2014 REGULAR SESSION
ACTUARIAL NOTE HB 1225

House Bill 1225 HLS 14RS-270 Reengrossed with HRC Amendment #3951 and HFA #4456 & #4569 **Author: Representative Joel C. Robideaux and Senator Elbert L. Guillory** **Date: May 9, 2014** **LLA Note HB 1225.03** **Organizations Affected:** **State Retirement Systems** **RE DECREASE APV**	**The Note was prepared by the Actuarial Services Department of the Office of the Legislative Auditor. The attachment of the Note to HB 1225 provides compliance with the requirements of R.S. 24:521.** **Paul T. Richmond, ASA, MAAA, EA** **Manager Actuarial Services**

Bill Header: RETIREMENT/STATE SYSTEMS: Provides relative to payment of system liabilities and limits creation of additional liabilities.

Cost Summary:

The estimated actuarial and fiscal impact of the proposed legislation 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/(Savings) to Retirement Systems and OGB	Decrease
Total Five Year Fiscal Cost	
Expenditures	See Below
Revenues	See Below

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.

Actuarial Cost (Savings) to:	**Increase (Decrease) in The Actuarial Present Value**
All Louisiana Public Retirement Systems	Decrease
Other Post Retirement Benefits	$0
Total	Decrease

This bill complies with the Louisiana Constitution which requires unfunded liabilities created by an improvement in benefits to be amortized over a period not to exceed ten years.

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. Fiscal costs include estimated administrative costs and costs associated with other fiscal concerns. A fiscal cost is denoted by "Increase" or a positive number. Fiscal savings are denoted by "Decrease" or a negative number.

EXPENDITURES	**2014-15**	**2015-16**	**2016-17**	**2017-2018**	**2018-2019**	**5 Year Total**
State General Fund	$ 0	See Below	See Below	See Below	See Below	See Below
Agy Self Generated	0	Decrease	Decrease	Decrease	Decrease	Decrease
Stat Deds/Other	0	0	0	0	0	0
Federal Funds	0	0	0	0	0	0
Local Funds	0	See Below	See Below	See Below	See Below	See Below
Annual Total	$ 0	See Below	See Below	See Below	See Below	See Below

REVENUES	**2014-15**	**2015-16**	**2016-17**	**2017-2018**	**2018-2019**	**5 Year Total**
State General Fund	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Agy Self Generated	0	See Below	See Below	See Below	See Below	See Below
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	See Below	See Below	See Below	See Below	See Below

A detailed analysis of savings resulting from HB 1225 begins on page 7.

Bill Information:

Current Law

Article 10(29)(F), enacted by the legislature and the voters in 2010, states "Benefit provisions for members of any public retirement system, plan, or fund that is subject to legislative authority shall be altered only by legislative enactment. No such benefit provisions having an actuarial cost shall be enacted unless approved by two-thirds of the elected members of each house of the legislature." Based on our reading of the constitutional amendment, our discussions with General Counsel for the LLA, and our discussions with legislative staff, we assume for the purposes of this actuarial note:

1. Automatic Gain Sharing - Future transfers of investment gains to the Experience Account are automatic and do not depend on legislative approval.

2. Template Benefit Provisions - Permanent benefit increases (PBIs) are ad hoc, and are not automatic. Current law contains a template of benefit provisions that will be useful as a guide to future legislators. However, future PBI grants will require the introduction of a bill, approval by two-thirds of the House and Senate, and the signature of the governor.

Automatic Gain Sharing

For the Louisiana State Employees' Retirement System (LASERS), the Teachers' Retirement System of Louisiana (TRSL), the Louisiana School Employees' Retirement System (LSERS), and the State Police Retirement System (STPOL), a portion of investment gains for each system may be transferred to the systems' Experience Accounts. The rules for each system are summarized below:

LASERS

1. Investment gains relative to the assumed discount rate are calculated on each valuation date.

2. The first $50 million of investment gains are to be used to reduce the Original Amortization Base (OAB). The amortization schedule for the OAB is then re-amortized.

3. The next $50 million of gains are to be used to reduce the Experience Account Amortization Base (EAAB). The amortization schedule for the EAAB is then re-amortized.

4. 50% of any gains in excess of $100 million will be transferred to the Experience Account. A charge base is established equal to the amount transferred. This base is amortized over 30 years.

5. A transfer of gains to the Experience Account for a given year may not exceed the difference between two times the cost of a full 3% PBI and the amount already in the Account.

TRSL

1. Investment gains relative to the assumed discount rate are calculated on each valuation date.

2. The first $100 million of investment gains are to be used to reduce the Original Amortization Base (OAB). The amortization schedule for the OAB is then re-amortized.

3. The next $100 million of gains are to be used to reduce the Experience Account Amortization Base (EAAB). The amortization schedule for the EAAB is then re-amortized.

4. 50% of any gains in excess of $200 million will be transferred to the Experience Account. A charge base is established equal to the amount transferred. This base is amortized over 30 years.

5. A transfer of gains to the Experience Account for a given year may not exceed the difference between two times the cost of a full 3% PBI and the amount already in the Account.

LSERS and STPOL

1. Investment gains relative to the assumed discount rate are calculated on each valuation date.

2. 50% of investment gains will be transferred to the Experience Account. A charge base is established equal to the amount transferred. This base is amortized over 30 years.

3. A transfer of gains to the Experience Account for a given year may not exceed the difference between two times the cost of a full 3% PBI and the amount already in the Account.

Gain sharing is automatic but subject to the maximum limit of funds that can be held in the Experience Account. PBIs require legislation. If the legislature does not grant a PBI, the balance in the Experience Account will reach the maximum limit. Once that occurs additional transfers of investment gains are not permitted. However, the balance in the Experience Account will still grow with interest credits.

Template Benefit Provisions

Current law provides a legal template that the legislature may choose to adopt in the enactment of permanent benefit increases (PBI). This template specifies eligibility criteria, which is generally age 60 with one year of retirement, and the basis for the amount of a PBI grant, which is the CPI-U. There is no requirement that PBI legislation follow the template. Nor is there any guarantee that PBIs in the future will even be based on the balance in the Experience Account.
The PBI template contains the following provisions:

Eligibility:

The following retirees and beneficiaries of the Louisiana State Employees' Retirement System (LASERS) will be eligible for a PBI to be paid July 1, 2014.

