LASERS. The employer normal cost rate for the LASERS CB sub plan will be determined separately from employer normal cost rates applicable to the other sub plans. Employers participating in LASERS will have one employer normal cost rate applicable to Pre 2013 rank and file members and another rate applicable to Post 2013. UALs or surpluses associated with the LASERS CB plan will be aggregated with the UALs or surpluses associated with all other sub plans and, in general, a single employer UAL cost rate will apply to all employers participating in LASERS.
3. The TRSL and LSERS CB plans will not be treated as separate sub plans, but rather employer normal cost rates for these systems will be determined in the aggregate. A single employer normal cost rate will apply to all employers participating in TRSL and LSERS respectively. Similarly, a single employer UAL cost rate will also apply.
4. CB plan members will not be eligible for COLAs, except as indicated in item 8 above. Therefore, HB 61 will revise the gain sharing formula applicable to Pre 2013 members in the following manner.
 - a. The actuary for LASERS, TRSL, and LSERS will determine the share of total system assets attributable to the CB plan. HB 61 does not provide any other guidance on how this allocation is to be made.
 - b. For LASERS, 50% of investment gains in excess of \$100 million, associated with system assets not attributable to the CB plan, will be available for gain sharing and funding of COLAs for Pre 2013 members.
 - c. For TRSL, 50% of investment gains in excess of \$200 million, associated with system assets not attributable to the CB plan, will be available for gain sharing and funding of COLAs for Pre 2013 members.
 - d. For LSERS, 50% of investment gains, associated with system assets not associated with the CB plan, will be available for gain sharing and funding of COLAs for Pre 2013 members.
5. PRSAC will be allowed to adopt an actuarial valuation for FY 2014 that has been prepared by an actuary who is a member of the American Academy of Actuaries and who has been engaged by the Division of Administration.

Study Requirements

1. The Division of Administration is required to study the feasibility of enrolling cash balance plan members into Social Security.
2. The Division of Administration is also required to conduct a cost benefit analysis for establishing an increased pay scale for cash balance plan members that employees may use to enhance their retirement income.

Implications of the Proposed Changes

HB 61 makes a significant change to the retirement benefit policy used by the state for its employees. In general, the current policy is to provide career employees with retirement income that is superior to that provided under Social Security. The state is able to provide these benefits at a cost to the state and to its employees that is comparable to the cost that would be incurred if the state participated in the federal Social Security program.

If HB 61 is enacted, the policy shifts from providing retirement income security for career employees to providing retirement benefits that are portable. As a result, benefit dollars will be diverted from career employees to employees who work for the state for much shorter periods of time. Benefits payable from the retirement system to members who terminate employment before age 55 under the CB plan will generally have greater value than benefits payable under the traditional DB plan. Benefits payable upon termination of employment between ages 55 to 65 will generally have smaller value. And, the value of benefits payable to those who terminate employment after age 67 will generally be larger.

The policy change implemented by HB 61 will be better for some state employees; it will not be as good for others. The current traditional DB plan, without Social Security, encourages employees to make a lifestyle commitment to state employment.

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Penalties for moving back and forth from state to private employment are severe and the rewards for continued state employment are quite significant. Under the CB plan proposed under HB 61, the rewards for career state employment will be reduced and the penalties for movement between the state and private sector will diminish. Some barriers will remain, however, because Social Security benefits are not portable between the private sector and government employers not participating in Social Security.

Cost Analysis:

Analysis of Actuarial Costs

Retirement Systems

It is difficult to develop precise measures of the future actuarial cost associated with the CB plan proposed by HB 61. There are significantly more cost variables with a CB plan than with a traditional DB plan. In the discussion that follows, we will attempt to provide answers to the following questions:

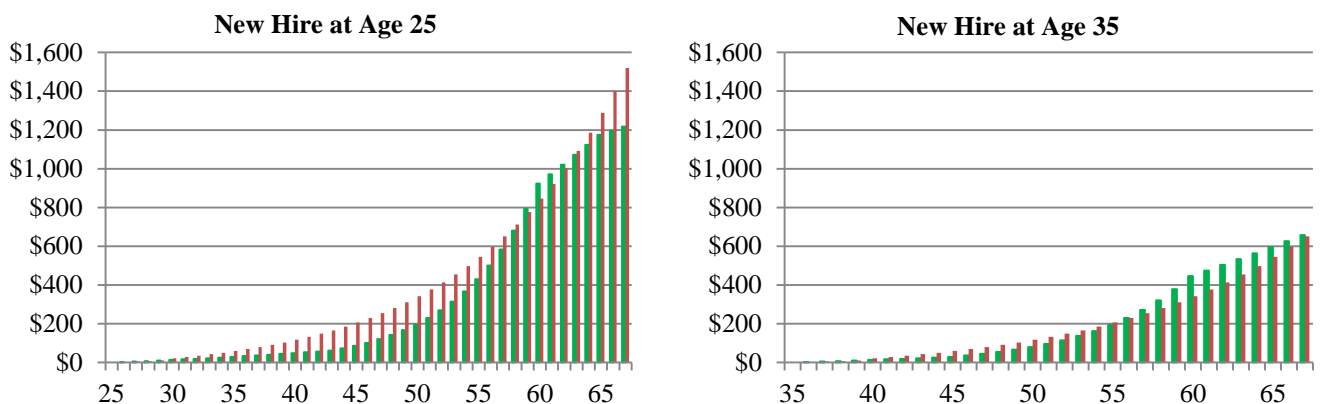
1. How will the pattern of wealth accumulation for a new employee change with the enactment of the proposed CB plan? How does the wealth accumulation pattern change in total when considering both the employee and the state contribution to the retirement program? How does it change when considering only the retirement benefits funded by the state?
2. What effect will the change in wealth accumulation patterns have on total normal cost calculations and on employer normal cost calculations?
3. Does the proposed CB plan reduce the amount of risk borne by the state, and if so, what risks are reduced and what is the magnitude of the risk reduction?
4. Will changes in investment policy become necessary as the CB plan matures and an increasingly larger portion of the work force participates in the CB plan?
5. What effect will any necessary changes in investment policy have on contribution requirements for LASERS and TRSL?
6. In the professional opinion of the actuary for the Legislative Auditor, will the CB plan proposed under HB 61 result in larger or smaller actuarial costs for the state?

Question 1: How will the pattern of wealth accumulation for a new employee change with the enactment of the proposed CB plan? How does the wealth accumulation pattern change in total when considering both the employee and the state contribution to the retirement program? How does it change when considering only the retirement benefits funded by the state?

We will attempt to answer these questions by using a series of charts that compare the wealth a new member will accumulate under the proposed CB plan with the wealth he would have earned under the current DB plan. Wealth accumulations are defined as the value of benefits promised to the member if he terminates employment at the ages indicated on the x-axis of the charts shown below.

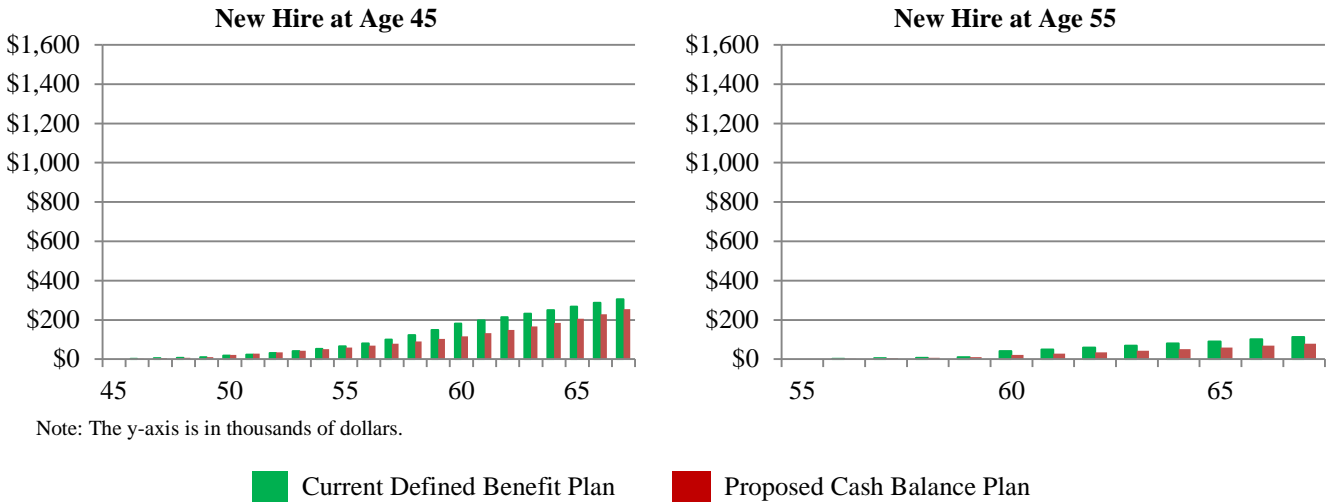
Wealth accumulations for a new member initially hired at age 25 and covered under the current traditional DB plan are compared below with wealth accumulations the same member will enjoy as a participant in the proposed CB plan. Similar comparisons are provided for a member newly hired at age 35, at age 45 and at age 55. All graphs are based on a beginning salary of \$30,000 a year.

