



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

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Ms. Krista Olson
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Re: Administrative Review Report

To Whom It May Concern:

We are pleased to present the enclosed report summarizing our findings on Part I 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 I consists of a high-level review of each of the systems procedures in administering the retirement systems to identify areas of possible improvement in the systems, their operations and the actuarial procedures. Part II, which will be released at a later date, will consist of a 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,

Administrative Review Report
New York City Retirement Systems

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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.

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 NYCERS' operations, and uses NYCERS' 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.

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

Respectfully submitted,



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Executive Summary

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)

The primary purposes of the administrative review are to:

- 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).

In systems as large and complex as those in NYCRS, there are many aspects to the administration process. The reader should recognize that many of the issues that we reviewed and which we will discuss in this report are subject to opinion and professional preference. By its nature, a review of another professional’s work product will tend to focus on those aspects where the reviewer believes some modification in current procedures would be desirable. 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 administrative procedures and processes in place meet or exceed Milliman expectations for each of the systems.** While we will discuss areas where we believe some modifications in administrative procedures or processes would be beneficial, that discussion should be considered within the context of an overall favorable review of the systems.

To conduct the review, Milliman provided each of the systems with an administrative request covering the following categories:

- Administration Procedures
- Audit Control Methods
- Performance
- System Capabilities
- Other Processes

Each system was asked to provide responses to a series of twenty-eight requests pertaining to the administrative practice utilized within those categories. After reviewing the materials provided, responses to follow-up requests, and discussions with Milliman, we provided each system a copy of the preliminary draft of this report, along with the opportunity to review the report, ask questions, and provide additional information to us. All systems provided feedback along with updated information and materials that were relevant but not previously provided. This report contains our amended commentary, as

Administrative Review Report
New York City Retirement Systems

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appropriate, reflecting any additional information provided, and conversations had with the systems.

Based on the response provided by the system, each of the twenty-eight requests were scored with Needs Improvement (□) or Satisfactory (◆). The report that follows provides the score and detailed commentary for all requests within each category. This summary grid provides an overall review using the following metrics:

- ◆ indicates that the System scored satisfactory in all segments within that category.
- indicates that the System scored Satisfactory in most segments within that category, but there was at least one segment that scored Needs Improvement within that category.
- indicates that the System scored as many or more Needs Improvement as Satisfactory in the segments within that category.

Category:		NYCERS	TRS	BERS	Police	Fire
1.	Administrative Procedures or Documentation Guidelines	◆	◆	◆	◆	◆
2.	Audit Control Methods	◆	◆	◆	□	□
3.	Performance or Customer Response	◆	◆	◆	□	◆
4.	System Capabilities	◆	◆	◆	□	□
5.	Other Processes	◆	◆	◆	◆	◆

Based on these scores, we have concluded that overall, each system is being administered in an appropriate and expected manner in comparison to Milliman's best practices, industry standards and industry trends. Each system has been proactive with procedural improvements and enhancing system functionality and have various enhancements currently under consideration. We encourage them to continue looking forward and pursuing these enhancements.

The systems maintain large and complex plans and generally have the proper procedures in place to handle the volume and complex work involved. This report provides additional details and specifics about each system, but the following items contain our overarching comments and suggestions for improvements within each category.

Administrative Procedures

Most of the systems provided robust documentation of their administrative procedures and we have rated each system for each item as satisfactory. We do note that the level of information provided for NYCERS, TRS and BERS was much more detailed than the level of information provided for POLICE and FIRE. NYCERS, TRS and BERS have systematic processes in place to generate the annual valuation files to the OA. However,

only NYCERS and TRS documented a thorough review and reasonability checks prior to sending the data to the OA. We encourage the other systems to put similar processes in place to better ensure the quality of the data provided to the OA.

Audit Control Methods

Each of the systems indicated their procedures for maintaining audit controls and we have rated each system for nearly every item as satisfactory. There were a few items where we believe additional controls should be implemented. We suggest the systems continue to evaluate their processes and find opportunities for automation of the calculator. The complexity of the plans can make a more automated calculator difficult but also important. Efficiencies for staff and mitigation of risk are created through automation by reducing human error.

Performance

Meeting member expectations and timing needs when providing services is an important part of plan administration. Milliman has evaluated each system's ability to perform tasks in a timely manner and were assessed in comparison to the different systems and to industry standards. In total, we found each system is able to assist members through the process in a reasonable amount of time and set expectations for next steps. However, each system tracks varying levels of performance measurements. While it can be difficult to measure these types of analytics, they can help identify areas in need of improvement. TRS and NYCERS identified the need to improve the wait time members were facing and both increased the number of staff by 33% and nearly 50%, respectively. BERS utilized overtime and increased staff to reduce backlogs and improve response times to its members.

System Capabilities

Overall, every system has had a focus on improving their system capabilities for several years. NYCERS, TRS and BERS currently set the standard for the online participant experience where members can initiate the retirement process, upload documents, perform what-if-calculations, and make retiree changes. Although the other systems contain some, but not all of this functionality, each is actively working towards an improved online presence. BERS recently appointed a Chief Information Security Officer to implement robust fraud prevention activities to safeguard member's data while providing members with an online retirement tool. We encourage the systems to continue developing and pursuing the plans they have in place, including the most up-to-date security measures such as multi-factor authentication.

Other Processes

In this section, we reviewed the procedures in place to handle situations that are more non-standard in practice such as Domestic Relations Orders (DRO), methods for commencing benefits for former employees at their first commencement date, and the

ongoing procedures ensure that deaths are identified and appropriately handled for both retirees and beneficiaries. There are varying levels of effort made towards early identification of deaths through third party searches by the systems. NYCERS and TRS have robust procedures in place including the use of several vendors to ensure a wide breadth of possible results. BERS recently implemented a search with results anticipated by the end of 2023. The frequency at which the member population is identified, and the results returned reduces the number of overpayments made to deceased retirees. We recommend all other systems look at these procedures if implementation plans are not in place already.

Future Reviews

The scope of this administrative review focused on process and procedure based on responses provided by each of the systems throughout the duration of this project. Part II of our administrative review will include 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.

However, the scope of these reviews will 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.

Administrative Review

Introduction

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 are ensuring the validity of the data provided to the OA.

On August 5, 2022, Milliman provided each of the systems with a request for information on how benefits are administered and what controls are in place to ensure those calculations are accurate. This request is shown in the Appendix. The administrative request covered the following items:

- Administration Procedures
- Audit Control Methods
- Performance
- System Capabilities
- Other Processes

This information has been compared to Milliman's internal processes and controls and other best practices within the retirement industry.

The following details the information requested and received by each of the systems for the administrative review. Since the requests were provided to the systems, Milliman has had numerous email exchanges and conference calls discussing the requests. In summary, Milliman has received all information requested from each of the five systems.