1. Each retiree who satisfies all of the following criteria on June 30, 2014:
   - Has received a benefit for at least one year, and
   - Has attained at least age 60.
2. Each non-retiree beneficiary (including each survivor of a deceased active member) receiving a benefit on June 30, 2014, who satisfies all of the following criteria:
   - The deceased member or beneficiary or both combined have received benefits for at least one year, and
   - The deceased member would have been at least age 60 had he lived.
3. Each disability retiree and each beneficiary who is receiving benefits based on the death of a disability retiree, who also on June 30, 2014, has been receiving benefits for at least one year.

Permanent Benefit Increase:

1. The maximum PBI that may be granted on a July 1 for a given year is equal to the lesser of:
   a. 3% x the current benefit,
   b. The increase in the CPI-U for the prior calendar year x the current benefit.
2. If the rate of return on the actuarial value of assets for a fiscal year ending on June 30 is less than 8.25% for LASERS and TRSL (8.25% is hard coded into the law) and the assumed discount rate for LSERS and STPOL (currently 7.25% and 7.00% respectively), then a PBI may be granted on July 1. However, the maximum PBI that may be granted is the lesser of:
   a. 2% x the current benefit,
   b. The increase in the CPI-U for the prior calendar year x the current benefit.
3. No PBI may be granted on July 1 for LASERS and TRSL if the actuarial return on system assets is less than the assumed rate of return (currently 8.00%) and the funded ratio of the system is less than 80%. There is no similar restriction relative to LSERS and STPOL.
4. If the balance in the Experience Account is less than the actuarial present value of the full PBI determined above, then no PBI may be granted.
5. PBIs will be based on the portion of a retiree's benefit that is less than $96,931 for LASERS, $93,755 for TRSL, and $94,313 for LSERS and STPOL. These limits are indexed to the CPI-U.

Investment Gains

All investment gains not specifically allocated to the OAB, to the EAAB, or to the Experience Account will be amortized as a credit base with level payments over a 30 year period.

Proposed Law

HB 1225 continues to use a legal format for granting permanent benefit increases that includes automatic gain sharing and a PBI template. A brief summary of the changes HB 1225 will make is given below.

1. Transfers to the Experience Account will continue to be automatic. Automatic gain sharing rules pertaining to the calculation of the portion of investment gains to be transferred the Experience Account will be changed.
2. PBI grants will continue to require approval through the legislative process. The PBI template relative to the amount of PBI that may be granted and when such a grant may occur will be changed. Template rules pertaining to benefit eligibility will not change.
3. The allocation of investment gains not transferred to the Experience Account will change. Gains retained by the Regular Benefit Account will be allocated to pay off older charge bases more rapidly under HB 1225 than under current law.

Automatic Gain Sharing

A portion of investment gains for each state retirement system may be transferred to the systems' Experience Accounts. The rules for each system are summarized below:

LASERS

1. Investment gains relative to the assumed discount rate are calculated on each valuation date.

2. The first $25 million of investment gains will be used to reduce the Original Amortization Base (OAB) for the June 30, 2014, valuation. The amortization schedule for the OAB **will not** be re-amortized. Beginning with the June 30, 2015, valuation and continuing thereafter, the $25 million amount will be increased to $50 million.

3. The next $25 million of investment gains will be used to reduce the Experience Account Amortization Base (EAAB) for the June 30, 2014, valuation. The amortization schedule for the EAAB **will not** be re-amortized. Beginning with the June 30, 2015, valuation and continuing thereafter, the $25 million amount will be increased to $50 million.

4. For the June 30, 2014, valuation only, investment gains between $50 million and $100 million will be treated as an actuarial gain. Such gain will be amortized over a period of five years.

5. For the June 30, 2014, valuation and continuing thereafter, 50% of any investment gains in excess of $100 million will be transferred to the Experience Account. However, the transfer amount may not exceed the amounts shown in Table 1.

Table 1

Funded Ratio on Valuation Date	**Transfer May Not Exceed:**
80% or More	The difference between **<u>two</u>** times the cost of a full 3% PBI and the amount already in the Experience Account.
75% to 80%	The difference between the cost of a full 2.5% PBI and the amount already in the Experience Account.
65% to 75%	The difference between the cost of a full 2.0% PBI and the amount already in the Experience Account.
55% to 65%	The difference between the cost of a full 1.5% PBI and the amount already in the Experience Account.
Less than 55%	No transfer is allowed.

6. Any amount that may not be transferred to the Experience Account because of the Table 1 limit will be treated as an actuarial gain. For the June 30, 2014, valuation such gain will be amortized over five years. For the June 30, 2015, valuation and continuing thereafter, such gain shall be amortized over 30 years. Once the system has a funded level of 85% or more, such gain shall be amortized over 20 years.

7. When either the OAB or EAAB are fully liquidated, investment gains that otherwise would have applied to the OAB or EAAB will be next applied to the remaining OAB or EAAB. Gains that remain after the OAB and EAAB have been fully liquidated will then be allocated to the next oldest charge base. The amortization schedule for that base **will not** be re-amortized unless the system is 85% funded.

8. All other investment gains will be treated as an actuarial gain and will be amortized over a 30 year period. Once the system becomes 85% funded, such gain shall be amortized over 20 years.

9. The $50 million amount and the $100 million amount will increase on each valuation date by the ratio of the actuarial value of assets on the valuation date to the actuarial value of assets on the prior valuation date. If the actuarial value of assets decreases between valuation dates, the $50 million and $100 million thresholds will not change.

10. A charge base will be established whenever an amount is transferred to the Experience Account. This base will be amortized over a period of 30 years. Beginning with the June 30, 2019, valuation, such charge base will be amortized over a ten year period.

11. When the system becomes 85% funded, any new bases (charge bases or credit bases) will be amortized over 20 years rather than 30 years. The only exception to this rule will be for bases resulting from benefit increases or transfers to the Experience Account. These bases will continue to be amortized over ten years.

TRSL

1. Investment gains relative to the assumed discount rate are calculated on each valuation date.

2. The first $50 million of investment gains will be used to reduce the Original Amortization Base (OAB) for the June 30, 2014, valuation. The amortization schedule for the OAB **will not** be re-amortized. Beginning with the June 30, 2015, valuation and continuing thereafter, the $50 million amount will be increased to $100 million.

3. The next $50 million of investment gains will be used to reduce the Experience Account Amortization Base (EAAB) for the June 30, 2014, valuation. The amortization schedule for the EAAB **will not** be re-amortized. Beginning

with the June 30, 2015, valuation and continuing thereafter, the $50 million amount will be increased to $100 million.

4. For the June 30, 2014, valuation only, investment gains between $100 million and $200 million will be treated as an actuarial gain. Such gain will be amortized over a period of five years.

