

**MASSACHUSETTS HOUSING FINANCE AGENCY  
EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM**

**AUDIT REPORT**

**JAN. 1, 2019 - DEC. 31, 2023**



**PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION**  
COMMONWEALTH OF MASSACHUSETTS

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### **Bill Keefe**

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## Public Employee Retirement Administration Commission

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# PERAC

COMMONWEALTH OF MASSACHUSETTS | PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION

PHILIP Y. BROWN, ESQ., *Chair*

WILLIAM T. KEEFE, *Executive Director*

Auditor DIANA DIZOGLIO | KATHLEEN M. FALLON | KATE FITZPATRICK | JAMES J. GUIDO | RICHARD MACKINNON, JR. | JENNIFER F. SULLIVAN, ESQ.

February 4, 2026

The Public Employee Retirement Administration Commission (PERAC) has completed a review of the audits of the Massachusetts Housing Finance Agency Employees' Retirement System conducted by the firm of CliftonLarsonAllen (CLA), LLP, Certified Public Accountants. CLA conducted these audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits in *Government Auditing Standards*, issued by the Comptroller General of the United States. The audits covered the period from January 1, 2019 to December 31, 2023.

We conducted an inspection of the work papers prepared by CLA. We determined that the audits were conducted in a competent professional manner and the work papers demonstrated that audit tests and procedures were performed in sufficient detail to allow us to accept the final audit reports as issued.

We identified specific differences between these financial audits designed to provide an opinion on financial statements and our compliance audits performed in accordance with the accounting and management standards established by PERAC in regulation 840 CMR 25.00 and in compliance with the provisions specified in PERAC Memo #18/2019.

Accordingly, we supplemented the field work conducted in the audits by CLA with certain limited procedures designed to provide additional assurance that the accounting and management standards established by PERAC were adhered to and complied with. The specific objectives of our review were to determine: 1) that the Board is exercising appropriate fiduciary oversight, 2) that cash balances are accurately stated, 3) that retirement contributions are accurately deducted, 4) that retirement allowances were correctly calculated, and 5) that required member documentation is maintained.

To achieve these objectives, we inspected certain records of the Massachusetts Housing Finance Agency Employees' Retirement Board in the above areas. Specifically, we reviewed the minutes of the Board meetings for compliance with fiduciary oversight and verified cash balances. We tested the payroll records of a sample of active members to confirm that the correct percentage of regular compensation is being deducted, including the additional two percent over \$30,000. We tested a sample of members who retired during our audit period to verify that their retirement allowance was calculated in accordance with the statute. We also reviewed a sample of member files for accuracy and completeness.



In our opinion, the financial records are being maintained, and the management functions are being performed in conformity with the standards established by PERAC.

We commend the Massachusetts Housing Finance Agency Employees' Retirement Board for the exemplary operation of the system.

It should be noted that the financial statements included in this audit report were based on the work performed by CLA, and the tests conducted for the periods referenced in their opinion. These audits were not performed by employees or representatives of PERAC. It should also be noted that the opinions expressed in these audit reports were based on the laws and regulations in effect at the time.

The financial statements and footnotes presented in this report were limited to the express results as of and for the years ended December 31, 2023, December 31, 2022, December 31, 2021, December 31, 2020, and December 31, 2019.

In closing, I wish to acknowledge the work of CliftonLarsonAllen LLP, who conducted these examinations, and the PERAC examiners who conducted limited procedures to supplement the field work and express my appreciation to the Massachusetts Housing Finance Agency Employees' Retirement Board and staff for their courtesy and cooperation.

Sincerely,

A handwritten signature in black ink that reads "Bill Keefe". The signature is written in a cursive, flowing style.

William T. Keefe  
Executive Director

## SUPPLEMENTARY INFORMATION

### SCHEDULE OF ALLOCATION OF INVESTMENTS OWNED

(percentages by category)

AS OF DECEMBER 31, 2023		
	MARKET VALUE	PERCENTAGE OF TOTAL ASSETS
Cash	\$1,107,187	0.5%
Fixed Income Securities	29,650,778	12.3%
Pooled Domestic Equity Funds	56,006,714	23.2%
Pooled International Equity Funds	41,536,262	17.2%
Pooled Domestic Fixed Income Funds	21,945,199	9.1%
Pooled International Fixed Income Funds	10,137,703	4.2%
Pooled Alternative Investment Funds	57,350,175	23.7%
Pooled Real Estate Funds	23,905,830	9.9%
<b>Grand Total</b>	<b><u>\$241,639,848</u></b>	<b><u>100.0%</u></b>

For the year ending December 31, 2023, the rate of return for the investments of the Massachusetts Housing Finance Agency Employees' Retirement System was 11.62%. For the ten-year period ending December 31, 2023, the rate of return for the investments of the Massachusetts Housing Finance Agency Employees' Retirement System averaged 7.33%. For the 39-year period ending December 31, 2023, since PERAC began evaluating the returns of the retirement systems, the rate of return on the investments of the Massachusetts Housing Finance Agency Employees' Retirement System was 7.63%.

The composite rate of return for all retirement systems for the year ending December 31, 2023 was 11.64%. For the ten-year period ending December 31, 2023, the composite rate of return for the investments of all retirement systems averaged 7.81%. For the 39-year period ending December 31, 2023, since PERAC began evaluating the returns of the retirement systems, the composite rate of return on the investments of all retirement systems averaged 9.05%.

## SUPPLEMENTARY INFORMATION (Continued)

### ADMINISTRATION OF THE SYSTEM

The System is administered by a five-person Board of Retirement consisting of the Massachusetts Housing Finance Agency Treasurer, who shall be a member ex-officio, a second member appointed by the governing authority, a third and fourth member who shall be elected by the members in or retired from the service of such system, and a fifth member appointed by the other four board members.

Ex-officio Member:	Rachel Madden		
Appointed Member:	Thomas J. Flynn	Serves until a successor is appointed	
Elected Member:	Antonio Torres	Term Expires:	06/30/2027
Elected Member:	Michael Fitzmaurice, Chair	Term Expires:	12/10/2028
Fifth Member:	Paul T. Hynes, Esq.	Term Expires:	12/31/2026

The Board members are required to meet at least once a month. The Board must keep a record of all of its proceedings. The Board must annually submit to the appropriate authority an estimate of the expenses of administration and cost of operation of the system. The board must annually file a financial statement of condition for the system with the Executive Director of PERAC.

The investment of the system's funds is the responsibility of the Board. All retirement allowances must be approved by the Retirement Board. The PERAC Actuary performs verification prior to payment, unless the system has obtained a waiver for superannuation calculations allowing them to bypass this requirement. All expenses incurred by the System must be approved by a majority vote of the Board. Payments shall be made only upon vouchers signed by two persons designated by the Board.

Retirement board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts. Fidelity insurance is the only required policy coverage under Ch. 32 §21 and §23 as well as 840 CMR 17.01. The policy is designed to cover specific intentional acts such as theft, fraud or embezzlement and also specify who commits such acts, most commonly employees of the system. This coverage reimburses the system for the losses it suffers as a result of its employees' actions. It does not insure the employees for their illegal acts. Statutorily required coverage is provided by the current fidelity insurance policy to a limit of \$1,000,000 with a \$10,000 deductible issued through Travelers Casualty and Surety Insurance Company of America. The system also has Fiduciary coverage to a limit of \$100,000,000 under a blanket policy issued through the Massachusetts Association of Contributory Retirement Systems.

### BOARD REGULATIONS

The Massachusetts Housing Finance Agency Retirement Board has adopted Supplemental Regulations which are available on the PERAC website at <https://www.mass.gov/mass-housing-finance-agency-retirement-board-regulations>.

## SUPPLEMENTARY INFORMATION (Continued)

### MEMBERSHIP EXHIBIT

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Retirement in Past Years</b>										
Superannuation	7	10	14	4	14	18	16	11	13	9
Ordinary Disability	0	0	0	0	0	0	0	0	0	0
Accidental Disability	0	0	0	0	0	0	0	0	0	0
<b>Total Retirements</b>	7	10	14	4	14	18	16	11	13	9
 Total Retirees, Beneficiaries and Survivors	132	139	151	153	164	184	194	202	210	214
 Total Active Members	337	342	342	346	324	330	315	308	316	329
<b>Pension Payments</b>										
Superannuation	\$3,484,702	\$3,759,118	\$4,176,167	\$4,766,031	\$5,113,673	\$5,730,203	\$6,464,187	\$6,983,016	\$7,543,653	\$7,972,455
Survivor/Beneficiary Payments	173,353	170,883	173,345	192,275	199,809	290,995	218,700	229,962	258,270	284,970
Ordinary Disability	0	0	0	0	0	0	0	0	0	0
Accidental Disability	76,268	77,048	77,828	82,605	180,415	120,668	88,871	68,819	69,749	71,699
Other	45,413	61,031	63,201	85,533	98,500	178,609	136,678	149,497	152,906	154,478
<b>Total Payments for Year</b>	<u>\$3,779,736</u>	<u>\$4,068,080</u>	<u>\$4,490,541</u>	<u>\$5,126,444</u>	<u>\$5,592,397</u>	<u>\$6,320,474</u>	<u>\$6,908,435</u>	<u>\$7,431,294</u>	<u>\$8,024,579</u>	<u>\$8,483,602</u>

**MASSACHUSETTS HOUSING FINANCE AGENCY  
EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)**

**FINANCIAL STATEMENTS AND  
SUPPLEMENTARY INFORMATION**

**YEAR ENDED DECEMBER 31, 2023**



CPAs | CONSULTANTS | WEALTH ADVISORS

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
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YEAR ENDED DECEMBER 31, 2023**

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## INDEPENDENT AUDITORS' REPORT

Honorable Retirement Board  
Massachusetts Housing Finance Agency Employees' Retirement System  
Boston, Massachusetts

### **Report on the Audit of the Financial Statements**

#### ***Opinion***

We have audited the accompanying financial statements of the Massachusetts Housing Finance Agency Employees' Retirement System (the System), a fiduciary component unit of the Massachusetts Housing Finance Agency (MassHousing), as of and for the year ended December 31, 2023, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of December 31, 2023, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

#### ***Basis for Opinion***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### ***Responsibilities of Management for the Financial Statements***

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

***Auditors' Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and, therefore, is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, schedule of changes in employer net pension liability (asset) and related ratios, schedule of employer contributions, and schedule of investment returns be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with GAAS, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated June 28, 2024 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.



**CliftonLarsonAllen LLP**

Andover, Massachusetts  
June 28, 2024

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2023**

As management of the Massachusetts Housing Finance Agency Employees' Retirement System (the System), we offer readers of these financial statements this narrative overview and analysis of the System's financial activities for the year ended December 31, 2023.

The management's discussion and analysis (MD&A) is presented in the following sections:

1. Financial Highlights
2. Overview of the Financial Statements
3. Financial Statement Analysis

Please refer to the audited *Financial Statements* when reading the MD&A.

***Financial Highlights***

The System's funding objective is to meet long-term benefit obligations through contributions and investment income. As of January 1, 2023, the latest actuarial valuation, the funded ratio was 93.2% based on the actuarial value of assets at that date. As of December 31, 2023, the System's fiduciary net position was 100.7% of the total pension liability.

The System's net position increased by \$21,824,272, or 9.93%, when compared to the prior year's net position. Net position is the residual of the System's assets in excess of the System's liabilities as of the statement date. The System's assets are restricted to meet future benefit payments.

***Overview of the Financial Statements***

The financial statements are comprised of a Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Notes to Financial Statements, and Required Supplementary Information.

The **statement of fiduciary net position** presents information on the System's assets and liabilities and the resulting net position restricted for pensions. This is calculated using the following formula: Assets – Liabilities = Net Position restricted for pensions. This statement reflects the System's investments at fair value, as well as cash, receivables and other assets and liabilities. The Statement of Fiduciary Net Position reports the financial position of the System at December 31, 2023. Over time, the increase or decrease in net position serves as a useful indicator of the System's financial health.

The **statement of changes in fiduciary net position** presents information showing how the System's net position changed during the year ended December 31, 2023. It reflects contributions by its individual members and participating employer along with deductions for retirement benefits, refunds, withdrawals, and administrative expenses. Investment income during the period is also presented showing income from investing activities.

The **notes to financial statements** provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The **required supplementary information** includes a schedule of changes in employer net pension liability (asset) and related ratios, a schedule of employer contributions and a schedule of investment returns.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2023**

***Financial Statement Analysis***

The System's total assets as of December 31, 2023, were \$241,885,440 and were comprised of cash and cash equivalents, investments, accrued interest and dividends, prepaid expenses, and receivables.

Total liabilities as of December 31, 2023, were \$271,244 and represent amounts owed for accounts payable and to MassHousing for reimbursement of the System's payroll, payroll related costs, rent, and other operating costs for the period July 1, 2023 through December 31, 2023.

The following tables present current and prior year data on the System's financial statements.

**Fiduciary Net Position**

As noted earlier, net position may serve over time as a useful indicator of a government's financial position. The System's net position was \$241,614,196 at the close of the year and is summarized as follows:

	<u>2023</u>	<u>2022</u>
<b>Assets:</b>		
Cash and Cash Equivalents	\$ 1,107,187	\$ 889,782
Investments	240,532,660	218,960,809
Other Assets	<u>245,593</u>	<u>213,669</u>
Total Assets	<u>241,885,440</u>	<u>220,064,260</u>
<b>Liabilities:</b>		
Accounts Payable	70,827	90,931
Due to MassHousing	<u>200,417</u>	<u>183,405</u>
Total Liabilities	<u>271,244</u>	<u>274,336</u>
<b>Net Position:</b>		
Restricted for Pensions	<u>\$ 241,614,196</u>	<u>\$ 219,789,924</u>

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2023**

Changes in Fiduciary Net Position

For the year ended December 31, 2023, the System's total fiduciary net position increased by \$21,824,272. In the prior year, fiduciary net position decreased by \$30,260,695. These amounts are summarized as follows:

	<u>2023</u>	<u>2022</u>
<b>Additions:</b>		
Contributions:		
Employer	\$ 4,727,032	\$ 1,087,188
Plan Members	4,073,686	3,747,377
Reimbursements and Transfers from Other Systems	1,114,120	844,434
Investment Income:		
Net Appreciation (Depreciation) in Fair Value of Investments	22,243,706	(23,987,561)
Interest and Dividends	3,799,727	1,893,294
Less: Investment Fees	<u>(1,939,555)</u>	<u>(1,952,996)</u>
Net Investment Income	<u>24,103,878</u>	<u>(24,047,263)</u>
Total Additions	34,018,716	(18,368,264)
<b>Deductions:</b>		
Retirement Benefits and Refunds	11,496,991	11,047,292
Reimbursements and Transfers to Other Systems	189,252	390,191
Administration	<u>508,201</u>	<u>454,948</u>
Total Deductions	<u>12,194,444</u>	<u>11,892,431</u>
<b>Change in Fiduciary Net Position</b>	21,824,272	(30,260,695)
Fiduciary Net Position - Beginning of Year	<u>219,789,924</u>	<u>250,050,619</u>
<b>Fiduciary Net Position - End of Year</b>	<u>\$ 241,614,196</u>	<u>\$ 219,789,924</u>

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2023**

**Additions to Fiduciary Net Position**

The amount needed to finance benefits is accumulated through the collection of employer and plan member contributions, earnings on investments and reimbursements and transfers from other systems. These additions resulted in a increase to net position totaling \$34,018,716. Employer contributions increased by approximately \$3,640,000 in 2023 due to the increase in MassHousing's annual required contribution as the result of the system no longer being fully funded. Plan member contributions increased by approximately \$326,000 and reimbursements and transfers from other systems increased by approximately \$270,000 when compared to the prior year. The System had net investment income of approximately \$24,104,000 in 2023, which was an increase of approximately \$48,151,000 from \$24,047,000 of net investment loss in 2022.

**Deductions from Fiduciary Net Position**

The primary deductions of the System include the payment of pension benefits to participants and beneficiaries, refunds of contributions, and the costs of administering the System. Deductions to net position totaled \$12,194,444 during the current year versus \$11,892,431 in the previous year. The payment of pension benefits increased by approximately \$450,000, or 4.07%, over the previous year. The increase in these expenses resulted from an increase in benefit payments to newer retirees with higher average compensation.

**Requests for Information**

This financial report is designed to provide the Board, our membership, taxpayers, investors, and creditors with a general overview of the System's financial results and to demonstrate the System's accountability for the funding it receives. If you have any questions about this report or need additional financial information, please contact the Executive Secretary at One Beacon Street, 6<sup>th</sup> floor, Boston, Massachusetts 02108.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
STATEMENT OF FIDUCIARY NET POSITION  
DECEMBER 31, 2023**

<b>ASSETS</b>	
Cash and Cash Equivalents	\$ 1,107,187
Investments:	
Fixed Income	29,650,778
Pooled Equities	97,542,976
Pooled Fixed Income	32,082,901
Real Estate	23,905,830
Private Equity	57,350,175
Total Investments	<u>240,532,660</u>
Accrued Interest and Dividends	214,240
Prepaid Expenses	27,250
Receivables:	
Investments Sold	<u>4,103</u>
Total Assets	241,885,440
<b>LIABILITIES</b>	
Accounts Payable	70,827
Due to MassHousing	<u>200,417</u>
Total Liabilities	<u>271,244</u>
<b>FIDUCIARY NET POSITION</b>	
Restricted for Pensions	<u>\$ 241,614,196</u>

See accompanying Notes to Financial Statements.

(8)

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
YEAR ENDED DECEMBER 31, 2023**

**ADDITIONS:**

**CONTRIBUTIONS**

Employer	\$ 4,727,032
Plan Members	4,073,686
Reimbursements and Transfers from Other Systems	<u>1,114,120</u>
Total Contributions	<u>9,914,838</u>

**INVESTMENT INCOME**

Net Appreciation in Fair Value of Investments	22,243,706
Interest and Dividends	<u>3,799,727</u>
Total Investment Income	<u>26,043,433</u>
Less: Investment Expense	<u>(1,939,555)</u>
Net Investment Income	<u>24,103,878</u>

Total Additions 34,018,716

**DEDUCTIONS:**

Retirement Benefits and Refunds	11,496,991
Reimbursements and Transfers to Other Systems	189,252
Administration	508,201
Total Deductions	<u>12,194,444</u>

**CHANGE IN FIDUCIARY NET POSITION** 21,824,272

**FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS:**

Beginning of Year	<u>219,789,924</u>
End of Year	<u><u>\$ 241,614,196</u></u>

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2023**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**General**

The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the standard-setting body for establishing governmental accounting and financial reporting principles. The significant accounting policies are described herein.

**Reporting Entity**

The Massachusetts Housing Finance Agency Employees' Retirement System (the System) was established to provide retirement benefits to employees of the Massachusetts Housing Finance Agency (MassHousing) and their beneficiaries. The System is governed by a five-member board comprised of MassHousing's Chief Financial & Administrative Officer (ex-officio), two members elected by the System's participants, one member appointed by MassHousing's Board, and one member appointed by the System's Board members.

The System is reported as a fiduciary component unit in MassHousing's financial statements due to its reporting relationship with MassHousing.

**Measurement Focus and Basis of Accounting**

The System's financial statements are presented using the flow of economic resources measurement focus and use the accrual basis of accounting.

**Cash and Investments**

Cash and cash equivalents are considered to be cash on hand, demand deposits, and short-term investments with an original maturity of three months or less from the date of acquisition.

Investments are reported at fair value. Fair value is based on quotations from a national securities exchange except for pooled funds (pooled equities and fixed income securities), private equity and real estate investments, for which fair values are estimated as detailed below.

**Pooled Funds**

The fair value of shares in managed investment pools is based on unit value reported by the funds.

**Private Equity and Real Estate**

The fair values of these types of investments have been determined by the third-party investment managers using the Net Asset Value (NAV) per share (or its equivalent) on the System's ownership interest in partner's capital.

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**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**Basis of Investment Transactions**

Purchases and sales of investments are recorded on the trade date. Transactions remaining unsettled as of year-end are recorded as payables for securities purchased and as a receivable for securities sold.

**Prepaid Expenses**

Certain payments reflect costs applicable to future accounting periods and as such, are recorded as prepaid expenses. These prepaid items will be expensed as they are liquidated.

**Due to MassHousing**

MassHousing pays the System's employees' weekly payroll. In addition, MassHousing charges the System for payroll related benefits, rent, and other operating expenses.

**Contributions and Investment Income**

Contributions are recognized as additions in the period when they become due pursuant to formal commitments, statutory, or contractual requirements. Investment income is recognized when earned.

**Benefits and Refunds**

Benefits and refunds are recognized as deductions when incurred.

**Administrative Expenses**

Administrative expenses are financed by investment income.

**Use of Estimates**

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Fair values of real estate funds and private equity investments have been estimated in the absence of readily available market values, and these estimates may be materially different than values that would have been used had a ready market existed.

**NOTE 2 PLAN DESCRIPTION**

**General**

The System is a single employer public employee retirement system established by MassHousing on June 12, 1974, under Massachusetts General Laws (MGL), Chapter 32, and is regulated by the Massachusetts Public Employee Retirement Administration Commission (PERAC). The System is a defined benefit pension plan that covers eligible employees of MassHousing.

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**NOTE 2 PLAN DESCRIPTION (CONTINUED)**

**General (Continued)**

Membership in the System is mandatory immediately upon the commencement of employment for all permanent full-time employees working at least 18 <sup>3</sup>/<sub>4</sub> hours weekly. The System has one classification of members (general).