The following sections detail the information requested and received from the systems. Each system has been graded as Needs Improvement (□) or Satisfactory (◆) in each category, based on the review Milliman performed.

Administration Procedures

The following table indicates the grade the system received for the specific information requested under the general category of Administration Procedures or Documentation Guidelines. A grade of (□) indicates the process Needs Improvement and a grade of (◆) indicates the process is Satisfactory.

Administration Procedures or Documentation Guidelines:		NYCERS	TRS	BERS	POLICE	FIRE
1.	Uploading member data from participating employers on compensation, contributions, and basic data	◆	◆	◆	◆	◆
2.	Verifying member data for benefit calculation purposes covering service, compensation, contributions, and applicable plan provisions	◆	◆	◆	◆	◆
3.	Finalizing benefit calculations after initial payment has begun for a new retiree	◆	◆	◆	◆	◆
4.	Providing annual data to the Office of the Actuary for benefit calculation purposes *	◆	◆	◆	◆	◆
5.	Providing annual data to the Office of the Actuary for actuarial valuation purposes	◆	◆	◆	◆	◆
6.	Other documented procedures related to the administration of the pension plan	◆	X**	◆	X**	◆

* Item #4 incorrectly included the word annual in the request.

** No documents were provided for this item, but no additional items were needed.

Milliman Review

The primary purpose of this section was to review the specific administration procedures for handling data and completing benefit calculations. Milliman requested and evaluated detailed descriptions of the procedures in place for standard, recurring administrative responsibilities. We then evaluated these procedures for systematic and/or manual review when payroll data is received to ensure reasonability of the data. In addition, we reviewed procedures in place to ensure the received data was properly uploaded into the system of record, if applicable. We determined if calculations receive the appropriate review to ensure proper data is used. We examined the process in place to ensure final benefits are accurately determined and have been provided to the OA for certification.

Lastly, we assessed the procedures in place to assure quality data is provided to the actuary on an annual basis for valuation purposes as well as any other standard procedures used for administration of the plan.

Overall

Most of the systems provided robust documentation of their administrative procedures and we have rated each system for each item as satisfactory. We do note that the level of information provided for NYCERS, TRS and BERS were much more detailed than the level of information provided for POLICE and FIRE.

One item of note is, except for NYCERS and TRS, no system documented an internal review of the valuation files produced for the OA before delivering them. We recognize that the OA does perform their own review of the data and are ultimately responsible for that task, but we encourage the systems to take a more active role in that review. Reasonability checks of the data can help eliminate the need for back and forth with the OA and capture underlying issues with the data itself or the automated or manual pull of the data file. In Part II of our administrative review report, we will compare the data used in actual benefit calculations with the data provided for valuation purposes for consistency.

NYCERS

NYCERS provided robust responses detailing responsibilities for workers and checkers on verifying data used for benefit calculation purposes. NYCERS detailed the procedures for:

- Verifying service, including purchase service and service granted from prior systems.
- Verifying compensation used in the calculation based on the type of retirement and member's tier and plan, including the development of final average compensation.
- Verifying member contributions, including whether there are any deficits or refunds owed.
- Verifying the applicable plan provisions for the member.
- Finalizing calculations after the initial payment has begun.
- Providing data to the OA for benefit calculation purposes.

The documentation included the various units and sub-units that have responsibility for the various data items and sections of the calculation. The technical standard operating procedure (SOP) for loading payroll is very detailed and shows step by step instructions, helping to ensure the data is accurately loaded into the system of record. In addition, particular attention is given to the review and verification of member data during the calculation process, specifically related to plan eligibility, including tier and service history.

Part of the documentation included the process for revisions in the benefit. Revisions occur due to changes in member's case history, contractual retroactive payments,

adjustments to service, compensation, and other items. There is an automatic revision process that occurs fifteen to twenty months after the finalization of the option retirement allowance. With so many reasons for revisions, the OA's involvement in the two types of benefit revision helps maintain the accuracy of the benefit.

NYCERS also provided detailed instructions on how valuation data is generated, reviewed, and submitted to actuary for the annual actuarial valuation.

TRS

TRS provided information on its various procedures for verifying data, calculating benefits, and providing information to OA. These items included:

- Information on how compensation, members contributions and basic data is uploaded and reviewed.
- Detailed information on the different types of service, including membership service, transferred service, optional service, etc.
- How reinstatements or transfers into TRS impact a member's plan and tier.

As part of the process, TRS noted the system validations that are applied to the data for reasonability. The validations generate reports and error files for review and correction. Any manual entries follow a specific set of guidelines for the processing unit to confirm the accuracy of the data.

In addition, the calculation and finalization of benefits process is well outlined with a clear delineation of responsibility between the groups assigned to preparation and review. TRS utilizes the Unified Pension System (UPS). There is a clear level of attention required to be given to the plan eligibility of every member to properly determine the plan in which a retiree earns the highest calculated benefit.

The UPS is primarily used for performing the calculations automatically, but there is also a level of manual review afterwards. For example, final average earnings (FAE) salary is verified with each calculation due to complexities that can exist. We would encourage the system to define the calculations that do result in errors or miscalculations and determine if the UPS calculation engine can be enhanced to eliminate such errors and reduce the need for manual review.

Procedures are established to commence a "pending" payment as of the date of commencement and then to follow the finalization procedures, which may take up to six months to complete. We believe this is a reasonable period to complete the calculation process. During this pending period, information is provided to the OA to complete the review and certification process.

TRS has an extensive internal review process prior to sending any data files to the OA, which begins with an annual meeting to discuss any new requirements and those from the prior year. Prior to sending any file to the OA, the file must receive data governance

and business user approval. Additionally, TRS has extensive plans for improvement and automation through the ASPEN system, which is currently in the user acceptance testing phase. TRS has been working with the OA throughout the process. Using this system, the pension valuation file will be initiated by IT with the business unit performing review and reasonability checks before approving the final file to be generated. The final file is placed in an outbox folder where a process sweeps the file to transmit to the OA for review. This process has consolidated seven files into one as well as format improvements.

BERS

BERS Standard Operating Procedure Manuals (SOPM) provides detailed information on the process for:

- Completing Benefit Calculations/Recalculations
- Initiating pension inception, including joint and survivor benefits and benefits to alternate payees
- Ceasing benefits upon death
- Service purchases, including military service

These SOPMs detail the units involved, the process and the process flow. There is a clear demonstration by the different teams that the required review is a priority. Specifically, the verification of payroll data for calculations using multiple city data sources conveys the required attention to data integrity. The automation involved in the creation of the valuation files is a good and important use of technology for both processing efficiency and the mitigation of risk, especially given the number of files produced (14 files).