5. For the June 30, 2014, valuation and continuing thereafter, 50% of any investment gains in excess of $200 million will be transferred to the Experience Account. However, the transfer amount may not exceed the amounts shown in Table 1.

6. Any amount that cannot be transferred to the Experience Account because of the Table 1 limit will be treated as an actuarial gain. For the June 30, 2014, valuation such gain will be amortized over five years. For the June 30, 2015 valuation and continuing thereafter, such gain shall be amortized over 30 years. Once the system has a funded level of 85% or more, such gain shall be amortized over 20 years.

7. When either the OAB or EAAB are fully liquidated, investment gains that otherwise would have applied to the OAB or EAAB will be next applied to the remaining OAB or EAAB. Gains that remain after the OAB and EAAB have been fully liquidated will then be allocated to the next oldest charge base. The amortization schedule for that base **will not** be re-amortized unless the system is 85% funded.

8. All other investment gains will be treated as an actuarial gain and will be amortized over a 30 year period. Once the system becomes 85% funded, such gain shall be amortized over 20 years.

9. The $100 million amount and the $200 million amount will increase on each valuation date by the ratio of the actuarial value of assets on the valuation date to the actuarial value of assets on the prior valuation date. If the actuarial value of assets decreases between valuation dates, the $100 million and $200 million thresholds will not change.

10. A charge base will be established whenever an amount is transferred to the Experience Account. This base will be amortized over a period of 30 years. Beginning with the June 30, 2019, valuation, such charge base will be amortized over a ten year period.

11. When the system becomes 85% funded, any new bases (charge bases or credit bases) will be amortized over 20 years rather than 30 years. The only exception to this rule will be for bases resulting from benefit increases or transfers to the Experience Account. These bases will continue to be amortized over ten years.

LSERS

1. Investment gains relative to the assumed discount rate are calculated on each valuation date.

2. The first $7.5 million of investment gains will be used to reduce the oldest charge amortization base for the June 30, 2014, valuation. The amortization schedule for the base **will not** be re-amortized. Beginning with the June 30, 2015, valuation and continuing thereafter, the $7.5 million amount will be increased to $15 million.

3. For the June 30, 2014, valuation only, investment gains between $7.5 million and $15 million will be treated as an actuarial gain. Such gain will be amortized over a period of five years.

4. For the June 30, 2014, valuation and continuing thereafter, 50% of any investment gains in excess of $15 million will be transferred to the Experience Account. However, the transfer amount may not exceed the amounts shown in Table 1.

5. Any amount that can not be transferred to the Experience Account because of the Table 1 limit will be treated as an actuarial gain. For the June 30, 2014, valuation such gain will be amortized over five years. For the June 30, 2015 valuation and continuing thereafter, such gain shall be amortized over 30 years. Once the system has a funded level of 85% or more, such gain shall be amortized over 20 years.

6. When the oldest charge base has been fully liquidated, investment gains that otherwise would have applied to the oldest charge base will be next applied to the next oldest charge base. The amortization schedule for that base **will not** be re-amortized unless the system is 85% funded.

7. All other investment gains will be treated as an actuarial gain and will be amortized over a 30 year period. Once the system becomes 85% funded, such gain shall be amortized over 20 years.

8. The $15 million amount will increase on each valuation date by the ratio of the actuarial value of assets on the valuation date to the actuarial value of assets on the prior valuation date. If the actuarial value of assets decreases between valuation dates, the $15 million threshold will not change.

9. A charge base will be established whenever an amount is transferred to the Experience Account. This base will be amortized over a period of 30 years. Beginning with the June 30, 2019, valuation, such charge base will be amortized over a ten year period.

10. When the system becomes 85% funded, any new bases (charge bases or credit bases) will be amortized over 20 years rather than 30 years. The only exception to this rule will be for bases resulting from benefit increases or transfers to the Experience Account. These bases will continue to be amortized over ten years.

STPOL

1. Investment gains relative to the assumed discount rate are calculated on each valuation date.

2. The first $2.5 million of investment gains will be used to reduce the oldest charge amortization base for the June 30, 2014, valuation. The amortization schedule for the base **will not** be re-amortized. Beginning with the June 30, 2015, valuation and continuing thereafter, the $2.5 million amount will be increased to $5 million.

3. For the June 30, 2014, valuation only, investment gains between $2.5 million and $5 million will be treated as an actuarial gain. Such gain will be amortized over a period of five years.

4. For the June 30, 2014, valuation and continuing thereafter, 50% of any investment gains in excess of $5 million will be transferred to the Experience Account. However, the transfer amount may not exceed the amounts shown in Table 1.

5. Any amount that can not be transferred to the Experience Account because of the Table 1 limit will be treated as an actuarial gain. For the June 30, 2014, valuation such gain will be amortized over five years. For the June 30, 2015 valuation and continuing thereafter, such gain shall be amortized over 30 years. Once the system has a funded level of 85% or more, such gain shall be amortized over 20 years.

6. When the oldest charge base has been fully liquidated, investment gains that otherwise would have applied to the oldest charge base will be next applied to the next oldest charge base. The amortization schedule for that base **will not** be re-amortized unless the system is 85% funded.

7. All other investment gains will be treated as an actuarial gain and will be amortized over a 30 year period. Once the system becomes 85% funded, such gain shall be amortized over 20 years.

8. The $5 million amount will increase on each valuation date by the ratio of the actuarial value of assets on the valuation date to the actuarial value of assets on the prior valuation date. If the actuarial value of assets decreases between valuation dates, the $5 million threshold will not change.

9. A charge base will be established whenever an amount is transferred to the Experience Account. This base will be amortized over a period of 30 years. Beginning with the June 30, 2019, valuation, such charge base will be amortized over a ten year period.

10. When the system becomes 85% funded, any new bases (charge bases or credit bases) will be amortized over 20 years rather than 30 years. The only exception to this rule will be for bases resulting from benefit increases or transfers to the Experience Account. These bases will continue to be amortized over ten years.

Cash flows for the Experience Account are summarized below.

1. The Experience Account is credited with interest on June 30 of a plan year based on the balance in the Account on the first day of the plan year and the rate of return on the actuarial value of assets for that year.

2. PBIs, which become effective on July 1, are paid from the Regular Benefit Account. On June 30, the day prior to the effective day of the PBI, an amount is transferred from the Experience Account back to the Regular Benefit Account. This amount is equal to the present value cost of the PBI so granted.

3. The portion of the investment gains to be allocated to the Experience Account, if any, relative to a fiscal year ending June 30 is not known until the valuation process has been completed in October. However, once the allocation to the Experience Account has been determined, the transfer transaction is assumed to have occurred retroactively on July 1.

