2018 REGULAR SESSION
ACTUARIAL NOTE SB 533

Senate Bill 533 SLS 18RS-734
Original

Author: Senator Milkovich
Date: April 9, 2018
LLA Note SB 533.01

Organizations Affected:
Firefighters' Retirement System

OR INCREASE APV

This Note has been prepared by the Actuarial Services Department of the Legislative Auditor with assistance from either the Fiscal Notes staff of the Legislative Auditor or staff of the Legislative Fiscal Office. The attachment of this Note provides compliance with the requirements of R.S. 24:521 as amended by Act 353 of the 2016 Regular Session.

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Manager Actuarial Services

Bill Header: FIREFIGHTERS RETIREMENT. Provides for a five-year DROP period. (06/30/18)

Cost Summary:

The estimated actuarial and fiscal impact of SB 533 on the retirement systems and their plan sponsors is summarized below. Actuarial costs pertain to estimated changes in the ***actuarial present value of future benefit payments***. Fiscal costs or savings pertain to changes to all cash flows over the next five year period including retirement system cash flows, OPEB cash flows, or cash flows related to other government entities.

An increase in actuarial costs is denoted throughout the actuarial note by “Increase” or a positive number. Actuarial savings are denoted by “Decrease” or a negative number. An increase in expenditures or revenues (fiscal impact) is denoted by “Increase” or a positive number. A decrease in expenditures or revenues is denoted by “Decrease” or a negative number.

Estimated Actuarial Impact:

The top part of the following chart shows the estimated change in the ***actuarial present value of future benefit payments and expenses***, if any, attributable to the proposed legislation. The bottom part shows the effect on cash flows.

Actuarial Costs Pertaining to:		**Actuarial Cost**
The Retirement Systems		Increase
Other Post Employment Benefits (OPEB)		Decrease
Other Government Entities		0
Total		Increase
Five Year Fiscal Cost Pertaining to:	**Expenses**	**Revenues**
The Retirement Systems	Increase	Increase
Other Post Employment Benefits	Decrease	0
Other Government Entities	0	0
Total	Increase	Increase

Bill Information

Current Law

Current law provides that members of the Firefighters’ Retirement System (FRS) may remain in the Deferred Retirement Option Plan (DROP) for a period of three years.

Proposed Law

The duration of the DROP period will be extended to five years for any member who has at least 27 years of service.

Implications of the Proposed Changes

The benefit provisions pertaining to DROP will be enhanced.

I. ACTUARIAL ANALYSIS SECTION

A. Analysis of Actuarial Costs (Prepared by LLA)

This section of the actuarial note pertains to actuarial costs or savings associated with the retirement systems, with OPEB, and with other government entities.

1. Retirement Systems

The actuarial cost of SB 533 associated with the retirement systems is estimated to be an increase. Our analysis is summarized below.

The following information is presented to put some context to our analysis of actuarial costs.

a. FRS has 280 active members who have 25 to 30 years of service. The average salary of these members is $75,700 a year.

b. FRS has 160 members who are in DROP and are age 60 or under. The average service and average pay associated with these members are not available.

c. FRS has 11 members in DROP who are between age 61 and age 65. Average service and average pay are not available.

The following case is presented to illustrate the basis for our cost conclusions.

A 58 year old member with 27 years of service before entering DROP has been in DROP for three years. He is earning $60,000 a year and has been earning that amount for the past 6 years. If he continues to be a firefighter, he will continue to earn $60,000 a year for the foreseeable future.

Situation A

Let's first suppose that the member intends to continue to work two more years regardless of whether or not SB 533 is enacted. SB 533 will then have the following effects on the member, FRS, and the employer.

The following analysis shows that if SB 533 is enacted, the employer avoids paying $31,500 in contributions to the system, FRS liability increases by $99,500, and the plan member gains an additional $68,000 of wealth. Essentially, the employer saves $31,500 but at a $99,500 cost to FRS. This cost is spread proportionately by payroll to all employers participating in FRS.