POLICE

POLICE provided responses to our requests, but it was not apparent if specific procedures and documentation manuals exist for staff to follow that would be used to verify the accuracy of the data and to perform the calculations. We recommend having some controls implemented to ensure the compensation, contribution, and demographic data files received through various methods are reasonable and without issues. In general, it is easier and more efficient to resolve issues with the file before anything is loaded to the system of record.

On the other hand, there was emphasis on review of the data in benefit calculations, as shown by having several levels of review required by different teams. The Membership Services Unit processes and checks transfer service and service purchases. The Pension Computation Unit processes any manual calculations and reviews all calculations for accuracy and completeness.

While the finalization process is ongoing, members receive 85% of their estimated retirement benefit until OA certifies the benefit. As there may be times that officers are working under expired collective bargaining agreements, the benefit is not finalized until the applicable collective bargaining agreement is signed.

FIRE

FIRE provided responses on the various requested items indicating the unit responsible for that portion of the process.

- FDNY IT Unit has responsibility for capturing data from the data warehouse systems (HRIS and EPIS) and migrating it to the Fire Pension Fund's (FPF) data warehouse system (E-UPS).
- Calculation Unit verifies the data against the member's retirement application.
- IT also assists with the calculation of the benefit and submitting data to the OA for benefit calculations and the annual valuation.

The Fire Pension Fund (FPF) does not have control over FDNY's payroll data. As stated above, FDNY's IT migrates the data so it can be used by FIRE. However, despite not having the responsibility for data loading or validation, they do perform quality assurance steps as part of the staff's tasks to confirm that data has been properly posted into the member's record and address any issues with FDNY IT, as necessary. Since the commencement of this audit, FIRE has eliminated the manual process of staff entering pension deductions into the Payroll Management System (PMS). There is now a process in place where the database generates the output file for Financial Information Services Agency (FISA) to import into PMS. Further, the import file is tested and change output is reviewed prior to loading to live data then reviewing the change output file again.

FIRE did provide a well-documented process on the finalization of a member's benefit. Members receive 90% of their estimated retirement benefit until OA certifies the benefit. As there may be times that firefighters are working under expired collective bargaining agreements, the benefit is not finalized until the applicable collective bargaining agreement is signed.

The finalization process contains a thorough procedure detailing the importance of the various levels of review and includes the verification of benefit by the OA. This helps ensure accuracy and effectiveness of the team and ultimately provides a more positive experience for the members.

Audit Control Methods

The following table indicates the grade the system received for the specific information requested under the general category of Audit Control Methods. A grade of (□) indicates the process Needs Improvement and a grade of (◆) indicates the process is Satisfactory.

Audit Control Methods:		NYCERS	TRS	BERS	POLICE	FIRE
1.	Calculation of retirement benefits	◆	◆	◆	◆	◆
2.	Option selections by members	◆	◆	◆	◆	◆
3.	Refunding employee contributions	◆	◆	◆	◆	◆
4.	Initiating monthly payments to retirees	◆	◆	◆	◆	◆
5.	Changes to payment information, such as tax withholding, address changes, direct deposit information, etc.	◆	◆	◆	◆	◆
6.	Calculating cost-of-living adjustments	◆	◆	◆	◆	◆
7.	System changes to the base calculation engine as a result of plan changes or other changes impacting how benefits are determined	◆	◆	◆	◆	□
8.	Obtaining and reviewing SOC II reports from software vendors*	◆	◆	◆	□	◆

* Service Organization Control 2, (SOC 2) report addresses an organization's controls that are relevant to their operations and compliance

Milliman Review

For this section, Milliman assessed the audit control details each system has in place to ensure that standard practices are being followed in various aspects of administration. This includes processes that impact the accuracy of the calculator, the benefit amount presented to and ultimately paid to the participant, as well as adjustments to the retirement benefit, whether it be through a retiree requested change or a plan required adjustment.

This section also includes how modifications to the administration system are initiated, documented, and verified as well as obtaining a SOC II report. A SOC II report addresses an organization's controls that are relevant to their operations and compliance.

Overall

Each of the systems indicated their procedures for maintaining audit controls and we have rated each system for nearly every item as satisfactory. There were a few items that we believe additional control should be implemented; one each for POLICE and FIRE.

There was a common theme where the work performed had a processor and a checker, which is a vital element of administration when full automation is unavailable. We encourage you to have clear delineation regarding which tasks fall to a processor and the defined processes designated to a checker. There should be a clear audit trail detailing who worked on what steps and who performed the required review.

In addition, the systems may wish to define requirements for checkers to only allow qualified staff to complete work designated to a checker. We do note that NYCERS defines the responsibilities of a checker and the requirements to be a checker.

Although all systems have some level of automation in the calculator, we recommend an evaluation of the information that is being manually reviewed after the benefit is calculated. There appears to be a significant amount of manual review for benefits that are determined by a calculator. Questions we would ask are:

- Are there areas of review that are no longer needed? It is not uncommon to fall into habits where you perform extra review after there was an issue identified.
- Are there specific issues where there is an underlying issue with the calculator? We recommend you evaluate areas where accuracy is uncertain, dig into the root causes for the uncertainty, and attempt to find ways to improve the underlying issues in the calculator.

Errors and warnings are a vital part of automation being successful, but it is critical to target them specifically at the populations that are impacted. If an error or warning impacts the entire population, it is likely a coding change should be considered. If the error or warning is too broad and triggers for members without a real issue, staff will spend time inefficiently, reviewing details that ultimately do not require the review.

NYCERS

In NYCERS responses, there is delegation of responsibility through a worker and checker, and in some instances an additional final reviewer, for each of the units. This is consistently applied through various administrative tasks that were evaluated in this review. The inclusion of an online option through MNYCERS used in the last two years is a significant improvement. Allowing members to use more self-service features provides additional control and reduces processing time and the potential for errors. There is a strong Vendor Risk Management process in place; requiring the SOC II, or other applicable reports, is vital for the security of the system.

TRS

TRS provided an overview of controls for:

- Calculation of retirement benefits, including detailing the experience and expertise of the unit.
- When members select an option, coordinating between the Retirement Unit and Member Services.
- Refunding employee contributions.
- Initiating monthly payments.
- Changes to payment information, including determining cost-of-living-adjustments.

The controls document the process that begins with Member Services and cycles to the Retirement Unit, OA, and the Retirement Payroll Unit. Finally, information is transmitted to the Financial Information Services Agency (FISA).

In addition, the member portal has been enhanced to provide two-factor authentications at time of registration. The methodology used at time of registration and subsequent login follows industry standards.