Wealth Accumulated from Employer and Employee Contributions



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Wealth Accumulated from Employer and Employee Contributions



Note: The y-axis is in thousands of dollars.

The following observations can be made from these charts.

New Hire at Age 25

1. Although the pattern of the bar graphs appears to be similar, there is actually a significant difference between them. For example, from the time such an employee attains age 35 until he attains about age 50, the proposed CB plan creates twice the wealth as the current DB plan. The difference between the two amounts ranges from \$50,000 to \$150,000.

Note: Post 2013 members who terminate employment before reaching retirement age will receive benefits that are greater under the proposed CB plan than under the current DB plan. This appears to be a benefit improvement subject to Article X, Section 29(F) of the Louisiana Constitution.

2. Wealth accumulated at ages 57 through 63 is about the same for the two plans.
3. If the 25 year old new hire remains employed until age 64 or later, the CB plan delivers superior wealth.
4. On the other hand, wealth accumulations shown above are based on a presumption that the employee works his full career in the same job position; he does not receive any promotion throughout his career. This rarely occurs. Most employees have one or a series of promotions throughout their career.
5. Job promotions affect wealth accumulations in a DB plan very differently from accumulations in a CB plan. A significant jump will occur in the wealth accumulation under a DB plan whenever an employee receives a promotion. The larger level of income retroactively increases the wealth he has accumulated in the past. Only a small increase in wealth will occur under a CB plan because the promotion only affects future wealth accumulations.
6. If the above charts had reflected one or more promotions over the person's career, the bar chart for the DB plan would show a jump in value each time a promotion occurred. A similar jump in the CB bars would not occur.
7. Therefore, although these charts are somewhat representative of the differences between the DB plan and the CB plan, all factors are not fully recognized.

New Hire at Age 35

1. The CB plan and the current DB plan deliver similar amount of wealth until a person hired at age 35 attains about age 58.
2. The current DB plan delivers about \$100,000 more wealth if such a member remains employed thereafter.

New Hire at Age 45 and New Hire at Age 55

- The current DB plan delivers about \$50,000 more wealth than the CB plan for a new member hired at age 45 and a new hire at age 55.

General Observation

- The ages at which most employees of the state are hired currently ranges from age 20 to age 40. If employee recruitment remains focused on these ages and if employees perceive that the barriers to benefit portability have been largely removed, then benefit distributions from the CB plan will occur earlier than they would have if the current DB plan had continued to apply.

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It is also of interest to compare the portion of the total wealth accumulation attributable to employer contributions. Wealth attributable to employer contributions is equal to the wealth delivered to the member by the retirement plan minus the value of the member's contributions accumulated with interest. Negative wealth occurs when the member receives a benefit from the retirement system that has less value than the member's own investment. The following graphs make this comparison.

Wealth Accumulated from Employer Contributions



Note: the y-axis is in thousands of dollars.

Current Defined Benefit Plan
 Proposed Cash Balance Plan

The following additional observations can be made.