Membership in the System was as follows at December 31, 2023:

Active Members	329
Inactive Members	60
Retirees and Beneficiaries Currently Receiving Benefits	214
Total	603

**Significant Plan Provisions and Requirements**

Pursuant to MGL, Chapter 32, the System provides retirement, disability, and death benefits to Plan members and their beneficiaries up to a maximum of 80% of a member's final three-year or five-year average salary based on hiring date. In addition to compensation, benefits are based upon a member's age and length of creditable service.

Members of the System become vested after 10 years of creditable service. Normal retirement occurs at age 65 or age 67 (if hired on or after April 2, 2012).

For employees hired prior to April 2, 2012, the annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law. Assuming normal retirement at age 65, this percentage is 2.5%, which is reduced for individuals who retire prior to age 65 to reflect the longer pay out period. A member's final three-year average salary is defined as the greater of the highest consecutive three-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last three years of creditable service prior to retirement.

For employees hired on or after April 2, 2012, the annual amount of the retirement allowance is based on the member's final five-year average salary multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law. Assuming normal retirement at age 67, this percentage is 2.5%. A member's final five-year average salary is defined as the greater of the highest consecutive five-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last five years of creditable service prior to retirement.

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**NOTE 2 PLAN DESCRIPTION (CONTINUED)**

**Significant Plan Provisions and Requirements**

Employees may elect early retirement after 20 years of service or at any time after attaining age 55 or age 60 with 10 years of eligible service. Plan members who become permanently and totally disabled may be eligible to receive a disability retirement allowance. The amount of benefits to be received depends on several factors, including the member's age, compensation, veteran status, years of service, and whether or not the disability is work-related. In addition, certain death benefits exist for beneficiaries of employees who die in active service.

Pursuant to MGL, Chapter 32, Section 3(8)(c), for members leaving the System's employment to work for other Massachusetts governmental units, the System transfers their accumulated account balances and creditable service to the retirement system of their new employer. Other such retirement systems are in turn required to make comparable transfers to the System for employees coming to work for a participating employer. Liability for the service transfer is not calculated until the member's actual retirement date. Per statute, the actuary considers length of service as well as acceptance of military service credit and salary cap provisions (if applicable) in calculating the liability.

**NOTE 3 DEPOSITS AND INVESTMENTS**

Deposits and investments made by the System are governed by Chapter 32 of the MGL. The System has the ability to invest in equity securities, corporate bonds, real estate, and other specified investments in accordance with state laws and regulations.

The Board has the authority for establishing and amending investment policy decisions. Based on the investment objectives and constraints of the System, and based on an annual review of the asset allocation and asset classes, the Board will specify a long-term target allocation for each class of permissible assets. These targets will be expressed as a percentage of the total portfolio, and will have ranges surrounding them, allowing for the portfolio to maintain policy through market fluctuations.

The long-term target allocations are intended as strategic goals. Thus, it is permissible for the overall System's asset allocation to deviate from the long-term target, as would likely occur during manager transitions, asset class restructurings, and other temporary changes in the System. Surplus cash flows are utilized to maintain the asset management structure. Should these cash flows not be sufficient to reallocate the Plan according to policy, the transfer of assets may occur between managers. At least annually, the Board reevaluates the portfolio weightings by asset class and adjustments are made accordingly. The following identifies the asset allocation policy as of December 31, 2023:

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**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

Asset Class	Target	Range
Domestic Equity	20 %	15 - 25 %
Private Equity	17	12 - 22
Investment Grade Bonds	16	11 - 21
TIPS	10	5 - 15
Real Estate	8	5 - 11
Core Infrastructure	8	5 - 12
Developed Market Equity	6	2 - 10
High Yield Bonds	6	3 - 9
Emerging Market Equity	5	0 - 15
Emerging Market Bonds	4	1 - 7
Cash	-	0 - 5

**Rate of Return**

For the year ended December 31, 2023, the annual money-weighted rate of return on investments, net of investment expense, was 10.99%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

**Deposits — Custodial Credit Risk**

Custodial credit risk for deposits is the risk that, in the event of a bank failure, the System's deposits may not be recovered. The System's policy for custodial credit risk of deposits is to rely on FDIC insurance coverage. As of December 31, 2023, the System was not exposed to custodial credit risk. The carrying value of the System's deposits at December 31, 2023 totaled \$154,282.

**Investments Summary**

The System's investments at December 31, 2023 are presented below. All investments are presented by investment type, with debt securities presented by maturity (using segmented-time distribution).

Investment Type	Total Amount	Investment Maturities (in Years)			
		Less Than 1	1 - 5	6 - 10	More Than 10
<b>Debt Securities:</b>					
U.S. Treasuries	\$ 10,941,530	\$ -	\$ 3,585,412	\$ 4,204,137	\$ 3,151,981
U.S. Agencies	7,528,252	-	239,067	335,137	6,954,048
Corporate Bonds	11,180,996	-	1,946,375	2,320,813	6,913,808
Money Market Mutual Funds	952,905	952,905	-	-	-
Pooled Fixed Income	32,082,901	32,082,901	-	-	-
Total Debt Securities	<u>62,686,584</u>	<u>\$ 33,035,806</u>	<u>\$ 5,770,854</u>	<u>\$ 6,860,087</u>	<u>\$ 17,019,837</u>
<b>Other Investments:</b>					
Pooled Equities	97,542,976				
Real Estate	23,905,830				
Private Equity	57,350,175				
Total Other Investments	<u>178,798,981</u>				
Total Investments	<u>\$ 241,485,565</u>				

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**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Investments — Interest Rate Risk of Debt Securities**

Interest rate risk for debt securities is the risk that changes in interest rates of debt securities will adversely affect the fair value of an investment. The System's policy for interest rate risk of debt securities is to use diversification to minimize the exposure to interest rate risks in the aggregate investment portfolio.

**Investments — Custodial Credit Risk**

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty, the System will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The System does not have a policy for custodial credit risk of investments. As of December 31, 2023, the System was not exposed to custodial credit risk.

**Investments — Credit Risk of Debt Securities**

Credit risk for debt securities is the risk that an issuer or other counterparty to a debt security will not fulfill its obligations. The System's policy for credit risk of debt securities is to use diversification to minimize the exposure to credit risks in the aggregate investment portfolio. As of December 31, 2023, the credit quality ratings of the System's debt securities, excluding exempt U.S. Treasuries of \$10,941,530, are as follows:

Quality Ratings*	Total Amount	Investment Type			Pooled Fixed Income
		U.S. Agencies	Corporate Bonds	Money Market Mutual Funds	
AAA	\$ 852,695	\$ 190,520	\$ 662,175	\$ -	\$ -
AA+	136,941	-	136,941	-	-
AA	523,160	-	523,160	-	-
AA-	670,665	-	670,665	-	-
A+	341,698	-	341,698	-	-
A	664,012	-	664,012	-	-
A-	991,321	-	991,321	-	-
BBB+	1,470,241	-	1,470,241	-	-
BBB	912,401	-	912,401	-	-
BBB-	1,487,067	-	1,487,067	-	-
D	129,333	-	129,333	-	-
Unrated	43,565,520	7,337,732	3,191,982	952,905	32,082,901
Total	<u>\$ 51,745,054</u>	<u>\$ 7,528,252</u>	<u>\$ 11,180,996</u>	<u>\$ 952,905</u>	<u>\$ 32,082,901</u>

\* Per the rating scale of Standard and Poor's (a nationally recognized statistical rating organization).

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**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Deposits and Investments – Foreign Currency Risk**

Foreign currency risk is the risk that fluctuations in exchange rates will adversely affect the fair value of an investment or a deposit. The System's policy for foreign currency risk is to diversify the foreign countries and currencies within its international investment portfolio. As of December 31, 2023, the System had indirect exposure to foreign currency risk for certain equity and fixed income investments in the amount of approximately \$51,674,000.

**Investments – Concentration of Credit Risk**

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer. The System's policy for concentration of credit risk is to use extensive diversification to minimize exposure to company and industry specific risks in the aggregate investment portfolio. As of December 31, 2023, the System had no exposure to concentration of credit risk.

**Investments – Fair Value**

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs. The System has the following recurring fair value measurements as of December 31, 2023:

Investment Type	Total Amount	Fair Value Measurements Using	
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)
Debt Securities:			
U.S. Treasuries	\$ 10,941,530	\$ 10,941,530	\$ -
U.S. Agencies	7,528,252	-	7,528,252
Corporate Bonds	11,180,996	-	11,180,996
Money Market Mutual Funds	952,905	952,905	-
Total Investments Measured at Fair Value	30,603,683	\$ 11,894,435	\$ 18,709,248
Investments Measured at the Net Asset Value (NAV):			
Pooled Funds	129,625,877		
Private Equity	57,350,175		
Real Estate	23,905,830		
Total Investments Measured at NAV	210,881,882		
Total Investments Measured at Fair Value	\$ 241,485,565		

Debt securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. U.S. agencies and corporate bonds classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices.

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**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Investments — Fair Value (Continued)**

The valuation methods for investments measured at the net asset value (NAV) per share or its equivalent are presented on the following table:

	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period (Days)
Pooled Funds	\$ 129,625,877	\$ -	Daily	1
Private Equity (1)	57,350,175	9,494,012	(1)	(1)
Real Estate (2)	23,905,830	1,316,872	(2)	(2)
Total Investments Measured at NAV	<u>\$ 210,881,882</u>			

(1) *Private Equity* – This investment type includes investments in 15 private equity funds that invest primarily in private domestic and international companies of diversified industries. The fair value measurements of this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Approximately 32% of the funds can be redeemed quarterly with 90 days' notice. The remaining 68% of the investments can never be redeemed from the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. For the investments in funds that cannot be redeemed, it is expected approximately 1% of the underlying assets of the funds will be liquidated over the next 1 to 5 years, 29% over the next 3-7 years, and the remaining investments over the next 5 to 15 years.

(2) *Real Estate* – This investment type includes investments in three funds that invest in real estate. The fair value measurements of this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Approximately 84% of the funds can be redeemed quarterly and of those funds, approximately 43% can be redeemed with 45 days' notice; with the remainder subject to 90 days' notice. The remaining 16% of the investments can never be redeemed from the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. For the investments in funds that cannot be redeemed, it is expected that the underlying assets of the funds will be liquidated over the next 5 to 10 years.

**NOTE 4 FUNDING POLICY**

Plan members are required to contribute to the System at rates ranging from 5% to 9% of annual compensation, depending on their employment date. Members hired after December 31, 1978, must contribute an additional 2% of regular compensation in excess of \$30,000. These deductions earn interest at a rate determined by PERAC that vest based upon years of service. MassHousing is required to pay into the System 100% of the actuarially determined contribution. For the year ended December 31, 2023, employer contributions totaled \$4,727,032 and Plan member contributions totaled \$4,073,686.

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**NOTE 4 FUNDING POLICY (CONTINUED)**

Cost-of-living adjustments (COLA) must be granted by the Board and are the responsibility of the System. COLA cannot exceed 3% of the first \$17,000 unless the System elects to increase the maximum base retirement allowance in multiples of \$1,000. In 2023, an additional 5% COLA was granted on a \$16,000 base for calendar year 2022.

**NOTE 5 NET PENSION ASSET**

The components of the net pension asset of the System at December 31, 2023, were as follows:

Total Pension Liability	\$ 239,963,445
Fiduciary Net Position	<u>(241,614,196)</u>
Net Pension Asset	<u>\$ (1,650,751)</u>
Fiduciary Net Position as a Percentage of the Total Pension Liability	<u>100.7 %</u>

**Actuarial Methods and Assumptions**

The total pension asset was determined using the actuarial valuation as of the January 1, 2023, which was rolled forward to the December 31, 2023 measurement date. The following actuarial methods and assumptions apply to all periods included in the measurement:

Methods:	
Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Fair Value
Assumptions:	
Inflation	2.8%
Salary Increases	5.25% grading down to 3.75% after 10 years of service.
Investment Rate of Return	7.00% per year net of investment expenses
Cost-of-Living Adjustment	A 3% COLA on the first \$17,000 of retirement income is assumed to be granted in 2023, increasing to \$18,000 in 2024. A 5% COLA was granted on a \$16,000 base in 2022.
Mortality	Pri-2012 White Collar mortality table projected using MP-2021 (sex-distinct). During employment the healthy employee mortality table is used. Post-employment the healthy annuitant table is used. The prior valuation used MP-2016 projection. Mortality for disabled retirees follows the same table as nondisabled retirees, set forward two years. Death is assumed to be due to the same cause as the disability 40% of the time.
Retirement Rates	Ages 50 to 75
Overall Disability	75% ordinary disability; 25% accidental disability.

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**NOTE 5 NET PENSION ASSET (CONTINUED)**

**Actuarial Methods and Assumptions (Continued)**

The long-term expected real rate of return reflects the expected rate of return on Plan assets minus the expected rate of inflation. The long-term real rate of return removes the effect of inflation on the return amounts. It is a long-term assumption and is meant to reflect a best estimate of future experience, based on the expected asset allocation. Best estimates of geometric rates of return for each major asset class included in the System's target asset allocation as of December 31, 2023, are summarized in the following table:

Asset Class	Long-Term Expected Real Rate of Return (%)
Investment Grade Bonds	1.90 %
Long Government Bonds	2.10
TIPS	1.80
High Yield Bonds	3.90
Emerging Market Bonds	3.90
Domestic Equity	5.50
Developed Market Equity (Non-US)	5.90
Emerging Market Equity	5.90
Private Equity	8.20
Real Estate	5.10
Core Infrastructure	5.10

**Discount Rate**

The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that Plan member contributions will be made at the current contribution rate and that MassHousing's contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current Plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**Sensitivity of the Net Pension Asset to Changes in the Discount Rate**

The following presents the net pension asset of MassHousing calculated using the discount rate of 7.00%, as well as what MassHousing's net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net Pension Liability (Asset)	\$ 24,782,525	\$ (1,650,751)	\$ (24,137,917)

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**Schedule of Changes in Employer Net Pension Liability (Asset) and Related Ratios**

	2023	2022	2021	2020	2019
<b>Total Pension Liability (In Thousands):</b>					
Service Cost	\$ 4,351	\$ 4,103	\$ 4,015	\$ 3,861	\$ 3,700
Interest	16,043	15,554	15,295	14,608	13,583
Changes in Benefit Terms	-	2,531	-	-	1,591
Differences Between Expected and Actual Experience	-	848	(387)	-	3,848
Changes of Assumptions	-	(5,675)	2,291	-	5,878
Benefit Payments, Including Refunds of Member Contributions	(10,572)	(10,593)	(9,576)	(8,732)	(8,029)
Net Change in Total Pension Liability	9,822	6,768	11,638	9,737	20,571
Total Pension Liability - Beginning	230,141	223,373	211,735	201,998	181,427
Total Pension Liability - Ending (a)	239,963	230,141	223,373	211,735	201,998
<b>Fiduciary Net Position (In Thousands):</b>					
Contributions - Employer	4,727	1,087	13,273	10,081	10,031
Contributions - Member	4,074	3,747	3,591	3,527	3,449
Net Investment Income	24,104	(24,047)	33,100	26,999	27,731
Benefit Payments, Including Refunds of Member Contributions	(11,497)	(11,047)	(10,097)	(9,180)	(8,527)
Reimbursements and Transfers from Other Systems, Net	924	454	521	449	496
Administrative Expense	(508)	(455)	(555)	(490)	(468)
Net Change in Fiduciary Net Position	21,824	(30,261)	39,833	31,386	32,712
Fiduciary Net Position - Beginning	219,790	250,051	210,218	178,832	146,120
Fiduciary Net Position - Ending (b)	241,614	219,790	250,051	210,218	178,832
Net Pension Liability (Asset) - Ending (a) - (b)	<u>\$ (1,651)</u>	<u>\$ 10,351</u>	<u>\$ (26,678)</u>	<u>\$ 1,517</u>	<u>\$ 23,166</u>
Fiduciary Net Position as a Percentage of the Total Pension Liability	100.7 %	95.5 %	111.9 %	99.3 %	88.5 %
Covered Payroll	\$ 38,407	\$ 36,887	\$ 35,372	\$ 35,737	\$ 34,362
Net Pension Liability (Asset) as a Percentage of Covered Payroll	(4.3)%	28.1 %	(75.4)%	4.2 %	67.4 %

See accompanying Note to Required Supplementary Information.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
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**Schedule of Changes in Employer Net Pension Liability (Asset) and Related Ratios (Continued)**

	2018	2017	2016	2015	2014
<b>Total Pension Liability (In Thousands):</b>					
Service Cost	\$ 3,566	\$ 3,437	\$ 3,247	\$ 3,129	\$ 2,695
Interest	12,908	11,895	11,623	10,444	9,984
Changes in Benefit Terms	-	-	-	-	-
Differences Between Expected and Actual Experience	-	(3,670)	-	(265)	-
Changes of Assumptions	-	8,772	-	7,362	-
Benefit Payments, Including Refunds of Member Contributions	(7,182)	(6,920)	(5,958)	(5,161)	(5,134)
Net Change in Total Pension Liability	9,292	13,514	8,912	15,509	7,545
Total Pension Liability - Beginning	172,135	158,621	149,709	134,200	126,655
Total Pension Liability - Ending (a)	181,427	172,135	158,621	149,709	134,200
<b>Fiduciary Net Position (In Thousands):</b>					
Contributions - Employer	6,527	6,491	6,093	6,065	3,946
Contributions - Member	3,483	3,477	3,274	3,219	3,176
Net Investment Income	(5,545)	18,137	11,084	(3,354)	4,042
Benefit Payments, Including Refunds of Member Contributions	(7,600)	(7,085)	(5,994)	(5,479)	(5,351)
Reimbursements and Transfers from Other Systems, Net	418	239	36	319	538
Administrative Expense	(444)	(375)	(377)	(364)	(347)
Net Change in Fiduciary Net Position	(3,161)	20,884	14,116	406	6,004
Fiduciary Net Position - Beginning	149,281	128,397	114,281	113,875	107,871
Fiduciary Net Position - Ending (b)	146,120	149,281	128,397	114,281	113,875
Net Pension Liability (Asset) - Ending (a) - (b)	<u>\$ 35,307</u>	<u>\$ 22,854</u>	<u>\$ 30,224</u>	<u>\$ 35,428</u>	<u>\$ 20,325</u>
Fiduciary Net Position as a Percentage of the Total Pension Liability	80.5 %	86.7 %	80.9 %	76.3 %	84.9 %
Covered Payroll	\$ 34,506	\$ 33,250	\$ 33,641	\$ 32,430	\$ 28,044
Net Pension Liability (Asset) as a Percentage of Covered Payroll	102.3 %	68.7 %	89.8 %	109.2 %	72.5 %

See accompanying Note to Required Supplementary Information.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
REQUIRED SUPPLEMENTARY INFORMATION  
YEAR ENDED DECEMBER 31, 2023  
(SEE INDEPENDENT AUDITORS' REPORT)**

**Schedule of Employer Contributions  
(In Thousands)**

	2023	2022	2021	2020	2019
Actuarially Determined Contribution	\$ 4,727	\$ 1,087	\$ 1,030	\$ 10,081	\$ 10,031
Contributions in Relation to the Actuarially Determined Contribution	4,727	1,087	13,273	10,081	10,031
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (12,243)</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 39,180	\$ 37,647	\$ 36,082	\$ 35,737	\$ 34,362
Contributions as a Percentage of Covered Payroll	12.1 %	2.9 %	36.8 %	28.2 %	29.2 %
	2018	2017	2016	2015	2014
Actuarially Determined Contribution	\$ 6,527	\$ 6,491	\$ 6,093	\$ 6,065	\$ 3,946
Contributions in Relation to the Actuarially Determined Contribution	6,527	6,491	6,093	6,065	3,946
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 34,506	\$ 33,250	\$ 33,641	\$ 32,430	\$ 28,044
Contributions as a Percentage of Covered Payroll	18.9 %	19.5 %	18.1 %	18.7 %	14.1 %

**Schedule of Investment Returns**

<u>Year Ended December 31,</u>	<u>Annual Money- Weighted Rate of Return, Net of Investment Expense</u>
2023	10.99 %
2022	(9.73)
2021	15.38
2020	14.99
2019	18.09
2018	(1.11)
2017	18.16
2016	9.64
2015	(4.04)
2014	3.48

See accompanying Note to Required Supplementary Information.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTE TO REQUIRED SUPPLEMENTARY INFORMATION  
DECEMBER 31, 2023  
(SEE INDEPENDENT AUDITORS' REPORT)**

**NOTE 1 ACTUARIALLY DETERMINED CONTRIBUTION — METHODS AND ASSUMPTIONS**

The following actuarial methods and assumptions apply to the 2023 actuarially determined contributions:

Methods:	
Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Fair Value
Assumptions:	
Inflation	2.20%
Salary Increases	5.25% grading down to 3.75% after 10 years of service.
Investment Rate of Return	7.00% per year net of investment expenses.
Cost-of-Living Adjustment	A 3% COLA on the first \$17,000 of retirement income is assumed to be granted in 2023, increasing to \$18,000 in 2024. A 5% COLA was granted on a \$16,000 base in 2022.
Mortality	Pri-2012 White Collar mortality table projected using MP-2021 (sex-distinct). During employment the healthy employee mortality table is used. Post-employment the healthy annuitant table is used. The prior valuation used MP-2016 projection. Mortality for disabled retirees follows the same table as nondisabled retirees, set forward two years. Death is assumed to be due to the same cause as the disability 40% of the time.
Retirement Rates	Ages 50-70
Overall Disability	75% ordinary disability; 25% accidental disability.



