STATE OF TENNESSEE
TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
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Explanation Guide for Suggested Accounting Entries for Cost-Sharing Plans; or plans that use Cost-Sharing methodologies under GASB Statement Number 68

Suggested Accounting Entries

Each year journal entries are recorded to reflect the results of the most recent annual actuarial valuation. These journal entries affect the net pension liability (asset) and pertain to six main components: employer contributions, pension expense, differences in actuarial experience, differences in assumed and actual investments earnings, changes in proportionate share of net pension liability, and changes in actuarial assumptions. The suggested accounting entries are derived from the annual actuarial valuation. Below are explanations of where to find the information on the actuarial valuation and how to calculate each journal entry.

Changes in Proportionate Share - The basis for determining each employer's current year proportion is employer contributions as a percentage of total cost-sharing plan contributions. For example, if employer contributions for the cost-sharing plan totaled $100,000 and a specific employer's contributions totaled $15,000, the corresponding proportionate share would be 15% ($15,000/$100,000). This proportion would be used to allocate the employer's share of the collective net pension liability (asset), collective pension expense, collective deferred inflows/outflows of resources from experience, collective deferred inflows/outflows of resources from investments, and collective deferred inflows/outflows of resources from changes of assumptions.

An employer's proportionate share may increase or decrease from one year to the next. If there is a change in the employer's proportionate share since the prior measurement period, the net effect of that change on the collective net pension liability (asset), collective deferred outflows of resources and collective deferred inflows of resources must be calculated as of the beginning of the current measurement period.

A portion of the change in proportionate share is recognized in pension expense during the current year. The remaining portion is amortized in a rational method over a closed period equal to the average expected remaining service life of all active and inactive employees in the plan.

The remaining average expected service life is reflected in the "Original Period" column of the "Development of Deferred Outflows and Deferred Inflows" schedule in the actuarial report. Changes in proportionate share in the current year will be amortized over the remaining average expected service life in effect at the establishment date (i.e. changes in proportionate share will be tiered) as either a deferred inflow of resources or a deferred outflow of resources. Cumulative changes in proportionate share deferred inflows of resources will be presented separately from cumulative changes in proportionate share deferred outflows of resources (i.e. cumulative deferred inflows of resources and deferred outflows of resources are not presented as a net amount).

To record Pension Expense (Income) and Changes in Net Pension Liability (Asset)

Pension Expense (Income) – Under the Pension Expense (Income) and Deferred Outflows/Inflows of Resources section of the actuarial valuation there will be a schedule to calculate the pension expense for the current fiscal year. The allocation of Pension Expense (Income) to be recorded is calculated by multiplying the total Pension Expense (Income) by your current proportionate share. Pension Expense is debited and Net Pension Liability is credited. The entries are opposite if there is pension income calculated.

Employer Contributions (from prior fiscal year) – The employer contributions that were used in the latest actuarial valuation were from contributions made in the prior fiscal year (i.e. measurement date of June 30, 2018 for a reporting date of June 30, 2019). These employer contributions will have an entry of a debit to Net Pension Liability and a credit to Deferred Outflow of Resources. Employers will need to record employer contributions subsequent to the measurement date up through the reporting date. This entry is a debit to Deferred Outflows and a credit to the applicable account as determined by the employer.

Differences between Expected and Actual Experience - Experience differences pertain to non-investment economic and demographic factors. When actual non-investment economic and demographic factors are positively different than assumed, the experience difference is referred to as an experience gain. An experience loss occurs when actual experience is negatively different than assumed.

A portion of the experience (gain)/loss is recognized in pension expense during the current year. The remaining portion is amortized in a rational method over a closed period equal to the average expected remaining service life of all active and inactive employees in the plan. The remaining average expected service life can vary from year to year depending on the underlying demographic factors considered by the actuary.

Information pertaining to experience (gain)/loss is obtained from the Development of Deferred Outflows and Deferred Inflows section of the actuarial valuation. In the "Original Amount" column are the (gains)/losses that have been established each year. Negative amounts represent experience gains and positive amounts represent experience losses. The entire (gain)/loss established with the most recent actuarial valuation is recorded in the current year. If an experience gain occurs, the resulting entry will be a debit to Net Pension Liability and credit to Deferred Inflows of Resources. If an experience loss occurs, the resulting entry will be a debit to Deferred Outflows of Resources and credit to Net Pension Liability.