Gain sharing is automatic but subject to the maximum limit of funds that can be held in the Experience Account. PBIs require legislation. If the legislature does not grant a PBI, the balance in the Experience Account will reach the maximum limit. Once that occurs additional transfers of investment gains are not permitted. Under HB 1225, additional interest credits are also not permitted.

<u>Template Benefit Provisions</u>

HB 1225 provides a legal template that the legislature may choose to adopt in the enactment of permanent benefit increases (PBI). This template specifies eligibility criteria, which is generally age 60 with one year of retirement and the basis for the amount of a PBI grant, which is the CPI-U. There is no requirement that PBI legislation follow the template. Nor is there any guarantee that PBIs in the future will even be based on the balance in the Experience Account.

The PBI template contains the following provisions:

Eligibility:

Eligibility criteria for a PBI under HB 1225 are the same as under current law.

Permanent Benefit Increase:

1. The maximum PBI that may be granted on a July 1 for a given year depends on the information contained in Table 2.

Table 2

Conditions Necessary for A Tentative PBI		Tentative PBI Grant = the Lesser of CPI-U and
Funded Ratio	**PBI Granted In Prior Year?**	
80% or More	n/a	3.0%
75% - 80%	No	2.5%
65% - 75%	No	2.0%
55% - 65%	No	1.5%
Less than 55%	n/a	0.0%

2. If the rate of return on the actuarial value of assets for a fiscal year ending on June 30 is less than 8.25% for LASERS and TRSL (8.25% is hard coded into the law) and the assumed discount rate for LSERS and STPOL (currently 7.25% and 7.00% respectively), then a PBI may be granted on July 1. However, the maximum PBI that may be granted is the lesser of:

    a. 2% x the current benefit,

    b. The increase in the CPI-U for the prior calendar year x the current benefit.

3. No PBI may be granted on July 1 for LASERS and TRSL if the actuarial return on system assets is less than the assumed rate of return (currently 8.00%) and the funded ratio of the system is less than 80%. There is no similar restriction relative to LSERS and STPOL.

4. If the balance in the Experience Account is less than the actuarial present value of the full PBI determined above, then no PBI may be granted.

5. PBI's will be based on the portion of a retiree's benefit that is less than $60,000 for all state retirement systems. These limits will be indexed to the CPI-U.

Investment Gains

Investment gains allocated to the OAB, EAAB, and other charge bases will be used to reduce the outstanding balance of these bases. However, the amortization payment schedule for these bases will not be changed.

All investment gains not specifically allocated to the OAB, to the EAAB, to other charge bases, or to the Experience Account will be amortized as a credit base. Amortization periods associated with these gains will vary depending upon the year of occurrence and whether or not a system is 85% funded.

Implications of the Proposed Changes

As a result of HB 1225, investment gains transferred to the Experience Account will be smaller and less frequent. The limit on assets that may be retained in the Experience Account will be reduced. PBI grants will be reduced as long as the legislature follows the new template. A larger portion of investment gains will be used to amortize and eventually liquidate the OAB, the EAAB, and charge bases starting with the oldest first. Employer contribution requirements toward amortization costs will not be reduced until a charge base has been fully liquidated.

Cost Analysis:

Analysis of Actuarial Costs

Retirement Systems

HB 1225 contains no benefit provisions having an actuarial cost.

The following analysis of actuarial cost pertains to LASERS and TRSL only. The information to be gained by conducting a similar analysis for LSERS and STPOL did not warrant the cost to conduct the analysis primarily because these systems are so small relative to LASERS and TRSL.

This actuarial note was prepared using stochastic actuarial modeling to obtain a general overview of actuarial savings that will occur under HB 1225 and the general effect on employer contribution requirements. Deterministic actuarial modeling was used to identify provisions of HB 1225 as amended that would result in upward pressures and downward pressures on employer contribution requirements.

Stochastic Actuarial Modeling

The stochastic actuarial model was prepared with 85% as the basis for when the maximum Experience Account value would change to the actuarial present value of two x a full 3% PBI. The model also used 85% as the basis for when a 3% PBI could be granted. Modeling results based on the 85% value provide a conceptual view of the savings that might materialize. If an

80% value is used instead of the 85% value, then savings will be reduced because PBIs will be larger and PBIs will be granted sooner.

LASERS

1. The following conclusions can be drawn from Table A.

   a. The average frequency of transfers to the Experience Account has been significantly reduced. Transfers are expected to occur 55% of the time under current law, but only 40% of the time under HB 1225.

   b. The average dollar amount of each transfer when a transfer does occur has been reduced from $102.3 million to $63.7 million, a reduction of almost $40 million per transfer.

   c. A member of LASERS is expected to receive under current law a benefit increase of 1.26% a year throughout his retirement. Under HB 1225, the average increase will be about 0.75% a year.

   d. Employer contributions over the next 30 years will be $1.8 billion less if HB 1225 is enacted. The present value savings is estimated to be about $0.4 billion.

LASERS Table A
Information Obtained from Stochastic Open Group Valuation Analysis

	Current Law	HB 1225	Increase / (Decrease)
1. Average Frequency of Transfers to the Experience Account	55%	40%	(15%)
2. Average Amount of Transfer	$103.2 million	$63.7 million	($39.5 million)
3. Equivalent Annual PBI	1.26%	0.75%	(0.51%)
4. Total Expected Employer Contributions over the Next 30 Years	$16.6 billion	$14.8 billion	($1.8 billion)
5. Present Value of Expected Employer Contributions over the Next 30 Years	$7.0 billion	$6.6 billion	($0.4 billion)