Effect On:		**SB 533 Is Not Enacted**	**SB 533 Is Enacted**
The Member:			
	Deposits into DROP Account	$ 0	$60,000 x 3 1/3% x 27 x 2 = $ 108,000
	Member Contributions Paid to FRS	$(60,000) x 2 x 10% = $ (12,000)	$ 0
	Value of Additional Benefit Accruals	2 x 3 1/3% x $60,000 x 13 = $ 52,000	$ 0
	Future Salary Received by the Member from the Employer	2 x $60,000 = $ 120,000	2 x $60,000 = $ 120,000
	Increase/(Decrease) in Member's Wealth	$ 160,000	$ 228,000
	Increase/(Decrease) in Member's Wealth Resulting from the Enactment of SB 533		$ 68,000
FRS:			
	Payments to Member's DROP Account.	$ 0	$(60,000) x 3 1/3 x 27 x 2 = $(108,000)
	Contributions Received from the Member	$60,000 x 2 x 10% = $ 12,000	$ 0
	Contributions Received from the Employer	$60,000 x 2 x 26.25% = $ 31,500	$ 0
	Value of Additional Benefits Granted to the Employee	2 x 3 1/3% x $(60,000) x 13 = $ (52,000)	$ 0
	Increase/(Decrease) in FRS Resources	$ (8,500)	$ (108,000)
	Increase/(Decrease) in FRS Resources Resulting from the Enactment of SB 533		$ (99,500)

Effect On:		**SB 533 Is Not Enacted**	**SB 533 Is Enacted**
The Employer:			
	Salary Paid by the Employer to the Member	$(60,000) x 2 = $ (120,000)	$(60,000) x 2 = $ (120,000)
	Contributions Paid to FRS by the Employer	$ (31,500)	$ 0
	Increase/(Decrease) in Employer Resources	$ (151,500)	$ (120,000)
	Increase/(Decrease) in Employer Resources Resulting from the Enactment of SB 533		$ 31,500

Situation B

On the other hand, let's suppose that the member will quit immediately if SB 533 is not enacted, but will continue to work for an additional two years if it is enacted. SB 533 will then have the following effects on the member, FRS, and the employer.

The following analysis shows that if SB 533 is enacted, the employer's resources will increase $44,250, FRS' liability will increase $19,050, and the member has no gain or loss of wealth.

Effect On:		**SB 533 Is Not Enacted**	**SB 533 Is Enacted**
The Member:			
	Pension Benefits Paid to the Member and/or Deposits into the Member's DROP Account	$60,000 x 3 1/3% x 27 x 2 = $ 108,000	$60,000 x 3 1/3% x 27 x 2 = $ 108,000
	Member Contributions to Paid to FRS	$ 0	$ 0
	Value of Additional Benefit Accruals	$ 0	$ 0
	Increase/(Decrease) in Member's Wealth	$ 108,000	$ 108,000
	Increase/(Decrease) in Member's Wealth Resulting from the Enactment of SB 533		$ 0
FRS:			
	Pension Benefits Paid to the Member and/or Deposits into the Member's DROP Account	$(108,000)	$(108,000)
	Contributions Received from the Member's Replacement Assuming the Replacement earns $30,000 a year, or from the member who Continues to Work while in DROP	$30,000 x 2 x 10% = $ 6,000	$ 0
	Contributions received from the Employer of the Replacement Employee Based on Replacement's Salary and/or from the Member's Employer Based on the Member's Salary	$30,000 x 2 x 26.25% = $ 15,750	$ 0
	Value of Additional Benefits Earned by the Member's Replacement and/or by the Member	2 x 3 % x $(30,000) x 1.5 = $ (2,700)	$ 0
	Increase/(Decrease) in FRS Resources	$ (88,950)	$ (108,000)
	Increase/(Decrease) in FRS Resources Resulting from the Enactment of SB 533		$ (19,050)

