



City of Milwaukee
Employees' Retirement System

Bernard J. Allen
Executive Director

David M. Silber, CFA, CAIA
Chief Investment Officer

Melody Johnson
Deputy Director

December 13, 2019

Mr. Jim Owczarski
City Clerk
Room 205, City Hall

Dear Mr. Owczarski:

Please be advised that an Administration & Operations (A&O) Committee Meeting of the Annuity and Pension Board has been scheduled for **Thursday, December 19, 2019 at 8:30 a.m. in the Employees' Retirement System Conference Room at 789 N. Water Street, Suite 300.** If a quorum of the Board is present, this meeting will convene as a Special Board Meeting. The agenda is as follows:

- I. Experis Internal Audit Reports.
- II. Cyber Risk Insurance Discussion.
- III. IT Projects Portfolio.
- IV. Organizational/Personnel Update.

Sincerely,

A handwritten signature in cursive script, appearing to read "Bernard J. Allen", is written over a printed name and title.

Bernard J. Allen
Executive Director

BJA:jmw

PLEASE NOTE - Upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through sign language interpreters or other auxiliary aids. For additional information or to request this service, please call 414-286-3557.



City of Milwaukee Employees' Retirement Services

Accounting and Financial Reporting Audit

AUGUST 2019

EXPERIS FINANCE
RISK ADVISORY SERVICES
WISCONSIN OFFICE

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EXECUTIVE SUMMARY

Background

At the direction of the Administration and Operations (A&O) Committee, an Accounting and Financial Reporting Audit was performed during the period July 16, 2019 – August 31, 2019. The City of Milwaukee Employees' Retirement System (ERS) has the responsibility of administering the benefits of its member constituency, which is comprised of employees and retirees of the City of Milwaukee and its related agencies.

ERS uses Sage 300 as its general ledger application to compile financial information from several sources. Sage 300 also interfaces with MERITS, its pension administration system, to capture agency contribution and member benefit payment data. ERS uses complex spreadsheets to download and reconcile all investment information to complete the financial statements on an annual basis.

Audit Scope & Objectives

The objective of the Accounting and Financial Reporting audit included the review of processes and controls related to the design and operating effectiveness of financial reporting controls, including:

- Review and approval of vouchered payments;
- Account reconciliations;
- Journal entry review and approval;
- Actuarial reports;
- Segregation of duties;
- Financial reporting accuracy; and
- Access restrictions to accounting software and complex accounting spreadsheets.

Various audit techniques were used to assess and examine the effectiveness of the ERS internal control environment. Audit techniques included conducting interviews with ERS personnel, observation of performance of required procedures and controls, and examination of related documentation.

Overall Assessment

ERS management has implemented a solid internal control environment for its Accounting & Financial Reporting process. Based on the results of our review, **no internal control deficiencies** were noted.

Audits are only one part of a comprehensive risk management and control program. Recommendations are provided with the objective to assist the Board, A&O Committee and management in the effort to eliminate, reduce or mitigate overall risks. The procedures performed are included in the next section of the report.

Procedures Performed

The following procedures were performed during the audit testing period, January 2018 through July 2019.

- Performed a walkthrough of five Standard Practice Instructions (SPI) for accuracy.
- Verified depreciation schedules were calculated properly, reviewed and approved by management.
- Confirmed the annual budget is reviewed by Senior Management and approved by the Board of Directors.
- Selected and verified that two monthly reimbursement payments due to the City of Milwaukee for administrative services were made accurately and timely.
- Selected and reviewed a sample of 25 journal entries and determined that they were reviewed and approved by management prior to being recorded in the General Ledger.
- Reviewed the procedures used by management to ensure that the Actuarial Report was properly calculated and valued.
- Selected and reviewed a sample of 25 invoice batches to determine they were reviewed and approved by key personnel prior to submitting to the City of Milwaukee for payment.
- Tested three monthly account reconciliations for all bank and investment accounts and attached journal entries. Agreed the reconciled balances to the general ledger and verified the reconciliations and journal entries were reviewed by someone independent from the process.
- Reviewed the system User access controls that management has put in place to manage and control sensitive information and access to key financial spreadsheets.
- Reviewed the key financial spreadsheets and verified ending balances used for reporting purposes agreed to the general ledger.
- Determined that management regularly evaluates Finance personnel for the purpose of assessing employee cross training.
- Reviewed and evaluated management's procedures for assessing and evaluating SSAE 18 SOC-1 third party servicer internal controls and related User Control Considerations for the Northern Trust system.