2. The following conclusions can be drawn from Graph 1.

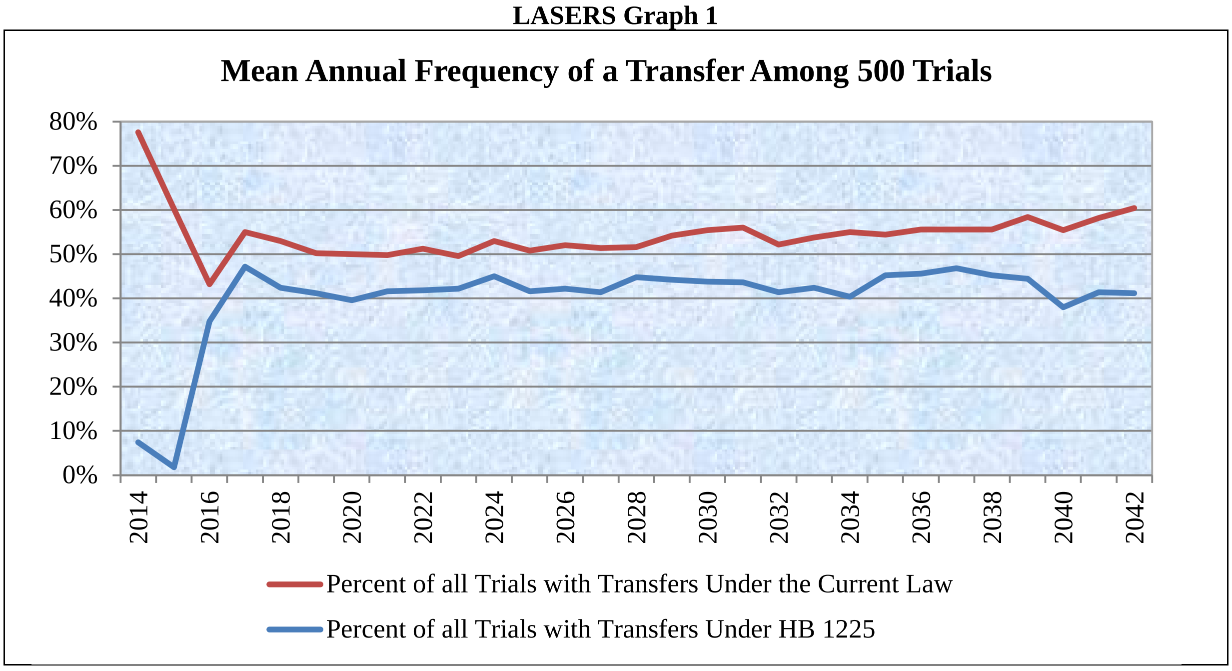
   a. The probability that a transfer to the Experience Account will occur for FYE 2014 and 2015 is quite large under current law. It is quite small under HB 1225. The reason is that the balance in the LASERS' Experience Account is almost large enough to grant a full 1.5% PBI. The transfer limit under current law will allow significant additional investment gains to be transferred to the Experience Account; but under HB 1225, transfers of additional gains are severely restricted.

   b. Transfer probabilities after FYE 2016 are quite stable both under current law and under HB 1225.

   c. The probability that a transfer to the Experience Account will occur for FYE 2017 under current law is about 55%. The probability under HB 1225 is only 45%.

   d. However, the probability of a transfer under current law in FYE 2042 is almost 60%. Under HB 1225 it is only about 40%.

LASERS Graph 1



3. The following conclusions can be drawn from Graph 2.

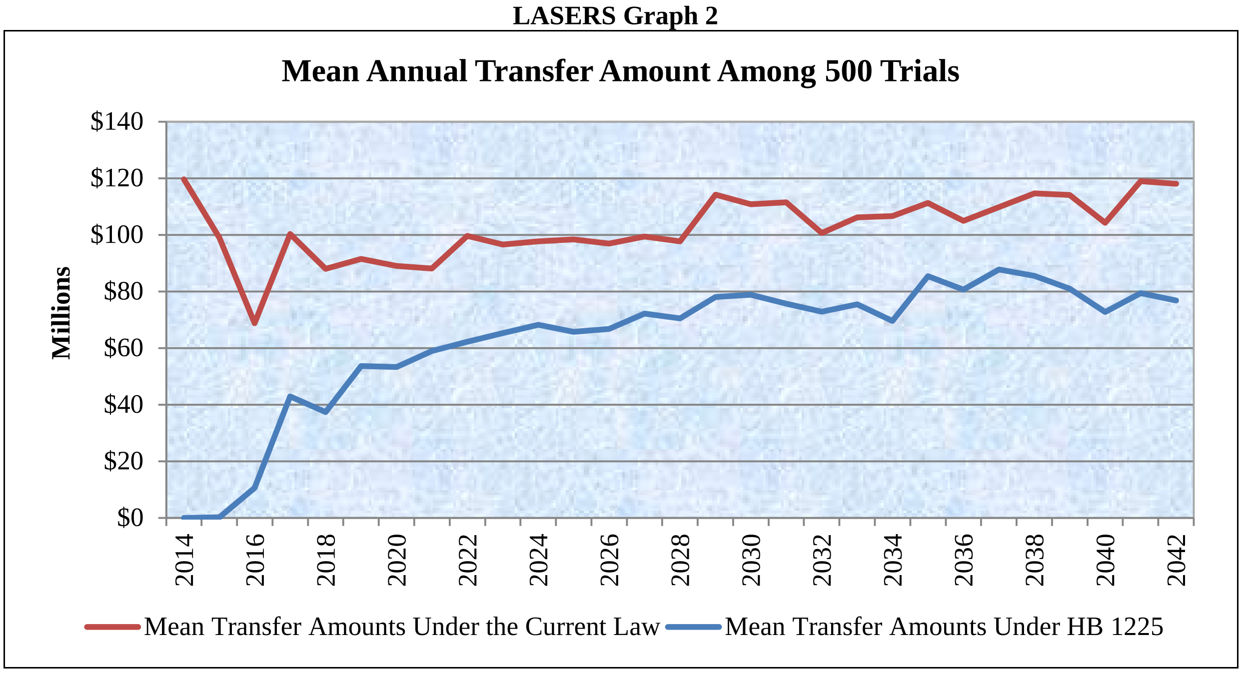
a. Graph 2 should be interpreted in the following manner for FYE 2014 (and for every year thereafter). We selected 500 rates of return on assets for FYE 2014 based on LASERS's capital market assumptions. We then measured investment gains that would occur for each rate selected and the amount of transfer to the Experience Account for each trial. The $120 million shown for FYE 2014 under current law is the average of all 500 outcomes.

b. The transfer amount for FYE 2014 is very small because of the provisions of HB 1225. The funded ratio is currently just above 55%. Therefore there is a significant probability that the ratio could fall below 55% and no transfer would be permitted. Furthermore, even if a transfer is permitted, the balance in the Experience Account is already nearly sufficient to pay for a full 1.5% PBI. The average is small, because most of the trials result in no transfer being allowed.

c. The average transfer beginning for FYE 2018 under current law is about $90 million. Under HB 1225, the average transfer will be only $40 million; a $50 million difference.

d. Average transfer amounts increase over time under both current law and HB 1225. However, the difference between the two averages tends to decrease over the next 30 years.