Effect On:		**SB 533 Is Not Enacted**	**SB 533 Is Enacted**
The Employer:			
	Salary Paid by the Employer to the Member's Replacement and/or to the Member	2 x $(30,000) = $(60,000)	2 x $(60,000) = $(120,000)
	Contributions paid to FRS by the Employer of the Member's Replacement and/or the Member	$(30,000) x 2 x 26.25% = $ (15,750)	$ 0
	Increase/(Decrease) in Employer Resources	$ (75,750)	$ (120,000)
	Increase/(Decrease) in Employer Resources Resulting from the Enactment of SB 533		$ (44,250)

Therefore, in both situations, FRS incurs a net actuarial cost (liability increases offset by revenue decreases) as a result of SB 533. Employer contribution requirements will have to be increased in the future in order to accommodate the net increase in actuarial costs. The precise amount cannot be determined. Currently FRS has 173 members in DROP. Many of these are likely to be in Situation A. They will work two more years regardless of SB 533. Enactment will provide them with a windfall and FRS will pay out significantly more money in pension benefits.

Many of the 173 members in DROP will fall into Situation B. They will not receive a windfall, but FRS still incurs a net loss.

Some actuarial savings may arise relative to members of FRS who elect to continue regular employment and defer entry into DROP to obtain the benefit of the extended DROP period. SB 533 may induce members with less than 27 years of service to remain employed in order to reap the benefit of a longer DROP period. If such inducement occurs some savings will be realized to offset the additional benefits that will be provided to such members. There is insufficient evidence to conclude that such savings will be large enough to offset the additional costs associated Situation A and Situation B. As a result, SB 533 has an net actuarial cost.

The effects on various components of actuarial cost relative to the DROP provisions of SB 533 are summarized below:

a. The actuarial present value of future benefits will increase.
b. The unfunded accrued liability of the plan will increase.
c. Normal costs will increase.
d. Employer and employee contributions will increase.

The example provided above illustrates the complexity of determining an actuarial cost for SB 533. Actuarial costs depend on a number of factors such as:

a. The number of members who are eligible to make a decision to enter or exit DROP.
b. The age, service, and salary characteristics of such members.
c. Prevailing biases toward DROP including – employer biases and member biases.

Answers to questions a and b can be determined. An answer to question c cannot be predicted in advance of the enactment of SB 533. Some actuaries assert that DROP is a cost neutral benefit, regardless of whether the DROP period is three years or five years, and can produce historical statistical evidence supporting their conclusion. Other actuaries are a bit more cautious, factoring in their opinions the unintended consequences of DROP that could potentially occur.

Some of the large fire districts have claimed that a five year DROP period would be less costly to their district than a three year DROP period. The argument is supported by assumptions and membership characteristics that are unique to their district. We do not dispute these arguments; they may very well be correct. But if there is any actuarial cost to FRS, and there is likely to be a cost, it must be paid by someone. And it is likely that the employer that has the most DROP participants will not pay FRS for the full cost that it incurs. Some of the cost will be spread among all employers participating in the retirement system.

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After a careful analysis and after reading and listening to presentations on DROP, it is our opinion that SB 533 will have an actuarial cost, although that cost will be small.

2. Other Post-Employment Benefits (OPEB)

Actuarial costs for post-retirement benefits other than pensions will decrease as a result of SB 533 to the extent that employers provide such benefits. Some members will stay in DROP for a couple more years. As a result, premiums associated with post-employment benefits will not be paid and actuarial costs will decrease.

3. Other Government Entities

The actuarial cost or savings of SB 533 associated with government entities other than those identified in SB 533, is estimated to be $0.

B. Actuarial Data, Methods and Assumptions
(Prepared by LLA)

Unless indicated otherwise, the actuarial note for SB 533 was prepared using actuarial data, methods, and assumptions as disclosed in the most recent actuarial valuation report adopted by PRSAC. The data, methods and assumptions are being used to provide consistency with the actuary for the retirement system who may also be providing testimony to the Senate and House retirement committees.