City of Milwaukee Employees' Retirement Services

Benefit Calculation Process Audit

MAY/JULY 2019

EXPERIS FINANCE
RISK ADVISORY SERVICES
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EXECUTIVE SUMMARY

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At the direction of the Administration and Operations (A&O) Committee, a Benefit Calculation Audit was performed during the period May 31, 2019 – July 31, 2019. The City of Milwaukee Employees' Retirement System (ERS) has the responsibility of administering the benefits of its member constituency, which is comprised of employees and retirees of the City of Milwaukee and its related agencies.

ERS manages the benefits of City of Milwaukee workers in accordance with legislative guidance and contractual obligations. A database of monthly benefits is maintained for over 13,000 retired and/or disabled City workers. ERS uses the MERITS application to calculate benefits in accordance with legislative statutes and contractual obligations and process monthly pay checks for each member or surviving beneficiary, as applicable. Prior to payment processing, each retiree's benefits calculation is independently reviewed for accuracy. As changes to benefit calculations occur as a result of collective bargaining, legal opinion, or legislative activity, MERITS is updated and all changes to MERITS are reviewed for accuracy prior to implementation.

Audit Scope & Objectives

The objective of the Benefit Calculation audit encompassed the review of processes and controls related to the following:

- Calculation and independent review of member benefits;
- Verification processes over changes to benefits calculation methodology;
- Physical security over members' confidential paperwork; and
- User access review controls.

Various audit techniques were used to assess and examine the effectiveness of the ERS internal control environment. Audit techniques included conducting interviews with ERS personnel, observation of performance of required procedures and controls, and examination of related documentation.

Overall Assessment

ERS management has implemented a solid internal control environment for its Benefit Calculation process. Based on the results of our review, **no internal control deficiencies** were noted.

Audits are only one part of a comprehensive risk management and control program. Recommendations are provided with the objective to assist the Board, A&O Committee and management in the effort to eliminate, reduce or mitigate overall risks. The procedures performed are included in the next section of the report.

Procedures Performed

The following procedures were performed during the audit testing period, January 2018 through May 2019.

- Selected and tested the various benefit calculations performed by ERS, including:
 - 25 Standard Defined Benefit payments;
 - 5 participants with Early Retirement Benefit payments;
 - 5 Lump Sum Benefit payments;
 - 5 Disability Benefit payments;
 - 25 Early Termination Benefit payments;
 - 3 Survivorship Benefit payments that transitioned to the spouse; and
 - 5 Benefit payments involving service reciprocity with other state and local government entities.

Sample sizes for each subset were determined based upon the volume of the population for that subset:

<u>Sample Size</u>	<u>Population Size</u>
25	>= 100
5	50 – 100
3	< 50

- From each of these sample populations, the benefit calculations were analyzed for the following transactions:
 - Verified that member compensation history was reviewed and earnings adjusted for any retroactive payments.
 - Verified that benefits for the following calculations were accurately calculated and independently reviewed:
 - Service retirement
 - Global Pension Settlement (GPS) lump sum bonus
 - Disability
 - Death benefits
 - Determined that all benefit calculations were independently reviewed and approved by appropriate personnel.
- Examined evidence that all approved contract changes were properly reviewed, analyzed and, as appropriate, adopted for use within MERITS.
- Reviewed the clean desk policy controls by observing the status of employees' work areas after normal operating hours.
- Determined system user access controls that management has put in place to manage and control access to sensitive member information have been reviewed at least annually.
- Reviewed a sample of five Standard Practice Instructions Guidelines (SPI) for accuracy.

- Determined that management regularly evaluates the Benefit Calculation personnel process for the purposes of assessing employee cross training.



City of Milwaukee Employees' Retirement Services

Ethics and Governance Audit

SEPTEMBER 2019

EXPERIS FINANCE
RISK ADVISORY SERVICES
WISCONSIN OFFICE

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EXECUTIVE SUMMARY

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At the direction of the Administration and Operations (A&O) Committee, an Ethics and Governance Audit was performed during the period July 16, 2019 – September 3, 2019. The City of Milwaukee Employees' Retirement System (ERS) has the responsibility of administering the benefits of its member constituency, which is comprised of employees and retirees of the City of Milwaukee and its related agencies.