LASERS Graph 2

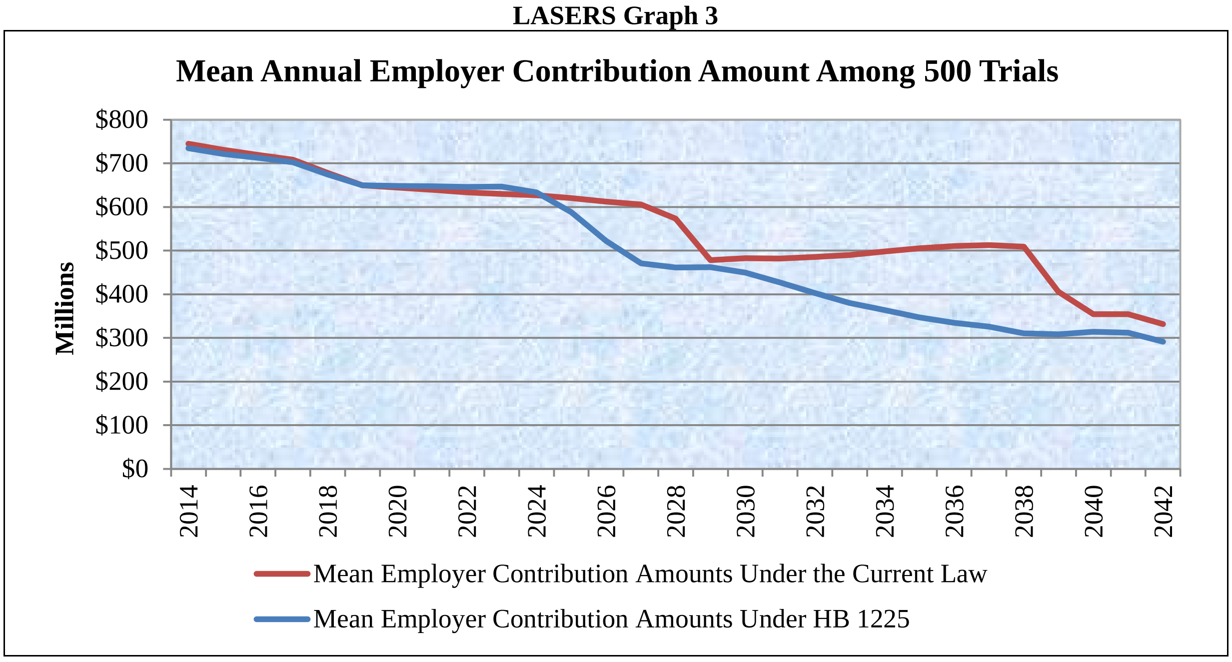


4. The following conclusions can be drawn from Graph 3.

a. Enactment of HB 1225 will produce a small reduction in employer contributions over the next five year period. A small increase is expected from 2020 to 2025. Contribution requirements under HB 1225 do not change materially from requirements under current law because amortization payments for the OAB and EAAB do not change even though the outstanding balances are reduced.

b. Significant savings will occur once the OAB and EAAB have been liquidated in about 2025.

LASERS Graph 3



TRSL

1. The following conclusions can be drawn from Table A.

   a. The average frequency of transfers to the Experience Account has been significantly reduced. Transfers are expected to occur 51% of the time under current law, but only 41% of the time under HB 1225.

   b. The average dollar amount of each transfer when a transfer does occur has been reduced from $181.9 million to $125.0 million, a reduction of almost $56.9 million per transfer.

   c. A member of TRSL is expected to receive under current law a benefit increase of 1.18% a year throughout his retirement. Under HB 1225, the average increase will be about 0.76% a year.

   d. Employer contributions over the next 30 years will be $3.0 billion less over the next 30 if HB 1225 is enacted. The present value savings is estimated to be about $0.7 billion.

TRSL Table A
Information Obtained from Stochastic Open Group Valuation Analysis

	Current Law	HB 1225	Increase / (Decrease)
1. Average Frequency of Transfers to the Experience Account	51%	41%	10%
2. Average Amount of Transfer	$181.9 million	$125.0 million	($56.9 million)
3. Equivalent Annual PBI	1.18%	0.76%	(0.42%)
4. Total Expected Employer Contributions over the Next 30 Years	$29.6 billion	$26.6 billion	($3.0 billion)
5. Present Value of Expected Employer Contributions over the Next 30 Years	$12.1 billion	$11.4 billion	($0.7 billion)

2. The following conclusions can be drawn from Graph 1.

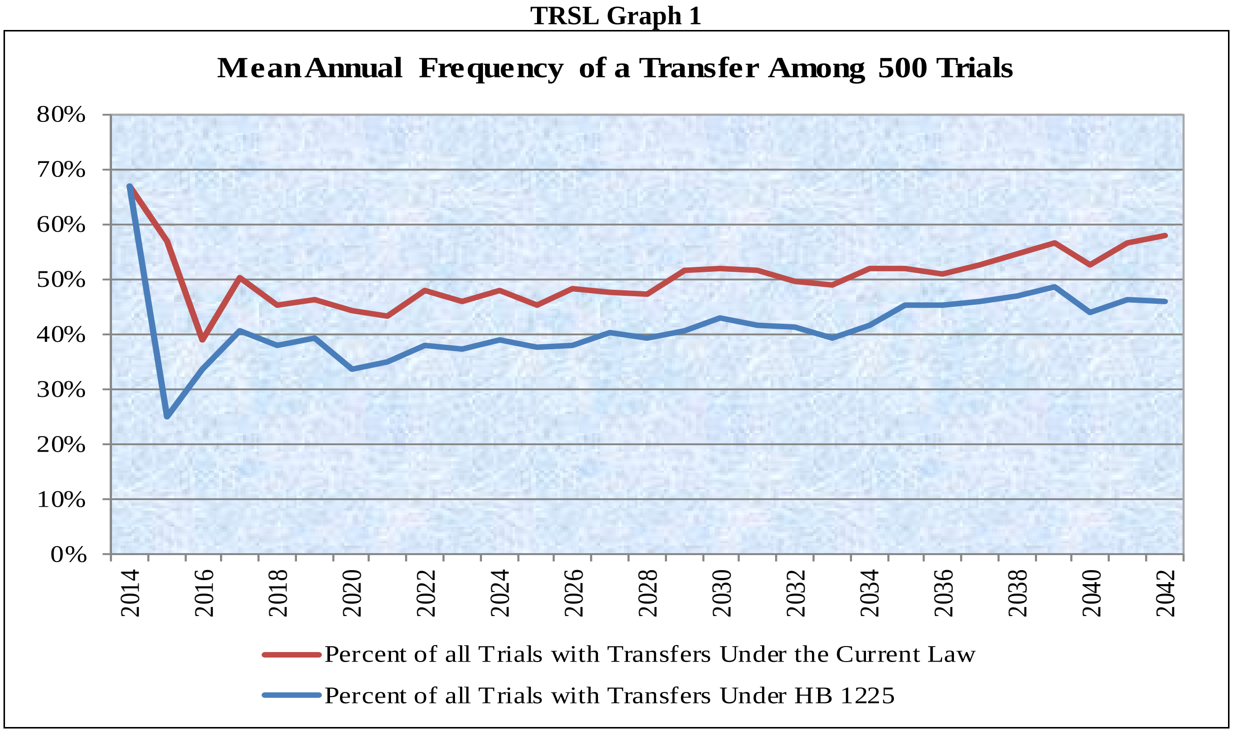
   a. The probability that a transfer to the Experience Account will occur for FYE 2014 under current law and under HB 1225 is about 68%. The reason is that the balance in the TRSL Experience Account is quite small relative to the cost of a 1.5% PBI and the funded ratio is well above 55%. Therefore, the limitations imposed by HB 1225 are not likely to apply.