C. Actuarial Caveat
(Prepared by LLA)

There is nothing in SB 533 that will compromise the signing actuary's ability to present an unbiased statement of actuarial opinion.

II. FISCAL ANALYSIS SECTION

This section of the actuarial note pertains to fiscal costs or savings associated with the retirement systems (Table A), with OPEB (Table B), and with other fiscal costs or savings associated with government entities not associated with either the retirement systems or OPEB (Table C). Fiscal costs or savings in Table A include administrative costs associated with the retirement systems and the sponsoring government entities. The total effect of SB 533 on fiscal costs, fiscal savings, or cash flows is presented in Table D.

A. Estimated Fiscal Impact – Retirement Systems
(Prepared by LLA)

1. Narrative

Table A shows the estimated fiscal impact of the proposed legislation on the retirement systems and the government entities that sponsor them. A fiscal cost is denoted by "Increase" or a positive number. Fiscal savings are denoted by "Decrease" or a negative number. A revenue increase is denoted by "Increase" or a positive number. A revenue decrease is denoted by "Decrease" or a negative number.

Retirement System Fiscal Cost: Table A

EXPENDITURES	2018-19	2019-2020	2020-2021	2021-2022	2022-23	5 Year Total
State General Fund	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Agy Self Generated	Increase	Increase	Increase	Increase	Increase	Increase
Stat Deds/Other	0	0	0	0	0	0
Federal Funds	0	0	0	0	0	0
Local Funds	Increase	Increase	Increase	Increase	Increase	Increase
Annual Total	Increase	Increase	Increase	Increase	Increase	Increase

REVENUES	2018-19	2019-2020	2020-2021	2021-2022	2022-23	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

SB 533 will have the following effects on retirement related fiscal costs and revenues during the five year measurement period.

2. Expenditures:

   a. Expenditures from FRS (Agy Self-Generated) will increase because there will be a net loss of FRS resources. FRS will pay DROP benefits under SB 533 when it would not have under current law.

   b. Expenditures from the Local Funds will increase to the extent that employer contribution requirements increase to fund the net loss of FRS resources.

   c. Expenditures from Local Funds will increase to the extent that employer payroll costs will be larger under SB 533 than under current law.

3. Revenues:

   a. FRS revenues (Agy Self-Generated) will increase to the extent that employer contributions increase.

B. Estimated Fiscal Impact – OPEB
(Prepared by LLA)

1. Narrative

Table B shows the estimated fiscal impact of SB 533 on actuarial costs or savings associated with OPEB and the government entities that sponsor these benefit programs. Fiscal costs or savings in Table B include administrative costs associated with the government entity sponsoring the OPEB program. A fiscal cost is denoted by "Increase" or a positive number. Fiscal savings are denoted by "Decrease" or a negative number. A revenue increase is denoted by "Increase" or a positive number. A revenue decrease is denoted by "Decrease" or a negative number.

OPEB Fiscal Cost: Table B

EXPENDITURES	2018-19	2019-2020	2020-2021	2021-2022	2022-23	5 Year Total
State General Fund	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
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	Decrease	Decrease	Decrease	Decrease	Decrease
Annual Total	$ 0	Decrease	Decrease	Decrease	Decrease	Decrease

REVENUES	2018-19	2019-2020	2020-2021	2021-2022	2022-23	5 Year Total
State General Fund	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
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	0	0	0	0	0
Annual Total	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0

SB 533 will have the following effect on OPEB related fiscal costs and revenues during the five year measurement period.

Expenditures from the Local Funds will decrease to the extent that premiums associated with post-employment benefits are delayed by a few years for some retirees.

