


**2015 REGULAR SESSION
ACTUARIAL NOTE SB 14**

| | |
|---|---|
| <p>Senate Bill 14 SLS 15RS-151 Original</p> <p>Author: Senator Elbert L Guillory Date: April 14, 2015</p> <p>LLA Note SB 14.01</p> <p>Organizations Affected: All State Retirement Systems</p> <p>OR NO IMPACT APV</p> | <p>This Note has been prepared by the Actuarial Services Department of the Office of the Legislative Auditor. The attachment of this Note to SB 14 provides compliance with the requirements of R.S. 24:521</p> <div style="text-align: center;">  Paul T. Richmond, ASA, MAAA, EA Manager Actuarial Services </div> |
|---|---|

Bill Header: Provides for determination of employer contributions. (6/30/15)

Cost Summary:

The estimated actuarial and fiscal impact of the proposed legislative is summarized below. Actuarial costs pertain to changes in the *actuarial present value of future benefit payments*. A cost is denoted by “Increase” or a positive number. Savings are denoted by “Decrease” or a negative number.

| | |
|--------------------------------------|----------------|
| Actuarial Cost to Retirement Systems | \$0 |
| Total Five Year Fiscal Cost | |
| Expenditures | \$ 172,355,362 |
| Revenues | \$ 172,355,362 |

Estimated Actuarial Impact:

The chart below shows the estimated change in the *actuarial present value of future benefit payments*, if any, attributable to the proposed legislation. A cost is denoted by “Increase” or a positive number. Savings are denoted by “Decrease” or a negative number. Present value costs associated with administration or other fiscal concerns are not included in these values.

| <u>Actuarial Cost to:</u> | <u>Change in the Actuarial Present Value</u> |
|---|---|
| All Louisiana Public Retirement Systems | \$0 |
| Other Post Retirement Benefits | \$0 |
| Total | \$0 |

Estimated Fiscal Impact:

The chart below shows the estimated fiscal impact of the proposed legislation. This represents the effect on cash flows for the retirement systems and other government entities.. Fiscal costs include estimated administrative costs and costs associated with other fiscal concerns. A fiscal cost is denoted by “Increase” or a positive number. Actuarial or fiscal savings are denoted by “Decrease” or a negative number.

| EXPENDITURES | 2015-16 | 2016-17 | 2017-18 | 2018-2019 | 2019-2020 | 5 Year Total |
|---------------------|----------------|----------------|----------------|------------------|------------------|---------------------|
| State General Fund | \$ 0 | \$ 26,115,067 | \$ 24,809,486 | \$ 23,464,737 | \$ 22,079,646 | \$ 96,468,936 |
| Agy Self Generated | 0 | 0 | 0 | 0 | 0 | 0 |
| Stat Deds/Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Federal Funds | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Funds | 0 | 20,516,133 | 19,506,787 | 18,467,161 | 17,396,345 | 75,886,426 |
| Annual Total | \$ 0 | \$ 46,631,200 | \$ 44,316,273 | \$ 41,931,898 | \$ 39,475,991 | \$ 172,355,362 |

| REVENUES | 2015-16 | 2016-17 | 2017-18 | 2018-2019 | 2019-2020 | 5 Year Total |
|--------------------|----------------|----------------|----------------|------------------|------------------|---------------------|
| State General Fund | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| Agy Self Generated | 0 | 46,631,200 | 44,316,273 | 41,931,898 | 39,475,991 | 172,355,362 |
| 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 | \$ 46,631,200 | \$ 44,316,273 | \$ 41,931,898 | \$ 39,475,991 | \$ 172,355,362 |

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Bill Information:

Current Law

The actuarially required employer contribution for the four state retirement systems – Louisiana State Employees’ Retirement System (LASERS), Teachers’ Retirement System of Louisiana (TRSL), Louisiana School Employees’ Retirement System (LSERS), and Louisiana State Police Retirement System (STPOL) – is defined as the sum of the following:

1. The employer normal cost,
2. The annual amortization payment necessary to amortize changes in unfunded accrued liabilities (UAL) occurring in prior years,
3. The annual amortization payment necessary to amortize the most recent year’s over- or under-payment of employer contributions, and
4. The annual amortization payment necessary to amortize changes in UAL resulting from gains/losses, asset valuation method changes, changes in actuarial assumptions or funding methods, and benefit changes occurring over the most recent year.