TRS also detailed the procedures for changes to the calculator and larger level changes to the underlying administration system. The detailed methods followed by TRS are consistent with the procedures followed by Milliman, including the use of the Agile project management protocols. Spending time upfront developing the user stories with feedback and signoff from the stakeholders will provide a deliverable that satisfies the true need. We believe the different levels of review, including technical code review, technical review of the change by Quality Center of Excellence (QCOE) and then User Acceptance Testing (UAT) by the business users are critical elements to the proper development and maintenance of the system.

We believe all Systems should be looking to TRS as an example for system change procedures when making larger changes to their respective system.

Finally, TRS provided information on its processes to ensure proper security controls are in place for sensitive data. A security accreditation process is initiated with vendors, including receiving a SOC II compliance document, and the TRS Information Security and IT Security teams. These controls meet industry standards.

BERS

BERS Standard Operating Procedure Manuals (SOPM) contain Quality Assurance Management reports detailing:

- Review of payroll reports.
- Review of payroll exception reports.

- Verifying the payroll has been uploaded into the calculation system properly.
- Review of payroll deductions, including the handling of unapplied deductions.

Addressing unapplied deductions is primarily a manual process where specific reports are run in the system to align any payment received with the regular deduction amount, to any loan amount, to service purchases or other items. Any unapplied amounts are reviewed by the specific departments to make the required adjustments in the system. This is one item where it is difficult to determine if the enhancements to the system would reduce the amount of manual subsequent review. On the other hand, controls appear to be in place to review these items on a continual basis so that they do not add up and then become a much greater project to correct.

From an audit controls perspective, the work done on the calculation of retirement benefits is satisfactory. However, we would encourage BERS to look for opportunities for improvements that will provide a level of confidence in the calculation generated in the Comprehensive Pension Management System (CPMS) to make independently calculating every pension benefit via an excel spreadsheet unnecessary. Although this practice is likely to ensure the accuracy of the benefit, it introduces inefficiency in the process that might be able to be eliminated.

The cost-of-living adjustments (COLA) calculation process initially received a Needs Improvement grade as the same individual was responsible for both processing and review. However, this grade has been changed to Satisfactory because BERS has since separated the roles of preparer and verifier within the Pension Payroll Unit.

The process for system changes has appropriate steps in place to ensure proper review is completed in a testing environment. Having regression testing in place is a key functionality to ensure there are no unintended impacts to the calculator.

BERS has recently onboarded a Chief Information Security Officer (CISO) who is in the process of reviewing the security infrastructure of the organization. The CISO has completed a review of the SOC II reports from its vendors and concluded that they are satisfactory and operate in accordance with the security standards. Reports will continue to be reviewed on an ongoing basis as they become available.

POLICE

POLICE indicated the steps involved in:

- The calculation of retirement benefits.
- The process for finalizing member benefits.
- Refunding employee contributions.
- Initiating payments to retirees.
- Changing payment information, including calculating cost-of-living-adjustments.
- The development changes to the COPS 1.0 and 2.0 pension systems.

The pension system (COPS 1.0) produces the calculations and maintains information on member contributions. The Pension Payroll Unit reviews the calculations and initiates the finalization process. The steps in place to start a member at 85% of their benefit then confirm accurate finalization of the benefit in addition to the options selection and receipt of beneficiary validation are satisfactory. There is a demonstration of proper review in place for changes such as retiree maintenance on payment information. While the responses indicate satisfactory compliance with what is anticipated from an audit control perspective, we are uncertain if the specific procedures noted are formally documented. We recommend the processes noted, including the responsibilities of the processor and checker, be formalized to the extent that they are not.

POLICE provide three separate COLAs: the monthly COLA, the World Trade Center Re-Classified COLA (WTC R) and the Special Accidental Death Benefit Increase. Although the source of determining the increase varies based on the COLA type, the Safeguards unit follows a standard procedure to verify the values input into the Pension Payroll Management System (PPMS) by the Pension Payroll unit, check for errors and re-process in PPMS if errors are identified. The Special Accidental Death Benefit Increase recipients receive a letter including the new COLA increase and one-time retro amount, if applicable. The first-time recipients of the monthly COLA and WTC R COLA also receive a letter. All letters are checked twice to ensure accuracy.

Changes to the COPS 2.0 pension system are documented with subject matter expert(s) (SME) from the impacted business area(s) involved in the design and testing of any new functionality. The SME is ultimately the one with the final signoff that the new development meets the documented need before deployment to production or as part of a rollout. Additionally, a full security assessment is run prior to deployment. A less formal process is followed for changes to COPS 1.0 as very minimal changes are made; however, the general process for documentation by SME's, development and testing signoff is still completed. The process followed by POLICE is in line with our expectations.

A SOC II report has been requested from the software vendor for the COPS 2.0 project, but it has not been requested from software vendors on a consistent basis. A Chief Information Security Officer consultant has been hired to perform a review of cyber security and IT controls to ensure best practices are in place. We recommend POLICE begin requesting SOC II reports as standard practice. As such, we indicated a Needs Improvement grade.

FIRE

FIRE provided responses on the various requested items indicating the types of reviews that occur:

- Retirement benefits are verified against actuary's report, initial benefits reconciled against summary report, calculations are reviewed including scanning payroll information for inconsistencies.

- Member's option benefits are verified.
- Review of member contribution balances to determine the excess amount over the minimum required amount.
- If there are pending domestic relation orders prior to payout, reconcile the report against applications submitted.
- For initiating monthly benefits, updating the pension administration system, and providing supporting documentation to the Pension Payroll unit.

While the responses indicate the items to be checked and reviewed, we are uncertain if the specific procedures noted are formally documented. We recommend the processes noted, including the responsibilities of the processor and checker, be formalized to the extent that they are not.

We do note that FIRE has a formal process for supervisors to report potential issues with a relevant policy or procedure document to the compliance officer. Therefore, if there is an issue with any policy or procedure, a supervisor can self-report the issue to begin the process to correct it and alleviate potential risk to the system. Based on the information provided, we do believe that FIRE has appropriate controls in place and thus, we scored a Satisfactory grade for these items.

FIRE provided a detailed response related to the process followed to calculate and review COLAs. The COLA rate effective September 1 is first calculated by the OA and provided to FIRE in April. This rate is stored in a reference table by the Financial Information Services Agency and the Office of Payroll Administration (FISA-OPA) to be used in an automated annual COLA increase process. PPMS is programmed to automatically calculate and apply the COLA based on various indicators, such as age, retirement date and retirement type, and the COLA rate. FIRE matches our expectations of review by performing reasonability checks of the COLA amounts calculated versus manually recalculating all members amounts to compare to the PPMS value.