C. Estimated Fiscal Impact: Other Government Entities (unrelated to the retirement systems or OPEB)
(Prepared by Bradley Cryer, Assistant Legislative Auditor)

1. Narrative

From time to time, legislation is proposed that has an indirect effect on cash flows associated with other government entities, unrelated to the retirement systems or OPEB. Table C shows the estimated fiscal impact (administrative and actuarial) of SB 533 on such government entities. A fiscal cost is denoted by "Increase" or a positive number. Fiscal savings are denoted by "Decrease" or a negative number.

Fiscal Costs for Other Government Entities: Table C

EXPENDITURES	2018-19	2019-2020	2020-2021	2021-2022	2022-23	5 Year Total
State General Fund	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
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	0	0	0	0	0
Annual Total	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0

REVENUES	2018-19	2019-2020	2020-2021	2021-2022	2022-23	5 Year Total
State General Fund	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
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	0	0	0	0	0
Annual Total	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0

SB 533 will have the following effects on fiscal costs and revenues related to government entities other than FRS and its sponsors during the five year measurement period.

2. Expenditures:

The bill will have an indirect impact on employee recruiting, hiring, and retainage at individual employers, based on DROP participants remaining in their positions for an additional two years; however, there is no anticipated direct material effect on aggregate governmental expenditures as a result of this measure.

3. Revenues:

This bill is not expected to have a fiscal impact.

D. Estimated Fiscal Impact − All Retirement Systems, OPEB, and All Government Entities (Prepared by LLA)

1. Narrative

Table D shows the estimated fiscal impact of SB 533 on all government entities within the state of Louisiana. Cell values in Table D are the sum of the respective cell values in Table A, Table B, and Table C. A fiscal cost is denoted by "Increase" or a positive number. Fiscal savings are denoted by "Decrease" or a negative number. A revenue increase is denoted by "Increase" or a positive number. A revenue decrease is denoted by "Decrease" or a negative number.

Total Fiscal Cost: Table D (Cumulative Costs from Tables A, B, & C)

EXPENDITURES	**2018-19**	**2019-2020**	**2020-2021**	**2021-2022**	**2022-23**	**5 Year Total**
State General Fund	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Agy Self Generated	Increase	Increase	Increase	Increase	Increase	Increase
Stat Deds/Other	0	0	0	0	0	0
Federal Funds	0	0	0	0	0	0
Local Funds	Increase	Increase	Increase	Increase	Increase	Increase
Annual Total	Increase	Increase	Increase	Increase	Increase	Increase

REVENUES	**2018-19**	**2019-2020**	**2020-2021**	**2021-2022**	**2022-23**	**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

Credentials of the Signatory Staff:

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.

Bradley Cryer, Assistant Legislative Auditor, has supervised the preparation of the fiscal analyses contained herein.

Information Pertaining to Article (10)(29(F) of the Louisiana Constitution

X SB 533 contains a retirement system benefit provision having an actuarial cost.

Some members of FRS will receive a larger benefit with the enactment of SB 533 than what they would have received without SB 533.

Dual Referral Relative to Total Fiscal Costs or Total Cash Flows:

The information presented below is based on information contained in Table D for the first three years following the 2018 regular session.

Senate			House		
☐	13.5.1	Applies to Senate or House Instruments. If an annual fiscal cost ≥ \$100,000, then bill is dual referred to: **Dual Referral: Senate Finance**	☐	6.8F	Applies to Senate or House Instruments. If an annual General Fund fiscal cost ≥ \$100,000, then the bill is dual referred to: **Dual Referral to Appropriations**
☐	13.5.2	Applies to Senate or House Instruments. If an annual tax or fee change ≥ \$500,000, then the bill is dual referred to: **Dual Referral: Revenue and Fiscal Affairs**	☐	6.8G	Applies to Senate Instruments only. If a net fee decrease occurs or if an increase in annual fees and taxes ≥ \$500,000, then the bill is dual referred to: **Dual Referral: Ways and Means**