Because the formula for employer contributions does not include any provision for their recovery, administrative expenses produce an actuarial loss each year. Each annual loss is amortized with level payments over a 30 year period.

Proposed Law

SB 14 changes the contribution formula to include projected annual administrative expenses in the calculation of employer contribution requirements. Administrative expense will no longer be treated as an actuarial loss. If enacted, SB 14 will be implemented for the state retirement systems beginning with the June 30, 2015 valuations and will first affect contribution requirements for FYE 2017.

Implications of the Proposed Changes

If SB 14 is enacted, estimated noninvestment related administrative expenses will be included in the calculation of employer contribution requirements.

Cost Analysis:

Analysis of Actuarial Costs

Retirement Systems

SB 14 contains no benefit provisions.

Current Law

Since FYE 1990, annual administrative expense has been treated as an actuarial loss and amortized over 30 years. Table 1 shows the cumulative cost of amortizing administrative expense for LASERS, TRSL, LSERS, and STPOL for each year from June 30, 1990 through June 30, 2015. It shows cumulative administrative expense incurred for FYE 1990 through FYE 2015, cumulative amortization payments over the same period, and cumulative amortization payments that remain. It also shows actual administrative expenses for FYE 2015 and the FYE 2015 payment to cover the amortization of unpaid administrative expense prior to June 30, 2015.

Table 1: Historical Analysis FYE 1990 through FYE 2015

| | LASERS | TRSL | LSERS | STPOL | Total |
|---|----------------|----------------|---------------|---------------|----------------|
| a. Cumulative Administrative Expenses: FYE 1990 through FYE 2015 | \$ 324,566,221 | \$ 299,121,094 | \$ 75,016,300 | \$ 10,107,226 | \$ 708,810,841 |
| b. Cumulative Amortization Payments: FYE 1990 through FYE 2015 | 265,399,080 | 246,607,320 | 58,166,323 | 7,962,762 | 578,135,485 |
| c. Amortization Payments that Remain on Losses from FYE 1990 Through FYE 2015 | 518,445,898 | 475,786,300 | 115,199,219 | 14,873,826 | 1,124,305,243 |
| d. Interest Paid to Date: = (b) + (c) – (a) | 459,278,757 | 423,272,526 | 98,349,242 | 12,729,363 | 993,629,887 |
| e. Administrative Expense for FYE 2015 | 18,168,272 | 18,048,582 | 4,764,347 | 641,366 | 41,621,567 |
| f. Payment in FYE 2015 to Amortize Losses Due to Administrative Expenses Incurred Prior to 2015 | 26,128,166 | 24,079,787 | 5,778,851 | 761,220 | 56,748,024 |
| g. Ratio = (f)/(e) | 144% | 133% | 121% | 119% | 136% |

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The process used to pay for administrative expenses under current law is summarized below.

1. Instead of paying administrative expenses each year, participating employers are allowed to “borrow” these costs from the retirement system and pay the system back over a 30 year period at the plan’s assumed long term rate.
2. A new “loan” is taken out by employers each year for that year’s expenses.
3. Eventually, employers will have 30 “loans”, each with an amortization payment.
4. The first “loan” (\$2,577,670 for LASERS and \$3,464,997 for TRSL) made in FYE 1990 will be paid off in FYE 2020. Over the thirty years, LASERS will have paid \$6,360,210 to pay off the FYE 1990 administrative expense (\$2,577,670) TRSL will have paid \$8,549,640 to pay off the FYE 1990 administrative expense (\$3,464,997).
5. On the June 30, 2019 valuation date, there will be 30 outstanding “loans”, one for each year from FYE 1990 through FYE 2019. Each year thereafter, there will be 30 “loans” for each state system.
6. For example, “loan” payments relative to administrative expenses will cost participating employers of LASERS \$33.9 million for FYE 2020. Actual administrative expense for FYE 2020 is estimated to be only about \$21.1 million. Employer “loan” payments will be 59% larger than actual administrative expenses projected for FYE 2020.
7. LASERS’ administrative expense for FYE 2015 was \$18,168,272. However, employers made \$26,128,166 in “loan” payments to the system relative to cumulative administrative expenses. Employers paid 44% more in “loan” payments than the actual administrative expenses incurred in FYE 2015.
8. If it is assumed that administrative expense will increase 3% a year, the ratio of “loan” payments for LASERS to actual administrative expense will increase to about 172% by FYE 2029. The ratio will then gradually decrease and eventually stabilize at about 163%.
9. The ratio of “loan” payments to cover cumulative administrative expenses for TRSL is currently about 133% of actual administrative expense for FYE 2015. This ratio is projected to reach 167% for FYE 2034 and will eventually level off at about 163%.