Regarding system changes, we recommend enhancing the procedures for review when changes to the base calculation engine occur. When a change is made to the calculator, there is a risk that the change was incorrect, or an unintended change occurred. This risk can be mitigated by having multiple levels of review both by users of the calculator and, if possible, systemic review through regression testing. We recognize that FIRE is working towards revising the calculation methods to allow for easier troubleshooting of issues. Additionally, they are looking to implement solutions that will allow for parallel testing using the same source of data. If determined that parallel testing with the same data is not feasible, we recommend having at least one other database environment where changes can be tested without impact to the live data or production calculator.

Since payroll data is received directly from FDNY, no SOC II report is required as the EPIS data center is under the direct control of the FDNY. FIRE confirmed SOC II reports are provided from other vendors.

Performance

The following table indicates the grade the system received for the specific information requested under the general category of Performance. A grade of (□) indicates the process Needs Improvement and a grade of (◆) indicates the process is Satisfactory.

Performance (Customer Response):		NYCERS	TRS	BERS	Police	Fire
1.	Completing retirement estimates for future commencement dates	◆	◆	◆	□	◆
2.	Initiating first payment upon retirement	◆	◆	◆	◆	◆
3.	Completing a final calculation if first payment is based on an estimate	◆	◆	◆	◆	◆
4.	Responding to phone calls, emails or other communications from members	◆	◆	◆	□	◆

Milliman Review

The primary purpose of this section was to evaluate the timeliness of meeting members' needs. Meeting member expectations and timing needs when providing services is an important part of plan administration. As such, Milliman has evaluated each system's ability to perform tasks in a timely manner. Performance and turn-around times were assessed in comparison to the different systems and to industry standards.

Overall

The retirement process can be a long and confusing process for members for them to understand the data used in their calculation, the applicable provisions in determining the benefit, the application of the formulas, available options including the election of refunds of certain contribution balances, selection of an option and receiving the first pension check. And then, the calculation can be subsequently revised to reflect final earnings and service, which can be months or even years later for certain systems. In total, we found each system able to assist members through the process in a reasonable amount of time and set expectations for next steps.

In terms of answering phone calls, emails, and communications from members, there was a lack of statistics provided by most systems. Assuming the staff responsible for these tasks is not part of a large call center, we wouldn't necessarily expect call center statistics and standards to be fully applicable. However, we would recommend focusing on and tracking one of the industry standard metrics known as first call resolution (FCR). This would involve setting up standard documentation for the reps with facts about the plan and how to handle frequently asked questions. Being able to resolve a member's questions or concerns on the first call provides a positive experience for the member and can decrease the workload of the different teams. TRS sets a strong example with an FCR of 93%. We believe assessing a system's performance should be an important aspect that should be explored further.

NYCERS

NYCERS provided information on the following items:

- Providing annual estimates to active members.
- Timing for commencing a partial or advanced payment upon retirement.
- Information on different methods of interacting and responding to customers, such as by video, phone, and in-person counseling.

The process of sending estimate benefit letters to members that are eligible for service retirement meets expectations. Continuing to send a letter every year thereafter until the member retires is a good practice to have in place as administrators continue to face additional pressure to make continued attempts at contacting retirement eligible members. In addition, members can produce their own estimates using an online estimated benefit calculator.

The level of service and options available for members to contact the system is commendable. The in-person counseling and customer service walk-ins appear to be heavily used services increasing member satisfaction and reducing errors in the retirement process. It may be advantageous for the system to promote the video and phone consultations as they are less widely used and could reach a broader audience more efficiently. Interestingly, the average time spent on a video call is nearly double that of in-person counseling or phone conferences.

The number of phone inquiries is, as expected, the highest volume, but the average speed to answer is very high (average of 37 minutes for the three months of data provided). NYCERS recognized that the increase in call volume required additional staff. Using a formula to estimate the needed call center capacity, they prepared several proposals to the Board of Trustees for additional staff. In May of 2022, the Board approved NYCERS to nearly double the size of the call center staff to meet the members needs and reduce wait time. We are indicating a Satisfactory grade based on the changes implemented but would encourage NYCERS to continue tracking call statistics to ensure the increase in staff provides the expected changes.

TRS

TRS provided information on the ability of members to perform their own estimates using a member portal and on average response times to customers.

The use of the member portal for future commencement date estimates matches our expectation. The self-service portal provides a faster turnaround time for the participant as calculation results are provided within seconds. This eliminates the need for staff to work on these calculations and allows them to focus on other priorities.

For response times, average wait times for responding to phone calls was noted as approximately 20 minutes, responding to emails within 3-5 business days and written correspondence within 7 business days. As noted for NYCERS, average wait time for Milliman clients is under 1 minute for responding to phone calls and emails are answered within the next business day. Despite the response times, TRS does set a high standard with an FCR rate of 93% and indicated that it rates in the top 3 of 82 pension systems participating in CEM (cost-effectiveness models) Benchmarking despite having the highest member contact, specifically call volume, in comparison to the other systems. Additionally, TRS has already taken steps to reduce and handle the call volume by adding a new telecom system, streamlining the Interactive Voice Response (IVR) menu, implementing an online chat and email feature to the portal, and adding an additional 10 call center staff members. We believe these changes should improve the overall experience for the members and as stated for NYCERS, we encourage TRS to continue tracking the call statistics to ensure the new features and staff provide the expected changes.

BERS

BERS provided information on the ability of members to receive future commencement dated estimates, the timeline for receiving a final calculation and average response times to members.

Members can receive an estimate immediately via the member portal or through Member Services with an average turnaround time of 10 business days. The process of sending members estimated benefits during retirement consultation then completing the final benefit and providing members with those finalized numbers meets our expectations. The final benefit is determined through a comprehensive audit of the service, salary, and accumulation of member contributions and first pension checks can be expected within 10-90 days from the date of retirement.

Since the commencement of this audit, Member Communications has taken notable steps to improve performance and wait times. The Member Communications Department has reduced the response time for emails and secure messages from 10 to 15 days down to 5 to 7 days and to 1 to 2 business days for outreach emails. This is a significant reduction from the initial 10 days previously reported. Utilizing overtime and onboarding two employees into the unit allowed the department to reduce backlogs, free up staff capacity and bring operations up to date. Furthermore, the department has approved additional headcount and anticipates further improvement in the wait times within the next year. Our initial grade of Needs Improvement has been adjusted to Satisfactory due to the significant improvements already displayed.

POLICE

POLICE provided descriptions on the following items:

- Completing retirement estimates.
- Initiating first payment.
- Final calculation process.
- Responses to phone calls and messages.

Currently members are unable to complete retirement estimates online. POLICE limit the estimates and working with Retirement Processing staff to members committed to retirement. Retirement Processing staff can perform calculations in real time as needed. We understand that POLICE have a goal of providing an online calculator to promote self-service. Being able to provide estimates to all members of the system is strongly encouraged. As such, we indicated a Needs Improvement grade.