New Hire at Age 25

1. This chart demonstrates the fundamental difference between the proposed CB plan and the current DB plan.
2. The wealth accumulated by the employee from employer contributions under the current DB plan is negative until a member hired at age 25 attains age 55. Or, in other words, an employee who leaves employment before age 55 forfeits money attributable to his own contributions to the state. This reason for this is explained below:
 - a. A member contributes 8.0% of his pay to the retirement system.
 - b. The retirement system invests employee contributions and earns 8.25% on average.
 - c. In theory, the wealth accumulated by the system attributable to employee contributions is equal to the contributions actually made plus investment earnings thereon.
 - d. However, the member, upon termination of employment before age 55 receives a benefit that has less value than his own contributions accumulated with interest.
 - e. Therefore, an employee who terminates employment prior to age 55 subsidizes the retirement system. The employee receives less wealth than he would have received if he had been able to obtain a refund of his own contributions plus interest.
3. On the other hand, an employee, who remains in employment with the state until retirement age, is rewarded. Such an employee receives a significant amount of wealth from employer provided resources.
4. The optimal age for retirement under the DB plan appears to be age 60. At this age the member receives the most wealth from the employer.
5. On the other hand, if the newly hired employee becomes a participant in the proposed CB plan, he begins to accumulate wealth from employer provided resources once he has been employed 5 years.

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6. Actually, he accumulates more employer provided wealth under the CB plan than he would accumulate under the DB plan at all ages except for the core retirement years – ages 59 to 62.
7. A comparison of the green bar at age 60 in the first set of graphs with the purple bar at the same age demonstrates that the employee funds 70% to 80% of the total value of the retirement benefit payable at age 60.
8. But once again, these charts don't tell the entire story. If the charts had reflected one or more job promotions, the comparisons of wealth would be much closer together.
9. Therefore, it is reasonable to conclude that a member participating under the DB plan accepts the negative wealth he gains from the employer in the early years of his career in exchange for significant jumps in wealth whenever he receives a job promotion. No such exchange exists under the CB plan.

New Hire at Age 35

1. Similar conclusions can be drawn relative to any person hired at age 35. The general patterns of both the DB plan graph and the CB plan chart are the same as for a person hired at age 25.
2. However, the amount of the employee subsidy to the employer, should he terminate employment before retirement, is less.
3. The employee begins to accumulate wealth from the employer under the DB plan at about age 51.
4. The wealth provided by the employer when the member retires between ages 57 and 66 is significantly larger under the DB plan than under the proposed cash balance plan.

New Hires at Age 45 and New Hires at Age 55

1. A member that participates in a DB plan accumulates significantly more wealth than he would have accumulated under the CB plan.

These sets of charts confirm the statements we made above in the "Implications" section of this actuarial note. A CB plan delivers benefits to members who terminate employment early in their career. The traditional DB plan delivers benefits to members who remain in employment for a full career. Changing the retirement program from a traditional DB plan to a CB plan will have a significant influence on employee behavior. CB plans provide benefits that are portable and employees will make use of that portability. Traditional DB plans are not portable and as a result, employees generally commit to a full career in the government sector.

Question 2: What effect will the change in wealth accumulation patterns have on total normal cost calculations and on employer normal cost calculations?

Based on actuarial models projecting costs for the next 30 years, the total normal cost for the current DB plan is expected to be about 12.0% of pay. The projected normal cost for the proposed CB plan is expected to be about the same, but nevertheless, slightly larger than this amount. Our analysis, supported by deterministic and stochastic modeling processes, is summarized below.

1. Pay credits provided to members of the CB plan are equal to 12% of pay. Employees pay 8% and employers pay whatever is actuarially required to maintain the actuarial solvency of the plan. Our analysis shows that the total normal cost will exceed 12% of pay, and the employer normal cost will exceed 4% of pay. This will occur because interest credits granted under the CB plan, due to the 0% minimum interest rate, will exceed 8.25% and because disability and survivor benefits available under the CB plan have increased its cost.
2. According to HB 61, interest credits are to be calculated annually as the rate of investment return earned on the actuarial value of assets minus 100 basis points, but no less than 0%. The actuarial cost to provide the 0% minimum rate is about 100 basis points. Therefore, the 100 basis point cushion between the actual investment return and the interest credits granted to members is completely consumed by the cost associated with the 0% minimum credit.
3. If the CB plan fails to realize an 8.25% rate of return on an actuarial value basis, then the plan will incur systematic investment losses, and the employer normal cost plus amortization costs will exceed 4% of pay. If the discount rate used to calculate normal costs is reduced, the state's investment risk is reduced, but the normal cost will increase. The only way to completely eliminate risk is to place CB plan assets into a non interest bearing account. The cost of the CB plan would then be 12% of pay with employees contributing 8% of pay and the employer contributing 4%.