Senate Bill 14

SB 14 will end the “loan” process. Estimated administrative expenses for FYE 2016 and later years will be included in the calculation of the employer contribution rate. The annual cost to employers will be the sum of the amount needed to make the amortization payment for “loans” from FYE 1990 through FYE 2015, and administrative expense expected to be incurred for FYE 2016.

If SB 14 is enacted, “loans” will begin to be liquidated one year at a time starting in FYE 2020. By FYE 2045, all loans made FYE 1990 through FYE 2015 will be liquidated, and employer contribution requirements will only include administrative expense as it occurs.

Tables 2.1 through 2.4 show the projected payments to cover administrative expenses under current law and SB14.

| Table 2.1: LASERS | | | | | | | |
|--------------------------|--------------------------------------|---|--|---------------------------|--|---------------------------|---------------------------------|
| | Current Law | | | SB 14 | | | Impact of SB14 |
| FYE | Admin. Expenses- New Loan | Amortization Payment on the New Loan | Cumulative Payments on Historical Loans | Admin. Expense | Cumulative Payments on Historical Loans | Total Payments | Increase/ (Decrease) |
| 2016 | \$ 18,712,290 | \$ 1,506,373 | \$ 27,634,539 | \$ 18,172,290 | \$ 26,128,166 | \$ 44,840,456 | \$ 17,205,917 |
| 2017 | 19,273,659 | 1,551,564 | 29,186,103 | 19,273,659 | 26,128,166 | 45,401,825 | 16,215,722 |
| 2018 | 19,851,869 | 1,598,111 | 30,784,215 | 19,851,869 | 26,128,166 | 45,980,035 | 15,195,820 |
| 2019 | 20,447,425 | 1,646,055 | 32,430,269 | 20,447,425 | 26,128,166 | 46,575,591 | 14,145,322 |
| 2020 | 21,060,848 | 1,695,436 | 33,918,198 | 21,060,848 | 25,920,659 | 46,981,507 | 13,063,309 |
| 2021-2044 | 746,802,213 | 32,479,272 | 1,246,997,058 | 746,802,213 | 388,012,575 | 1,134,814,788 | (112,182,270) |
| 2045 | 44,096,742 | 3,549,867 | 71,666,331 | 44,096,742 | - | 44,096,742 | (27,569,589) |

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| | Current Law | | | SB 14 | | | Impact of SB14 |
|-----------|---------------------------|--------------------------------------|---|----------------|---|----------------|----------------------|
| FYE | Admin. Expenses- New Loan | Amortization Payment on the New Loan | Cumulative Payments on Historical Loans | Admin. Expense | Cumulative Payments on Historical Loans | Total Payments | Increase/ (Decrease) |
| 2016 | \$ 18,590,039 | \$ 1,496,532 | \$ 25,576,319 | \$ 19,590,039 | \$ 24,079,787 | \$ 42,669,826 | \$ 17,093,507 |
| 2017 | 19,147,740 | 1,541,428 | 27,117,747 | 19,147,740 | 24,079,787 | 43,227,527 | 16,109,781 |
| 2018 | 19,722,172 | 1,587,670 | 28,705,417 | 19,722,172 | 24,079,787 | 43,801,959 | 15,096,542 |
| 2019 | 20,313,837 | 1,635,301 | 30,340,717 | 20,313,837 | 24,079,787 | 44,393,624 | 14,052,907 |
| 2020 | 20,923,252 | 1,684,360 | 31,746,138 | 20,923,252 | 23,800,849 | 44,724,101 | 12,977,962 |
| 2021-2044 | 741,923,155 | 59,726,152 | 1,209,038,830 | 741,923,155 | 355,666,302 | 1,097,589,457 | (111,449,374) |
| 2045 | 43,808,644 | 3,526,675 | 71,198,116 | 43,808,644 | - | 43,808,044 | (27,389,472) |