   b. Transfer probabilities after FYE 2016 are quite stable both under current law and under HB 1225.

   c. The probability that a transfer to the Experience Account will occur for FYE 2017 under current law is about 50%. The probability under HB 1225 is only 40%.

   d. The difference between the transfer probabilities under current law and HB 1225 are quite similar through the modeling period.

TRSL Graph 1



3. The following conclusions can be drawn from Graph 2.

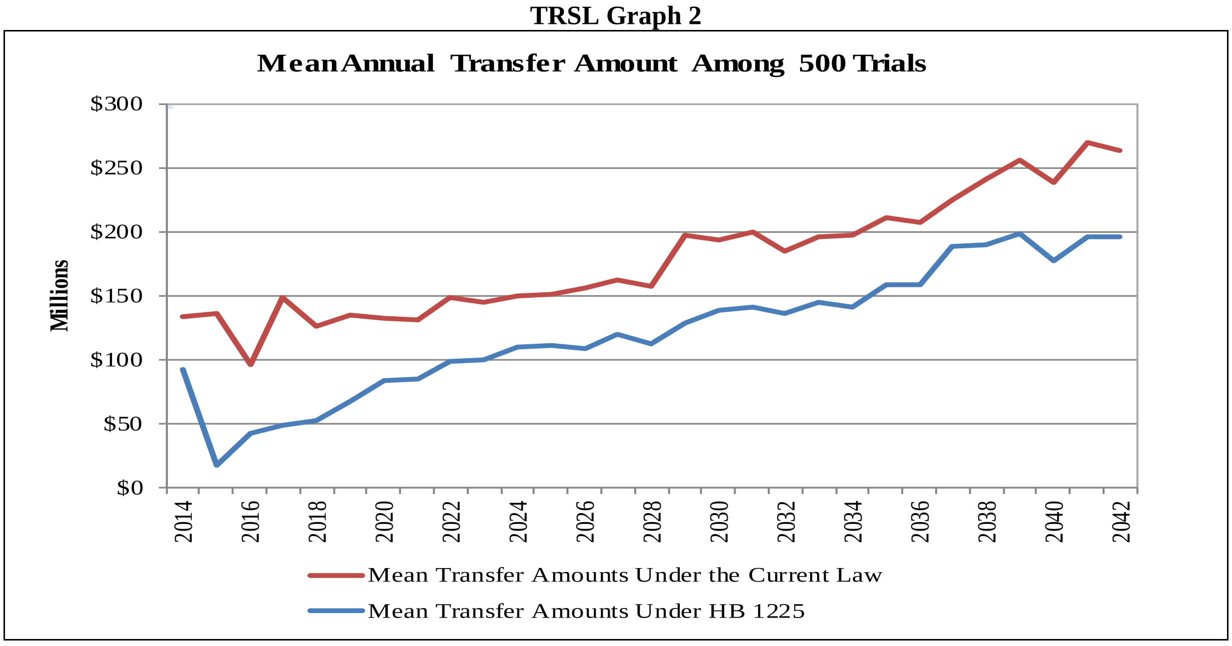
a. Graph 2 should be interpreted in the following manner for FYE 2014. We selected 500 rates of return on assets for FYE 2014 based on TRSL's capital market assumptions. We then measured investment gains that would occur for each rate selected and the amount of transfer to the Experience Account for each trial. The $140 million shown for FYE 2014 under current law is the average of all 500 outcomes.

b. The difference between the mean annual transfer amounts under current law and under HB 1225 for TRSL for FYE 2014 is very unlike comparable information for LASERS. The reason is that the balance in the TRSL Experience Account is very small relative to the cost of a 1.5% PBI whereas the LASERS Experience Account is very close to the transfer limit.

c. The average transfer beginning for FYE 2020 under current law is about $135 million. Under HB 1225, the average transfer will be only about $85 million; a $50 million difference.

d. Average transfer amounts increase over time under both current law and HB 1225. However, the difference between the two averages tends remain the same over the next 30 years.