Other observations about our cost analysis are given below:

1. Benefit payments to members who terminate employment prior to retirement will generally be larger under the CB plan than under the DB plan.
2. Benefit portability under the CB plan is likely to produce higher turnover with larger benefit distributions than the under the DB plan.
3. Most benefit payments under the CB plan will be made as lump sum payments.

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4. The duration of benefit liabilities for active will become shorter with the enactment of the CB plan. CB plan members who leave employment will receive distributions of their account balances. The residual liability that remains when a member leaves employment under a traditional DB plan will gradually go away as new CB plan members replace existing members.
5. The duration of retired liabilities will also eventually decline as existing retirees die and are not replenished with new retirees. It is likely that most employees who reach retirement age, regardless of whether they leave employment before or after age 60, will elect to receive the lump sum account balance rather than an annuity.
6. Over time, the investment policy of the retirement system must change if the CB plan is enacted because the duration of liabilities will be smaller. As duration decreases, assets must be invested more conservatively.
7. More conservative, and less volatile, investments generally produce lower investment returns.
8. Lower investment returns will require a reduction in the assumed discount rate used to calculate employer normal costs.
9. A lower discount rate produces higher contribution requirements.

Eventually, when all members of the current work force have been replaced with members hired on or after July 1, 2013, the cost of the CB plan will be greater than the cost of the current plan.

Question 3: Does the proposed cash balance plan reduce the state risk, and if so, what risks are reduced and what is the magnitude of the risk reduction?

The state bears the following risks relative to the current DB plan. The risks are fully or partially transferred to employees under the proposed CB plan.

1. **Investment risk.** All investment risks are borne by the state under the current DB plan. The state commits to paying a benefit for life regardless of the investment performance on assets set aside to secure those promises.

The state will continue to bear investment risk under the CB plan. However, an investment gain will be offset by a corresponding liability loss and similarly, an investment loss will be offset by a corresponding liability gain. As a result, the potential for the creation of new UALs due to market place conditions should be reduced. The risk for new UALs is not eliminated, however, because of the 0% minimum interest credit, and because the plan offers an annuity form of benefit for members who terminate employment after attaining age 60.

2. **Salary Improvement Risk.** Under the DB plan, the state bears most of the risk associated with unexpected increases in a member's income particularly toward the end of a person's career. The state commits to paying a pension based on the unexpected higher salary following a promotion.

Under HB 61, the entire risk will be transferred from the state to individual employees.

3. **Mortality Risk.** Under the DB plan, the state bears all of the mortality risk because a pension is paid for life. Life expectancies have been increasing with improving medical technologies. However, benefit promises were made without recognition of longer lifetimes. The state bears the burden of these additional benefit payments.

Under HB 61, the state will retain this risk for individual members who elect to purchase an annuity from the retirement system when they retire. Mortality risk will be transferred to any member who receives a lump sum distribution upon termination of employment.

4. **Disability and Survivor Income Risk.** Under the DB plan, the state bears the risk of providing family income security to members who become disabled or die before reaching retirement age. Note: this risk is particularly burdensome to an individual because the member will not be entitled to disability benefits or family survivor benefits under Social Security.

The state will continue to bear this risk under HB 61 as amended. The disability and survivor benefits now available under HB 61 are estimated to cost 0.5% of pay or about \$15 million once the CB plan become mature.

Although it appears that a significant amount of risk will be transferred from the state to individuals under HB 61, the reduction in risk may only be temporary. In theory, the state, as a significantly larger entity with significantly more resources at its disposal, is in a better position to bear these risks. An individual to whom these risks have been transferred is not likely to have the reserves, the ability, or enough time to overcome the hardships that he or she will incur should any one of these hazards result in a financial hardship. Because there is no Social Security coverage, such a member may very well become a ward of the state because he or she has no other available resources. Any savings that may be perceived from the transfer of risk from the state to the individual may be fleeting.

Question 4: Will changes in investment policy become necessary as the cash balance plan matures and increasingly larger percentages of employees participate in the cash balance plan?

