



New York City Retirement Systems Administrative Review Report – Part II for Office of the Comptroller

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Ms. Krista Olson
Deputy Comptroller for Budget
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1 Centre Street, 8th Floor
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Re: Administrative Review Report – Part II

To Whom It May Concern:

We are pleased to present the enclosed report summarizing our findings on Part II of the administrative review for the five New York City Retirement Systems ("NYCRS"):

- New York City Employees' Retirement System ("NYCERS")
- Teachers' Retirement System of the City of New York ("TRS")
- Board of Education Retirement System of the City of New York ("BERS")
- New York City Police Pension Fund ("POLICE")
- New York City Fire Pension Fund ("FIRE")

Part II focuses on review of individual calculations performed by the systems including how the data used in these calculations is provided to the Office of the Actuary (OA) for use in the actuarial valuations.

We would like to thank each of the staffs of NYCRS for their cooperation. Their prompt and courteous responses to our questions and requests for information were of valuable assistance to us and greatly appreciated.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by staffs of NYCRS. This information includes, but is not limited to, statutory provisions, employee data, and administrative policies. Since the results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing.

Administrative Review Report Part II
New York City Retirement Systems

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Ms. Krista Olson
January 7, 2025
Page 2

Milliman's work product was prepared exclusively for the New York City Office of the Comptroller for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning NYCRS' operations, and uses NYCRS' data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third-party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product but should engage qualified professionals for advice appropriate to its own specific needs.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Code of Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel. The signing actuaries are independent of NYCRS. We are not aware of any relationship that would impair the objectivity of our work.

Respectfully submitted,



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TABLE OF CONTENTS

Benefit Calculation Review	1
Methodology.....	3
Data Validity – Active Data	5
Data Validity – Retiree Data	6
Benefit Calculation Review.....	8

Benefit Calculation Review

This report summarizes the administrative review performed by Milliman of the five New York City Retirement Systems (“NYCRS”):

- New York City Employees’ Retirement System (NYCERS)
- Teachers’ Retirement System of the City of New York (TRS)
- Board of Education Retirement System of the City of New York (BERS)
- New York City Police Pension Fund (POLICE)
- New York City Fire Pension Fund (FIRE)

Milliman’s focus for the administrative review is a high-level review to determine if the systems have appropriate controls in place, are serving their members appropriately, and on the validity of the data provided to OA. Part I focused on the first two items. This Part II report focuses on the third item on the validity of the data based on a review of individual benefit calculations.

- Conduct a high-level review of existing administrative controls.
- Review the member services and experiences.
- ***Test the validity of the data provided to the Office of the Actuary (OA).***

This report summarizes our overall findings, which includes a review of preliminary findings by OA.

Administering systems as large and complex as those in NYCERS involves many components:

- Collecting data from numerous sources
- Housing data collected over decades
- Applying a complex set of rules and regulations to determine the applicable benefit amount
- Interacting with the member who can make various decisions impacting their benefit such as:
 - Receiving credit for prior service
 - Setting contribution level in cases where options exist
 - Receiving a portion of the benefit as a lump sum or increasing their pension benefit
 - Electing benefits that would provide for continuation upon death, etc.
- Adjusting the benefit reflecting decisions made by the member

The key to all of these steps is the accuracy of the data. To test the reasonableness or the validity of the data we reviewed actual benefit calculations completed for members who recently retired and compared it to the data provided to the actuary for the actuarial valuation. There are many aspects to the benefit calculation process and various data elements.

By its nature, a review of this type will tend to focus on those aspects where differences were uncovered. Hence, a report such as this will devote the majority of the presentation to commentary that, even though intended to be constructive, may give the reader the impression that only issues exist. ***Therefore, we would like to state clearly up front, that overall, we found the data provided to the actuary to be reasonable, the actuary applies generally reasonable adjustments to the data for valuation purposes where necessary, and that systems are determining the benefits in accordance with our understanding of the applicable plan provisions.***

Methodology

Milliman provided each of the systems with a request for information on a sampling of actual benefit calculations. The benefit calculation request contained the following items:

- Basic information, such as date of birth, hire, retirement, applicable plan provisions, etc.
- Determination of service
- Determination of final average compensation
- Information on employee contributions
- Benefit amount including those under optional forms of payment
- Beneficiary information for those electing a joint and survivor annuity

The primary purpose of reviewing actual benefit calculations is to compare the data used in the benefit calculations for consistency with the valuation data provided to the plan actuary for data validity purposes. To the extent differences arise, this may impact the assumptions used by the OA in adjusting the data for the actuarial valuation.

To perform this task, we selected records for members who retired during the fiscal year ending June 30, 2021 based on the valuation data provided to the OA. The sample members were randomly selected to encompass most of the various employee categories and the full spectrum of the benefits members from each of the systems receive. These benefits include service retirement benefits, disability benefits, survivor benefits, etc.