The Annuity and Pension Board (Board) governs the ERS, and serves as trustee of the System's funds. Board members are fiduciaries of the trust, along with the Executive Director, Deputy Director and Chief Investment Officer and other ERS Senior Management serving in specific capacities. The ERS' Executive Director is responsible for daily operations, and also serves as secretary for the Board. The Board is composed of eight members:

- Three representatives appointed by the President of the Common Council;
- Three representatives elected by the active members of the ERS;
- One member elected by retired members of the ERS; and
- City Comptroller, who serves as an ex-officio voting member.

Audit Scope & Objectives

The objectives of the Ethics and Governance audit included the review of processes and controls related to the following:

- ERS compliance with conflict of interest provisions among its Board members and senior management employees.
- Board governance practices, including compliance with the Board Rules and Regulations.
- Adherence to the ERS code of ethics certification requirement among ERS employees.

Various audit techniques were used to assess and examine the effectiveness of the ERS internal control environment. Audit techniques included conducting interviews with ERS personnel, observation of performance of required procedures and controls, and examination of related documentation.

Overall Assessment

ERS management has implemented a solid internal control environment for its Ethics and Governance processes. Based on the results of our review, **no internal control deficiencies** were noted.

Audits are only one part of a comprehensive risk management and control program. Recommendations are provided with the objective to assist the Board, A&O Committee and management in the effort to eliminate, reduce or mitigate overall risks. The procedures performed are included in the next section of the report.

Procedures Performed

The following procedures were performed during the audit testing period, January 2018 through May 2019.

- Reviewed the Board's adherence with the Board Rules and Regulations:
 - Determined the A&O Committee and Audit Charters were updated annually.
 - Determined Monthly Board Meeting checklist has been completed and followed.
 - Reviewed all policy changes to determine the list has been properly updated.
- Reviewed Board minutes for evidence that the Board and its committees met periodically with management and third parties to maintain or obtain:
 - Oversight over investment performance;
 - Quality of member service;
 - Reporting accuracy;
 - Information technology training;;
 - Compliance with ERS Regulations and Policies; and
 - Proper controls for associated risks in business areas.
- Reviewed Board minutes for evidence that Audit Charters, Rules and Regulations, and ERS policies were reviewed, updated and approved as needed.
- Verified that Board members and senior management employees submitted the required Statement of Economic Interests annually.
- On a test basis, selected five employees and determined that the employees were informed of the city's Fraud, Waste and Abuse of City Resources hotline program at the time they are hired and are aware of the program through office publications.
- Verified all ERS employees reviewed and signed the Basic Office Guidelines, which reflects the office code of conduct, by reviewing management's tracking checklist. Reviewed 15 signed employees' Basic Office Guidelines to determine checklist completeness.

Memo



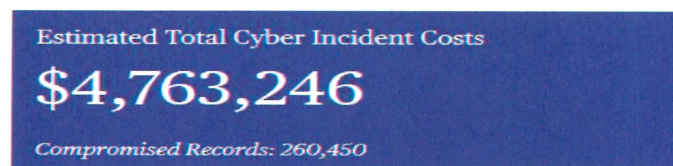
To: Bernard J. Allen, ERS Executive Director
From: Manuel Raynal, ERS Systems Manager
Date: December 04, 2019
Re: Cyber Insurance

Due to the highly sensitive nature of this topic, generalities will be utilized where additional detail could provide an attacker and/or attackers with sufficient information that could be used to exploit systems.

At the ERS we have many layers of protection and defense against malicious actors, malware, and disasters. One of those layers provides us with the capabilities to recover critical systems within a 15-minute window of a catastrophic or full wipe-out event. A subsequent layer gives us the capabilities to recover critical systems within a 4-hour window of a catastrophic or full wipe-out event. An additional layer enables the capabilities to recover critical systems within a 24-hour window of a catastrophic or full wipe-out event. Our present level of service, as delivered by IT for the ERS, affirms that we can fully recover and be operational within 24 hours and we have continuously proven this to be an adequate amount of time throughout various types of tests that we conduct on a regular basis.