For initiating the first payment, the process and timeline for putting members into pay with the “first payment” by the end of the month immediately following the month of retirement allows for procedural consistency and efficiency, which provides a positive experience for the members.

POLICE did not provide any specific “performance” items on time to respond to calls or messages from members. Members have the ability to send secure messages through webCOPS, COPS 2.0 system and through NYC 311 system. They also have the ability to easily contact the Executive Director through the PPF website, which is handled by the chief operations officer in conjunction with the Executive Director’s executive assistant. Once an online calculator becomes available, it is our experience that the system may be contacted more often soon after the release, but less on a long-term basis as the system provides self-service features of updating addresses, beneficiaries, tax information, etc. Tracking performance will be important to verifying the appropriate staffing levels needed.

FIRE

FIRE provided limited information in terms of performance items. They did note that estimates are provided to members within 72 hours and that the Member Services Team members aim to respond to emails and phone calls within 24 hours. These response times are within Milliman’s guidelines assuming actual performance meets these expectations and that estimates are provided to all members upon request.

For initiating the first payment, the process and timeline for putting members into pay with the “first payment” is based on the member’s retirement date. If it falls from the 1st to the 15th of the month, the member will receive the first check at the end of the same month. If it falls from the 16th to the last day of the month, the member will receive the first check at the end of the month immediately following the month of retirement. Although a different schedule than POLICE, the same procedural consistency and efficiency leads to a positive experience for the members.

The FIRE system became its own entity in 2017 and has been adding staff recently. An online “Uniformed Pension Portal” is available through the FDNY intranet to all active

members using any FDNY computer system or a kiosk available at every fire house. Through this portal they have access to generate pension estimates, pension manuals, applications, forms, and retirement seminar schedules. It is our understanding that there is currently a proposed project to potentially develop an internet facing pension portal to make it more widely available. Similar to POLICE, tracking performance will be important to verifying the appropriate staffing levels needed.

Members of FIRE are provided with their unit's direct phone number by the Unions giving them the option to contact the responsible unit directly or reach out to the main number and be directed to the responsible staff member. This direct access eliminates any wait time in reaching the appropriate member. The Members Service Unit handles all inquiries pertaining to retirement applications, the retirement process, retirement counseling, seminars, pension estimates, etc. The policy states that all emails and phone calls will be responded to within 24 hours. In addition, all communication with members is being tracked through Pentrack which will allow FIRE to better assist members on an ongoing basis.

System Capabilities

The following table indicates the grade the system received for the specific information requested under the general category of System Capabilities. A grade of (□) indicates the process Needs Improvement and a grade of (◆) indicates the process is Satisfactory.

System Capabilities:		NYCERS	TRS	BERS	Police	Fire
1.	Ability of member to initiate retirement process online	◆	◆	◆	□	□
2.	Ability to upload applicable documents required to commence a benefit	◆	◆	◆	◆	□
3.	Ability to perform what-if retirement calculations based on current, up-to-date payroll data	◆	◆	◆	□	◆
4.	Provide retirement readiness materials, including seminars, webinars, etc.	◆	◆	◆	◆	◆
5.	Ability of retirees to change payment information through a website	◆	◆	◆	□	□
6.	Multi-factor authentication (MFA) and other fraud prevention capabilities	◆	◆	◆	◆	◆

Milliman Review

The purpose of this section is to review the functionality of the systems used by both the administrative teams and members. We requested information on the online participant experience that exists today as well as future expansion plans. It has become industry standard to provide a more self-service model where participants can model benefits, initiate and/or complete the retirement process and make allowable adjustments to retirement benefits.

Overall

NYCERS, TRS and BERS are the largest systems and as such, their systems appeared to be the most sophisticated in handling the various elements of the retirement process. POLICE and FIRE rely more on manual processes, but upgrades are currently being developed or contemplated.

NYCERS

The System meets both Milliman expectations and industry standard in every category we reviewed related to their system capabilities and available online functionality. Providing members a secure method to self-service the retirement initiation process and retiree maintenance enhances efficiency for members and the NYCERS staff. Additionally, the checks in place when an invalid submission occurs, ensure the accuracy of the update. The multiple levels of fraud prevention in place, including multi-factor

authentication (MFA), the knowledge-based authentication quiz, and increasing the risk management service provider's scoring metrics exceeds the baseline that we consider satisfactory.

NYCERS significantly increased the number of members participating in educational events using video seminars and webinars. In 2022, nearly 20,000 members attended virtual seminars. The following seminars are offered to members, and all materials are posted on the NYCERS website.

- Prospective member seminars.
- Pre-retirement planning seminars.
- Lunch and learn seminars.
- Comprehensive pre-retirement planning seminars that include representatives from the Social Security Administration and OLR for health insurance and deferred compensation.
- Union sponsored events.
- Annual train-the-trainer seminar for employer and union benefits coordinators.

TRS

The effort TRS is putting towards educating members on the pension is commendable. There is outreach through free virtual and in-person educational programs, participation in employer and sponsored outreach events, a variety of written materials easily accessible for all members online and annual statements provided. These efforts result in a more informed population that understands both their pension and the process they need to follow to reach their retirement needs. The system meets all expectations for the online experience for members by allowing initiation of the retirement process, upload of documents, calculating estimates and retiree maintenance. Additionally, access to this member portal is effectively using fraud prevention measures with both MFA and the use of security image verification.

BERS

BERS recognizes that the participant online experience is essential in providing a seamless and efficient experience for BERS current and retired members. They provide members with online features such as performing what-if retirement estimates, the ability to upload applicable documents to commence a benefit, initiate the retirement process, and adjustment payment information once a retiree through the BERS Member Self Service Portal (MSS).

At the onset of this review, BERS was not utilizing MFA to protect against unauthorized access and potentially fraudulent activities such that a Needs Improvement score was originally provided. Since then, MFA has been rolled out to all member and employees using the MSS portal, which was a significant step forward in security verification. As a result, the score now reflects Satisfactory. Additionally, in response to the growing

importance of safeguarding their members' data, BERS recently appointed a Chief Information Security Officer (CISO) whose primary responsibility is to implement robust fraud prevention activities. This act reinforces their commitment to ensuring the highest level of data security for their members, and will make this functionality available to members once BERS is confident in the measures put in place for MSS. We encourage BERS to continue their steadfast improvements in this area.

From a retirement readiness perspective, we saw many forms and publications online that will help members understand their benefit and the retirement process. The outreach materials provided to members, including the use of multiple languages, should aid in members in understanding how to contact BERS, the benefits of joining BERS and the timing expectations of certain processes.