CLA (CliftonLarsonAllen LLP) is a network member of CLA Global. See [CLAglobal.com/disclaimer](http://CLAglobal.com/disclaimer). Investment advisory services are offered through CliftonLarsonAllen Wealth Advisors, LLC, an SEC-registered investment advisor.

**MASSACHUSETTS HOUSING FINANCE AGENCY  
EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)**

**FINANCIAL STATEMENTS AND  
SUPPLEMENTARY INFORMATION**

**YEAR ENDED DECEMBER 31, 2022**



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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
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## INDEPENDENT AUDITORS' REPORT

Honorable Retirement Board  
Massachusetts Housing Finance Agency Employees' Retirement System  
Boston, Massachusetts

### **Report on the Audit of the Financial Statements**

#### ***Opinion***

We have audited the accompanying financial statements of the Massachusetts Housing Finance Agency Employees' Retirement System (the System), a fiduciary component unit of the Massachusetts Housing Finance Agency (MassHousing), as of and for the year ended December 31, 2022, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of December 31, 2022, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

#### ***Basis for Opinion***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### ***Responsibilities of Management for the Financial Statements***

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

***Auditors' Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and, therefore, is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, schedule of changes in employer net pension liability (asset) and related ratios, schedule of employer contributions, and schedule of investment returns be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with GAAS, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated June 29, 2023 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.



**CliftonLarsonAllen LLP**

Boston, Massachusetts  
June 29, 2023

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2022**

As management of the Massachusetts Housing Finance Agency Employees' Retirement System (the System), we offer readers of these financial statements this narrative overview and analysis of the System's financial activities for the year ended December 31, 2022.

The management's discussion and analysis (MD&A) is presented in the following sections:

1. Financial Highlights
2. Overview of the Financial Statements
3. Financial Statement Analysis

Please refer to the audited *Financial Statements* when reading the MD&A.

***Financial Highlights***

The System's funding objective is to meet long-term benefit obligations through contributions and investment income. As of January 1, 2023, the latest actuarial valuation, the funded ratio was 93.0% based on the actuarial value of assets at that date. As of December 31, 2022, the System's fiduciary net position was 95.5% of the total pension liability.

The System's net position decreased by \$30,260,695, or -12.10%, when compared to the prior year's net position. Net position is the residual of the System's assets in excess of the System's liabilities as of the statement date. The System's assets are restricted to meet future benefit payments.

***Overview of the Financial Statements***

The financial statements are comprised of a Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Notes to Financial Statements, and Required Supplementary Information.

The **statement of fiduciary net position** presents information on the System's assets and liabilities and the resulting net position restricted for pensions. This is calculated using the following formula: Assets – Liabilities = Net Position restricted for pensions. This statement reflects the System's investments at fair value, as well as cash, receivables and other assets and liabilities. The Statement of Fiduciary Net Position reports the financial position of the System at December 31, 2022. Over time, the increase or decrease in net position serves as a useful indicator of the System's financial health.

The **statement of changes in fiduciary net position** presents information showing how the System's net position changed during the year ended December 31, 2022. It reflects contributions by its individual members and participating employer along with deductions for retirement benefits, refunds, withdrawals, and administrative expenses. Investment income during the period is also presented showing income from investing activities.

The **notes to financial statements** provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The **required supplementary information** includes a schedule of changes in employer net pension liability (asset) and related ratios, a schedule of employer contributions and a schedule of investment returns.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2022**

***Financial Statement Analysis***

The System's total assets as of December 31, 2022, were \$220,064,260 and were comprised of cash and cash equivalents, investments, accrued interest and dividends, and receivables.

Total liabilities as of December 31, 2022, were \$274,336 and represent amounts owed for accounts payable and to the Massachusetts Housing Finance Agency (MassHousing) for reimbursement of the System's payroll, payroll related costs, rent, and other operating costs for the period July 1, 2022 through December 31, 2022.

The following tables present current and prior year data on the System's financial statements.

**Fiduciary Net Position**

As noted earlier, net position may serve over time as a useful indicator of a government's financial position. The System's net position was \$219,789,924 at the close of the year and is summarized as follows:

	<u>2022</u>	<u>2021</u>
<b>Assets:</b>		
Cash and Cash Equivalents	\$ 889,782	\$ 2,263,147
Investments	218,960,809	247,893,936
Other Assets	213,669	212,096
Total Assets	<u>220,064,260</u>	<u>250,369,179</u>
<b>Liabilities:</b>		
Accounts Payable	90,931	146,101
Due to MassHousing	183,405	172,459
Total Liabilities	<u>274,336</u>	<u>318,560</u>
<b>Net Position:</b>		
Restricted for Pensions	<u>\$ 219,789,924</u>	<u>\$ 250,050,619</u>

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2022**

Changes in Fiduciary Net Position

For the year ended December 31, 2022, the System's total fiduciary net position decreased by \$30,260,695. In the prior year, fiduciary net position increased by \$39,832,836. These amounts are summarized as follows:

	<u>2022</u>	<u>2021</u>
<b>Additions:</b>		
Contributions:		
Employer	\$ 1,087,188	\$ 13,272,681
Plan Members	3,747,377	3,591,019
Reimbursements and Transfers from Other Systems	844,434	746,049
Investment Income:		
Net Appreciation (Depreciation) in Fair Value of Investments	(23,987,561)	32,775,280
Interest and Dividends	1,893,294	2,834,027
Less: Investment Fees	<u>(1,952,996)</u>	<u>(2,509,105)</u>
Net Investment Income	<u>(24,047,263)</u>	<u>33,100,202</u>
Total Additions	(18,368,264)	50,709,951
<b>Deductions:</b>		
Retirement Benefits and Refunds	11,047,292	10,097,298
Reimbursements and Transfers to Other Systems	390,191	224,641
Administration	<u>454,948</u>	<u>555,176</u>
Total Deductions	<u>11,892,431</u>	<u>10,877,115</u>
<b>Change in Fiduciary Net Position</b>	(30,260,695)	39,832,836
Fiduciary Net Position - Beginning of Year	<u>250,050,619</u>	<u>210,217,783</u>
<b>Fiduciary Net Position - End of Year</b>	<u>\$ 219,789,924</u>	<u>\$ 250,050,619</u>

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2022**

**Additions to Fiduciary Net Position**

The amount needed to finance benefits is accumulated through the collection of employer and employee contributions, earnings on investments and reimbursements and transfers from other systems. These additions resulted in a decrease to net position totaling \$18,368,264. Employer contributions decreased by approximately \$12,185,000 in 2022 due to the reduction in MassHousing's annual required contribution as the result of additional contributions made by MassHousing in 2021. Plan member contributions increased by approximately \$156,000 and reimbursements and transfers from other systems increased by approximately \$98,000 when compared to the prior year. The System had net investment loss of approximately \$24,047,000 in 2022, which was a decrease of approximately \$57,147,000 from \$33,100,000 of net investment income in 2021.

**Deductions from Fiduciary Net Position**

The primary deductions of the System include the payment of pension benefits to participants and beneficiaries, refunds of contributions, and the costs of administering the System. Deductions to net position totaled \$11,892,431 during the current year versus \$10,877,115 in the previous year. The payment of pension benefits increased by \$950,000, or 9.41%, over the previous year. The increase in these expenses resulted from an increase in benefit payments to newer retirees with higher average compensation.

**Requests for Information**

This financial report is designed to provide the Board, our membership, taxpayers, investors, and creditors with a general overview of the System's financial results and to demonstrate the System's accountability for the funding it receives. If you have any questions about this report or need additional financial information, please contact the Executive Secretary at One Beacon Street, 6<sup>th</sup> floor, Boston, Massachusetts 02108.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
STATEMENT OF FIDUCIARY NET POSITION  
DECEMBER 31, 2022**

<b>ASSETS</b>	
Cash and Cash Equivalents	\$ 889,782
Investments:	
Fixed Income	18,088,544
Pooled Equities	89,103,757
Pooled Fixed Income	29,388,816
Real Estate	27,126,498
Private Equity	55,253,194
Total Investments	<u>218,960,809</u>
Accrued Interest and Dividends	130,185
Receivables:	
Investments Sold	<u>83,484</u>
Total Assets	220,064,260
<b>LIABILITIES</b>	
Accounts Payable	90,931
Due to MassHousing	<u>183,405</u>
Total Liabilities	<u>274,336</u>
<b>FIDUCIARY NET POSITION</b>	
Restricted for Pensions	<u><u>\$ 219,789,924</u></u>

See accompanying Notes to Financial Statements.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
YEAR ENDED DECEMBER 31, 2022**

**ADDITIONS:**

**CONTRIBUTIONS**

Employer	\$ 1,087,188
Plan Members	3,747,377
Reimbursements and Transfers from Other Systems	<u>844,434</u>
Total Contributions	5,678,999

**INVESTMENT INCOME**

Net Depreciation in Fair Value of Investments	(23,987,561)
Interest and Dividends	<u>1,893,294</u>
Total Investment Income	(22,094,267)
Less: Investment Fees	<u>(1,952,996)</u>
Net Investment Income	(24,047,263)

Total Additions (18,368,264)

**DEDUCTIONS:**

**RETIREMENT BENEFITS AND REFUNDS** 11,047,292

**REIMBURSEMENTS AND TRANSFERS TO OTHER SYSTEMS** 390,191

**ADMINISTRATION** 454,948

Total Deductions 11,892,431

**CHANGE IN FIDUCIARY NET POSITION** (30,260,695)

**FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS:**

Beginning of Year 250,050,619

End of Year \$ 219,789,924

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2022**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**General**

The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the standard-setting body for establishing governmental accounting and financial reporting principles. The significant accounting policies are described herein.

**Reporting Entity**

The Massachusetts Housing Finance Agency Employees' Retirement System (the System) was established to provide retirement benefits to employees of the Massachusetts Housing Finance Agency (MassHousing) and their beneficiaries. The System is governed by a five-member board comprised of MassHousing's Treasurer (ex-officio), two members elected by the System's participants, one member appointed by MassHousing's Board, and one member appointed by the System's Board members.

The System is reported as a fiduciary component unit in MassHousing's financial statements due to its reporting relationship with MassHousing.

**Measurement Focus and Basis of Accounting**

The System's financial statements are presented using the flow of economic resources measurement focus and use the accrual basis of accounting.

**Cash and Investments**

Cash and cash equivalents are considered to be cash on hand, demand deposits, and short-term investments with an original maturity of three months or less from the date of acquisition.

Investments are reported at fair value. Fair value is based on quotations from a national securities exchange except for pooled funds (pooled equities and fixed income securities), private equity and real estate investments, for which fair values are estimated as detailed below.

**Pooled Funds**

The fair value of shares in managed investment pools is based on unit value reported by the funds.

**Private Equity and Real Estate**

The fair values of these types of investments have been determined by the third-party investment managers using the Net Asset Value (NAV) per share (or its equivalent) on the System's ownership interest in partner's capital.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2022**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**Basis of Investment Transactions**

Purchases and sales of investments are recorded on the trade date. Transactions remaining unsettled as of year-end are recorded as payables for securities purchased and as a receivable for securities sold.

**Due to MassHousing**

MassHousing pays the System's employees' weekly payroll. In addition, MassHousing charges the System for payroll related benefits, rent, and other operating expenses.

**Contributions and Investment Income**

Contributions are recognized as additions in the period when they become due pursuant to formal commitments, statutory, or contractual requirements. Investment income is recognized when earned.

**Benefits and Refunds**

Benefits and refunds are recognized as deductions when incurred.

**Administrative Expenses**

Administrative expenses are financed by investment income.

**Use of Estimates**

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Fair values of real estate funds and private equity investments have been estimated in the absence of readily available market values, and these estimates may be materially different than values that would have been used had a ready market existed.

**NOTE 2 PLAN DESCRIPTION**

**General**

The System is a single employer public employee retirement system established by MassHousing on June 12, 1974, under Massachusetts General Laws (MGL), Chapter 32, and is regulated by the Massachusetts Public Employee Retirement Administration Commission (PERAC). The System is a defined benefit pension plan that covers eligible employees of MassHousing.

Membership in the System is mandatory immediately upon the commencement of employment for all permanent full-time employees working at least 18 <sup>3</sup>/<sub>4</sub> hours weekly. The System has one classification of members (general).

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2022**

**NOTE 2 PLAN DESCRIPTION (CONTINUED)**

**General (Continued)**

Membership in the System was as follows at December 31, 2022:

Active Members	316
Inactive Members	63
Retirees and Beneficiaries Currently Receiving Benefits	210
Total	589

**Significant Plan Provisions and Requirements**

Pursuant to MGL, Chapter 32, the System provides retirement, disability, and death benefits to Plan members and their beneficiaries up to a maximum of 80% of a member's final three-year or five-year average salary based on hiring date. In addition to compensation, benefits are based upon a member's age and length of creditable service.

Members of the System become vested after 10 years of creditable service. Normal retirement occurs at age 65 or age 67 (if hired on or after April 2, 2012).

For employees hired prior to April 2, 2012, the annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law. Assuming normal retirement at age 65, this percentage is 2.5%, which is reduced for individuals who retire prior to age 65 to reflect the longer pay out period. A member's final three-year average salary is defined as the greater of the highest consecutive three-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last three years of creditable service prior to retirement.

For employees hired on or after April 2, 2012, the annual amount of the retirement allowance is based on the member's final five-year average salary multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law. Assuming normal retirement at age 67, this percentage is 2.5%. A member's final five-year average salary is defined as the greater of the highest consecutive five-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last five years of creditable service prior to retirement.

Employees may elect early retirement after 20 years of service or at any time after attaining age 55 or age 60 with 10 years of eligible service. Plan members who become permanently and totally disabled may be eligible to receive a disability retirement allowance. The amount of benefits to be received depends on several factors, including the member's age, compensation, veteran status, years of service, and whether or not the disability is work-related. In addition, certain death benefits exist for beneficiaries of employees who die in active service.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2022**

**NOTE 2 PLAN DESCRIPTION (CONTINUED)**

**Significant Plan Provisions and Requirements (Continued)**

Pursuant to MGL, Chapter 32, Section 3(8)(c), for members leaving the System's employment to work for other Massachusetts governmental units, the System transfers their accumulated account balances and creditable service to the retirement system of their new employer. Other such retirement systems are in turn required to make comparable transfers to the System for employees coming to work for a participating employer. Liability for the service transfer is not calculated until the member's actual retirement date. Per statute, the actuary considers length of service as well as acceptance of military service credit and salary cap provisions (if applicable) in calculating the liability.

**NOTE 3 DEPOSITS AND INVESTMENTS**

Deposits and investments made by the System are governed by Chapter 32 of the MGL. The System has the ability to invest in equity securities, corporate bonds, real estate, and other specified investments in accordance with state laws and regulations.

The Board has the authority for establishing and amending investment policy decisions. Based on the investment objectives and constraints of the System, and based on an annual review of the asset allocation and asset classes, the Board will specify a long-term target allocation for each class of permissible assets. These targets will be expressed as a percentage of the total portfolio, and will have ranges surrounding them, allowing for the portfolio to maintain policy through market fluctuations.

The long-term target allocations are intended as strategic goals. Thus, it is permissible for the overall System's asset allocation to deviate from the long-term target, as would likely occur during manager transitions, asset class restructurings, and other temporary changes in the System. Surplus cash flows are utilized to maintain the asset management structure. Should these cash flows not be sufficient to reallocate the Plan according to policy, the transfer of assets may occur between managers. At least annually, the Board reevaluates the portfolio weightings by asset class and adjustments are made accordingly. The following identifies the asset allocation policy as of December 31, 2022:

Asset Class	Target	Range
Domestic Equity	27 %	22 - 32 %
Private Equity	12	4 - 20
Public Emerging Market Equity	11	7 - 15
Developed Foreign Equity	10	6 - 14
Investment Grade Bonds	9	5 - 13
Real Estate	8	2 - 14
Core Infrastructure	7	4 - 10
TIPS	6	3 - 9
Emerging Market Debt	5	2 - 8
High Yield Bonds	5	1 - 9
Cash	-	0 - 5

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**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Rate of Return**

For the year ended December 31, 2022, the annual money-weighted rate of return on investments, net of investment expense, was -9.73%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

**Deposits — Custodial Credit Risk**

Custodial credit risk for deposits is the risk that, in the event of a bank failure, the System's deposits may not be recovered. The System's policy for custodial credit risk of deposits is to rely on FDIC insurance coverage. As of December 31, 2022, the System was not exposed to custodial credit risk. The carrying value of the System's deposits at December 31, 2022 totaled \$95,220.

**Investments Summary**

The System's investments at December 31, 2022 are presented below. All investments are presented by investment type, with debt securities presented by maturity (using segmented-time distribution).

Investment Type	Total Amount	Investment Maturities (in Years)			
		Less Than 1	1 - 5	6 - 10	More Than 10
<b>Debt Securities:</b>					
U.S. Treasuries	\$ 6,370,015	\$ -	\$ 2,238,144	\$ 2,417,837	\$ 1,714,034
U.S. Agencies	3,763,353	-	28,644	46,945	3,687,764
Corporate Bonds	7,955,176	41,858	1,659,428	1,414,011	4,839,879
Money Market Mutual Funds	794,562	794,562	-	-	-
Pooled Fixed Income	29,388,816	29,388,816	-	-	-
Total Debt Securities	48,271,922	\$ 30,225,236	\$ 3,926,216	\$ 3,878,793	\$ 10,241,677
<b>Other Investments:</b>					
Pooled Equities	89,103,757				
Real Estate	27,126,498				
Private Equity	55,253,194				
Total Other Investments	171,483,449				
Total Investments	\$ 219,755,371				

**Investments — Interest Rate Risk of Debt Securities**

Interest rate risk for debt securities is the risk that changes in interest rates of debt securities will adversely affect the fair value of an investment. The System's policy for interest rate risk of debt securities is to use diversification to minimize the exposure to interest rate risks in the aggregate investment portfolio.

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**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Investments — Custodial Credit Risk**

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty, the System will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The System does not have a policy for custodial credit risk of investments. As of December 31, 2022, the System was not exposed to custodial credit risk.

**Investments — Credit Risk of Debt Securities**

Credit risk for debt securities is the risk that an issuer or other counterparty to a debt security will not fulfill its obligations. The System's policy for credit risk of debt securities is to use diversification to minimize the exposure to credit risks in the aggregate investment portfolio. As of December 31, 2022, the credit quality ratings of the System's debt securities, excluding exempt U.S. Treasuries of \$6,370,015, are as follows:

Quality Ratings*	Total Amount	Investment Type			
		U.S. Agencies	Corporate Bonds	Money Market Mutual Funds	Pooled Fixed Income
AAA	\$ 565,886	\$ 85,637	\$ 480,249	\$ -	\$ -
AA+	132,468	-	132,468	-	-
AA	222,118	-	222,118	-	-
AA-	507,965	-	507,965	-	-
A+	369,589	-	369,589	-	-
A	172,179	-	172,179	-	-
A-	690,019	112,304	577,715	-	-
BBB+	721,520	-	721,520	-	-
BBB	701,186	-	701,186	-	-
BBB-	1,314,001	-	1,314,001	-	-
D	218,153	94,191	123,962	-	-
Unrated	36,286,823	3,471,221	2,632,224	794,562	29,388,816
Total	<u>\$ 41,901,907</u>	<u>\$ 3,763,353</u>	<u>\$ 7,955,176</u>	<u>\$ 794,562</u>	<u>\$ 29,388,816</u>

\* Per the rating scale of Standard and Poor's (a nationally recognized statistical rating organization).

**Deposits and Investments — Foreign Currency Risk**

Foreign currency risk is the risk that fluctuations in exchange rates will adversely affect the fair value of an investment or a deposit. The System's policy for foreign currency risk is to diversify the foreign countries and currencies within its international investment portfolio. As of December 31, 2022, the System had indirect exposure to foreign currency risk for certain equity and fixed income investments in the amount of approximately \$46,582,000.

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**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Investments — Concentration of Credit Risk**

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer. The System's policy for concentration of credit risk is to use extensive diversification to minimize exposure to company and industry specific risks in the aggregate investment portfolio. As of December 31, 2022, the System had no exposure to concentration of credit risk.

**Investments — Fair Value**

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs. The System has the following recurring fair value measurements as of December 31, 2022:

Investment Type	Total Amount	Fair Value Measurements Using	
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)
Debt Securities:			
U.S. Treasuries	\$ 6,370,015	\$ 6,370,015	\$ -
U.S. Agencies	3,763,353	-	3,763,353
Corporate Bonds	7,955,176	-	7,955,176
Money Market Mutual Funds	794,562	794,562	-
Total Investments Measured at Fair Value	18,883,106	<u>\$ 7,164,577</u>	<u>\$ 11,718,529</u>
Investments Measured at the Net Asset Value (NAV):			
Pooled Funds	118,492,573		
Private Equity	55,253,194		
Real Estate	27,126,498		
Total Investments Measured at NAV	<u>200,872,265</u>		
Total Investments Measured at Fair Value	<u>\$ 219,755,371</u>		

Debt securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. U.S. agencies and corporate bonds classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices.