The number of calculations reviewed from each of the systems:

Benefit Calculations Reviewed	
System	Number
NYCERS	30
TRS	16
BERS	20
POLICE	20
FIRE	14

Each of the systems provided detailed information on the calculation of the benefits. Some systems provided actual copies of calculations and signed paperwork while others

summarized the information in worksheets. Milliman received adequate information from each of the five systems to complete our review.

Our review focused on three categories.

1. **Active Data** - we compared active data elements, such as service, salary, contributions, etc. with the active data as of June 30, 2020.
2. **Retiree Data** - we compared the retiree data elements, such as maximum retirement allowance, option selected benefit, form of payment, etc. with the retiree data as of June 30, 2021.
3. **Benefit Calculations** - we reviewed the determination of the benefit based on our understanding of the applicable plan provisions based on the data provided in the calculation.

To conduct our analysis, each data element reviewed within the above three categories was graded as Reasonable, Potential Additional Review, or Additional Review Recommended.

- **Reasonable** - indicates that the data used in the benefit calculation is consistent with the data provided for the actuarial valuation.
- **Potential Additional Review** - indicates that the data used in the calculation was somewhat consistent with the valuation data, but outside of a reasonable range. For instance, the salary used in the benefit calculation was more than 10% different than the salary contained in the valuation data. If there were several of these situations, the Systems may wish to review their data to ensure that accurate data is provided to OA for valuation purposes.
- **Additional Review Recommended** - indicates that the data used in the calculation was not consistent with the valuation data. In these situations, we suggest a review of the information to ensure it is not a systematic issue. OA as well as some of the Systems provided responses to our findings and they are incorporated into this report.

Data Validity – Active Data

We compared the data elements used to determine each member's retirement benefit contained in the benefit calculation with the active data fields provided for the June 30, 2020 actuarial valuation. This is the last valuation in which these individuals are considered active members. Please note that the active member data does include vested members or other employees indicated as off payroll.

This comparison allows us to verify the validity of the active data to determine if the actuarial valuation programs would reasonably determine the member's benefit at the member's actual date of retirement. The following table displays the information reviewed.

Benefit Calculation Review: Active Data Elements		
1.	Status	Status (active, off payroll, vested, non-vested) was provided accurately in the active data to the actuary.
2.	Plan Code	The benefit plan, including tier, that was used in the benefit calculation was consistent with the information contained in the active data.
3.	Date Fields	Basic data information (date of birth, membership date) was provided accurately in the active data to the actuary.
4.	Service	Total service credit from the benefit calculation was generally consistent with the active data.
5.	Salary	The salary information from the benefit calculation was generally consistent with the active data.
6.	Contributions	Employee contribution balances (total, minimum, ITHP balances) were generally consistent with the active data.

The areas with the most items noted as Potential Additional Review or Additional Review Recommended were related to service and salary:

- Final benefit calculations reflected periods of past service and this information was not provided in the active data to the actuary. This may occur based on decisions made at the time of retirement by the member or situations that the system resolves at the time of retirement.
- Earnings used in the calculation of final average salary were different than that provided to the actuary. This may be due to salaries being higher in the past than in the most recent year for a member. There were instances where the current salary provided was very low (less than \$12,000).
- For BERS, we noticed that there were instances where the final period used in the determination of final average earnings may be greater than 12 months. We understand this may occur if a member worked on a basis other than full-time or had absences without pay during the 36 months immediately preceding retirement. This resulted in the pay used for a year being greater than the "annual" salary provided to the actuary for valuation purposes.

Data Validity – Retiree Data

We compared the data elements from the member's benefit calculation with the retiree data fields provided for the June 30, 2021 actuarial valuation. This is the first valuation in which these individuals are considered retirees. This allows us to verify that the information from each individual's calculation, including the option selected, is transmitted to the actuary accurately. The following table displays the information reviewed.

Benefit Calculation Review: Retiree Data Elements		
1.	Status	Status (terminated vested, retiree, disability retiree, etc.) was provided accurately in the retiree data to the actuary. Codes used: <ul style="list-style-type: none"> - Deferred = Terminated vested - Service = Service retiree - Ord Dis = Ordinary disability retiree - Acc Dis = Accidental disability retiree - Acc Dth = Accidental death
2.	Date Fields	Basic data information (date of birth, retirement date) was provided accurately in the retiree data to the actuary.
3.	Retirement Type	Type of retirement was provided accurately in the retiree data to the actuary (service retirement, disability retirement, survivor retirement, etc.).
4.	Form of Payment	Form of payment, (maximum, joint and survivor annuity, etc.), including survivor percentage, was provided accurately in the retiree data to the actuary.
5.	Option Selected Benefit	The benefit selected by the retiree was consistent with the form of payment and was provided accurately in the retiree data to the actuary, including any allocation between pension and annuity amounts.
6.	Maximum Retirement Allowance	The maximum retirement allowance was consistent with the option selected benefit and was provided accurately in the retiree data to the actuary.