| | Current Law | | | SB 14 | | | Impact of SB14 |
|-----------|---------------------------|--------------------------------------|---|----------------|---|----------------|----------------------|
| FYE | Admin. Expenses- New Loan | Amortization Payment on the New Loan | Cumulative Payments on Historical Loans | Admin. Expense | Cumulative Payments on Historical Loans | Total Payments | Increase/ (Decrease) |
| 2016 | \$ 4,907,277 | \$ 378,030 | \$ 6,156,882 | \$ 4,907,277 | \$ 5,778,851 | \$ 10,686,128 | \$ 4,529,247 |
| 2017 | 5,054,495 | 389,371 | 6,546,253 | 5,054,495 | 5,778,851 | 10,833,346 | 4,287,094 |
| 2018 | 5,206,130 | 401,052 | 6,947,305 | 5,206,130 | 5,778,851 | 10,984,981 | 4,037,677 |
| 2019 | 5,362,314 | 413,084 | 7,360,389 | 5,362,314 | 5,778,851 | 11,141,165 | 3,780,777 |
| 2020 | 5,523,183 | 425,476 | 7,685,211 | 5,523,183 | 5,678,197 | 11,201,380 | 3,516,170 |
| 2021-2044 | 195,847,961 | 15,087,071 | 301,971,044 | 195,847,961 | 86,405,616 | 282,253,577 | (19,717,467) |
| 2045 | 11,564,315 | 890,852 | 17,984,937 | 11,564,315 | - | 11,564,315 | (6,420,622) |

| | Current Law | | | SB 14 | | | Impact of SB14 |
|-----------|---------------------------|--------------------------------------|---|----------------|---|----------------|----------------------|
| FYE | Admin. Expenses- New Loan | Amortization Payment on the New Loan | Cumulative Payments on Historical Loans | Admin. Expense | Cumulative Payments on Historical Loans | Total Payments | Increase/ (Decrease) |
| 2016 | \$ 660,607 | \$ 49,753 | \$ 810,973 | \$ 660,607 | \$ 761,220 | \$ 1,421,827 | \$ 610,854 |
| 2017 | 680,425 | 51,246 | 862,219 | 680,425 | 761,220 | 1,441,645 | 579,426 |
| 2018 | 700,838 | 52,783 | 915,002 | 700,838 | 761,220 | 1,462,058 | 547,056 |
| 2019 | 721,863 | 54,367 | 969,369 | 721,863 | 761,220 | 1,483,083 | 513,714 |
| 2020 | 743,519 | 55,998 | 1,015,330 | 743,519 | 751,183 | 1,494,702 | 479,372 |
| 2021-2044 | 26,364,641 | 1,985,637 | 39,448,725 | 26,364,641 | 11,077,765 | 37,442,406 | (2,006,319) |
| 2045 | 1,556,764 | 117,247 | 2,367,030 | 1,556,764 | - | 1,556,764 | (810,266) |

Other Post-Employment Benefits

There are no actuarial costs or savings associated with SB 14 for post-employment benefits other than pensions.

Analysis of Fiscal Costs

Table 3 compares fiscal costs relative to the state retirement systems under SB 14 and current law. Note: SB 14 has no effect on FYE 2016 because the contribution requirement has already been established.

| Year | LASERS | | | TRSL | | |
|---------|----------------|----------------|-----------------------|----------------|----------------|-----------------------|
| | Current Law | SB 14 | Increase / (Decrease) | Current Law | SB 14 | Increase / (Decrease) |
| 2015-16 | \$ 27,634,539 | \$ 27,634,539 | \$ - | \$ 25,576,319 | \$ 25,576,319 | \$ - |
| 2016-17 | 29,186,103 | 49,401,825 | 20,339,869 | 27,117,747 | 47,324,731 | 20,206,985 |
| 2017-18 | 30,784,215 | 50,104,182 | 19,319,967 | 28,705,417 | 47,899,163 | 19,193,746 |
| 2018-19 | 32,430,269 | 50,699,738 | 18,269,469 | 30,340,717 | 48,490,828 | 18,150,111 |
| 2019-20 | 34,125,705 | 51,313,161 | 17,187,456 | 32,025,077 | 49,100,243 | 17,075,166 |
| Total | \$ 154,160,831 | \$ 229,277,592 | \$ 75,116,760 | \$ 143,765,277 | \$ 218,391,285 | \$ 74,626,008 |