POLICE

The system used by POLICE does not currently perform certain functions such as what if calculations and initiating retirement benefits online. As such, we indicated a Needs Improvement score. However, the ability to upload documents instead of mailing is an increasingly popular and efficient method and is a good feature to have available for the members today. We encourage POLICE to continue moving forward with future releases to add functionality for both estimate calculations and retiree payment changes. These are key online self-service features that add value to the member and gain efficiency for the staff. There is an industry trend towards payment initiation online and we would recommend exploring whether that functionality would be beneficial for your specific demographic and population.

FIRE

As noted earlier, FIRE is in the early stages of developing its administration system relative to the other NYC retirement systems. An online presence is increasingly important in the industry, which is currently available for active members through the FDNY intranet. There are plans to modernize the pension administration platform to allow retirees to initiate payment and perform retiree maintenance and we encourage you to heavily consider pursuing this proposed project that is currently in review with a third party. If it is determined that functionality allowing members to actively engage online, such as initiating retirement, uploading forms or adjusting retirement benefits will not happen, we recommend creating an online presence that at a minimum provides members with information about the plan and retirement readiness materials to non-active members.

Although we feel an online presence is vital, Member Services is already providing several methods for members to receive retirement readiness materials. This includes monthly virtual seminars for firefighters and fire officers, biannual seminars for probationary firefighters, retirement consultations to prospective retirees upon request and the availability of the Summary Plan Description (SPD).

The use of multi-factor authentication on all Fire Pension Fund (FPF) machines is a good step towards fraud prevention. Since paper submission is so prevalent, FIRE is appropriately handling sensitive documents. They are scanning all finalized member files to Visual Vault, which only certain members who are granted access can easily access the electronic files when necessary. After scanning, the physical files are sent to the off-site storage facility, GRM. Files that are not sent to GRM are stored in the in-house pension file room, which is restricted, secured, and accessible by personnel to whom the Chief of Staff has granted access using a security badge. When a staff member does require a file, they must make the request in writing and the removed files are documented with the name of the requestor and the reason.

Other Processes

The following table indicates the grade the system received for the specific information requested under the general category of Other Processes. A grade of (□) indicates the process Needs Improvement and a grade of (◆) indicates the process is Satisfactory.

Other Processes:		NYCERS	TRS	BERS	Police	Fire
1.	Reviewing and initiating payments to alternate payees of domestic relations orders (DROs)	◆	◆	◆	◆	◆
2.	Initiating payments for deferred vested participants	◆	◆	◆	◆	◆
3.	Verifying members and/or spouses are alive and eligible to continue to receive retirement benefits	◆	◆	◆	◆	◆
4.	Overpayment recovery in cases where death notification is not provided timely	◆	◆	◆	◆	◆

Milliman Review

In this section, we were reviewing the procedures in place to handle situations that are more non-standard in practice. What steps are in place to ensure a system is properly reviewing Domestic Relations Orders (DRO) to ensure they are qualified and that the benefits are properly calculated and distributed based on the unique requirements of the Qualified Domestic Relations Orders (QDRO). What rules are in place for participants who defer beyond their Normal Retirement Date and how do the systems adjust that benefit. Lastly, what ongoing procedures ensure that deaths are identified and appropriately handled for both retirees and beneficiaries.

Overall – Domestic Relations Orders

Each of the systems provided detailed steps used in reviewing, assessing, and administering domestic relations orders (DROs). Each system applies a shared-interest approach meaning that the alternate payee receives a portion of the member's benefit while the member is alive. Some of the DROs indicate that the alternate payee should also be named the survivor and require the retiree to make a joint and survivor election. Each system involves legal reviewing the DROs and has procedures in place to determine the benefit in accordance with the specific document. We agree with the systems' approaches.

Overall – Initiating Benefits to Terminated Vested Members

Each of the systems indicated that benefits commence at the first payability date regardless of when actual commencement occurs. This can result in retroactive payment checks being issued if commencement occurs after the first payability date, but no interest adjustment is included. NYCERS and TRS appear to have systematic approaches in attempting to contact members eligible to receive benefits. BERS indicated that reports may be run periodically but there did not appear to be a definitive process. Due to the number of vested members in POLICE and FIRE, this is less of an issue for those systems.

From a best practice perspective, we encourage each system to establish procedures to identify members within three to six months of their first payability date. In addition, there may be ways to leverage the death searches for address searches where a valid address is not known.

Finally, there have been some recent IRS Revenue Procedures issued on these types of administration issues and we encourage each system to ensure current practices are consistent with IRS guidelines.

Overall – Death Searches and Payment Recovery

Performing an adequate death search is an important function of administration. Timely discovery of a death has positive downstream impacts to the administrative team, the plan, the member, and ultimately the surviving spouse or beneficiary. There are many companies for hire to perform the search on your population at a given interval. Each of the systems are employing strategies to have searches performed with various commercial companies specializing in these types of searches. We note that BERS has implemented a procedure to be completed by the end of calendar year 2023.

The frequency of the searches varies by system. NYCERS and TRS's processes and timing for performing the search is ideal and recommended for all other systems. Identifying the population monthly with weekly or monthly returned results from their current providers. Certain providers will be returning results weekly allowing for significantly earlier identification of deaths resulting in less potential for overpayments.

We recommend all the systems consider consolidating the death search process, when using the same vendor is appropriate, as many companies will provide cost savings based on the volume of records. In addition, we encourage the systems to consider including terminated vested members and elected beneficiaries of joint and survivor annuities, in addition to retirees if they are not already included in the population. If the survivor of a joint and survivor annuity has pre-deceased the retiree, the Office of the Actuary can utilize that information in determining the liabilities for the systems.

In addition, all of the systems require proof of life affidavits:

- NYCERS requires affidavits for retirees over age 85.

- TRS requires affidavits for retirees over age 85, pension income in excess of \$100,000 and those living overseas.
- BERS requires affidavits to pensioners over the age of 85.
- POLICE require annual affidavits for retirees over age 80 and living overseas.
- FIRE requires affidavits for retirees over age 80.

In situations where the death of a participant was discovered subsequent to the month, each of the systems had methods for recouping payment for any benefits erroneously paid after death. In some instances, legal was involved in the process. TRS provided a detailed methodology of the payment process, and we would recommend that each system documents their procedures in a similar fashion.

NYCERS

As stated in the review above, NYCERS is one of the systems that sets the standard to identify new retiree deaths. They are also meeting expectations on handing overpayment recovery after the death was identified through multiple attempts to retrieve the overpayment, both EFT and checks. The utilization of third party vendors that specialize in both person and information location services to locate any relatives is a worthwhile effort in instances where one was unable to be located or was not known.

TRS

The procedures are clear and detailed for overpayments resulting from a member's death and overpayments related to a cost recovery where the benefit must be reduced. Cost recovery scenarios can be sensitive situations based on the reason for the reduction, but the methods for recalculation and review performed by TRS provide for a timely correction once identified. In addition, the procedures in place if an appeal is filed are well defined.