The areas with the most items noted as Potential Additional Review or Additional Review Recommended appear to be related to the timing of calculations performed versus when the retiree data is provided to the actuary. We understand that in some situations the retirement systems may pay a member a percentage, such as 80% or 90%, of their benefit upon initial retirement until the calculation can be finalized. This may result in differences between the final calculation reviewed in this report and the data used for valuation purposes. However, OA indicated that they make adjustments in their valuation programming to account for these situations.

- For NYCERS, there were situations where the benefit matched but the form of payment did not or where the benefits were at least 20% lower than the amount shown in the benefit calculation. For many NYCERS plans, we understand that they may pay 80% of the retirement benefit until the benefit is finalized.
- For POLICE and FIRE, the benefits paid to members are 90% of the calculated amount until the benefit is finalized. Members also may make decisions on receiving excess contributions in a lump sum or add on to their benefit. The timing

of these decisions can cause differences with the valuation data. For FIRE, it appears initial benefits provided to the actuary may not include amounts related to excess contributions even though an election was not yet made by the member.

Benefit Calculation Review

In this section, we reviewed the development of the retirement benefits for consistency with the Summary Plan Descriptions and the plan provisions section of the actuarial valuation reports based on the information contained in the calculation. The following table displays the information to be reviewed.

Benefit Calculation Review: Data Elements		
1.	Calculation Type	The type of calculation was noted appropriately in the calculation. Codes used: <ul style="list-style-type: none"> - Deferred = Terminated vested - Service = Service retiree - Ord Dis = Ordinary disability retiree - Acc Dis = Accidental disability retiree - Acc Dth = Accidental death
2.	Plan Code	The plan provisions applicable to the member were noted appropriately in the calculation and that the member met the conditions for retirement based on age and service.
3.	Final Average Salary	Based on the salary information included in the calculation, the development of the final average salary was determined correctly.
4.	Maximum Retirement Allowance	Based on the above information, the development of the benefit was determined correctly. This reflected determining the applicable benefit accrual rate, early retirement factor and adjustments for outstanding loans or contribution deficits. We used the annuity factors contained in the calculation.

Application of actuarial equivalence factors¹ can be complex as some portions of the benefit may be based on prior factors. Reviewing the determination of the specific factors was outside the scope of our review, but we did review them for reasonableness. We did review the application of the factors in determining the optional form of payment and the portion associated with annuity savings fund versus the pension fund.

Our review of final average salary and earnings is based on the information provided. We did not verify if longevity portions of salary were correctly included or other portions of earnings that may or may not be considered pensionable as these items were outside the scope of our review.

¹ Actuarial equivalence factors are used in determining benefits for members who select optional forms of payment and conversion of benefits based on member contribution balances. For example, a member who chooses a 50% joint and survivor annuity will receive a reduced benefit such that upon their death, 50% of the reduced benefit will continue to their beneficiary. The benefit payment to the member is reduced from the calculated benefit (the benefit at the normal form) to account for providing this benefit continuation upon death. The present value of the normal form and the optional form (50% joint and survivor annuity in this example) are actuarial equivalent when they are calculated using the same actuarial assumptions basis. NYCERS have adopted updated factors over the years, which reflect changes in interest rates and life expectancies. However, to avoid any decreases to benefits for eligible members, the NYCERS determine whether the updated or the prior factors provide the greatest benefit to the member. This determination is made for the normal form and each benefit option and includes the benefit payable from the member's own contributions (annuity savings fund). The methodology used is quite complex and can reflect factor from different time periods.

Also, outside the scope of our review, was the calculation of required contributions, excess contributions and ITHP balances. Given this information, we verified that it was correctly used in the calculation.

The benefits provided by each of the systems are extremely complex. There are numerous different plan types in NYCERS and various components in POLICE and FIRE. Based on the information provided, we were essentially able to match nearly all of the benefits calculated.

Future Reviews

The scope of this administrative review focused on a review of the benefit calculations, including the consistency of the data used in these calculations with the data supplied to OA for valuation purposes. Part I of our administrative review focused on process and procedure based on responses provided by each of the systems.

However, the scope of these reviews did not encompass a review of the participant experience nor the underlying data. In future administrative reviews, it may be beneficial to provide access to the online calculation system for reviewers to understand how participants access information and perform what-if calculations to gauge the accuracy of such calculations. Additionally, a participant survey may be of assistance in future reviews to more accurately reflect participant satisfaction with performance and member support.

Finally, we recommend a review of the data provided by employers to each of the systems to review the methodology and accuracy of the information supplied and maintained by the systems.