One of the primary objectives of a CB plan is increased benefit portability. It is quite clear that the CB plan under HB 61 will accomplish this objective. Over time, the CB plan will become less and less a retirement plan and will become more and more an employment severance plan. Assets used to finance an employment severance plan must be invested much more conservatively than assets for a retirement plan because the trust must protect itself against significant investment

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losses and contribution volatility. To reduce volatility, a CB plan must invest more heavily in fixed income, perhaps even immunizing cash flows through appropriate bond purchases.

Question 5: What effect will any necessary changes in investment policy have on contribution requirements for LASERS and TRSL?

The investment yield on fixed income investment is typically 300 to 400 basis points less than yields on equities. Therefore the discount rate used to measure retirement plan liabilities must be significantly smaller in the future under the CB plan than the current rate of 8.25%. An appropriate rate may be as low as 4% to 5%. And a low rate will produce larger liabilities and larger normal costs.

Question 6: In the professional opinion of the actuary for the Legislative Auditor, will the cash balance plan proposed under HB 61 result in larger or smaller actuarial costs for the state?

It appears that the CB plan was designed in such a manner as to closely replicate the cost of the current DB plan. Nevertheless, actuarial modeling and other analyses lead us to conclude that the CB plan is likely to be somewhat more expensive than the current DB plan. There are too many variables affecting the final outcome to place a precise value on the cost differential. Nevertheless, we are confident in our conclusion that the CB plan will cost more than the current DB plan.

Other Post Retirement Benefits

The actuarial present value of costs associated with post-retirement benefits other than pensions will decrease. Currently, a member with 20 years of service may retire at any age with an actuarial reduced benefit. Because he is retiring from active employment, he is entitled to post-retirement medical insurance coverage from OGB partially funded by the state. Under HB 61, a member will not be entitled to retire until age 60. Anyone who elects to leave employment prior to age 60 will forfeit subsidized post-retirement health insurance.

Analysis of Fiscal Costs

Based on information provided by the retirement systems, we estimate that \$600,000 of additional administrative costs will be incurred to implement the cash balance program. These costs will be incurred in FY 2013.

Otherwise, HB 61 will have only a negligible effect on cash flows over the five year fiscal measurement period. Although we believe that the cash balance plan under HB 61 will ultimately cost more than the current DB plan, the effects of this increase will not materialize during the immediate future.

A summary of the effect of HB 61 on fiscal costs is given below:

Expenditures:

1. Expenditures from the State General Fund will increase beginning in FY 2014 to the extent that contribution requirements for employers of rank and file members of LASERS and higher education members of TRSL will increase. Contribution requirements will increase gradually over the five year measurement period as new members in the CB plan replace existing employees participating in the DB plan.
2. Expenditures from LASERS, TRSL, and LSERS will increase in FY 2013 to pay for implementation costs (about \$600,000) associated with the cash balance plan.
3. Expenditures from Local Funds will increase beginning in FY 2014 to the extent that employer contribution requirements for K-12 employers increase. Contribution requirements will increase because employer contributions to TRSL will increase as new CB plan members replace existing DB plan participants.

Revenues:

1. Revenues to LASERS, TRSL and LSERS will increase beginning in FY 2014 to the extent that employer contribution requirements increase.

Actuarial Caveat

Actuarial analyses contained in this actuarial note are based on the 8.25% discount rate assumption used by LASERS and TRSL in the preparation of valuation results as of June 30, 2011 and contribution requirements for FY 2012. Although PRSAC recently adopted a valuation report based on an 8.00% discount rate for estimating contribution requirements for LASERS for FY 2013, we are continuing to use the 8.25% rate because we started our analysis before the change was approved.

Actuarial Credentials:

Paul T. Richmond is the Manager of Actuarial Services for the Louisiana Legislative Auditor. He is an Enrolled Actuary, a member of the American Academy of Actuaries, a member of the Society of Actuaries and has met the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein.

**2012 REGULAR SESSION
ACTUARIAL NOTE HB 61**

Dual Referral:

Senate

13.5.1 \geq \$100,000 Annual Fiscal Cost

13.5.2 \geq \$500,000 Annual Tax or Fee Change

House

6.8(F) \geq \$500,000 Annual Fiscal Cost

6.8(G) \geq \$500,000 Annual Tax or Fee Change