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| Year | LSERS | | | STPOL | | |
|---------|---------------|---------------|-----------------------|--------------|--------------|-----------------------|
| | Current Law | SB 14 | Increase / (Decrease) | Current Law | SB 14 | Increase / (Decrease) |
| 2015-16 | \$ 6,156,882 | \$ 6,156,882 | \$ - | \$ 810,973 | \$ 810,973 | \$ - |
| 2016-17 | 6,546,253 | 11,907,147 | 5,360,895 | 862,219 | 1,585,671 | 723,452 |
| 2017-18 | 6,947,305 | 12,058,782 | 5,111,478 | 915,002 | 1,606,084 | 691,082 |
| 2018-19 | 7,360,389 | 12,214,966 | 4,854,578 | 969,369 | 1,627,109 | 657,740 |
| 2019-20 | 7,785,865 | 12,375,835 | 4,589,971 | 1,025,366 | 1,648,765 | 623,398 |
| Total | \$ 34,796,692 | \$ 54,713,613 | \$ 19,916,921 | \$ 4,582,928 | \$ 7,278,600 | \$ 2,695,672 |

We have assumed that TRSL administrative expenses will be allocated to K-12 and Higher Education based on relative payrolls. Although this is the assumption we have made, other methods of allocating TRSL expenses may also be valid. Using our method, 75% of TRSL administrative expenses have been allocated to K-12 and 25% to Higher Education.

Allocations of fiscal costs to the General Fund and to Local Funds are shown below.

Table 4
Allocation of Increase/(Decrease) in Fiscal Costs to the General Fund

| Year | LASERS | TRSL Higher Ed | STPOL | Total |
|---------|---------------|----------------|--------------|---------------|
| 2015-16 | \$ - | \$ - | \$ - | \$ - |
| 2016-17 | 20,339,869 | 5,051,746 | 723,452 | 26,115,067 |
| 2017-18 | 19,319,967 | 4,798,437 | 691,082 | 24,809,486 |
| 2018-19 | 18,269,469 | 4,537,528 | 657,740 | 23,464,737 |
| 2019-20 | 17,187,456 | 4,268,792 | 623,398 | 22,079,646 |
| Total | \$ 75,116,760 | \$ 18,656,502 | \$ 2,695,672 | \$ 96,468,935 |

Allocation of Increase/(Decrease) in Fiscal Costs to Local Funds

| Year | TRSL K-12 | LSERS | Total |
|---------|---------------|---------------|---------------|
| 2015-16 | \$ - | \$ - | \$ - |
| 2016-17 | 15,155,239 | 5,360,895 | 20,516,133 |
| 2017-18 | 14,395,310 | 5,111,478 | 19,506,787 |
| 2018-19 | 13,612,583 | 4,854,578 | 18,467,161 |
| 2019-20 | 12,806,375 | 4,589,971 | 17,396,345 |
| Total | \$ 55,969,506 | \$ 19,916,921 | \$ 75,886,427 |

In summary, SB 14 will have the following effect on fiscal costs:

Expenditures:

1. Expenditures from the General Fund will increase because employer contribution requirements will increase during the five-year measurement period.
2. Expenditures from Local Funds will increase because employer contribution requirements will increase during the five-year measurement period.

Revenues:

- LASERS, TRSL, LSERS and STPOL (Agy Self-Generated) revenues will increase because employer contribution requirements will increase during the five-year measurement period.

Actuarial Data, Methods and Assumptions

This actuarial note was prepared using actuarial data, methods, and assumptions as disclosed in the most recent actuarial valuation report adopted by PRSAC.

Note: Treatment of administrative expenses as an actuarial loss every year is contrary to Actuarial Standards of Practice (ASOPs) and could be construed as not being actuarial sound. Unless SB 14 is enacted, actuaries for the state retirement systems will be required under ASOPs to insert a caveat in the annual valuation reports stating that the valuations were not prepared in accordance with ASOPs because Louisiana law constrains them from doing so.

Actuarial Caveat

There is nothing in SB 14 that will compromise the signing actuary's ability to present an unbiased statement of actuarial opinion.

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Actuarial Credentials:

Paul T. Richmond is the actuary 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.

Dual Referral:

Senate

- 13.5.1: Annual Fiscal Cost \geq \$100,000
- 13.5.2: Annual Tax or Fee Change \geq \$500,000

House

- 6.8(F)(1): Annual Fiscal Cost \geq \$100,000
- 6.8(F)(2): Annual Revenue Reduction \geq \$100,000
- 6.8(G): Annual Tax or Fee Change \geq \$500,000