



## Understanding the Difference Between Accounting and Actuarial Pension Numbers

The Governmental Accounting Standards Board (GASB) sustainably changed the accounting and financial reporting of public pension plans effective with fiscal year 2015 under GASB 68.

### What's different?

Before 2015, government entities included only the yearly contributions as an expense on their financial statements, and the long-term cost of benefits, called Actuarial Accrued Liability, was included in the notes section of the Comprehensive Annual Financial Report (CAFR).

Under GASB 68, government entities were required to include a new calculation of the long-term cost of benefits, called Net Pension Liability, as a liability on their balance sheet.

The new requirement does not change the way MERS calculates how much municipalities need to contribute to cover benefits in any given year.

### Why is there a difference between my Net Pension Liability (NPL) and my Actuarial Accrued Liability (AAL)?

There are two components that make up the difference between the NPL and AAL.

The first component is that the Actuarial Accrued Liability is calculated using the actuarial value of assets, or the value of pension plan investments, smoothed over a period of 5 year. This smoothing procedure causes the actuarial value of assets to be different than the market value of assets, which is used to calculate Net Pension Liability.

The second component is that GASB requires that the total pension liability be calculated using a rate of return that is net of investment expenses but not of administrative expenses. The actuary uses a rate of return that is net of investment and administrative expenses for funding purposes. This results in the net pension liability being lower than the actuarial accrued liability.

These are the primary differences. How much the difference is between the NPL and AAL will depend on the municipality's unique circumstances.



## GASB 68 GLOSSARY OF TERMS

**Bold terms are defined  
in this glossary.**

### Active employees

Individuals employed at the end of the reporting or measurement period.

### Actuarial Accrued Liability (AAL)

The total value of benefits earned by members, both retired and active, under a specific plan to date. If assets equaled the total actuarial accrued liability (i.e. the plan is "fully funded" or "100% funded"), there would be no unfunded liability and future contribution requirements would consist solely of the calculated normal cost. (Similar to **Total Pension Liability**)

### Actuarial Assumptions

Factors which actuaries use in estimating the cost of funding a defined benefit plan. Examples include: the assumed rate of return; mortality rates; and the rates at which plan participants are expected to leave the system because of retirement, disability, termination, etc. As the fiduciary for the plan, the MERS Retirement Board selects these assumptions using an **Experience Study** to help guide the decisions.

### Actuarial Assumed Rate of Return

One **actuarial assumption** used to calculate the **actuarial value** of assets and employer contributions. Funding defined benefit plans involves the accumulation of assets to pay benefits in the future. These assets are invested and the net rate of investment earnings is a significant factor in determining the contributions required to support the ultimate cost of benefits. For the MERS actuarial valuations, the long-term investment yield is assumed to be 7.75% annually, net of administrative and investment expenses. MERS maintains the 7.75% annual return assumption in the belief that over the long-term this is achievable. For example, MERS' 35 year return was 8.84% as of December 31, 2018. MERS regularly monitors the investment return assumption to make sure it is reasonable compared to long term expectations.

### Actuarial Value of Assets (AVA)

The value of pension plan investments, used by the actuary for the purpose of the **Annual Actuarial Valuation**. This calculation uses a smoothed asset value, which causes the Actuarial Value of Assets to be different than the amount actually held in the trust for the plan (also known as the **Market Value of Assets**).

### Agent multiple employer defined benefit pension plan (agent pension plan)

A multiple-employer defined benefit pension plan in which pension plan assets are pooled for investment purposes, but separate accounts are maintained for each individual employer, so that each employer's share of assets are legally available to pay the benefits of only its retirees and employees.

### Amortization

Paying off an interest bearing liability by gradual reduction through a series of installments, as opposed to paying it off by one lump sum payment.

### Annual Actuarial Valuation (AAV)

An annual report provided to defined benefit plans, which is calculated by an actuary using the plan's actuarial assumptions. The report provides insight to the plan's liabilities, funding levels, contributions for both the employer and employee, and important GASB information. The information in the report provides the contribution rates for the following fiscal year.

### Covered-employee payroll

The payroll of employees that are provided with pensions through the pension plan.