TRS uses a third party vendor to determine if a member's address is valid prior to sending retirement eligibility notices to vested terminated participants. Additionally, in attempt to contact this population on a more regular basis, TRS has a planned enhancement to send the Annual Benefit Statement (ABS) in ASPEN as a reminder regarding their retirement eligibility.

Similar to NYCERS, TRS is setting the standard other systems should follow for identifying new deaths. Through the use of several vendors, TRS is sending updated data on a monthly or weekly basis to receive current results. In addition, TRS utilizes Financial Information Services Agency's (FISA) relationship with the Social Security Administration (SSA) to identify any new matches through monthly searches. They have performed a significant amount of research on vendors to determine who provides the most optimal results for their population and remain flexible to new methods when necessary.

BERS

We suggest BERS implements a regular process to ensure terminated vested members commence benefits timely and understand they are currently in the initial stages of developing a comprehensive program.

The implementation of a commercial death search by the end of 2023 will be a significant improvement in the verification of active pensioners. We also encourage you to include elected beneficiaries not yet in pay, as well as any deferred terminated vested participants.

POLICE

For DROs, the procedures in place and the division of responsibility, including review by the OA, ensure the accuracy of the benefit for the participant and alternate payee for both retired and vested members.

The procedures in place for members reaching their first unreduced commencement age meet expectations. Reaching out to members not once, but twice shows due diligence on POLICE's part to make all efforts to get members into pay status on a timely basis.

The methods used by the POLICE to confirm proof of life exceed expectations. These efforts will aid in the reduction of overpayments, which can cause a burden on the System, but more importantly, on the remaining relatives of the deceased member.

FIRE

Clear procedures and timelines are in place for finalizing a benefit and initiating the first payment. The distinction between the retirement date falling on or after the 15th of the month and how that sets the first payment date is efficient. This allows members to know exactly when they can expect their check, limiting their need to call and ask questions.

FIRE's approach to DROs, commencement of benefits to terminated vested members, performing retiree death checks and procedures for recovering overpayments all meet expectations. To the extent that these procedures are not documented in detail, we recommend creating formal documents detailing these and other items.

Appendix

Administrative Review Initial Request for System

This request in connection with an Administrative Review being conducted by Milliman, Inc. through a contract with the New York City Comptroller's office.

Administration Procedures

Please provide a list of procedures or documentation guidelines for the following:

- Uploading member data from participating employers
 - Compensation
 - Contributions
 - Basic data
- Verifying member data for benefit calculation purposes
 - Service, including purchase service and service granted from prior systems
 - Compensation
 - Contributions
 - Applicable Plan Provisions
- Finalizing benefit calculations after initial payment has begun for a new retiree
- Providing annual data to the Office of the Actuary for benefit calculation purposes
- Providing annual data to the Office of the Actuary for actuarial valuation purposes
- Other documented procedures related to the administration of the pension plan

Audit Controls

Please provide the audit control methods for the following:

- Calculation of retirement benefits
- Option selections by members
- Refunding employee contributions
- Initiating monthly payments to retirees
- Changes to payment information, such tax withholding, address changes, direct deposit information, etc.
- Calculating cost-of-living adjustments
- System changes to the base calculation engine as a result of plan changes or other changes impacting how benefits are determined
- Obtaining and reviewing SOC II reports from software vendors

Performance

Please describe customer response times for:

- Completing retirement estimates for future commencement dates
- Initiating first payment upon retirement
- Completing a final calculation if first payment is based on an estimate
- Responding to phone calls, emails or other communications from members

Administrative Review Initial Request for System

System Capabilities

Please describe the system's current capabilities or if these items are to be addressed through future system upgrades:

- Ability of member to initiate retirement process online
- Ability to upload applicable documents required to commence a benefit
- Ability to perform what-if retirement calculations based on current, up-to-date payroll data
- Provide retirement readiness materials, including seminars, webinars, etc.
- Ability of retirees to change payment information through a website
- Multi-factor authentication and other fraud prevention capabilities

Other Processes

Describe the processes in place for the following situations:

- Reviewing and initiating payments to alternate payees of domestic relations orders (DROs)
 - Indicate if the system administers separate interest DROs (benefit paid over alternate payee's lifetime) and/or shared-payment DROs (a portion of retiree's benefit is paid to alternate payee)
 - Describe the factors used in separate interest DROs if applicable
 - Stopping payments for alternate payees upon the death of the participant in cases of shared-payment DROs
- Initiating payments for deferred vested participants
 - Describe if you reach out to the member prior to them reaching first unreduced commencement age
 - If member is beyond first unreduced commencement age, describe the methodology for calculating the benefit:
 - Benefit commences at current age without any adjustment
 - Benefit commences at current age, but an actuarial adjustment is applied for late payment
 - Benefit commences retroactive to first unreduced commencement age such that the member would receive a lump sum payment for the "missed payments"
 - If this option is used, indicate if an interest adjustment is applied to the retroactive payments
- Verifying members and/or spouses are alive and eligible to continue to receive retirement benefits
- Overpayment recovery in cases where death notification is not provided timely

Administrative Review Initial Request for System

Benefit Calculations

A secure email will be sent requesting benefit calculations for a list of members based on information supplied by the Office of the Actuary. Please provide initial and final calculations, if applicable.

Secure File Transfer Portal

Milliman provides a Secure FTP (SFTP) solution for use between Milliman and third parties (clients, vendors, etc.) to secure both data in transit and at rest. This solution is designed to allow the secure transfer of data using either a supported browser or an FTP client (i.e., FileZilla). Data is encrypted during transit use SFTP, FTPS, and HTTPS delivery protocols. Milliman's solution serves as a proxy and redirects storage of data files into a secure subnet. Data is not persisted within the DMZ. The FTP server uses the AES 256 standard with AES 128 as a fall back. TLS 1.2 is also supported. Internal and external access is limited with Access Control Lists (ACL) via Active Directory (AD) and commercial 3rd party SFTP account provisioning respectively. The principle of least privilege is followed for granting access to data. Inactive SFTP user accounts are automatically disabled per policy and all SFTP user accounts are reviewed periodically.

For each individual who will upload information to the site, ***please provide contact information (name, email and phone number)***. An individual account will be established.

Once data is uploaded onto the portal, please email Scott Porter (scott.porter@milliman.com) stating the data has been uploaded. Data only resides on the portal for 7 days and no automatic notification is sent to Milliman consultants when files are uploaded.

Timing

Please provide information requested within 2 – 4 weeks from the date of this request. Some information can be provided after 4 weeks, as long as some information has been provided earlier so we may begin our review timely. All information does not have to be provided at once.