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**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Investments — Fair Value (Continued)**

The valuation methods for investments measured at the net asset value (NAV) per share or its equivalent are presented on the following table:

	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period (Days)
Pooled Funds	\$ 118,492,573	\$ -	Daily	1
Private Equity (1)	55,253,194	12,396,246	(1)	(1)
Real Estate (2)	27,126,498	1,810,700	(2)	(2)
Total Investments Measured at NAV	<u>\$ 200,872,265</u>			

(1) *Private Equity* - This investment type includes investments in 16 private equity funds that invest primarily in private domestic and international companies of diversified industries. The fair value measurements of this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Approximately 31% of the funds can be redeemed quarterly with 90 days' notice. The remaining 69% of the investments can never be redeemed from the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected the investments in funds that cannot be redeemed will be liquidated in the next 3 to 15 years.

(2) *Real Estate* - This investment type includes investments in four funds that invest in real estate. The fair value measurements of this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Approximately 88% of the funds can be redeemed quarterly and of those funds, approximately 44% can be redeemed with 45 days' notice with the remainder subject to 90 days' notice. The remaining 12% of the investments can never be redeemed from the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. For the investments in funds that cannot be redeemed, it is expected that the underlying assets of the funds will be liquidated over the next 5 to 10 years.

**NOTE 4 FUNDING POLICY**

Plan members are required to contribute to the System at rates ranging from 5% to 9% of annual compensation, depending on their employment date. Members hired after December 31, 1978, must contribute an additional 2% of regular compensation in excess of \$30,000. These deductions earn interest at a rate determined by PERAC that vest based upon years of service. MassHousing is required to pay into the System 100% of the actuarially determined contribution. For the year ended December 31, 2022, employer contributions totaled \$1,087,188 and Plan member contributions totaled \$3,747,377.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
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**NOTE 4 FUNDING POLICY (CONTINUED)**

Cost-of-living adjustments (COLA) must be granted by the Board and are the responsibility of the System. COLA cannot exceed 5% of the first \$16,000 in benefits unless the System elects to increase the maximum base retirement allowance in multiples of \$1,000.

**NOTE 5 NET PENSION LIABILITY**

The components of the net pension liability of the System at December 31, 2022, were as follows:

Total Pension Liability	\$ 230,140,537
Fiduciary Net Position	<u>(219,789,924)</u>
Net Pension Liability	<u>\$ 10,350,613</u>
Fiduciary Net Position as a Percentage of the Total Pension Liability	<u>95.5 %</u>

**Actuarial Methods and Assumptions**

The total pension liability was determined using the actuarial valuation as of the January 1, 2023, using a December 31, 2022 measurement date. The following actuarial methods and assumptions apply to all periods included in the measurement:

Methods:	
Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Fair Value
Assumptions:	
Inflation	2.60%
Salary Increases	5.25% grading down to 3.75% after 10 years of service.
Investment Rate of Return	7.00% per year net of investment expenses
Cost-of-Living Adjustment	A 3% COLA on the first \$17,000 of retirement income is assumed to be granted in 2023, increasing to \$18,000 in 2024. A 5% COLA was granted on a \$16,000 base in 2022.
Mortality	Pri-2012 White Collar mortality table projected using MP-2021 (sex-distinct). During employment the healthy employee mortality table is used. Post-employment the healthy annuitant table is used. The prior valuation used MP-2016 projection. Mortality for disabled retirees follows the same table as nondisabled retirees, set forward two years. Death is assumed to be due to the same cause as the disability 40% of the time.
Retirement Rates	Ages 50 to 75
Overall Disability	75% ordinary disability; 25% accidental disability.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
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**NOTE 5 NET PENSION LIABILITY (CONTINUED)**

**Actuarial Methods and Assumptions (Continued)**

The long-term expected real rate of return reflects the expected rate of return on Plan assets minus the expected rate of inflation. The long-term real rate of return removes the effect of inflation on the return amounts. It is a long-term assumption and is meant to reflect a best estimate of future experience, based on the expected asset allocation. Best estimates of geometric rates of return for each major asset class included in the System's target asset allocation as of December 31, 2022, are summarized in the following table:

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return (%)</u>
Domestic Equity	5.90 %
Developed Foreign Equity	7.00
Public Emerging Market Equity	7.20
Investment Grade Bonds	2.00
High Yield Bonds	4.60
TIPS	1.90
Emerging Market Debt	3.50
Real Estate	5.10
Private Equity	8.20
Government Bonds	2.30
Core Infrastructure	5.10

**Discount Rate**

The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that Plan member contributions will be made at the current contribution rate and that MassHousing's contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current Plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**Sensitivity of the Net Pension Liability to Changes in the Discount Rate**

The following presents the net pension liability of MassHousing calculated using the discount rate of 7.00%, as well as what MassHousing's net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net Pension Liability (Asset)	\$ 36,284,519	\$ 10,350,613	\$ (11,708,056)

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**Schedule of Changes in Employer Net Pension Liability (Asset) and Related Ratios (1)**

	2022	2021	2020	2019	2018
<b>Total Pension Liability (In Thousands):</b>					
Service Cost	\$ 4,103	\$ 4,015	\$ 3,861	\$ 3,700	\$ 3,566
Interest	15,554	15,295	14,608	13,583	12,908
Changes in Benefit Terms	2,531	-	-	1,591	-
Differences Between Expected and Actual Experience	848	(387)	-	3,848	-
Changes of Assumptions	(5,675)	2,291	-	5,878	-
Benefit Payments, Including Refunds of Member Contributions	(10,593)	(9,576)	(8,732)	(8,029)	(7,182)
Net Change in Total Pension Liability	<u>6,768</u>	<u>11,638</u>	<u>9,737</u>	<u>20,571</u>	<u>9,292</u>
Total Pension Liability - Beginning	<u>223,373</u>	<u>211,735</u>	<u>201,998</u>	<u>181,427</u>	<u>172,135</u>
Total Pension Liability - Ending (a)	230,141	223,373	211,735	201,998	181,427
<b>Fiduciary Net Position (In Thousands):</b>					
Contributions - Employer	1,087	13,273	10,081	10,031	6,527
Contributions - Member	3,747	3,591	3,527	3,449	3,483
Net Investment Income	(24,047)	33,100	26,999	27,731	(5,545)
Benefit Payments, Including Refunds of Member Contributions	(11,047)	(10,097)	(9,180)	(8,527)	(7,600)
Reimbursements and Transfers from Other Systems, Net	454	521	449	496	418
Administrative Expense	(455)	(555)	(490)	(468)	(444)
Net Change in Fiduciary Net Position	<u>(30,261)</u>	<u>39,833</u>	<u>31,386</u>	<u>32,712</u>	<u>(3,161)</u>
Fiduciary Net Position - Beginning	<u>250,051</u>	<u>210,218</u>	<u>178,832</u>	<u>146,120</u>	<u>149,281</u>
Fiduciary Net Position - Ending (b)	<u>219,790</u>	<u>250,051</u>	<u>210,218</u>	<u>178,832</u>	<u>146,120</u>
Net Pension Liability (Asset) - Ending (a) - (b)	<u>\$ 10,351</u>	<u>\$ (26,678)</u>	<u>\$ 1,517</u>	<u>\$ 23,166</u>	<u>\$ 35,307</u>
Fiduciary Net Position as a Percentage of the Total Pension Liability	95.5 %	111.9 %	99.3 %	88.5 %	80.5 %
Covered Payroll	\$ 36,887	\$ 35,372	\$ 35,737	\$ 34,362	\$ 34,506
Net Pension Liability (Asset) as a Percentage of Covered Payroll	28.1 %	(75.4)%	4.2 %	67.4 %	102.3 %

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
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**Schedule of Changes in Employer Net Pension Liability (Asset) and Related Ratios (1)  
(Continued)**

	2017	2016	2015	2014
<b>Total Pension Liability (In Thousands):</b>				
Service Cost	\$ 3,437	\$ 3,247	\$ 3,129	\$ 2,695
Interest	11,895	11,623	10,444	9,984
Changes in Benefit Terms	-	-	-	-
Differences Between Expected and Actual Experience	(3,670)	-	(265)	-
Changes of Assumptions	8,772	-	7,362	-
Benefit Payments, Including Refunds of Member Contributions	(6,920)	(5,958)	(5,161)	(5,134)
Net Change in Total Pension Liability	<u>13,514</u>	<u>8,912</u>	<u>15,509</u>	<u>7,545</u>
Total Pension Liability - Beginning	<u>158,621</u>	<u>149,709</u>	<u>134,200</u>	<u>126,655</u>
Total Pension Liability - Ending (a)	172,135	158,621	149,709	134,200
<b>Fiduciary Net Position (In Thousands):</b>				
Contributions - Employer	6,491	6,093	6,065	3,946
Contributions - Member	3,477	3,274	3,219	3,176
Net Investment Income	18,137	11,084	(3,354)	4,042
Benefit Payments, Including Refunds of Member Contributions	(7,085)	(5,994)	(5,479)	(5,351)
Reimbursements and Transfers from Other Systems, Net	239	36	319	538
Administrative Expense	(375)	(377)	(364)	(347)
Net Change in Fiduciary Net Position	<u>20,884</u>	<u>14,116</u>	<u>406</u>	<u>6,004</u>
Fiduciary Net Position - Beginning	<u>128,397</u>	<u>114,281</u>	<u>113,875</u>	<u>107,871</u>
Fiduciary Net Position - Ending (b)	<u>149,281</u>	<u>128,397</u>	<u>114,281</u>	<u>113,875</u>
Net Pension Liability (Asset) - Ending (a) - (b)	<u>\$ 22,854</u>	<u>\$ 30,224</u>	<u>\$ 35,428</u>	<u>\$ 20,325</u>
Fiduciary Net Position as a Percentage of the Total Pension Liability	86.7 %	80.9 %	76.3 %	84.9 %
Covered Payroll	\$ 33,250	\$ 33,641	\$ 32,430	\$ 28,044
Net Pension Liability (Asset) as a Percentage of Covered Payroll	68.7 %	89.8 %	109.2 %	72.5 %

(1) Data is being accumulated annually to present 10 years of the reported information.

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**Schedule of Employer Contributions  
(In Thousands)**

	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>
Actuarially Determined Contribution	\$ 1,087	\$ 1,030	\$ 10,081	\$ 10,031	\$ 6,527
Contributions in Relation to the Actuarially Determined Contribution	<u>1,087</u>	<u>13,273</u>	<u>10,081</u>	<u>10,031</u>	<u>6,527</u>
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ (12,243)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 37,647	\$ 36,082	\$ 35,737	\$ 34,362	\$ 34,506
Contributions as a Percentage of Covered Payroll	2.9 %	36.8 %	28.2 %	29.2 %	18.9 %
	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Actuarially Determined Contribution	\$ 6,491	\$ 6,093	\$ 6,065	\$ 3,946	\$ 3,927
Contributions in Relation to the Actuarially Determined Contribution	<u>6,491</u>	<u>6,093</u>	<u>6,065</u>	<u>3,946</u>	<u>3,927</u>
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 33,250	\$ 33,641	\$ 32,430	\$ 28,044	\$ 28,044
Contributions as a Percentage of Covered Payroll	19.5 %	18.1 %	18.7 %	14.1 %	14.0 %

**Schedule of Investment Returns (1)**

<u>Year Ended December 31,</u>	<u>Annual Money- Weighted Rate of Return, Net of Investment Expense</u>
2022	(9.73)%
2021	15.38
2020	14.99
2019	18.09
2018	(1.11)
2017	18.16
2016	9.64
2015	(4.04)
2014	3.48

(1) Data is being accumulated annually to present 10 years of the reported information.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
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**NOTE 1 ACTUARIALLY DETERMINED CONTRIBUTION — METHODS AND ASSUMPTIONS**

The following actuarial methods and assumptions apply to the 2022 actuarially determined contributions:

Methods:	
Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Fair Value
Assumptions:	
Inflation	2.20%
Salary Increases	5.25% grading down to 3.75% after 10 years of service.
Investment Rate of Return	7.00% per year net of investment expenses.
Cost-of-Living Adjustment	3% of the first \$15,000 of retirement income granted annually.
Mortality	RP-2014 Healthy White Collar Mortality table projected generationally from the year 2006 using MP-2020 (sex-distinct). Disabled mortality is the healthy retiree table set forward two years. Death is assumed to be due to the same cause as the disability 40% of the time.
Retirement Rates	Ages 50-70
Overall Disability	75% ordinary disability; 25% accidental disability.

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**FINANCIAL STATEMENTS AND  
REQUIRED SUPPLEMENTARY INFORMATION**

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## INDEPENDENT AUDITORS' REPORT

Honorable Retirement Board  
Massachusetts Housing Finance Agency Employees' Retirement System  
Boston, Massachusetts

### Report on the Audit of the Financial Statements

#### **Opinion**

We have audited the accompanying financial statements of the Massachusetts Housing Finance Agency Employees' Retirement System (the System), a fiduciary component unit of the Massachusetts Housing Finance Agency (MassHousing), as of and for the year ended December 31, 2021, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of December 31, 2021, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

#### **Basis for Opinion**

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### **Responsibilities of Management for the Financial Statements**

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

***Auditors' Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, schedule of changes in employer net pension liability (asset) and related ratios, schedule of employer contributions and schedule of investment returns be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with GAAS, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated August 5, 2022 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.



**CliftonLarsonAllen LLP**

Boston, Massachusetts  
August 5, 2022

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2021**

As management of the Massachusetts Housing Finance Agency Employees' Retirement System (System), we offer readers of these financial statements this narrative overview and analysis of the System's financial activities for the year ended December 31, 2021.

The management's discussion and analysis (MD&A) is presented in the following sections:

1. Financial Highlights
2. Overview of the Financial Statements
3. Financial Statement Analysis

Please refer to the audited *Financial Statements* when reading the MD&A.

***Financial Highlights***

The System's funding objective is to meet long-term benefit obligations through contributions and investment income. As of January 1, 2021, the latest actuarial valuation, the funded ratio was 95.0% based on the actuarial value of assets at that date. As of December 31, 2021, the System's fiduciary net position was 111.9% of the total pension liability.

The System's net position increased by \$39,832,836, or 18.95%, when compared to the prior year's net position. Net position is the residual of the System's assets in excess of the System's liabilities as of the statement date. The System's assets are restricted to meet future benefit payments.

***Overview of the Financial Statements***

The financial statements are comprised of a Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Notes to Financial Statements, and Required Supplementary Information.

The **statement of fiduciary net position** presents information on the System's assets and liabilities and the resulting net position restricted for pensions. This is calculated using the following formula: Assets – Liabilities = Net Position restricted for pensions. This statement reflects the System's investments at fair value, as well as cash, receivables and other assets and liabilities. The Statement of Fiduciary Net Position reports the financial position of the System at December 31, 2021. Over time, the increase or decrease in net position serves as a useful indicator of the System's financial health.

The **statement of changes in fiduciary net position** presents information showing how the System's net position changed during the year ended December 31, 2021. It reflects contributions by its individual members and participating employer along with deductions for retirement benefits, refunds, withdrawals, and administrative expenses. Investment income during the period is also presented showing income from investing activities.

The **notes to financial statements** provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The **required supplementary information** includes a schedule of changes in employer net pension liability (asset) and related ratios, a schedule of employer contributions and a schedule of investment returns.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2021**

***Financial Statement Analysis***

The System's total assets as of December 31, 2021 were \$250,369,179 and were comprised of cash and cash equivalents, investments, accrued interest and dividends, and receivables.

Total liabilities as of December 31, 2021 were \$318,560 and represent amounts owed for accounts payable and to the Massachusetts Housing Finance Agency (MassHousing) for reimbursement of the System's payroll, payroll related costs, rent, and other operating costs for the period July 1, 2021 through December 31, 2021.

The following tables present current and prior year data on the System's financial statements.

**Fiduciary Net Position**

As noted earlier, net position may serve over time as a useful indicator of a government's financial position. The System's net position was \$250,050,619 at the close of the year and is summarized as follows:

	<u>2021</u>	<u>2020</u>
<b>Assets</b>		
Cash and Cash Equivalents	\$ 2,263,147	\$ 3,010,239
Investments	247,893,936	207,383,081
Other Assets	<u>212,096</u>	<u>189,018</u>
Total Assets	250,369,179	210,582,338
<b>Liabilities</b>		
Accounts Payable	146,101	162,951
Due to MassHousing	<u>172,459</u>	<u>201,604</u>
Total Liabilities	<u>318,560</u>	<u>364,555</u>
<b>Net Position</b>		
Restricted for Pensions	<u>\$ 250,050,619</u>	<u>\$ 210,217,783</u>

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2021**

Changes in Fiduciary Net Position

For the year ended December 31, 2021, the System's total fiduciary net position increased by \$39,832,836. In the prior year, fiduciary net position increased by \$31,385,663. These amounts are summarized as follows:

	<u>2021</u>	<u>2020</u>
<b>Additions</b>		
<i>Contributions:</i>		
Employer	\$ 13,272,681	\$ 10,080,909
Plan Members	3,591,019	3,526,812
Reimbursements and Transfers from Other Systems	746,049	578,848
<i>Investment Income:</i>		
Net Appreciation in Fair Value of Investments	32,775,280	24,645,860
Interest and Dividends	2,834,027	3,994,459
Less: Investment Fees	<u>(2,509,105)</u>	<u>(1,641,171)</u>
Net Investment Income	<u>33,100,202</u>	<u>26,999,148</u>
Total Additions	50,709,951	41,185,717
<b>Deductions</b>		
Retirement Benefits and Refunds	10,097,298	9,180,432
Reimbursements and Transfers to Other Systems	224,641	129,931
Administration	<u>555,176</u>	<u>489,691</u>
Total Deductions	<u>10,877,115</u>	<u>9,800,054</u>
Change in Fiduciary Net Position	39,832,836	31,385,663
Fiduciary Net Position - Beginning of Year	<u>210,217,783</u>	<u>178,832,120</u>
Fiduciary Net Position - End of Year	<u>\$ 250,050,619</u>	<u>\$ 210,217,783</u>

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2021**

**Additions to Fiduciary Net Position**

The amount needed to finance benefits is accumulated through the collection of employer and employee contributions, earnings on investments and reimbursements and transfers from other systems. These additions resulted in an increase to net position totaling \$50,709,951. Employer contributions increased by approximately \$3,192,000 in 2021 while Plan member contributions increased by approximately \$64,000 and reimbursements and transfers from other systems increased by approximately \$167,000 when compared to the prior year. The employer contribution increased as a result of the annual actuarially determined employer contribution as well as an additional contribution made by MassHousing in excess of the actuarially determined contribution. The System had net investment income of approximately \$33,100,000 in 2021, which was an increase of approximately \$6,101,000 from \$26,999,000 of net investment income in 2020.

**Deductions from Fiduciary Net Position**

The primary deductions of the System include the payment of pension benefits to participants and beneficiaries, refunds of contributions, and the costs of administering the System. Deductions to net position totaled \$10,877,115 during the current year versus \$9,800,054 in the previous year. The payment of pension benefits increased by \$916,866, or 10.00%, over the previous year. The increase in these expenses resulted from an increase in benefit payments to newer retirees with higher average compensation.

**Requests for Information**

This financial report is designed to provide the Board, our membership, taxpayers, investors, and creditors with a general overview of the System's financial results and to demonstrate the System's accountability for the funding it receives. If you have any questions about this report or need additional financial information, please contact the Executive Secretary at One Beacon Street, 6<sup>th</sup> floor, Boston, Massachusetts 02108.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
STATEMENT OF FIDUCIARY NET POSITION  
DECEMBER 31, 2021**

<b>ASSETS</b>	
Cash and Cash Equivalents	\$ 2,263,147
Investments:	
Fixed Income	20,931,819
Pooled Equities	114,942,508
Pooled Fixed Income	37,323,994
Real Estate	24,164,668
Private Equity	<u>50,530,947</u>
Total Investments	247,893,936
Accrued Interest and Dividends	128,866
Receivables:	
Investments Sold	<u>83,230</u>
Total Assets	250,369,179
<b>LIABILITIES</b>	
Accounts Payable	146,101
Due to MassHousing	<u>172,459</u>
Total Liabilities	<u>318,560</u>
<b>FIDUCIARY NET POSITION</b>	
Restricted for Pensions	<u>\$ 250,050,619</u>

See accompanying Notes to Financial Statements.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
YEAR ENDED DECEMBER 31, 2021**

**ADDITIONS:**

**CONTRIBUTIONS**

Employer	\$ 13,272,681
Plan Members	3,591,019
Reimbursements and Transfers from Other Systems	<u>746,049</u>
Total Contributions	17,609,749

**INVESTMENT INCOME**

Net Appreciation in Fair Value of Investments	32,775,280
Interest	2,834,027
Less: Investment Fees	<u>(2,509,105)</u>
Net Investment Income	<u>33,100,202</u>

Total Additions 50,709,951

**DEDUCTIONS:**

Retirement Benefits and Refunds	10,097,298
Reimbursements and Transfers to Other Systems	224,641
Administration	<u>555,176</u>

Total Deductions 10,877,115

**CHANGE IN FIDUCIARY NET POSITION** 39,832,836

**FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS:**

Beginning of Year	<u>210,217,783</u>
End of Year	<u>\$ 250,050,619</u>

*See accompanying Notes to Financial Statements.*

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2021**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**General**

The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the standard-setting body for establishing governmental accounting and financial reporting principles. The significant accounting policies are described herein.