The experience (gain)/loss is amortized over the corresponding establishment period stated in the "Original Period" column. The amount in the "Amount Recognized in Expense" column is the amount that is going to be amortized for that year's experience (gain)/loss. This amount is reflected in the pension expense (income) schedule located in the Pension Expense (Income) and Deferred Outflows/Inflows of Resources section of the actuarial valuation. The entries for each year's amortization layer will depend on whether the original amount established was a gain or loss. Amortization of a gain will result in a debit to Deferred Inflows of Resources and credit to Net Pension Liability every year until the amortization period has expired. Amortization of a loss will result in a debit to Net Pension Liability and credit to Deferred Outflows of Resources every year until the amortization period expires.

The allocation of experience (gain)/loss and related amortization to be recorded is calculated by multiplying each total by your current proportionate share.

Differences between Projected and Actual Investment Earnings - When actual investment earnings exceed projected investment earnings, the investment difference is referred to as an investment gain. If the actual earnings are less than projected, the investment difference is referred to as an investment loss. The investment earnings assumption is currently 7.25%.

A portion of the investment (gain)/loss is recognized in pension expense during the current year. The remaining portion is amortized in a rational method over a closed five-year period.

The portion of investment gains to be recognized in future periods will be reflected as a deferred inflow of resources. The portion of investment losses to be recognized in future periods will be reflected as a deferred outflow of resources.

Information pertaining to investment (gain)/loss is obtained from the Development of Deferred Outflows and Deferred Inflows section of the actuarial valuation. In the “Original Amount” column are the (gains)/losses that have been established each year. Negative amounts represent gains and positive amounts represent losses. The entire (gain)/loss established with the most recent actuarial valuation is recorded in the current year. If a gain occurs, the resulting entry will be a debit to Net Pension Liability and credit to Deferred Inflows of Resources. If a loss occurs, the resulting entry will be a debit to Deferred Outflows of Resources and credit to Net Pension Liability.

The investment (gain)/loss is amortized over five years. This information is reflected in the “Original Period” column. The amounts in the “Amount Recognized in Expense” column is the amount that is going to be amortized for that year’s investment (gain)/ loss. This amount is reflected in the pension expense (income) schedule located in the Pension Expense (Income) and Deferred Outflows/Inflows of Resources section of the actuarial valuation. The entries for each year’s amortization layer will depend on whether the original amount established was a gain or loss. Amortization of an investment gain will result in a debit to Deferred Inflows of Resources and credit to Net Pension Liability every year until the amortization period has expired. Amortization of an investment loss will result in a debit to Net Pension Liability and credit to Deferred Outflows of Resources every year until the amortization period expires.

The allocation of investment (gain)/loss and related amortization to be recorded is calculated by multiplying each total by your current proportionate share.

Changes of Assumptions - Actuarial assumptions fall into two types: economic and demographic. Economic assumptions impact the amount of future expected benefits while demographic assumptions impact timing and probability of the benefit amount to be paid. Some examples of economic assumptions are: discount rate, salary, cost of living adjustments, etc. Demographic assumptions include: retirement pattern, turnover and mortality rates.

Information pertaining to the assumption changes (gain)/loss is obtained from the Development of Deferred Outflows and Deferred Inflows section of the actuarial valuation. In the “Original Amount” column are the (gains)/losses that were established when assumption changes were made. Negative amounts represent gains and positive amounts represent losses. The entire (gain)/loss determined with the actuarial valuation is recorded in the year established. If a gain occurs, the resulting entry will be a debit to Net Pension Liability and credit to Deferred Inflows of Resources. If a loss occurs, the resulting entry will be a debit to Deferred Outflows of Resources and credit to Net Pension Liability. Changes in assumptions generally only occur if results of the most recent actuarial experience study indicate changes may be necessary. An actuarial experience study is performed every 4 years. The most recent actuarial experience study for TCRS was performed for the period July 1, 2012 through June 30, 2016.

The changes of assumption (gain)/loss is amortized over the corresponding establishment period stated in the “Original Period” column. The amounts in the “Amount Recognized in Expense” column is the amount that is going to be amortized for that year’s assumption gain or loss. The entries for each year’s amortization layer will depend on whether the original amount established was a gain or loss. Amortization of a changes of assumptions gain will result in a debit to Deferred Inflows of Resources and credit to Net Pension Liability every year until the amortization period has expired. Amortization of a changes of assumptions loss will result in a debit to Net Pension Liability and credit to Deferred Outflows of Resources every year until the amortization period expires.

The allocation of changes of assumptions (gains)/losses and related amortization to be recorded is calculated by multiplying each total by your current proportionate share.