### Required Employer Contributions

Michigan Law requires that pension plans be pre-funded, meaning money is set aside now to pay for future benefits. Pension plans are usually funded by employer and employee contributions, and investment income. The Required Employer Contributions are calculated annually through the **Annual Actuarial Valuation**. Contribute rates are calculated using assumptions regarding future events. The economic and demographic assumptions include:

- An **actuarial assumed rate of return** that is used to discount liabilities and project what plan assets will earn.
- A mortality table projecting the number of members who will die before retirement and the duration of benefit payments after retirement.
- Assumed retirement rates projecting when members will retire and commence receiving retirement benefits.
- A set of withdrawal and disability rates to estimate the number of members who will leave the work force before retirement.
- Assumed rates of pay increase to project member compensation in future years.

### Deferred Outflows and Inflows of Resources

Changes in economic and demographic assumptions; and differences between expected and actual experience are to be amortized and expensed over the service lives of all employees. Differences between expected and actual investment income are to be recognized over five years beginning with the current period. Employer contributions subsequent to the measurement date of the **net pension liability** are required to be reported as deferred outflows of resources.

### Defined Benefit Plan

A plan in which an employer provides a specified monthly benefit to retirees based on a variety of factors, including earnings history and length of employment. (Example: a traditional pension)

### Defined Contribution Plan

A plan in which employers and/or employees make contributions to a retirement account for each employee. Benefits are then based on the value of that account at retirement. (Example: a 401(k) plan)

### Discount Rate

This rate will match the actuarial assumed rate of return, unless the plan is underfunded. If a plan is underfunded then the discount rate will be a blended rate using the actuarial assumed rate of return and a 20-year municipal bond index rate.

### Experience Study

A periodic review and analysis of the actual experience of the retirement system which may lead to an adjustment of some of the actuarial assumptions. Actual rates of death, retirement, disability, or termination and salary increases are compared to the assumed values and modified as appropriate by the actuary.

### Fiduciary Net Position

The actual amount of assets held in the pension trust for a plan as of the measurement date. (Also called the market value of assets)

### Funded Ratio

The funded ratio of a plan is the percentage of the dollar value of the accrued benefits that is covered by the actuarial value of assets.

### GASB Statement 68 (GASB 68)

This accounting standard guides how state and local government employers account for the cost of pension benefits on their financial statements. The standard requires government entities providing **defined benefit plans** to report the total long-term cost of these benefits as a liability on their annual financial reports. This standard does not change the methods and assumptions used to determine the contributions needed to fund the plan.

### Governmental Accounting Standards Board (GASB)

An independent, private-sector, not-for-profit organization that establishes and reviews standards of financial accounting and reporting for state and local governments in the United States. Governments and the accounting industry recognize GASB as the official source of generally accepted accounting principles for state and local governments.

### Inactive employees

Terminated individuals that have accumulated benefits but are not yet receiving them, and retirees or their beneficiaries currently receiving benefits.

### Market Rate of Return

This is the gain or loss of an investment over a specific period of time. Actuarial gains or losses represent the difference between the actual market rate of return and the expected actuarial assumed rate of return.

### Market Value of Assets

The actual amount of assets held in the pension trust for a plan at a certain measurement date. (Also called fiduciary net position)

### Measurement date

The date at which the employer's total pension liability and fiduciary net position will be measured, which may result in a net pension liability.

### Net Pension Liability (NPL)

The difference between the **Total Pension Liability** and the **Fiduciary Net Position** as of the **measurement date**.

### Normal Cost / Service Cost

The normal cost generally represents the portion of the cost of projected benefits allocated to the current plan year. The employer normal cost equals the total normal cost of the plan less employee contributions. For accounting purposes this is referred to as the service cost.

### Pension Expense

The difference in **Net Pension Liability** from the previous measurement date to the current **measurement date**, with some adjustments the calculations will take into account. Pension expense includes the current period service cost, interest on the total pension liability, changes in benefit terms that are required to be recognized immediately, projected earnings on the pension plan investments and the current period's recognition of deferred outflows and inflows.

### Smoothed Asset Value

An actuarial method used to reduce the volatility of the required employer contributions. MERS currently spreads returns over a 5-year period. Thus, only one fifth of the **market rate of return** is recognized in a given year.

### Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributable to past periods of employee service in conformance with requirements of Statement 68 as of the measurement date. Calculated by the actuary each year in the **Annual Actuarial Valuation**. This number is similar to the **Actuarial Accrued Liability** that employers are used to seeing in their report, however for some poorly funded plans the Total Pension Liability will be calculated using a different discount rate.

### Unfunded Accrued Liability (UAL)

A dollar amount that represents the difference between how much a retirement plan owes in benefits and how much is available to cover those costs. An Unfunded Accrued Liability occurs when the value of the benefits earned by members is higher than the value of the assets in the plan available to pay for those benefits.