In the event that all our layers of protection and defense should fail, we would still have mitigation strategies available to deliver payroll and other critical business services until critical systems could be brought online. Given our present and expected future state of risk-mitigating capabilities, we believe the following example regarding estimated cyber incident costs most closely exemplifies possible worst-case scenarios at this time with the records volume utilized in this estimate at more than four times our current record volume:

CHUBB in Partnership with NetDiligence



<i>Business Interruption</i>	\$750,000
<i>Crisis Management*</i>	\$1,671,349
<i>Data Restoration</i>	\$500,000
<i>Fines/Penalties*</i>	\$367,500
<i>Incident Investigation*</i>	\$949,396
<i>PCI*</i>	\$25,000
<i>Ransomware</i>	\$500,000

*In partnership with
NetDiligence

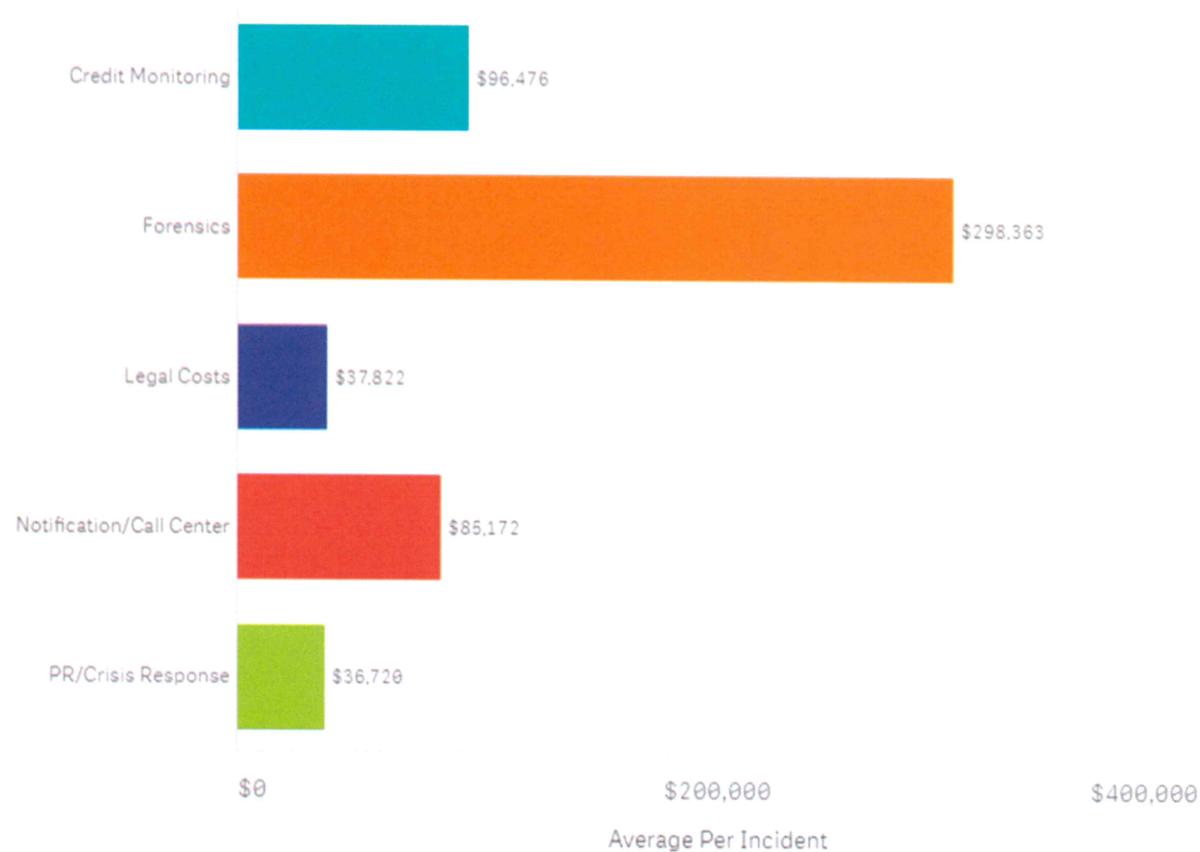
At this time, our recommendation is that the ERS maintain the current level of cyber insurance in force.



Latest CHUBB Data – 50,000+ Cyber Insurance Policies In Force

Average Paid Incident Response Costs Since 2009

Global, Financial Institutions and All Dates



Your Industry Selection vs. Overall

Credit Monitoring	76% ▲
Forensics	72% ▲
Legal Costs	7% ▲
Notification/Call Center	34% ▼
PR/Crisis Response	27% ▲

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IT Projects and Ticket Statistics

- Major Projects/Initiatives:

- Network Infrastructure Upgrade (In Progress)
- Vulnerability Audit (In Progress)
- Social Engineering Audit (In Progress)
- Business Continuity Audit (In Progress)
- Business Continuity Test (Completed)
- Citywide IT Vulnerability Assessment & Penetration Test (Completed)
- Windows 2016 Server Upgrade (Completed)
- VMware Upgrade (Completed)
- Firewall Review & Cleanup (Completed)
- SSRS (SQL Server Reporting Services) Reports Migration (In Progress)
- FileNet P8 Upgrade & Scanning Application Implementation (Completed)
- GL Upload Process Improvements (Completed)

- Application Statistics

Category	High Priority	Low Priority	Total
Current Inventory	13	0	13
PIR's	2	0	2
CCR's	11	0	11
Pending/Hold	0	0	0
Deployed(Awaiting Next stage) /Ready for Production	0	0	0
Net Current Inventory	8	0	5

Portfolio as of December 1, 2019

Project Health	% Complete	Priority	Complexity (S / M / L)	Project Name	Project Mgr	Description	Strategic Goal	Status	External Vendor Required: Y/N	Actual Start Date	Target Completion Date	Estimates (Hours)	Actuals (Hours)	Hours Variance = Estimates - Actuals	Hardware/Software & External Labor Budget (\$)	Actual Spent-to-Date on Hardware /Software & External Labor (\$)	Estimate to Completion (ETC) (of Hardware/ Software & External Labor Costs)
G	0%	1	M	Network Infrastructure Firmware Upgrade @	Powell	Firmware/OS upgrades	G1	IP	N	11/27/19	3/29/20	300	0	300	\$0	\$0	\$0
G	19%	2	L	SSRS Report Migration	Manchu	Replacing our discontinued reporting software with SSRS	G1	IP	Y	3/6/19	4/26/21	11,884	2,272	9,612	\$483,417	\$155,836	\$327,581
G	1%	3	S	Vulnerability Audit @	Raynal	Routine audit of IT Security Systems	G2	IP	Y	11/20/19	3/31/20	160	1	159	\$48,000	\$0	\$0
G	1%	4	S	Social Engineering Audit @	Siddiqui	Routine audit of Phishing Preparedness	G2	IP	Y	11/20/19	3/31/20	60	1	59	\$18,000	\$0	\$0
G	0%	5	S	IT General Controls Audit @	Siddiqui	Routine audit of IT General Controls	G2	IP	Y	12/2/19	3/31/20	80	0	80	\$24,000	\$0	\$0
G	10%	6	S	Business Continuity Audit @	Siddiqui	Routine audit of Business Continuity	G2	IP	Y	11/20/19	3/31/20	80	5	75	\$24,000	\$0	\$0

Green = On Target - No Significant Issues
Yellow = On Watch List – Issues Being Addressed
Red = Project cannot move forward as planned without management attention or approval.

NS = Not Started OH = On Hold @ = Activity (no charter)
 IP = In Process C = Completed

Special Note: SSRS Report Migration costs are part of the HP maintenance contract.

Completed Projects & Tasks in Last 12 Months	Finished	Hours / \$ Spent
Upgrade MS Exchange Servers and Tools @ (Raynal)	11/13/2018	61 hours / \$6,100
Update SQL Express @ (John)	12/19/2018	20.5 hours / \$2,050
Scanning Application Analysis (Manchu)	3/28/2019	150 hours / \$24,756
General Controls Audit @ (Siddiqui)	3/29/2019	100.25 hours / \$17,800
Struts 2 Upgrade -areas besides MAM (Manchu)	4/26/2019	9,011 hours / \$393,226
Desktop Imaging Upgrade (Zampino)	5/29/2019	120.75 hours / \$12,075

	Finished	Hours / \$ Spent
Veeam Upgrade @ (Zampino)	6/12/2019	10.5 hours / \$1,050
Titan Upgrade for CMERS.com (Zaffiro)	8/30/2019	18 hours / \$6,070
Upgrade Backup Exec and Agents @ (Zampino)	9/25/2019	3.5 hours / \$350
Server Upgrade to Windows 2016 (Zampino)	10/2/2019	343 hours / \$77,875
Upgrading Change Auditor to 7.0.3 (Zampino)	10/31/2019	8.5 hours / \$850
Installing IBM DataCap/Upgrading FileNet (Manchu)	11/7/2019	1318.5 hours / \$209,806
Business Continuity Test @ (Siddiqui)	11/27/2019	20.25 hours / \$2,025

Organizational/Personnel Update

Administration and Operations Committee

Thursday, December 19, 2019

- ERS is working with DER to fill the following vacancies:

Administrative Assistant II
Chief Technology Officer
ERS Disability Deputy Director
Network Administrator