Net Pension Liability (Asset) Summary

This is a summary of the impact from each of the entry components described above and ties the allocated beginning Net Pension Liability (Asset) to the allocated ending Net Pension Liability (Asset) balance. The change in allocated Net Pension Liability (Asset) should be the sum of the total changes in allocated Deferred Outflows of Resources, allocated Deferred Inflows of Resources and allocated Pension Expense (Negative Pension Expense). The beginning and ending Net Pension Liability (Asset) balances can be found in two sections of the most recent actuarial valuation: 1) Schedule of Changes in Net Pension Liability (Asset), 2) Schedules of Changes in the Net Pension Liability (Asset) and Related Ratios. Multiply the beginning and ending balances by your current proportionate share to calculate your allocation.

Detailed Entries Example

Following is an example of all detailed entries that are combined to develop the entries in the "Suggested Accounting Entries" document located on the GASB 68 website along with the actual corresponding document. The combined entries are highlighted in blue. The cells highlighted in yellow correspond to the balances that are presented in the "Deferred Outflows of Resources and Deferred Inflows of Resources" section in the "Suggested Notes and RSI" document located on the GASB 68 website.

It is important to note the "Deferred Outflows of Resources and Deferred Inflows of Resources" schedule is a cumulative schedule that shows the remaining balances in those accounts for all remaining years subsequent to the current year. The beginning balances for the current year are calculated by taking the prior year totals in the actuarial report and multiplying those by the current year's proportionate share. Additionally, differences between projected and actual investment earnings are presented as either a net Deferred Outflow of Resources or a net Deferred Inflow of Resources in the Pension Expense (Negative Pension Expense) and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions section of the Suggested Notes and RSI.

Closed State and Higher Education Plan
Suggested Accounting Entries for Consideration
Measurement Date of June 30, 2018
Measurement Period of July 1, 2017 thru June 30, 2018
Suggested entries applicable for the fiscal year ended June 30, 2019

Please note, debit entries are shown as positive numbers and credit entries are shown as negative numbers. Suggested entries have been aggregated into the two entries below. Additionally there is a summary of the change in Net Pension Liability (Asset). There is also guidance regarding the aggregation and reporting of differences between projected and actual earnings on pension plan investments as a net deferred outflow of resources or a net deferred inflow of resources.

1. To record Pension Expense (Negative Pension Expense) and Changes in Net Pension Liability (Asset).

Example Employer	Pension Expense	Net Pension Liability	Deferred Inflows of Resources	Deferred Outflows of Resources
Pension Expense	$1,640,703	($1,640,703)		
Employer Contributions from FY 2018		1,946,716		(1,946,716)
Difference in Actuarial Experience		(218,488)	199,368	19,120
Difference in Investment Earnings		236,160	857,146	(1,093,307)
Change in Proportionate Share	109,252	503,513	(74,951)	(537,814)
Changes in Assumptions		452,868	-	(452,868)
Net Journal Entry – Debit/(Credit)	$1,749,955	$1,280,065	$981,563	($4,011,584)

2. To record Employer Contributions subsequent to the measurement date.

	Debit	Credit
Employer contributions during the fiscal year ending June 30, 2019	Deferred Outflows	Entity to Determine

Net Pension Liability (Asset) Summary

Net Pension Liability (Asset) beginning of year (June 30, 2017)	$8,481,800
Deferred Inflows of Resources	981,563
Deferred Outflows of Resources	(4,011,584)
Pension Expense (Negative Pension Expense)	1,749,955
Net Pension Liability (Asset) end of year (June 30, 2018)	$7,201,734

Difference between Projected and Actual Earnings on Pension Plan Investments

GASB 68 requires differences between projected and actual pension plan investment earnings in different measurement periods to be aggregated and reported as a net deferred outflow of resources related to pensions or a net deferred inflow of resources related to pensions.

The net difference between projected and actual earnings on pension plan investments in the deferred outflows of resources and deferred inflows of resources related to pensions section of the Suggested Notes and Required Supplementary Information (RSI) has been aggregated and reported as a net deferred outflow or a net deferred inflow. The Suggested Accounting Entries **do not** include an entry to net the cumulative investment earnings since the netting is for presentation purposes only. It will be your entity's responsibility to determine if an entry will be booked to reflect the netting of aggregate investment earnings deferred outflows and deferred inflows for presentation purposes. If an entry is booked, it will need to be reversed in the subsequent year.