**Reporting Entity**

The Massachusetts Housing Finance Agency Employees' Retirement System (System) was established to provide retirement benefits to employees of the Massachusetts Housing Finance Agency (MassHousing) and their beneficiaries. The System is governed by a five-member board comprised of MassHousing's Treasurer (ex-officio), two members elected by the System's participants, one member appointed by MassHousing's Board and one member appointed by the System's Board members.

The System is reported as a fiduciary component unit in MassHousing's financial statements due to its reporting relationship with MassHousing.

**Measurement Focus and Basis of Accounting**

The System's financial statements are presented using the flow of economic resources measurement focus and use the accrual basis of accounting.

**Cash and Investments**

Cash and cash equivalents are considered to be cash on hand, demand deposits and short-term investments with an original maturity of three months or less from the date of acquisition.

Investments are reported at fair value. Fair value is based on quotations from a national securities exchange except for pooled funds (pooled equities and fixed income securities), private equity and real estate investments, for which fair values are estimated as detailed below.

**Pooled Funds**

The fair value of shares in managed investment pools is based on unit value reported by the funds.

**Private Equity and Real Estate**

The fair values of these types of investments have been determined by the third-party investment managers using the Net Asset Value (NAV) per share (or its equivalent) on the System's ownership interest in partner's capital.

MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2021

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**Basis of Investment Transactions**

Purchases and sales of investments are recorded on the trade date. Transactions remaining unsettled as of year-end are recorded as payables for securities purchased and as a receivable for securities sold.

**Due to MassHousing**

MassHousing pays the System's employees' weekly payroll. In addition, MassHousing charges the System for payroll related benefits, rent, and other operating expenses.

**Contributions and Investment Income**

Contributions are recognized as additions in the period when they become due pursuant to formal commitments, statutory, or contractual requirements. Investment income is recognized when earned.

**Benefits and Refunds**

Benefits and refunds are recognized as deductions when incurred.

**Administrative Expenses**

Administrative expenses are financed by investment income.

**Use of Estimates**

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Fair values of real estate funds and private equity investments have been estimated in the absence of readily available market values, and these estimates may be materially different than values that would have been used had a ready market existed.

**NOTE 2 PLAN DESCRIPTION**

**General**

The System is a single employer public employee retirement system established by MassHousing on June 12, 1974, under Massachusetts General Laws (MGL), Chapter 32, and is regulated by the Massachusetts Public Employee Retirement Administration Commission (PERAC). The System is a defined benefit pension plan that covers eligible employees of MassHousing.

Membership in the System is mandatory immediately upon the commencement of employment for all permanent full-time employees working at least 18 <sup>3</sup>/<sub>4</sub> hours weekly. The System has one classification of members (general).

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2021**

**NOTE 2 PLAN DESCRIPTION (CONTINUED)**

**General (Continued)**

Membership in the System was as follows at December 31, 2021:

Active Members	308
Inactive Members	62
Retirees and Beneficiaries Currently Receiving Benefits	<u>202</u>
Total	<u><u>572</u></u>

**Significant Plan Provisions and Requirements**

Pursuant to MGL, Chapter 32, the System provides retirement, disability, and death benefits to Plan members and their beneficiaries up to a maximum of 80% of a member's final three-year or five-year average salary based on hiring date. In addition to compensation, benefits are based upon a member's age and length of creditable service.

Members of the System become vested after 10 years of creditable service. Normal retirement occurs at age 65 or age 67 (if hired on or after April 2, 2012).

For employees hired prior to April 2, 2012, the annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law. Assuming normal retirement at age 65, this percentage is 2.5%, which is reduced for individuals who retire prior to age 65 to reflect the longer pay out period. A member's final three-year average salary is defined as the greater of the highest consecutive three-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last three years of creditable service prior to retirement.

For employees hired on or after April 2, 2012, the annual amount of the retirement allowance is based on the member's final five-year average salary multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law. Assuming normal retirement at age 67, this percentage is 2.5%. A member's final five-year average salary is defined as the greater of the highest consecutive five-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last five years of creditable service prior to retirement.

Employees may elect early retirement after 20 years of service or at any time after attaining age 55 or age 60 with 10 years of eligible service. Plan members who become permanently and totally disabled may be eligible to receive a disability retirement allowance. The amount of benefits to be received depends on several factors, including the member's age, compensation, veteran status, years of service, and whether or not the disability is work-related. In addition, certain death benefits exist for beneficiaries of employees who die in active service.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2021**

**NOTE 2 PLAN DESCRIPTION (CONTINUED)**

**Significant Plan Provisions and Requirements (Continued)**

Pursuant to MGL, Chapter 32, Section 3(8)(c), for members leaving the System's employment to work for other Massachusetts governmental units, the System transfers their accumulated account balances and creditable service to the retirement system of their new employer. Other such retirement systems are in turn required to make comparable transfers to the System for employees coming to work for a participating employer. Liability for the service transfer is not calculated until the member's actual retirement date. Per statute, the actuary considers length of service as well as acceptance of military service credit and salary cap provisions (if applicable) in calculating the liability.

**NOTE 3 DEPOSITS AND INVESTMENTS**

Deposits and investments made by the System are governed by Chapter 32 of the MGL. The System has the ability to invest in equity securities, corporate bonds, real estate, and other specified investments in accordance with state laws and regulations.

The Board has the authority for establishing and amending investment policy decisions. Based on the investment objectives and constraints of the System, and based on an annual review of the asset allocation and asset classes, the Board will specify a long-term target allocation for each class of permissible assets. These targets will be expressed as a percentage of the total portfolio, and will have ranges surrounding them, allowing for the portfolio to maintain policy through market fluctuations.

The long-term target allocations are intended as strategic goals. Thus, it is permissible for the overall System's asset allocation to deviate from the long-term target, as would likely occur during manager transitions, asset class restructurings, and other temporary changes in the System. Surplus cash flows are utilized to maintain the asset management structure. Should these cash flows not be sufficient to reallocate the Plan according to policy, the transfer of assets may occur between managers. At least annually, the Board reevaluates the portfolio weightings by asset class and adjustments are made accordingly. The following identifies the asset allocation policy as of December 31, 2021:

Asset Class	Target	Range
Domestic Equity	27 %	22 - 32%
Developed Foreign Equity	10 %	6 - 14%
Public Emerging Market Equity	11 %	7 - 15%
Investment Grade Bonds	9 %	5 - 13%
High Yield Bonds	5 %	1 - 9%
TIPS	6 %	3 - 9%
Emerging Market Debt	5 %	2 - 8%
Real Estate	8 %	5 - 11%
Private Equity	12 %	8 - 16%
Core Infrastructure	7 %	4 - 10%

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2021**

**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Rate of Return**

For the year ended December 31, 2021, the annual money-weighted rate of return on investments, net of investment expense, was 15.38%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

**Deposits — Custodial Credit Risk**

Custodial credit risk for deposits is the risk that, in the event of a bank failure, the System's deposits may not be recovered. The System's policy for custodial credit risk of deposits is to rely on FDIC insurance coverage. As of December 31, 2021, the System was not exposed to custodial credit risk. The carrying value of the System's deposits at December 31, 2021 totaled \$95,229.

**Investments Summary**

The System's investments at December 31, 2021 are presented below. All investments are presented by investment type, with debt securities presented by maturity (using segmented-time distribution).

Investment Type	Total Amount	Investment Maturities (in Years)			
		Less Than 1	1 - 5	6 - 10	More Than 10
<b><u>Debt Securities:</u></b>					
U.S. Treasuries	\$ 5,053,186	\$ 1,186,811	\$ 1,572,777	\$ 790,639	\$ 1,502,959
U.S. Agencies	3,646,869	-	-	109,278	3,537,591
Corporate Bonds	12,231,764	235,363	1,977,167	2,659,098	7,360,136
Money Market Mutual Funds	2,167,918	2,167,918	-	-	-
Pooled Fixed Income	37,323,994	37,323,994	-	-	-
Total Debt Securities	60,423,731	\$40,914,086	\$ 3,549,944	\$ 3,559,015	\$ 12,400,686
<b><u>Other Investments:</u></b>					
Pooled Equities	114,942,508				
Real Estate	24,164,668				
Private Equity	50,530,947				
Total Other Investments	189,638,123				
Total Investments	\$ 250,061,854				

**Investments — Interest Rate Risk of Debt Securities**

Interest rate risk for debt securities is the risk that changes in interest rates of debt securities will adversely affect the fair value of an investment. The System's policy for interest rate risk of debt securities is to use diversification to minimize the exposure to interest rate risks in the aggregate investment portfolio.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2021**

**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Investments — Custodial Credit Risk**

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty, the System will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The System does not have a policy for custodial credit risk of investments. As of December 31, 2021, the System was not exposed to custodial credit risk.

**Investments — Credit Risk of Debt Securities**

Credit risk for debt securities is the risk that an issuer or other counterparty to a debt security will not fulfill its obligations. The System's policy for credit risk of debt securities is to use diversification to minimize the exposure to credit risks in the aggregate investment portfolio. As of December 31, 2021, the credit quality ratings of the System's debt securities, excluding exempt U.S. Treasuries of \$5,053,186, are as follows:

Quality Ratings*	Total Amount	Investment Type			
		U.S. Agencies	Corporate Bonds	Money Market Mutual Funds	Pooled Fixed Income
AAA	\$ 605,512	\$ 250,232	\$ 355,280	\$ -	\$ -
AA+	91,061	-	91,061	-	-
AA	310,601	-	310,601	-	-
AA-	688,048	-	688,048	-	-
A+	351,451	-	351,451	-	-
A	148,922	-	148,922	-	-
A-	1,023,176	213,217	809,959	-	-
BBB+	1,334,373	-	1,334,373	-	-
BBB	1,759,120	-	1,759,120	-	-
BBB-	2,529,014	-	2,529,014	-	-
BB+	207,720	-	207,720	-	-
D	399,962	254,772	145,190	-	-
Unrated	45,921,585	2,928,648	3,501,025	2,167,918	37,323,994
Total	<u>\$ 55,370,545</u>	<u>\$ 3,646,869</u>	<u>\$ 12,231,764</u>	<u>\$ 2,167,918</u>	<u>\$ 37,323,994</u>

\* Per the rating scale of Standard and Poor's (a nationally recognized statistical rating organization).

**Deposits and Investments — Foreign Currency Risk**

Foreign currency risk is the risk that fluctuations in exchange rates will adversely affect the fair value of an investment or a deposit. The System's policy for foreign currency risk is to diversify the foreign countries and currencies within its international investment portfolio. As of December 31, 2021, the System had indirect exposure to foreign currency risk for certain equity and fixed income investments in the amount of approximately \$56,956,000.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2021**

**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Investments — Concentration of Credit Risk**

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer. The System's policy for concentration of credit risk is to use extensive diversification to minimize exposure to company and industry specific risks in the aggregate investment portfolio. As of December 31, 2021, the System had no exposure to concentration of credit risk.

**Investments — Fair Value**

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. The System has the following recurring fair value measurements as of December 31, 2021:

Investment Type	Total Amount	Fair Value Measurements Using	
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)
<b><u>Debt Securities</u></b>			
U.S. Treasuries	\$ 5,053,186	\$ 5,053,186	\$ -
U.S. Agencies	3,646,869	-	3,646,869
Corporate Bonds	12,231,764	-	12,231,764
Money Market Mutual Funds	2,167,918	2,167,918	-
Total Investments Measured at Fair Value	23,099,737	<u>\$ 7,221,104</u>	<u>\$ 15,878,633</u>
<b><u>Investments Measured at the Net Asset Value (NAV)</u></b>			
Pooled Funds	152,266,502		
Private Equity	50,530,947		
Real Estate	24,164,668		
Total Investments Measured at NAV	<u>226,962,117</u>		
Total Investments Measured at Fair Value	<u>\$ 250,061,854</u>		

Debt securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. U.S. agencies and corporate bonds classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices.

The valuation methods for investments measured at the net asset value (NAV) per share or its equivalent are presented on the following table:

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
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**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Investments — Fair Value (Continued)**

	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period (Days)
Pooled Funds	\$ 152,266,502	\$ -	Daily	1
Private Equity (1)	50,530,947	12,288,163	(1)	(1)
Real Estate (2)	24,164,668	3,497,942	(2)	(2)
Total Investments Measured at NAV	<u>\$ 226,962,117</u>			

(1) *Private equity* - This investment type includes investments in 16 private equity funds that invest primarily in private domestic and international companies of diversified industries. The fair value measurements of this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Approximately 25% of the funds can be redeemed quarterly with 90 days notice. The remaining 75% of the investments can never be redeemed from the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected the investments in funds that cannot be redeemed will be liquidated in the next 3 to 15 years.

(2) *Real estate* - This investment type includes investments in four funds that invest in real estate. The fair value measurements of this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Approximately 94% of the funds can be redeemed quarterly and of those funds, approximately 47% can be redeemed with 45 days notice; with the remainder subject to 90 days notice. The remaining 6% of the investments can never be redeemed from the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. For the investments in funds that cannot be redeemed, it is expected that the underlying assets of the funds will be liquidated over the next 5 to 10 years.

**NOTE 4 FUNDING POLICY**

Plan members are required to contribute to the System at rates ranging from 5% to 9% of annual compensation, depending on their employment date. Members hired after December 31, 1978 must contribute an additional 2% of regular compensation in excess of \$30,000. These deductions earn interest at a rate determined by PERAC that vest based upon years of service. MassHousing is required to pay into the System 100% of the actuarially determined contribution. For the year ended December 31, 2021, employer contributions totaled \$13,272,681 and Plan member contributions totaled \$3,591,019.

Cost-of-living adjustments (COLA) must be granted by the Board and are the responsibility of the System. COLA cannot exceed 3% of the first \$15,000 in benefits, unless the System elects to increase the maximum base retirement allowance in multiples of \$1,000.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
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**NOTE 5 NET PENSION ASSET**

The components of the net pension asset of the System at December 31, 2021, were as follows:

Total Pension Liability	\$ 223,373,433
Fiduciary Net Position	<u>(250,050,619)</u>
Net Pension Asset	<u>\$ (26,677,186)</u>
Fiduciary Net Position as a Percentage of the Total Pension Liability	 <u>111.9 %</u>

**Actuarial Methods and Assumptions**

The total pension liability was determined by performing update procedures to roll the liability forward from the January 1, 2021, actuarial valuation to the December 31, 2021 measurement date. The following actuarial methods and assumptions apply to all periods included in the measurement:

Methods:

Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Fair Value

Assumptions:

Inflation	2.20%
Salary Increases	5.25% grading down to 3.75% after 10 years of service.
Investment Rate of Return	7.00% per year net of investment expenses (7.25% previously)
Cost of Living Adjustment	3% of the first \$15,000 of retirement income granted annually.
Mortality	RP-2014 Healthy White Collar Mortality table projected generationally from the year 2006 using MP-2020 (sex-distinct). Disabled mortality is the healthy retiree table set forward two years. Death is assumed to be due to the same cause as the disability 40% of the time.
Retirement Rates	Ages 50 to 70
Overall Disability	75% ordinary disability; 25% accidental disability.

The long-term expected real rate of return reflects the expected rate of return on Plan assets minus the expected rate of inflation. The long-term real rate of return removes the effect of inflation on the return amounts. It is a long-term assumption and is meant to reflect a best estimate of future experience, based on the expected asset allocation. Best estimates of geometric rates of return for each major asset class included in the System's target asset allocation as of December 31, 2021 are summarized in the following table:

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
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**NOTE 5 NET PENSION ASSET (CONTINUED)**

**Actuarial Methods and Assumptions (Continued)**

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return (%)</u>
Domestic Equity	4.50
Developed Foreign Equity	5.20
Public Emerging Market Equity	6.10
Investment Grade Bonds	0.20
High Yield Bonds	2.20
TIPS	0.20
Emerging Market Debt	4.30
Real Estate	9.60
Private Equity	7.60
Government Bonds	0.60
Core Infrastructure	5.00

**Discount Rate**

The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that Plan member contributions will be made at the current contribution rate and that MassHousing's contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current Plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**Sensitivity of the Net Pension Asset to Changes in the Discount Rate**

The following presents the net pension asset of MassHousing calculated using the discount rate of 7.00%, as well as what MassHousing's net pension asset would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	<u>1% Decrease (6.00%)</u>	<u>Current Discount Rate (7.00%)</u>	<u>1% Increase (8.00%)</u>
Net Pension Asset	\$ (2,431,490)	\$ (26,677,186)	\$ (47,226,491)

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
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**NOTE 6 LEGALLY REQUIRED RESERVE ACCOUNTS**

The balance in the System's legally required reserves as of December 31, 2021 are as follows:

Description	Amount	Purpose
Annuity Savings Fund	\$ 41,930,755	Active Members' Contribution Balance
Annuity Reserve Fund	12,778,350	Retired Members' Contribution Account
Pension Reserve Fund	167,608,896	Amounts Appropriated to Fund Future Retirement
Pension Fund	27,732,618	Remaining Net Position
Total	<u>\$ 250,050,619</u>	

All reserve accounts are funded at levels required by state law.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
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YEAR ENDED DECEMBER 31, 2021  
(SEE INDEPENDENT AUDITORS' REPORT)**

**Schedule of Changes in Employer Net Pension Liability (Asset) and Related Ratios (1)**

	2021	2020	2019	2018	2017
<u>Total Pension Liability (In Thousands)</u>					
Service Cost	\$ 4,015	\$ 3,861	\$ 3,700	\$ 3,566	\$ 3,437
Interest	15,295	14,608	13,583	12,908	11,895
Changes in Benefit Terms	-	-	1,591	-	-
Differences Between Expected and Actual Experience	(387)	-	3,848	-	(3,670)
Changes of Assumptions	2,291	-	5,878	-	8,772
Benefit Payments, Including Refunds of Member Contributions	(9,576)	(8,732)	(8,029)	(7,182)	(6,920)
Net Change in Total Pension Liability	11,638	9,737	20,571	9,292	13,514
Total Pension Liability - Beginning	211,735	201,998	181,427	172,135	158,621
Total Pension Liability - Ending (a)	<u>\$ 223,373</u>	<u>\$ 211,735</u>	<u>\$ 201,998</u>	<u>\$ 181,427</u>	<u>\$ 172,135</u>
<u>Fiduciary Net Position (In Thousands)</u>					
Contributions - Employer	\$ 13,273	\$ 10,081	\$ 10,031	\$ 6,527	\$ 6,491
Contributions - Member	3,591	3,527	3,449	3,483	3,477
Net Investment Income	33,100	26,999	27,731	(5,545)	18,137
Benefit Payments, Including Refunds of Member Contributions	(10,097)	(9,180)	(8,527)	(7,600)	(7,085)
Reimbursements and Transfers from Other Systems, Net	521	449	496	418	239
Administrative Expense	(555)	(490)	(468)	(444)	(375)
Net Change in Fiduciary Net Position	39,833	31,386	32,712	(3,161)	20,884
Fiduciary Net Position - Beginning	210,218	178,832	146,120	149,281	128,397
Fiduciary Net Position - Ending (b)	<u>\$ 250,051</u>	<u>\$ 210,218</u>	<u>\$ 178,832</u>	<u>\$ 146,120</u>	<u>\$ 149,281</u>
Net Pension Liability (Asset) - Ending (a) - (b)	<u>\$ (26,678)</u>	<u>\$ 1,517</u>	<u>\$ 23,166</u>	<u>\$ 35,307</u>	<u>\$ 22,854</u>
Fiduciary Net Position as a Percentage of the Total Pension Liability	111.9 %	99.3 %	88.5 %	80.5 %	86.7 %
Covered Payroll	\$ 35,372	\$ 35,737	\$ 34,362	\$ 34,506	\$ 33,250
Net Pension Liability (Asset) as a Percentage of Covered Payroll	(75.4)%	4.2 %	67.4 %	102.3 %	68.7 %

See accompanying Notes to Required Supplementary Information.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
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REQUIRED SUPPLEMENTARY INFORMATION  
YEAR ENDED DECEMBER 31, 2021  
(SEE INDEPENDENT AUDITORS' REPORT)**

**Schedule of Changes in Employer Net Pension Liability (Asset) and Related Ratios (1)  
(Continued)**

	2016	2015	2014
<u>Total Pension Liability (In Thousands)</u>			
Service Cost	\$ 3,247	\$ 3,129	\$ 2,695
Interest	11,623	10,444	9,984
Changes in Benefit Terms	-	-	-
Differences Between Expected and Actual Experience	-	(265)	-
Changes of Assumptions	-	7,362	-
Benefit Payments, Including Refunds of Member Contributions	(5,958)	(5,161)	(5,134)
Net Change in Total Pension Liability	8,912	15,509	7,545
Total Pension Liability - Beginning	149,709	134,200	126,655
Total Pension Liability - Ending (a)	<u>\$ 158,621</u>	<u>\$ 149,709</u>	<u>\$ 134,200</u>
<u>Fiduciary Net Position (In Thousands)</u>			
Contributions - Employer	\$ 6,093	\$ 6,065	\$ 3,946
Contributions - Member	3,274	3,219	3,176
Net Investment Income	11,084	(3,354)	4,042
Benefit Payments, Including Refunds of Member Contributions	(5,994)	(5,479)	(5,351)
Reimbursements and Transfers from Other Systems, Net	36	319	538
Administrative Expense	(377)	(364)	(347)
Net Change in Fiduciary Net Position	14,116	406	6,004
Fiduciary Net Position - Beginning	114,281	113,875	107,871
Fiduciary Net Position - Ending (b)	<u>\$ 128,397</u>	<u>\$ 114,281</u>	<u>\$ 113,875</u>
Net Pension Liability (Asset) - Ending (a) - (b)	<u>\$ 30,224</u>	<u>\$ 35,428</u>	<u>\$ 20,325</u>
Fiduciary Net Position as a Percentage of the Total Pension Liability	80.9 %	76.3 %	84.9 %
Covered Payroll	\$ 33,641	\$ 32,430	\$ 28,044
Net Pension Liability (Asset) as a Percentage of Covered Payroll	89.8 %	109.2 %	72.5 %

(1) Data is being accumulated annually to present 10 years of the reported information.