TRSL Graph 2

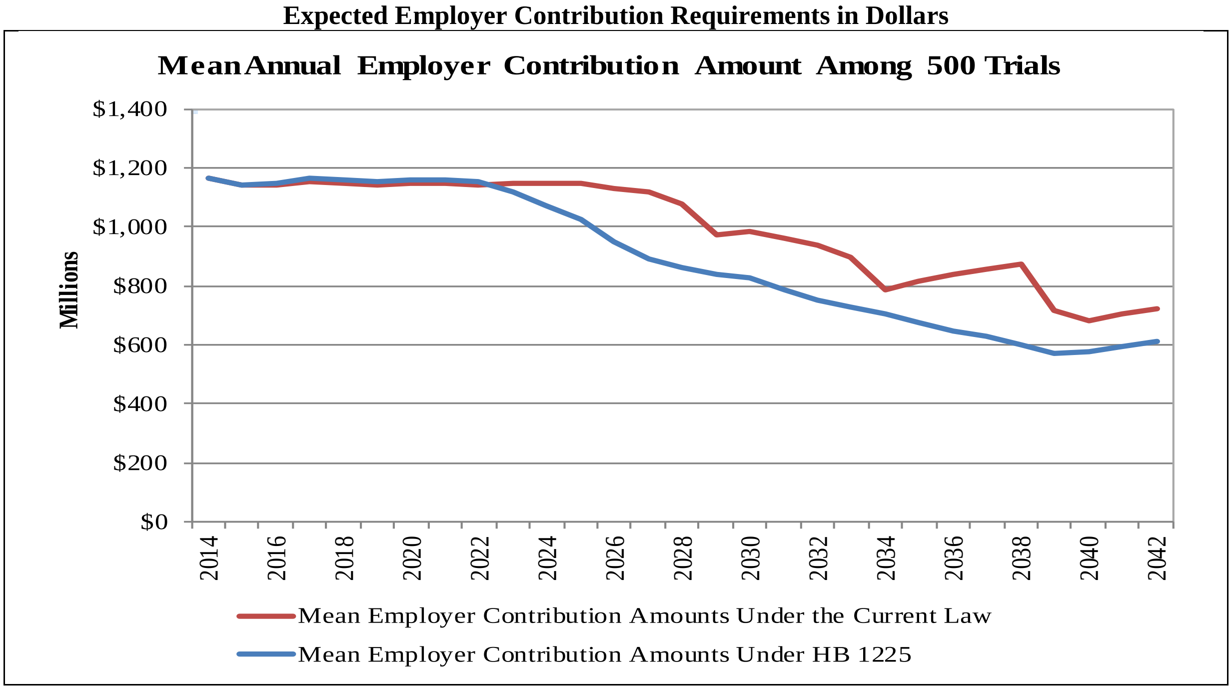


4. The following conclusions can be drawn from Graph 3.

a. Enactment of HB 1225 will produce a small reduction in employer contributions over the next five year period. A small increase is expected from 2020 to 2025. Contribution requirements under HB 1225 do not change materially from requirements under current law because amortization payments for the OAB and EAAB do not change even though the outstanding balances are reduced.

b. Significant savings will occur once the OAB and EAAB have been liquidated in about 2023.

TRSL Graph 3
Expected Employer Contribution Requirements in Dollars



Deterministic Actuarial Modeling

Deterministic actuarial modeling provides details that are not readily available under stochastic modeling. Deterministic actuarial modeling has revealed the following:

1. The OAB, the EAAB, and other charge bases will be reduced by investment gains, but amortization payment schedules will not be reduced. This creates upward pressure on employer contribution requirements.

2. Amounts transferred to the Experience Account will be amortized over a 10 year period rather than a 30 year period beginning with the June 30, 2019, valuation. This also creates upward pressure on employer contribution requirements beginning with the 2020-21 fiscal year.

3. Amounts transferrable to the Experience Account will be reduced and PBI grants will be smaller under HB 1225. This creates downward pressure on employer contribution requirements.

4. The net effect, particular during the first five years starting with the July 1, 2014 valuation, will be upward pressure on employer contribution requirements. However because of the special amortization rules that will apply for the June 30, 2014 valuation, it is very likely that employer contributions will be less during the next five years under HB 1225 than what they would have been under current law.

5. For the period five to ten years from now, employer contributions are projected to be somewhat larger under HB 1225 than under current law.

6. After ten years, downward pressures from smaller transfers to the Experience Account will overcome the upward pressures and employer contributions will begin to fall.

7. Employer contribution requirements will fall quite significantly when the OAB and EAAB are fully liquidated.

8. Eventually, the systems will attain 85% funding and employer contribution requirements thereafter will stabilize at a level significantly below expectations under current law.

Other Post-Employment Benefits

There are no actuarial costs associated with HB 1225 for post-employment benefits other than pensions.

Analysis of Fiscal Costs

HB 1225 will have the following effect on fiscal costs over the five year measurement period.

Expenditures:

1. Expenditures from the General Fund are estimated to be cost neutral with a potential for a small reduction in employer contribution requirements.

2. Expenditures from the state retirement systems (Agy Self-Generated) will decrease because transfers to the Experience Accounts will be smaller and because PBI grants will be smaller.

3. Expenditures from Local Funds are estimated to be cost neutral with a potential for a small reduction in employer contribution requirements.

Revenues:

- State retirement system revenues (Agy Self-Generated) are estimated to be cost neutral with a potential for a small reduction in revenue from employer contribution requirements.

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 approved by PRSAC. These assumptions and methods are in compliance with actuarial standards of practice. This 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.

The analysis contained in this actuarial note also relies on stochastic modeling prepared by Gabriel Roeder Smith, actuarial consultants for the Legislative Auditor. Information about the stochastic modeling process is summarized below.

1. The information shown in Table A and Graphs 1, 2 and 3 are based on the assumption that the Experience Account process and PBI templates under current law and under HB 1225 will continue indefinitely and that the legislature will always approve a PBI when the specified conditions are satisfied.

2. The information shown in Table A was produced using stochastic modeling techniques based on an open group valuation process. We assumed that the legislature would always approve a PBI when applicable conditions were satisfied. We also assumed that active membership in LASERS and TRSL will remain at current levels. Our model is based on 500 trials for each year in the projection period using the investment rate of return as the random variable. Investment rates of return for each trial were selected in accordance with the capital market assumption used by LASERS and TRSL respectively.

3. The stochastic modeling process was used to determine an annual PBI that would produce a cash flow of benefits that approximates PBI cash flows under current law and HB 1225.

Readers of this actuarial note should recognize that the stochastic modeling process is an effective tool for identifying trends and predicting cost differences between alternative actions. Stochastic modeling is not a reliable predictor of specific cost measurements for any particular year.

Certain provisions of HB 1225 result in investment gains being amortized more rapidly than losses. These provisions, when considered alone, may appear to be contrary to a basic actuarial principal that amortization of gains and losses should be symmetric. However, HB 1225 in the aggregate appears to be in compliance with actuarial standards of practice for the following reasons:

1. If HB 1225 is enacted, unfunded accrued liabilities will be reduced more rapidly than under current law, and

2. HB 1225 contains provisions that restore symmetrical amortization of gains and losses when each retirement system becomes 85% funded.

Actuarial Caveat

Retirement benefits payable to the actuary signing this actuarial note will be affected by the enactment of HB 1225. However, he has prepared this note without regard to the effect HB 1225 will have on him personally. The signing actuary certifies that his analysis is an unbiased statement of actuarial opinion.

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.

Dual Referral:

Senate	House
☐ 13.5.1: Annual Fiscal Cost ≥ \$100,000	☐ 6.8(F)(1): Annual State Fiscal Cost ≥ \$100,000
☐ 13.5.2: Annual Tax or Fee Change ≥ \$500,000	☐ 6.8(F)(2): Annual State Revenue Reduction ≥ \$500,000
	☐ 6.8(G): Annual Tax or Fee Change ≥ \$500,000