Posting the Suggested Accounting Entries will result in the following Investment Deferred Outflows of Resources and Deferred Inflows of Resources balances.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between projected and actual earnings on pension plan investments	$1,664,777	$1,871,777

Change in Proportionate Share

The Change in Proportionate Share entry presented above includes the total change in proportionate share in Net Pension Liability, Deferred Outflows of Resources and (Deferred Inflows of Resources) calculated for the current fiscal year, amortization of the current year change in proportionate share and the amortization of the change in proportionate share for all prior years. The total change in proportionate share for fiscal year 2019 is a Deferred Outflow of Resources (Deferred Inflow of Resources) of ($390,775) that will be amortized over a period of 4 years. Information for the amortization amounts for all prior years can be obtained under the General Tab section of the TCRS GASB 68 site. The GASB 68 site is accessible at https://publicreports.treasury.tn.gov/

Example Employer
12345

Detailed Entries Example for Fiscal Year 2019

Prior Year Proportionate Share	0.47394961%
Current Year Proportionate Share	0.44581408%

	Pension Expense		Net Pension Liability		Deferred Outflows		Deferred Inflows	
Balances From FY 2018 Actuarial Report				1,789,599,476	1,065,050,174			664,351,260

Summary of Journal Entries Detailed Below	**Pension Expense**		**Net Pension Liability**		**Deferred Outflows**		**Deferred Inflows**	
Current Year Beginning Balance (Prior Year Proportionate Share %				8,481,800	5,047,801			3,148,690
Beginning Change of Proportionate Share Balance					476,312			93,634
Change in Proportionate Share Net Entry	109,251		503,514		-	537,814	315,824	390,775
Pension Expense Net Entry	1,640,703			1,640,703				
Prior Year Contribution Beginning Balance in DC					1,946,716			
Employer Contributions Net Entry			1,946,716			1,946,716		
Differences in Experience Net Entry				218,489	19,120		199,369	
Differences in Investment Earnings Net Entry			236,161			1,093,307	857,146	
Change in Assumptions Net Entry			452,868			452,868		
Ending Balance *	1,749,954			7,201,733	3,459,244			2,260,760

Change Of Proportionate Share #	**Pension Expense**		**Net Pension Liability**		**Deferred Outflows**		**Deferred Inflows**	
2019 (Current Year)			503,514			299,658	186,919	390,775
2019 Amortization		97,694					97,694	
2018 Amortization		31,211					31,211	
2017 Amortization	148,815					148,815		
2016 Amortization	89,341					89,341		
Sum of Entries	238,156	128,905	503,514	-	-	537,814	315,824	390,775
Net Journal Entry - Debit/(Credit)	**109,251**		**503,514**		**(537,814)**		**(74,951)**	**-**

	Pension Expense		**Net Pension Liability**		**Deferred Outflows**		**Deferred Inflows**	
Pension Expense	**1,640,703**			**1,640,703**				
Employer Contributions (Prior Year)			**1,946,716**			**1,946,716**		

Differences in Experience	Pension Expense		Net Pension Liability		Deferred Outflows		Deferred Inflows		
Ending Balance Per Actuary Report FY 2018					141,641,227			52,229,835	
Beginning Balance Using Current Year Proportionate Share %					631,457			232,848	
2019 (Current Year)				373,720	373,720				
2019 Amortization			93,430			93,430			
2018 Amortization			109,117			109,117			
2017 Amortization				33,480			33,480		
2016 Amortization			152,053			152,053			
2015 Amortization				165,889			165,889		
Sum of Entries	-	-	354,600	573,089	1,005,177	354,600	199,369	232,848	
Ending Balance for DO/DI				218,489	650,577	-	-	33,479	
Net Journal Entry - Debit/(Credit)			**(218,489)**		**19,120**		**199,369**		**-**

Difference in Investment Earnings	Pension Expense		Net Pension Liability		Deferred Outflows		Deferred Inflows		
Ending Balance Per Actuary Report FY 2018					618,662,255			612,121,425	
Beginning Balance Using Current Year Proportionate Share %					2,758,083			2,728,923	
2019 (Current Year)			664,557					664,557	
2019 Amortization				132,911			132,911		
2018 Amortization				446,711			446,711		
2017 Amortization			571,470			571,470			
2016 Amortization			521,837			521,837			
2015 Amortization				942,081			942,081		
Sum of Entries	-	-	1,757,864	1,521,703	2,758,083	1,093,307	1,521,703	3,393,480	
Ending Balance for DO/DI			236,161		1,664,776	-	-	1,871,777	
Net Deferred Inflows/Outflows for Presentation in Suggested Notes and RSI*								207,001	
Net Journal Entry - Debit/(Credit)			**236,161**		**(1,093,307)**		**857,146**		**-**