See accompanying Notes to Required Supplementary Information.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
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REQUIRED SUPPLEMENTARY INFORMATION  
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(SEE INDEPENDENT AUDITORS' REPORT)**

**Schedule of Employer Contributions  
(In Thousands)**

	2021	2020	2019	2018	2017
Actuarially Determined Contribution	\$ 1,030	\$ 10,081	\$ 10,031	\$ 6,527	\$ 6,491
Contributions in Relation to the Actuarially Determined Contribution	<u>13,273</u>	<u>10,081</u>	<u>10,031</u>	<u>6,527</u>	<u>6,491</u>
Contribution Deficiency (Excess)	<u>\$ (12,243)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 36,082	\$ 35,737	\$ 34,362	\$ 34,506	\$ 33,250
Contributions as a Percentage of Covered Payroll	36.8 %	28.2 %	29.2 %	18.9 %	19.5 %
	2016	2015	2014	2013	2012
Actuarially Determined Contribution	\$ 6,093	\$ 6,065	\$ 3,946	\$ 3,927	\$ 3,169
Contributions in Relation to the Actuarially Determined Contribution	<u>6,093</u>	<u>6,065</u>	<u>3,946</u>	<u>3,927</u>	<u>3,169</u>
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 33,641	\$ 32,430	\$ 28,044	\$ 28,044	\$ 29,800
Contributions as a Percentage of Covered Payroll	18.1 %	18.70 %	14.07 %	14.00 %	10.63 %

**Schedule of Investment Returns (1)**

Year Ended:	Annual Money- Weighted Rate of Return, Net of Investment Expense
2021	15.38%
2020	14.99%
2019	18.09 %
2018	(1.11)%
2017	18.16 %
2016	9.64 %
2015	(4.04)%
2014	3.48%

(1) Data is being accumulated annually to present 10 years of the reported information.  
See accompanying Notes to Required Supplementary Information.  
(23)

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTE TO REQUIRED SUPPLEMENTARY INFORMATION  
DECEMBER 31, 2021  
(SEE INDEPENDENT AUDITORS' REPORT)**

**NOTE 1 ACTUARIALLY DETERMINED CONTRIBUTION — METHODS AND ASSUMPTIONS**

The following actuarial methods and assumptions apply to the 2021 actuarially determined contributions:

Methods:

Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Fair Value

Assumptions:

Inflation	2.20%
Salary Increases	5.25% grading down to 3.75% after 10 years of service.
Investment Rate of Return	7.00% per year net of investment expenses (previously 7.25%)
Cost of Living Adjustment	3% of the first \$15,000 of retirement income granted annually.
Mortality	RP-2014 Healthy White Collar Mortality table projected generationally from the year 2006 using MP-2020 (sex-distinct). Disabled mortality is the healthy retiree table set forward two years. Death is assumed to be due to the same cause as the disability 40% of the time.
Retirement Rates	Ages 50-70
Overall Disability	75% ordinary disability; 25% accidental disability.

**MASSACHUSETTS HOUSING FINANCE AGENCY  
EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)**

**FINANCIAL STATEMENTS AND  
REQUIRED SUPPLEMENTARY INFORMATION**

**YEAR ENDED DECEMBER 31, 2020**



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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
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## INDEPENDENT AUDITORS' REPORT

Honorable Retirement Board  
Massachusetts Housing Finance Agency Employees' Retirement System  
Boston, Massachusetts

### **Report on the Financial Statements**

We have audited the accompanying financial statements of the Massachusetts Housing Finance Agency Employees' Retirement System (the System), a fiduciary component unit of the Massachusetts Housing Finance Agency (MassHousing), as of and for the year ended December 31, 2020, and the related notes to the financial statements, as listed in the table of contents.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditors' Responsibility***

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



**Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of December 31, 2020, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

**Other Matters**

*Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis (located on pages 3 through 6), schedule of changes in employer net pension liability and related ratios, schedule of employer contributions and schedule of investment returns (located on pages 21 through 23) be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

**Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we have also issued our report dated July 29, 2021 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.



**CliftonLarsonAllen LLP**

Boston, Massachusetts

July 29, 2021

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2020**

As management of the Massachusetts Housing Finance Agency Employees' Retirement System (System), we offer readers of these financial statements this narrative overview and analysis of the System's financial activities for the year ended December 31, 2020.

The management's discussion and analysis (MD&A) is presented in the following sections:

1. Financial Highlights
2. Overview of the Financial Statements
3. Financial Statement Analysis

Please refer to the audited *Financial Statements* when reading the MD&A.

***Financial Highlights***

The System's funding objective is to meet long-term benefit obligations through contributions and investment income. As of January 1, 2019, the latest actuarial valuation, the funded ratio was 74.0% based on the actuarial value of assets at that date. As of December 31, 2020, the plan fiduciary net position was 99.3% of the total pension liability.

The System's net position increased by \$31,385,663, or 17.55%, when compared to the prior year's net position. Net position is the residual of the System's assets in excess of the System's liabilities as of the statement date. The System's assets are restricted to meet future benefit payments.

***Overview of the Financial Statements***

The financial statements are comprised of a Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Notes to Financial Statements, and Required Supplementary Information.

The **statement of fiduciary net position** presents information on the System's assets and liabilities and the resulting net position restricted for pensions. This is calculated using the following formula: Assets – Liabilities = Net Position restricted for pensions. This statement reflects the System's investments at fair value, as well as cash, receivables and other assets and liabilities. The Statement of Fiduciary Net Position reports the financial position of the System at December 31, 2020. Over time, the increase or decrease in net position serves as a useful indicator of the System's financial health.

The **statement of changes in fiduciary net position** presents information showing how the System's net position changed during the year ended December 31, 2020. It reflects contributions by its individual members and participating employer along with deductions for retirement benefits, refunds, withdrawals, and administrative expenses. Investment income during the period is also presented showing income from investing activities.

The **notes to financial statements** provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The **required supplementary information** includes a schedule of changes in employer net pension liability and related ratios, a schedule of employer contributions and a schedule of investment returns.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2020**

***Financial Statement Analysis***

The System's total assets as of December 31, 2020 were \$210,582,338 and were comprised of cash and cash equivalents, investments, accrued interest and dividends, and receivables.

Total liabilities as of December 31, 2020 were \$364,555 and represent amounts owed for accounts payable and to the Massachusetts Housing Finance Agency (MassHousing) for reimbursement of the System's payroll, payroll related costs, rent, and other operating costs for the period July 1, 2020 through December 31, 2020.

The following tables present current and prior year data on the System's financial statements.

**Fiduciary Net Position**

As noted earlier, net position may serve over time as a useful indicator of a government's financial position. The System's net position was \$210,217,783 at the close of the year and is summarized as follows:

	<u>2020</u>	<u>2019</u>
<b>Assets</b>		
Cash and Cash Equivalents	\$ 3,010,239	\$ 494,106
Investments	207,383,081	178,380,604
Other Assets	189,018	214,494
Total Assets	<u>210,582,338</u>	<u>179,089,204</u>
<b>Liabilities</b>		
Accounts Payable	162,951	63,319
Due to MassHousing	201,604	193,765
Total Liabilities	<u>364,555</u>	<u>257,084</u>
<b>Net Position</b>		
Restricted for Pensions	<u>\$ 210,217,783</u>	<u>\$ 178,832,120</u>

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2020**

Changes in Fiduciary Net Position

For the year ended December 31, 2020, the System's total fiduciary net position increased by \$31,385,663. In the prior year, fiduciary net position increased by \$32,712,972. These amounts are summarized as follows:

	<u>2020</u>	<u>2019</u>
<b>Additions</b>		
<i>Contributions:</i>		
Employer	\$ 10,080,909	\$ 10,030,667
Plan Members	3,526,812	3,448,858
Reimbursements and Transfers from Other Systems	578,848	759,547
<i>Net Investment Income:</i>		
Net Realized and Unrealized Gains/(Losses)	24,645,860	25,247,901
Interest and Dividends	3,994,459	4,167,373
Less: Investment Expense	<u>(1,641,171)</u>	<u>(1,683,999)</u>
Net Investment Income	<u>26,999,148</u>	<u>27,731,275</u>
Total Additions	41,185,717	41,970,347
<b>Deductions</b>		
Retirement Benefits and Refunds	9,180,432	8,526,012
Reimbursements and Transfers to Other Systems	129,931	262,890
Administration	<u>489,691</u>	<u>468,473</u>
Total Deductions	<u>9,800,054</u>	<u>9,257,375</u>
Change in Plan Net Position	31,385,663	32,712,972
Plan Net Position - Beginning of Year	<u>178,832,120</u>	<u>146,119,148</u>
Plan Net Position - End of Year	<u>\$ 210,217,783</u>	<u>\$ 178,832,120</u>

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2020**

**Additions to Fiduciary Net Position**

The amount needed to finance benefits is accumulated through the collection of employer and employee contributions, earnings on investments and reimbursements and transfers from other systems. These additions resulted in an increase to net position totaling \$41,185,717. Employer contributions increased by approximately \$50,000 in 2020 while Plan member contributions increased by approximately \$78,000 and reimbursements and transfers from other systems decreased by approximately \$181,000 when compared to the prior year. The employer contribution increased as a result of the annual actuarially determined contribution to meet the System's funding schedule. The System had net investment income of approximately \$26,999,000 in 2020, which was a decrease of approximately \$732,000 from \$27,731,000 of net investment income in 2019.

**Deductions from Fiduciary Net Position**

The primary deductions of the System include the payment of pension benefits to participants and beneficiaries, refunds of contributions, and the costs of administering the System. Total deductions to net position totaled \$9,800,054 during the current year versus \$9,257,375 in the previous year. The payment of pension benefits increased by \$654,420, or 7.68%, over the previous year. The increase in these expenses resulted from an increase in benefit payments to newer retirees with higher average compensation.

**Requests for Information**

This financial report is designed to provide the Board, our membership, taxpayers, investors, and creditors with a general overview of the System's financial results and to demonstrate the System's accountability for the funding it receives. If you have any questions about this report or need additional financial information, contact the Executive Secretary at One Beacon Street, 6<sup>th</sup> floor, Boston, Massachusetts 02108.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
STATEMENT OF FIDUCIARY NET POSITION  
DECEMBER 31, 2020**

**ASSETS**

Cash and Cash Equivalents	\$ 3,010,239
Investments:	
Fixed Income	18,941,536
Pooled Equities	96,462,507
Pooled Fixed Income	32,072,815
Real Estate	18,695,354
Private Equity	41,210,869
Total Investments	207,383,081
Accrued Interest and Dividends	121,278
Receivables:	
Investments Sold	67,740
Total Assets	210,582,338

**LIABILITIES**

Accounts Payable	162,951
Due to MassHousing	201,604
Total Liabilities	364,555

**FIDUCIARY NET POSITION**

Restricted for Pensions	\$ 210,217,783
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*See accompanying Notes to Financial Statements.*

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
YEAR ENDED DECEMBER 31, 2020**

**ADDITIONS:**

**CONTRIBUTIONS**

Employer	\$ 10,080,909
Plan Members	3,526,812
Reimbursements and Transfers from Other Systems	<u>578,848</u>
Total Contributions	14,186,569

**INVESTMENT INCOME**

Net Appreciation in Fair Value of Investments	24,645,860
Interest	3,994,459
Less: Investment Fees	<u>(1,641,171)</u>
Net Investment Income	<u>26,999,148</u>

Total Additions 41,185,717

**DEDUCTIONS:**

Retirement Benefits and Refunds	9,180,432
Reimbursements and Transfers to Other Systems	129,931
Administration	<u>489,691</u>

Total Deductions 9,800,054

**CHANGE IN FIDUCIARY NET POSITION** 31,385,663

**FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS:**

Beginning of Year	<u>178,832,120</u>
End of Year	<u>\$ 210,217,783</u>

*See accompanying Notes to Financial Statements.*

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2020**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**General**

The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the standard-setting body for establishing governmental accounting and financial reporting principles. The significant accounting policies are described herein.

**Reporting Entity**

The Massachusetts Housing Finance Agency Employees' Retirement System (System) was established to provide retirement benefits to employees of the Massachusetts Housing Finance Agency (MassHousing) and their beneficiaries. The System is governed by a five-member board comprised of MassHousing's Treasurer (ex-officio), two members elected by the System's participants, one member appointed by MassHousing's Board and one member appointed by the System's Board members.

The System is reported as a fiduciary component unit in MassHousing's financial statements due to its reporting relationship with MassHousing.

**Measurement Focus and Basis of Accounting**

The System's financial statements are presented using the flow of economic resources measurement focus and use the accrual basis of accounting.

**Cash and Investments**

Cash and cash equivalents are considered to be cash on hand, demand deposits and short-term investments with an original maturity of three months or less from the date of acquisition.

Investments are reported at fair value. Fair value is based on quotations from a national securities exchange except for pooled funds, private equity and real estate investments, for which fair values are estimated as detailed below.

**Pooled Funds**

The fair value of shares in managed investment pools is based on unit value reported by the funds.

**Private Equity and Real Estate**

The fair values of these types of investments have been determined by the third-party investment managers using the Net Asset Value (NAV) per share (or its equivalent) on the System's ownership interest in partner's capital.

MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2020

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**Basis of Investment Transactions**

Purchases and sales of investments are recorded on the trade date. Transactions remaining unsettled as of year-end are recorded as payables for securities purchased and as a receivable for securities sold.

**Due to MassHousing**

MassHousing pays the System's employees' weekly payroll. In addition, MassHousing charges the System for payroll related benefits, rent, and other operating expenses. At December 31, 2020, \$201,604 is owed to MassHousing for these costs.

**Revenue Recognition**

Contributions are recognized as additions in the period when they become due pursuant to formal commitments, statutory, or contractual requirements. Investment income is recognized when earned.

**Benefits and Refunds**

Benefits and refunds are recognized as deductions when incurred.

**Administrative Expenses**

Administrative expenses are financed by investment income.

**Use of Estimates**

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Fair values of real estate funds and private equity investments have been estimated in the absence of readily available market values, and these estimates may be materially different than values that would have been used had a ready market existed.

**NOTE 2 PLAN DESCRIPTION**

**General**

The System is a single employer public employee retirement system established by MassHousing on June 12, 1974, under Massachusetts General Laws (MGL), Chapter 32, and is regulated by the Massachusetts Public Employee Retirement Administration Commission (PERAC). The System is a defined benefit pension plan that covers eligible employees of MassHousing.

Membership in the System is mandatory immediately upon the commencement of employment for all permanent full-time employees working at least 18 <sup>3</sup>/<sub>4</sub> hours weekly. The System has one classification of members (general).

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2020**

**NOTE 2 PLAN DESCRIPTION (CONTINUED)**

**General (Continued)**

Membership in the System was as follows at December 31, 2020:

Active Members	315
Inactive Members	58
Retirees and Beneficiaries Currently Receiving Benefits	194
Total	567

**Significant Plan Provisions and Requirements**

Pursuant to MGL, Chapter 32, the System provides retirement, disability, and death benefits to Plan members and their beneficiaries up to a maximum of 80% of a member's final three-year or five-year average salary based on hiring date. In addition to compensation, benefits are based upon a member's age and length of creditable service.

Members of the System become vested after 10 years of creditable service. Normal retirement occurs at age 65 or age 67 (if hired on or after April 2, 2012).

For employees hired prior to April 2, 2012, the annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law. Assuming normal retirement at age 65, this percentage is 2.5%, which is reduced for individuals who retire prior to age 65 to reflect the longer pay out period. A member's final three-year average salary is defined as the greater of the highest consecutive three-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last three years of creditable service prior to retirement.

For employees hired on or after April 2, 2012, the annual amount of the retirement allowance is based on the member's final five-year average salary multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law. Assuming normal retirement at age 67, this percentage is 2.5%. A member's final five-year average salary is defined as the greater of the highest consecutive five-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last five years of creditable service prior to retirement.

Employees may elect early retirement after 20 years of service or at any time after attaining age 55 or age 60 with 10 years of eligible service. Plan members who become permanently and totally disabled may be eligible to receive a disability retirement allowance. The amount of benefits to be received depends on several factors, including the member's age, compensation, veteran status, years of service, and whether or not the disability is work-related. In addition, certain death benefits exist for beneficiaries of employees who die in active service.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2020**

**NOTE 2 PLAN DESCRIPTION (CONTINUED)**

**Significant Plan Provisions and Requirements (Continued)**

Pursuant to MGL, Chapter 32, Section 3(8)(c), for members leaving the System's employment to work for other Massachusetts governmental units, the System transfers their accumulated account balances and creditable service to the retirement system of their new employer. Other such retirement systems are in turn required to make comparable transfers to the System for employees coming to work for a participating employer. Liability for the service transfer is not calculated until the member's actual retirement date. Per statute, the actuary considers length of service as well as acceptance of military service credit and salary cap provisions (if applicable) in calculating the liability.

**NOTE 3 DEPOSITS AND INVESTMENTS**

Deposits and investments made by the System are governed by Chapter 32 of the MGL. The System has the ability to invest in equity securities, corporate bonds, real estate, and other specified investments in accordance with state laws and regulations.

The Board has the authority for establishing and amending investment policy decisions. Based on the investment objectives and constraints of the System, and based on an annual review of the asset allocation and asset classes, the Board will specify a long-term target allocation for each class of permissible assets. These targets will be expressed as a percentage of the total portfolio, and will have ranges surrounding them, allowing for the portfolio to maintain policy through market fluctuations.

The long-term target allocations are intended as strategic goals. Thus, it is permissible for the overall System's asset allocation to deviate from the long-term target, as would likely occur during manager transitions, asset class restructurings, and other temporary changes in the System. Surplus cash flows are utilized to maintain the asset management structure. Should these cash flows not be sufficient to reallocate the Plan according to policy, the transfer of assets may occur between managers. At least annually, the Board reevaluates the portfolio weightings by asset class and adjustments are made accordingly. The following identifies the asset allocation policy as of December 31, 2020:

Asset Class	Target	Range
Domestic Equity	25 %	20 - 30%
Developed Foreign Equity	10 %	6 - 14%
Public Emerging Market Equity	10 %	6 - 14%
Investment Grade Bonds	10 %	6 - 14%
High Yield Bonds	6 %	3 - 9%
TIPS	6 %	4 - 8%
Emerging Market Debt	5 %	3 - 7%
Real Estate	10 %	7 - 13%
Private Equity	10 %	6 - 14%
Natural Resources and Commodities	3 %	1 - 5%
Core Infrastructure	5 %	0 - 8%

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2020**

**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Rate of Return**

For the year ended December 31, 2020, the annual money-weighted rate of return on investments, net of investment expense, was 14.99%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

**Deposits — Custodial Credit Risk**

Custodial credit risk for deposits is the risk that, in the event of a bank failure, the System's deposits may not be recovered. The System's policy for custodial credit risk of deposits is to rely on FDIC insurance coverage. As of December 31, 2020, the System was not exposed to custodial credit risk. The carrying value of the System's deposits at December 31, 2020 totaled \$92,200.

**Investments Summary**

The System's investments at December 31, 2020 are presented below. All investments are presented by investment type, with debt securities presented by maturity (using segmented-time distribution).

Investment Type	Total Amount	Investment Maturities (in Years)			
		Less Than 1	1 - 5	6 - 10	More Than 10
<b><u>Debt Securities:</u></b>					
U.S. Treasuries	\$ 3,905,021	\$ 191,218	\$ 1,814,956	\$ 647,114	\$ 1,251,733
U.S. Agencies	3,306,511	-	-	161,173	3,145,338
Corporate Bonds	11,730,004	114,948	2,477,247	2,528,924	6,608,885
Money Market Mutual Funds	2,918,039	2,918,039	-	-	-
Pooled Fixed Income	32,072,815	32,072,815	-	-	-
Total Debt Securities	53,932,390	<u>\$ 35,297,020</u>	<u>\$ 4,292,203</u>	<u>\$ 3,337,211</u>	<u>\$ 11,005,956</u>
<b><u>Other Investments:</u></b>					
Pooled Equities	96,462,507				
Real Estate	18,695,354				
Private Equity	41,210,869				
Total Other Investments	156,368,730				
Total Investments	<u>\$ 210,301,120</u>				

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2020**

**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Investments — Interest Rate Risk of Debt Securities**

Interest rate risk for debt securities is the risk that changes in interest rates of debt securities will adversely affect the fair value of an investment. The System's policy for interest rate risk of debt securities is to use diversification to minimize the exposure to interest rate risks in the aggregate investment portfolio.

**Investments — Custodial Credit Risk**

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty, the System will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The System does not have a policy for custodial credit risk of investments. As of December 31, 2020, the System was not exposed to custodial credit risk.