Change in Assumptions	Pension Expense		Net Pension Liability		Deferred Outflows		Deferred Inflows		
Ending Balance Per Actuary Report FY 2018					304,746,692			-	
Beginning Balance Using Current Year Proportionate Share %					1,358,604			-	
2019 (Current Year)									
2019 Amortization									
2018 Amortization			452,868			452,868			
2017 Amortization									
2016 Amortization									
2015 Amortization									
Sum of Entries	-	-	452,868	-	1,358,604	452,868	-	-	
Ending Balance for DO/DI					905,736	-	-	-	
Net Journal Entry - Debit/(Credit)			**452,868**		**(452,868)**		**-**		**-**

* Netting of Investment Deferred Inflows and Investment Deferred Outflows

The Suggested Accounting Entries do not include an entry to net the cumulative investment earnings since the netting is for presentation purposes only. It will be your entity's responsibility to determine if an entry will be booked to reflect the netting of aggregate investment earnings deferred outflows and deferred inflows for presentation purposes. If an entry is booked, it will need to be reversed in the subsequent year. Below are the ending account balances after taking into account netting for Investment Earnings presentation in the Suggested Notes and RSI.

	Pension Expense		**Net Pension Liability**		**Deferred Outflows**		**Deferred Inflows**	
Ending Balances per Summary above	1,749,954	-	-	7,201,733	3,459,244	-	-	2,260,760
Netting of Differences in Investment Earnings						1,664,776	1,664,776	
Balances presented in Suggested Notes and RSI	1,749,954	-	-	7,201,733	1,794,468	-	-	595,984

Detailed Change In Proportionate Share Entry for Current Year Calculation

Prior Year Proportionate Share	0.47394961%
Current Year Proportionate Share	0.44581408%
Change in Proportionate Share	-0.02813553%

	Balance in 2018 Actuarial Report	**Change in Proportionate Share**	**Change in Proportionate Share**
Net Pension Liability	1,789,599,476	-0.02813553%	(503,513)
Deferred Outflows of Resources	1,065,050,174	-0.02813553%	(299,658)
Deferred Inflows of Resources	664,351,260	-0.02813553%	(186,919)

	Net Pension Liability		**Deferred Outflows**		**Deferred Inflows**	
Recording of Changes in Proportionate Share of Net Pension Liability, Deferred Outflows and Deferred Inflows	503,513			299,658	186,919	
Establishment of Current Year Change in Proportionate Share Layer						390,775
Net Current Year Change in Proportionate Share Entry	503,513	-	-	299,658		203,856

Current Year Change in Prop. Share Layer	(390,775)
Amortization Period	4
Amortization Amount	97,694

Explanation of Change in Proportionate Share

Normal Balances for Net Pension Liability, Deferred Outflows of Resources and Deferred Inflows of Resources are as follows:

- Net Pension Liability – Credit
- Deferred Outflows of Resources – Debit
- Deferred Inflows of Resources – Credit

The purpose of the change in proportionate share calculation is to capture the differences between the employer's ending balances in Net Pension Liability (NPL), Deferred Outflows of Resources (DO) and Deferred Inflows of Resources (DI) based on the prior year proportionate share and the beginning balances based on the current year proportionate share. Because of this, the ending balances in NPL, DO and DI will differ from the beginning balances for differences in expected experience, differences in expected earnings and changes in assumptions. The change in proportionate share calculation captures the change in balances for each category. After taking into account the change in proportionate share of the total NPL, DO and DI, there will be an amount needed to balance the entry. If a credit is needed, the amount will be credited to Deferred Inflows, conversely if a debit is needed, the amount will be credited to Deferred Outflows. In this example, this results in a credit to Deferred Inflows of $390,775 which is amortized over 4 years.

Balances as Presented in the Suggested Notes and RSI

	Deferred Outflows		**Deferred Inflows**	
Beginning Balance	476,312			93,634
2019 Establishment				390,775
2019 Amortization			97,694	
2018 Amortization			31,211	
2017 Amortization		148,815		
2016 Amortization		89,341		
Sum of Entries	476,312	238,156	128,905	484,409
Ending Balance for DO/DI	238,156	-	-	355,504

Please Note: The examples above are for illustrative purposes only. These examples will not be updated annually.

There may be rounding differences between the entries above and the corresponding illustrative Suggested Accounting Journal Entries and Suggested Notes and RSI documents.