**Investments — Credit Risk of Debt Securities**

Credit risk for debt securities is the risk that an issuer or other counterparty to a debt security will not fulfill its obligations. The System's policy for credit risk of debt securities is to use diversification to minimize the exposure to credit risks in the aggregate investment portfolio. As of December 31, 2020, the credit quality ratings of the System's debt securities, excluding exempt U.S. Treasuries of \$3,905,021, are as follows:

Quality Ratings*	Total Amount	Investment Type			
		U.S. Agencies	Corporate Bonds	Money Market Mutual Funds	Pooled Fixed Income
AAA	\$ 754,628	\$ 159,419	\$ 595,209	\$ -	\$ -
AA+	77,637	-	77,637	-	-
AA	537,764	-	537,764	-	-
AA-	600,806	-	600,806	-	-
A+	561,182	-	561,182	-	-
A	823,775	-	823,775	-	-
A-	1,235,588	287,501	948,087	-	-
BBB+	1,471,728	-	1,471,728	-	-
BBB	1,833,133	-	1,833,133	-	-
BBB-	1,727,073	-	1,727,073	-	-
BB+	106,466	-	106,466	-	-
D	414,664	262,910	151,754	-	-
Unrated	39,882,925	2,596,681	2,295,390	2,918,039	32,072,815
<b>Total</b>	<b>\$ 50,027,369</b>	<b>\$ 3,306,511</b>	<b>\$ 11,730,004</b>	<b>\$ 2,918,039</b>	<b>\$ 32,072,815</b>

\* Per the rating scale of Standard and Poor's (a nationally recognized statistical rating organization).

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2020**

**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Deposits and Investments — Foreign Currency Risk**

Foreign currency risk is the risk that fluctuations in exchange rates will adversely affect the fair value of an investment or a deposit. The System's policy for foreign currency risk is to diversify the foreign countries and currencies within its international investment portfolio. As of December 31, 2020, the System had indirect exposure to foreign currency risk for certain equity and fixed income investments in the amount of approximately \$48,115,000.

**Investments — Concentration of Credit Risk**

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer. The System's policy for concentration of credit risk is to use extensive diversification to minimize exposure to company and industry specific risks in the aggregate investment portfolio. As of December 31, 2020, the System had no exposure to concentration of credit risk.

**Investments — Fair Value**

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. The System has the following recurring fair value measurements as of December 31, 2020:

Investment Type	Total Amount	Fair Value Measurements Using	
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)
<b><u>Debt Securities</u></b>			
U.S. Treasuries	\$ 3,905,021	\$ 3,905,021	\$ -
U.S. Agencies	3,306,511	-	3,306,511
Corporate Bonds	11,730,004	-	11,730,004
Money Market Mutual Funds	2,918,039	2,918,039	-
Pooled Fixed Income Securities	32,072,815	-	32,072,815
Total Debt Securities	53,932,390	6,823,060	47,109,330
<b><u>Equity Securities</u></b>			
Pooled Equities	96,462,507	-	96,462,507
Total Investments Measured at Fair Value	150,394,897	\$ 6,823,060	\$ 143,571,837
<b><u>Investments Measured at the Net Asset Value (NAV)</u></b>			
Private Equity	41,210,869		
Real Estate	18,695,354		
Total Investments Measured at NAV	59,906,223		
Total Investments Measured at Fair Value	\$ 210,301,120		

Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. U.S. agencies, corporate bonds, pooled fixed income securities, and equity mutual funds classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2020**

**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Investments — Fair Value (Continued)**

The valuation methods for investments measured at the net asset value (NAV) per share or its equivalent are presented on the following table:

	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Private Equity (1)	\$ 41,210,869	\$ 13,404,193	(1)	(1)
Real Estate (2)	18,695,354	1,015,895	(2)	(2)
Total Investments Measured at NAV	<u>\$ 59,906,223</u>			

- (1) *Private equity* - This investment type includes investments in 17 private equity funds that invest primarily in private domestic and international companies of diversified industries. The fair value measurements of this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Approximately 25% of the funds can be redeemed quarterly with 90 days notice. The remaining 75% of the investments can never be redeemed from the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. For the investments in funds that cannot be redeemed, it is expected approximately 4% of the underlying assets of the funds will be liquidated over the next 1 to 5 years, 1% over the next 3 to 7 years, and the remaining investments over the next 5 to 15 years.
- (2) *Real estate* - This investment type includes investments in five funds that invest in real estate. The fair value measurements of this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Approximately 98% of the funds can be redeemed quarterly and of those funds, approximately 47% can be redeemed with 45 days notice; with the remainder subject to 90 days notice. The remaining 2% of the investments can never be redeemed from the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. For the investments in funds that cannot be redeemed, it is expected that the underlying assets of the funds will be liquidated over the next 5 to 10 years.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2020**

**NOTE 4 FUNDING POLICY**

Plan members are required to contribute to the System at rates ranging from 5% to 9% of annual compensation, depending on their employment date. Members hired after December 31, 1978 must contribute an additional 2% of regular compensation in excess of \$30,000. These deductions earn interest at a rate determined by PERAC that vest based upon years of service. MassHousing is required to pay into the System 100% of the actuarially determined contribution. For the year ended December 31, 2020, employer contributions totaled \$10,080,909 and Plan member contributions totaled \$3,526,812.

Cost-of-living adjustments (COLA) must be granted by the Board and are the responsibility of the System. COLA cannot exceed 3% of the first \$15,000 in benefits, unless the System elects to increase the maximum base retirement allowance in multiples of \$1,000.

**NOTE 5 NET PENSION LIABILITY**

The components of the net pension liability of the System at December 31, 2020, were as follows:

Total Pension Liability	\$ 211,735,409
Plan Fiduciary Net Position	<u>(210,217,783)</u>
Net Pension Liability	<u>\$ 1,517,625</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	<u>99.3 %</u>

**Actuarial Methods and Assumptions**

The total pension liability was determined by performing update procedures to roll the liability forward from the January 1, 2019, actuarial valuation to the December 31, 2020 measurement date. The following actuarial methods and assumptions apply to all periods included in the measurement:

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2020**

**NOTE 5 NET PENSION LIABILITY (CONTINUED)**

**Actuarial Methods and Assumptions (Continued)**

Methods:

Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Fair Value

Assumptions:

Inflation	2.10%
Salary Increases	5.25% grading down to 3.75% after 10 years of service.
Investment Rate of Return	7.25% per year net of investment expenses (7.50% previously)
Cost of Living Adjustment	3% of the first \$15,000 of retirement income granted annually.
Mortality	RP-2014 Healthy White Collar Mortability table projected generationally from the year 2006 using MP-2016 (sex-distinct). Disabled mortality is the healthy retiree table set forward two years. Death is assumed to be due to the same cause as the disability 40% of the time.
Retirement Rates	Ages 50 to 70
Overall Disability	75% ordinary disability; 25% accidental disability.

The actuarial assumptions used in the January 1, 2019 valuation were based on the results of the PERAC local experience study for the period 1995 through 2000 and was published in 2002.

The long-term expected real rate of return reflects the expected rate of return on Plan assets minus the expected rate of inflation. The long-term real rate of return removes the effect of inflation on the return amounts. It is a long-term assumption and is meant to reflect a best estimate of future experience, based on the expected asset allocation. Best estimates of geometric rates of return for each major asset class included in the System's target asset allocation as of December 31, 2020 are summarized in the following table:

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2020**

**NOTE 5 NET PENSION LIABILITY (CONTINUED)**

**Actuarial Methods and Assumptions (Continued)**

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return (%)</u>
Domestic Equity	4.60
Developed Foreign Equity	4.90
Public Emerging Market Equity	5.90
Investment Grade Bonds	(0.30)
High Yield Bonds	2.10
TIPS	(0.30)
Emerging Market Debt	1.60
Real Estate	3.30
Private Equity	6.90
Natural Resources and Commodities	5.10
Core Infrastructure	4.80

**Discount Rate**

The discount rate used to measure the total pension liability was 7.25%. The projection of cash flows used to determine the discount rate assumed that Plan member contributions will be made at the current contribution rate and that MassHousing's contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current Plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**Sensitivity of the Net Pension Liability to Changes in the Discount Rate**

The following presents the net pension liability of MassHousing calculated using the discount rate of 7.25%, as well as what MassHousing's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate:

	1% Decrease <u>(6.25%)</u>	Current Discount Rate <u>(7.25%)</u>	1% Increase <u>(8.25%)</u>
Net Pension Liability	\$ 24,451,411	\$ 1,517,625	\$(17,841,746)

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2020**

**NOTE 6 LEGALLY REQUIRED RESERVE ACCOUNTS**

The balance in the System's legally required reserves as of December 31, 2020 are as follows:

<u>Description</u>	<u>Amount</u>	<u>Purpose</u>
Annuity Savings Fund	\$ 40,635,949	Active Members' Contribution Balance
Annuity Reserve Fund	12,852,565	Retired Members' Contribution Account
Pension Reserve Fund	135,456,433	Amounts Appropriated to Fund Future Retirement
Pension Fund	21,272,836	Remaining Net Position
Total	<u>\$ 210,217,783</u>	

All reserve accounts are funded at levels required by state law.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
REQUIRED SUPPLEMENTARY INFORMATION  
YEAR ENDED DECEMBER 31, 2020  
(SEE INDEPENDENT AUDITORS' REPORT)**

**Schedule of Changes in Employer Net Pension Liability and Related Ratios (1)**

	2020	2019	2018	2017	2016
<u>Total Pension Liability (In Thousands)</u>					
Service Cost	\$ 3,861	\$ 3,700	\$ 3,566	\$ 3,437	\$ 3,247
Interest	14,608	13,583	12,908	11,895	11,623
Changes in Benefit Terms	-	1,591	-	-	-
Differences Between Expected and Actual Experience	-	3,848	-	(3,670)	-
Changes of Assumptions	-	5,878	-	8,772	-
Benefit Payments, Including Refunds of Member Contributions	(8,732)	(8,029)	(7,182)	(6,920)	(5,958)
Net Change in Total Pension Liability	9,737	20,571	9,292	13,514	8,912
Total Pension Liability - Beginning	201,998	181,427	172,135	158,621	149,709
Total Pension Liability - Ending (a)	<u>\$ 211,735</u>	<u>\$ 201,998</u>	<u>\$ 181,427</u>	<u>\$ 172,135</u>	<u>\$ 158,621</u>
<u>Plan Fiduciary Net Position (In Thousands)</u>					
Contributions - Employer	\$ 10,081	\$ 10,031	\$ 6,527	\$ 6,491	\$ 6,093
Contributions - Member	3,527	3,449	3,483	3,477	3,274
Net Investment Income	26,999	27,731	(5,545)	18,137	11,084
Benefit Payments, Including Refunds of Member Contributions	(9,180)	(8,527)	(7,600)	(7,085)	(5,994)
Reimbursements and Transfers from Other Systems, Net	449	496	418	239	36
Administrative Expense	(490)	(468)	(444)	(375)	(377)
Net Change in Plan Fiduciary Net Position	31,386	32,712	(3,161)	20,884	14,116
Plan Fiduciary Net Position - Beginning	178,832	146,120	149,281	128,397	114,281
Plan Fiduciary Net Position - Ending (b)	<u>\$ 210,218</u>	<u>\$ 178,832</u>	<u>\$ 146,120</u>	<u>\$ 149,281</u>	<u>\$ 128,397</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 1,517</u>	<u>\$ 23,166</u>	<u>\$ 35,307</u>	<u>\$ 22,854</u>	<u>\$ 30,224</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	99.3 %	88.5 %	80.5 %	86.7 %	80.9 %
Covered Payroll	\$ 35,737	\$ 34,362	\$ 34,506	\$ 33,250	\$ 33,641
Net Pension Liability as a Percentage of Covered Payroll	4.2 %	67.4 %	102.3 %	68.7 %	89.8 %

See accompanying Notes to Required Supplementary Information.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
REQUIRED SUPPLEMENTARY INFORMATION  
YEAR ENDED DECEMBER 31, 2020  
(SEE INDEPENDENT AUDITORS' REPORT)**

**Schedule of Changes in Employer Net Pension Liability and Related Ratios (1) (Continued)**

	<u>2015</u>	<u>2014</u>
<u>Total Pension Liability (In Thousands)</u>		
Service Cost	\$ 3,129	\$ 2,695
Interest	10,444	9,984
Changes in Benefit Terms	-	-
Differences Between Expected and Actual Experience	(265)	-
Changes of Assumptions	7,362	-
Benefit Payments, Including Refunds of Member Contributions	<u>(5,161)</u>	<u>(5,134)</u>
Net Change in Total Pension Liability	15,509	7,545
Total Pension Liability - Beginning	<u>134,200</u>	<u>126,655</u>
Total Pension Liability - Ending (a)	<u><u>\$ 149,709</u></u>	<u><u>\$ 134,200</u></u>
<u>Plan Fiduciary Net Position (In Thousands)</u>		
Contributions - Employer	\$ 6,065	\$ 3,946
Contributions - Member	3,219	3,176
Net Investment Income	(3,354)	4,042
Benefit Payments, Including Refunds of Member Contributions	(5,479)	(5,351)
Reimbursements and Transfers from Other Systems, Net	319	538
Administrative Expense	<u>(364)</u>	<u>(347)</u>
Net Change in Plan Fiduciary Net Position	406	6,004
Plan Fiduciary Net Position - Beginning	<u>113,875</u>	<u>107,871</u>
Plan Fiduciary Net Position - Ending (b)	<u><u>\$ 114,281</u></u>	<u><u>\$ 113,875</u></u>
Net Pension Liability - Ending (a) - (b)	<u><u>\$ 35,428</u></u>	<u><u>\$ 20,325</u></u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	76.3 %	84.9 %
Covered Payroll	\$ 32,430	\$ 28,044
Net Pension Liability as a Percentage of Covered Payroll	109.2 %	72.5 %

(1) Data is being accumulated annually to present 10 years of the reported information.

See accompanying Notes to Required Supplementary Information.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
REQUIRED SUPPLEMENTARY INFORMATION  
YEAR ENDED DECEMBER 31, 2020  
(SEE INDEPENDENT AUDITORS' REPORT)**

**Schedule of Employer Contributions  
(In Thousands)**

	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Actuarially Determined Contribution	\$ 10,081	\$ 10,031	\$ 6,527	\$ 6,491	\$ 6,093
Contributions in Relation to the Actuarially Determined Contribution	<u>10,081</u>	<u>10,031</u>	<u>6,527</u>	<u>6,491</u>	<u>6,093</u>
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 35,737	\$ 34,362	\$ 34,506	\$ 33,250	\$ 33,641
Contributions as a Percentage of Covered Payroll	28.2 %	29.2 %	18.9 %	19.5 %	18.1 %
	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>
Actuarially Determined Contribution	\$ 6,065	\$ 3,946	\$ 3,927	\$ 3,169	\$ 3,156
Contributions in Relation to the Actuarially Determined Contribution	<u>6,065</u>	<u>3,946</u>	<u>3,927</u>	<u>3,169</u>	<u>3,156</u>
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 32,430	\$ 28,044	\$ 28,044	\$ 29,800	\$ 29,800
Contributions as a Percentage of Covered Payroll	18.70 %	14.07 %	14.00 %	10.63 %	10.59 %

**Schedule of Investment Returns (1)**

	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual Money-Weighted Rate of Return, Net of Investment Expense	14.99%	18.09 %	(1.11)%	18.16 %	9.64 %	(4.04)%	3.48%

(1) Data is being accumulated annually to present 10 years of the reported information.

See accompanying Notes to Required Supplementary Information.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
(A FIDUCIARY COMPONENT UNIT OF MASSHOUSING)  
NOTE TO REQUIRED SUPPLEMENTARY INFORMATION  
DECEMBER 31, 2020  
(SEE INDEPENDENT AUDITORS' REPORT)**

**NOTE 1 ACTUARIALLY DETERMINED CONTRIBUTION — METHODS AND ASSUMPTIONS**

The following actuarial methods and assumptions apply to the 2020 actuarially determined contributions:

Methods:

Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Fair Value

Assumptions:

Inflation	2.60%
Salary Increases	5.25% grading down to 3.75% after 10 years of service.
Investment Rate of Return	7.25% per year net of investment expenses
Cost of Living Adjustment	3% of the first \$15,000 of retirement income granted annually.
Mortality	RP-2014 Healthy White Collar Mortability table projected generationally from the year 2006 using MP-2016 (sex-distinct). Disabled mortality is the healthy retiree table set forward two years. Death is assumed to be due to the same cause as the disability 40% of the time.
Retirement Rates	Ages 50-70
Overall Disability	75% ordinary disability; 25% accidental disability.

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**MASSACHUSETTS HOUSING FINANCE AGENCY  
EMPLOYEES' RETIREMENT SYSTEM**

**FINANCIAL STATEMENTS AND  
REQUIRED SUPPLEMENTARY INFORMATION**

**YEAR ENDED DECEMBER 31, 2019**



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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
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## INDEPENDENT AUDITORS' REPORT

Honorable Retirement Board  
Massachusetts Housing Finance Agency Employees' Retirement System  
Boston, Massachusetts

### **Report on the Financial Statements**

We have audited the accompanying financial statements of the Massachusetts Housing Finance Agency Employees' Retirement System (the System), as of and for the year ended December 31, 2019, and the related notes to the financial statements, as listed in the table of contents.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditors' Responsibility***

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



(1)

**Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of December 31, 2019, and the change in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

**Other Matters**

*Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis (located on pages 3 through 6), schedule of changes in employer net pension liability and related ratios, schedule of employer contributions and schedule of investment returns (located on pages 20 and 21) be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

**Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we have also issued our report dated August 13, 2020 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.



**CliftonLarsonAllen LLP**

Boston, Massachusetts  
August 13, 2020

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2019**

As management of the Massachusetts Housing Finance Agency Employees' Retirement System (System), we offer readers of these financial statements this narrative overview and analysis of the System's financial activities for the year ended December 31, 2019.

The management's discussion and analysis (MD&A) is presented in the following sections:

1. Financial Highlights
2. Overview of the Financial Statements
3. Financial Statement Analysis

Please refer to the audited *Financial Statements* when reading the MD&A.

***Financial Highlights***

The System's funding objective is to meet long-term benefit obligations through contributions and investment income. As of January 1, 2019, the latest actuarial valuation, the funded ratio was 74.0% based on the actuarial value of assets at that date. As of December 31, 2019, the plan fiduciary net position was 88.5% of the total pension liability.

The System's net position increased by \$32,712,972, or 22.39%, when compared to the prior year's net position. Net position is the residual of the System's assets in excess of the System's liabilities as of the statement date. The System's assets are restricted to meet future benefit payments.

***Overview of the Financial Statements***

The financial statements are comprised of a Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Notes to Financial Statements, and Required Supplementary Information.

The **statement of fiduciary net position** presents information on the System's assets and liabilities and the resulting net position restricted for pensions. This is calculated using the following formula: Assets – Liabilities = Net Position restricted for pensions. This statement reflects the System's investments at fair value, as well as cash, receivables and other assets and liabilities. The Statement of Fiduciary Net Position reports the financial position of the System at December 31, 2019. Over time, the increase or decrease in net position serves as a useful indicator of the System's financial health.

The **statement of changes in fiduciary net position** presents information showing how the System's net position changed during the year ended December 31, 2019. It reflects contributions by its individual members and participating employer along with deductions for retirement benefits, refunds, withdrawals, and administrative expenses. Investment income during the period is also presented showing income from investing activities.

The **notes to financial statements** provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The **required supplementary information** includes a schedule of changes in employer net pension liability and related ratios, a schedule of employer contributions and a schedule of investment returns.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2019**

***Financial Statement Analysis***

The System's total assets as of December 31, 2019 were \$179,089,204 and were comprised of cash and cash equivalents, investments, accrued interest and dividends, and receivables.

Total liabilities as of December 31, 2019 were \$257,084 and represent amounts owed for accounts payable and to MassHousing for reimbursement of the System's payroll, payroll related costs, rent, and other operating costs for the period July 1, 2019 through December 31, 2019.

The following tables present current and prior year data on the System's financial statements.

**Fiduciary Net Position**

As noted earlier, net position may serve over time as a useful indicator of a government's financial position. The System's net position was \$178,832,120 at the close of the year and is summarized as follows:

	<u>2019</u>	<u>2018</u>
<b>Assets</b>		
Cash and Cash Equivalents	\$ 494,106	\$ 4,899,929
Investments	178,380,604	141,322,126
Other Assets	214,494	199,264
Total Assets	<u>179,089,204</u>	<u>146,421,319</u>
<b>Liabilities</b>		
Accounts Payable	63,319	131,764
Due to MassHousing	193,765	170,407
Total Liabilities	<u>257,084</u>	<u>302,171</u>
<b>Net Position</b>		
Restricted for Pensions	<u>\$ 178,832,120</u>	<u>\$ 146,119,148</u>

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2019**

Changes in Fiduciary Net Position

For the year ended December 31, 2019, the System's total fiduciary net position increased by \$32,712,972. In the prior year, fiduciary net position decreased by \$3,161,253. These amounts are summarized as follows:

	<u>2019</u>	<u>2018</u>
<b>Additions</b>		
<i>Contributions:</i>		
Employer	\$ 10,030,667	\$ 6,526,674
Plan Members	3,448,858	3,483,261
Reimbursements and Transfers from Other Systems	759,547	877,442
<i>Net Investment Income:</i>		
Net Realized and Unrealized Gains/(Losses)	25,247,901	(6,294,889)
Interest and Dividends	4,167,373	1,809,328
Less: Investment Expense	<u>(1,683,999)</u>	<u>(1,059,690)</u>
Net Investment Income	<u>27,731,275</u>	<u>(5,545,251)</u>
Total Additions	41,970,347	5,342,126
<b>Deductions</b>		
Retirement Benefits and Refunds	8,526,012	7,599,740
Reimbursements and Transfers to Other Systems	262,890	459,556
Administration	<u>468,473</u>	<u>444,083</u>
Total Deductions	<u>9,257,375</u>	<u>8,503,379</u>
Change in Plan Net Position	32,712,972	(3,161,253)
Plan Net Position - Beginning of Year	<u>146,119,148</u>	<u>149,280,401</u>
Plan Net Position - End of Year	<u>\$ 178,832,120</u>	<u>\$ 146,119,148</u>

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2019**

**Additions to Fiduciary Net Position**

The amount needed to finance benefits is accumulated through the collection of employer and employee contributions, earnings on investments and reimbursements and transfers from other systems. These additions resulted in an increase to net position totaling \$41,970,347. Employer contributions increased by approximately \$3,500,000 in 2019 while Plan member contributions and reimbursements and transfers from other systems decreased by approximately \$34,000 and \$118,000, respectively, when compared to the prior year. The employer contribution increased as a result of the annual actuarially determined contribution to meet the System's funding schedule. The System had net investment income of approximately \$27,731,000 in 2019, which, due primarily due to favorable market conditions, was an increase of approximately \$22,186,000 from \$5,545,000 of net investment income in 2018.

**Deductions from Fiduciary Net Position**

The primary deductions of the System include the payment of pension benefits to participants and beneficiaries, refunds of contributions, and the costs of administering the System. Total deductions to net position totaled \$9,257,375 during the current year versus \$8,503,379 in the previous year. The payment of pension benefits increased by \$926,272 or 12.19%, over the previous year. The increase in these expenses resulted from an increase in benefit payments to newer retirees with higher average compensation.

**Requests for Information**

This financial report is designed to provide the Board, our membership, taxpayers, investors, and creditors with a general overview of the System's financial results and to demonstrate the System's accountability for the funding it receives. If you have any questions about this report or need additional financial information, contact the Executive Secretary at One Beacon Street, 6<sup>th</sup> floor, Boston, Massachusetts 02108.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
STATEMENT OF FIDUCIARY NET POSITION  
DECEMBER 31, 2019**

**ASSETS**

Cash and Cash Equivalents	\$	494,106
Investments:		
Fixed Income		19,631,511
Pooled Equities		80,514,515
Pooled Fixed Income		27,064,134
Real Estate		16,405,136
Private Equity		<u>34,765,308</u>
Total Investments		178,380,604
Accrued Interest and Dividends		138,016
Receivables:		
Investments Sold		<u>76,478</u>
Total Assets		179,089,204

**LIABILITIES**

Accounts Payable		63,319
Due to MassHousing		<u>193,765</u>
Total Liabilities		<u>257,084</u>

**FIDUCIARY NET POSITION**

Restricted for Pensions		<u>\$ 178,832,120</u>
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See accompanying Notes to Financial Statements.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
YEAR ENDED DECEMBER 31, 2019**

**ADDITIONS:**

**CONTRIBUTIONS**

Employer	\$ 10,030,667
Plan Members	3,448,858
Reimbursements and Transfers from Other Systems	759,547
Total Contributions	<u>14,239,072</u>

**INVESTMENT INCOME**

Net Appreciation in Fair Value of Investments	25,247,901
Interest	4,167,373
Less: Investment Fees	<u>(1,683,999)</u>
Net Investment Income	<u>27,731,275</u>

Total Additions 41,970,347

**DEDUCTIONS:**

Retirement Benefits and Refunds	8,526,012
Reimbursements and Transfers to Other Systems	262,890
Administration	<u>468,473</u>

Total Deductions 9,257,375

**CHANGE IN FIDUCIARY NET POSITION**

32,712,972

**FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS:**

Beginning of Year	<u>146,119,148</u>
End of Year	<u>\$ 178,832,120</u>

*See accompanying Notes to Financial Statements.*

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2019**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**General**

The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the standard-setting body for establishing governmental accounting and financial reporting principles. The significant accounting policies are described herein.

**Reporting Entity**

The Massachusetts Housing Finance Agency Employees' Retirement System (System) was established to provide retirement benefits to MassHousing employees and their beneficiaries. The System is governed by a five-member board comprised of MassHousing's Treasurer (ex-officio), two members elected by the System's participants, one member appointed by MassHousing's Board and one member appointed by the System's Board members.

**Measurement Focus and Basis of Accounting**

The System's financial statements are presented using the flow of economic resources measurement focus and use the accrual basis of accounting.

**Cash and Investments**

Cash and cash equivalents are considered to be cash on hand, demand deposits and short-term investments with an original maturity of three months or less from the date of acquisition.

Investments are reported at fair value. Fair value is based on quotations from a national securities exchange except for pooled funds, private equity and real estate investments, for which fair values are estimated as detailed below.

**Pooled Funds**

The fair value of shares in managed investment pools is based on unit value reported by the funds.

**Private Equity and Real Estate**

The fair values of these types of investments have been determined by the third-party investment managers using the Net Asset Value (NAV) per share (or its equivalent) on the System's ownership interest in partner's capital.

**Basis of Investment Transactions**

Purchases and sales of investments are recorded on the trade date. Transactions remaining unsettled as of year-end are recorded as payables for securities purchased and as a receivable for securities sold.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2019**

**NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**Due to MassHousing**

MassHousing pays the System's employees' weekly payroll. In addition, MassHousing charges the System for payroll related benefits, rent, and other operating expenses. At December 31, 2019, \$193,765 is owed to MassHousing for these costs.

**Revenue Recognition**

Contributions are recognized as additions in the period when they become due pursuant to formal commitments, statutory, or contractual requirements. Investment income is recognized when earned.

**Benefits and Refunds**

Benefits and refunds are recognized as deductions when incurred.

**Administrative Expenses**

Administrative expenses are financed by investment income.

**Use of Estimates**

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Fair values of real estate funds and private equity investments have been estimated in the absence of readily available market values, and these estimates may be materially different than values that would have been used had a ready market existed.

**NOTE 2 PLAN DESCRIPTION**

**General**

The System is a single employer public employee retirement system established by MassHousing on June 12, 1974, under Massachusetts General Laws (MGL), Chapter 32, and is regulated by the Massachusetts Public Employee Retirement Administration Commission (PERAC). The System is a defined benefit pension plan that covers eligible employees of MassHousing.

Membership in the System is mandatory immediately upon the commencement of employment for all permanent full-time employees working at least 18 <sup>3</sup>/<sub>4</sub> hours weekly. The System has one classification of members (general).

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2019**

**NOTE 2 PLAN DESCRIPTION (CONTINUED)**

**General (Continued)**

Membership in the System was as follows at December 31, 2019:

Active Members	330
Inactive Members	52
Retirees and Beneficiaries Currently Receiving Benefits	184
Total	566

**Significant Plan Provisions and Requirements**

Pursuant to MGL, Chapter 32, the System provides retirement, disability, and death benefits to Plan members and their beneficiaries up to a maximum of 80% of a member's final three-year or five-year average salary based on hiring date. In addition to compensation, benefits are based upon a member's age and length of creditable service.

Members of the System become vested after 10 years of creditable service. Normal retirement occurs at age 65 or age 67 (if hired on or after April 2, 2012).

For employees hired prior to April 2, 2012, the annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law. Assuming normal retirement at age 65, this percentage is 2.5%, which is reduced for individuals who retire prior to age 65 to reflect the longer pay out period. A member's final three-year average salary is defined as the greater of the highest consecutive three-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last three years of creditable service prior to retirement.

For employees hired on or after April 2, 2012, the annual amount of the retirement allowance is based on the member's final five-year average salary multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law. Assuming normal retirement at age 67, this percentage is 2.5%. A member's final five-year average salary is defined as the greater of the highest consecutive five-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last five years of creditable service prior to retirement.

Employees may elect early retirement after 20 years of service or at any time after attaining age 55 or age 60 with 10 years of eligible service. Plan members who become permanently and totally disabled may be eligible to receive a disability retirement allowance. The amount of benefits to be received depends on several factors, including the member's age, compensation, veteran status, years of service, and whether or not the disability is work-related. In addition, certain death benefits exist for beneficiaries of employees who die in active service.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2019**

**NOTE 2 PLAN DESCRIPTION (CONTINUED)**

**Significant Plan Provisions and Requirements (Continued)**

Pursuant to MGL, Chapter 32, Section 3(8)(c), for members leaving the System's employment to work for other Massachusetts governmental units, the System transfers their accumulated account balances and creditable service to the retirement system of their new employer. Other such retirement systems are in turn required to make comparable transfers to the System for employees coming to work for a participating employer. Liability for the service transfer is not calculated until the member's actual retirement date. Per statute, the actuary considers length of service as well as acceptance of military service credit and salary cap provisions (if applicable) in calculating the liability.

**NOTE 3 DEPOSITS AND INVESTMENTS**

Deposits and investments made by the System are governed by Chapter 32 of the MGL. The System has the ability to invest in equity securities, corporate bonds, real estate, and other specified investments in accordance with state laws and regulations.

The Board has the authority for establishing and amending investment policy decisions. Based on the investment objectives and constraints of the System, and based on an annual review of the asset allocation and asset classes, the Board will specify a long-term target allocation for each class of permissible assets. These targets will be expressed as a percentage of the total portfolio, and will have ranges surrounding them, allowing for the portfolio to maintain policy through market fluctuations.

The long-term target allocations are intended as strategic goals. Thus, it is permissible for the overall System's asset allocation to deviate from the long-term target, as would likely occur during manager transitions, asset class restructurings, and other temporary changes in the System. Surplus cash flows are utilized to maintain the asset management structure. Should these cash flows not be sufficient to reallocate the Plan according to policy, the transfer of assets may occur between managers. At least annually, the Board reevaluates the portfolio weightings by asset class and adjustments are made accordingly. The following identifies the asset allocation policy as of December 31, 2019:

Asset Class	Target	Range
Domestic Equity	25 %	20 - 30%
Developed Foreign Equity	10 %	6 - 14%
Public Emerging Market Equity	10 %	6 - 14%
Investment Grade Bonds	10 %	6 - 14%
High Yield Bonds	6 %	3 - 9%
TIPS	6 %	4 - 8%
Emerging Market Debt	5 %	3 - 7%
Real Estate	10 %	7 - 13%
Private Equity	10 %	6 - 14%
Natural Resources and Commodities	3 %	1 - 5%
Core Infrastructure	5 %	0 - 8%

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2019**

**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Rate of Return**

For the year ended December 31, 2019, the annual money-weighted rate of return on investments, net of investment expense, was 18.09%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

**Deposits — Custodial Credit Risk**

Custodial credit risk for deposits is the risk that, in the event of a bank failure, the System's deposits may not be recovered. The System's policy for custodial credit risk of deposits is to rely on FDIC insurance coverage. As of December 31, 2019, the System was not exposed to custodial credit risk. The carrying value of the System's deposits at December 31, 2019 totaled \$42,831.

**Investments Summary**

The System's investments at December 31, 2019 are presented below. All investments are presented by investment type, with debt securities presented by maturity (using segmented-time distribution).

Investment Type	Total Amount	Investment Maturities (in Years)			
		Less Than 1	1 - 5	6 - 10	More Than 10
<b><u>Debt Securities:</u></b>					
U.S. Treasuries	\$ 5,879,956	\$ -	\$ 2,467,174	\$ 1,204,517	\$ 2,208,265
U.S. Agencies	4,373,653	-	100,184	87,577	4,185,892
Corporate Bonds	9,377,902	35,634	4,414,305	1,638,717	3,289,246
Money Market Mutual Funds	451,275	451,275	-	-	-
Pooled Fixed Income	27,064,134	27,064,134	-	-	-
Total Debt Securities	47,146,920	\$ 27,551,043	\$ 6,981,663	\$ 2,930,811	\$ 9,683,403
<b><u>Other Investments:</u></b>					
Pooled Equities	80,514,515				
Real Estate	16,405,136				
Private Equity	34,765,308				
Total Other Investments	131,684,959				
Total Investments	\$ 178,831,879				

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2019**

**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Investments — Interest Rate Risk of Debt Securities**

Interest rate risk for debt securities is the risk that changes in interest rates of debt securities will adversely affect the fair value of an investment. The System's policy for interest rate risk of debt securities is to use diversification to minimize the exposure to interest rate risks in the aggregate investment portfolio.

**Investments — Custodial Credit Risk**

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty, the System will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The System does not have a policy for custodial credit risk of investments. As of December 31, 2019, the System was not exposed to custodial credit risk.

**Investments — Credit Risk of Debt Securities**

Credit risk for debt securities is the risk that an issuer or other counterparty to a debt security will not fulfill its obligations. The System's policy for credit risk of debt securities is to use diversification to minimize the exposure to credit risks in the aggregate investment portfolio. As of December 31, 2019, the credit quality ratings of the System's debt securities, excluding exempt U.S. Treasuries of \$5,879,956, are as follows:

Quality Ratings*	Total Amount	Investment Type			
		U.S. Agencies	Corporate Bonds	Money Market Mutual Funds	Pooled Fixed Income
AAA	\$ 779,881	\$ -	\$ 779,881	\$ -	\$ -
AA+	221,841	-	221,841	-	-
AA	337,843	-	337,843	-	-
AA-	563,197	88,217	474,980	-	-
A+	658,673	-	658,673	-	-
A	863,733	129,984	733,749	-	-
A-	1,305,550	281,331	1,024,219	-	-
BBB+	1,191,918	100,184	1,091,734	-	-
BBB	1,281,758	53,245	1,228,513	-	-
BBB-	1,290,857	-	1,290,857	-	-
B+	186,108	-	186,108	-	-
D	402,151	402,151	-	-	-
Unrated	32,183,454	3,318,541	1,349,504	451,275	27,064,134
<b>Total</b>	<b>\$ 41,266,964</b>	<b>\$ 4,373,653</b>	<b>\$ 9,377,902</b>	<b>\$ 451,275</b>	<b>\$ 27,064,134</b>

\* Per the rating scale of Standard and Poor's (a nationally recognized statistical rating organization).

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2019**

**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Deposits and Investments — Foreign Currency Risk**

Foreign currency risk is the risk that fluctuations in exchange rates will adversely affect the fair value of an investment or a deposit. The System's policy for foreign currency risk is to diversify the foreign countries and currencies within its international investment portfolio. As of December 31, 2019, the System had indirect exposure to foreign currency risk for certain equity and fixed income investments in the amount of approximately \$44,966,000.

**Investments — Concentration of Credit Risk**

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer. The System's policy for concentration of credit risk is to use extensive diversification to minimize exposure to company and industry specific risks in the aggregate investment portfolio. As of December 31, 2019, the System's exposure to concentration of credit risk resulted from one private equity investment in IFM Global Infrastructure LP of \$9,849,850; which represents 5.5% of total investments.

**Investments — Fair Value**

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. The System has the following recurring fair value measurements as of December 31, 2019:

Investment Type	Total Amount	Fair Value Measurements Using	
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)
<b><u>Debt Securities</u></b>			
U.S. Treasuries	\$ 5,879,956	\$ 5,879,956	\$ -
U.S. Agencies	4,373,653	4,373,653	-
Corporate Bonds	9,377,902	-	9,377,902
Money Market Mutual Funds	451,275	451,275	-
Pooled Fixed Income Securities	27,064,134	-	27,064,134
Total Debt Securities	47,146,920	10,704,884	36,442,036
<b><u>Equity Securities</u></b>			
Equity Mutual Funds	80,514,515	-	80,514,515
Total Investments Measured at Fair Value	127,661,435	\$ 10,704,884	\$ 116,956,551
<b><u>Investments Measured at the Net Asset Value (NAV)</u></b>			
Private Equity	34,765,308		
Real Estate	16,405,136		
Total Investments Measured at NAV	51,170,444		
Total Investments Measured at Fair Value	\$ 178,831,879		

Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Corporate bonds, pooled fixed income securities, and equity mutual funds classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2019**

**NOTE 3 DEPOSITS AND INVESTMENTS (CONTINUED)**

**Investments — Fair Value (Continued)**

The valuation methods for investments measured at the net asset value (NAV) per share or its equivalent are presented on the following table:

	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Private Equity (1)	\$ 34,765,308	\$ 16,282,550	(1)	(1)
Real Estate (2)	16,405,136	-	(2)	(2)
Total Investments Measured at NAV	<u>\$ 51,170,444</u>			

(1) *Private equity* - This investment type includes investments in 16 private equity funds that invest primarily in private domestic and international companies of diversified industries. The fair value measurements of this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Approximately 28% of the funds can be redeemed quarterly with 90 days notice. The remaining 72% of the investments can never be redeemed from the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. For the investments in funds that cannot be redeemed, it is expected approximately 6% of the underlying assets of the funds will be liquidated over the next 1 to 5 years; with the remaining investments over the next 5 to 15 years.

(2) *Real estate* - This investment type includes investments in three funds that invest in real estate. The fair value measurements of this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Approximately 97% of the funds can be redeemed quarterly and of those funds, approximately 52% can be redeemed with 45 days notice; with the remainder subject to 90 days notice. The remaining 3% of the investments can never be redeemed from the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. For the investments in funds that cannot be redeemed, it is expected that the underlying assets of the funds will be liquidated over the next 5 to 10 years.

**NOTE 4 FUNDING POLICY**

Plan members are required to contribute to the System at rates ranging from 5% to 9% of annual compensation, depending on their employment date. Members hired after December 31, 1978 must contribute an additional 2% of regular compensation in excess of \$30,000. These deductions earn interest at a rate determined by PERAC that vest based upon years of service. MassHousing is required to pay into the System 100% of the actuarially determined contribution. For the year ended December 31, 2019, employer contributions totaled \$10,030,667 and Plan member contributions totaled \$3,448,858.

Cost-of-living adjustments (COLA) must be granted by the Board and are the responsibility of the System. COLA cannot exceed 3% of the first \$15,000 in benefits, unless the System elects to increase the maximum base retirement allowance in multiples of \$1,000.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2019**

**NOTE 5 NET PENSION LIABILITY**

The components of the net pension liability of the System at December 31, 2019, were as follows:

Total Pension Liability	\$ 201,998,179
Plan Fiduciary Net Position	<u>(178,832,120)</u>
Net Pension Liability	<u>\$ 23,166,059</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	<u>88.5 %</u>

**Actuarial Methods and Assumptions**

The total pension liability was determined by performing update procedures to roll the liability forward from the January 1, 2019, actuarial valuation to the December 31, 2019 measurement date. The following actuarial methods and assumptions apply to all periods included in the measurement:

Methods:

Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Fair Value

Assumptions:

Inflation	2.60%
Salary Increases	5.25% grading down to 3.75% after 10 years of service.
Investment Rate of Return	7.25% per year net of investment expenses (7.50% previously)
Cost of Living Adjustment	3% of the first \$15,000 of retirement income granted annually.
Mortality	RP-2014 Healthy White Collar Mortability table projected generationally from the year 2006 using MP-2016 (sex-distinct). Disabled mortality is the healthy retiree table set forward two years. Death is assumed to be due to the same cause as the disability 40% of the time.
Retirement Rates	Ages 50-70
Overall Disability	75% ordinary disability; 25% accidental disability.

The actuarial assumptions used in the January 1, 2019 valuation were based on the results of the PERAC local experience study for the period 1995 through 2000 and was published in 2002.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2019**

**NOTE 5 NET PENSION LIABILITY (CONTINUED)**

**Actuarial Methods and Assumptions (Continued)**

The long-term expected real rate of return reflects the expected rate of return on Plan assets minus the expected rate of inflation. The long-term real rate of return removes the effect of inflation on the return amounts. It is a long-term assumption and is meant to reflect a best estimate of future experience, based on the expected asset allocation. Best estimates of geometric rates of return for each major asset class included in the System's target asset allocation as of December 31, 2019 are summarized in the following table:

Asset Class	Long-Term Expected Real Rate of Return (%)
Domestic Equity	4.68
Developed Foreign Equity	5.17
Public Emerging Market Equity	6.34
Investment Grade Bonds	0.39
High Yield Bonds	2.53
TIPS	0.29
Emerging Market Debt	2.05
Real Estate	4.78
Private Equity	6.63
Natural Resources and Commodities	5.56
Core Infrastructure	4.00

**Discount Rate**

The discount rate used to measure the total pension liability was 7.25%. The projection of cash flows used to determine the discount rate assumed that Plan member contributions will be made at the current contribution rate and that MassHousing's contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current Plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**Sensitivity of the Net Pension Liability to Changes in the Discount Rate**

The following presents the net pension liability of MassHousing calculated using the discount rate of 7.25%, as well as what MassHousing's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Net Pension Liability	\$ 45,642,374	\$ 23,166,059	\$ 4,185,351

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2019**

**NOTE 6 LEGALLY REQUIRED RESERVE ACCOUNTS**

The balance in the System's legally required reserves as of December 31, 2019 are as follows:

Description	Amount	Purpose
Annuity Savings Fund	\$ 39,769,677	Active Members' Contribution Balance
Annuity Reserve Fund	12,134,011	Retired Members' Contribution Account
Pension Reserve Fund	109,350,642	Amounts Appropriated to Fund Future Retirement
Pension Fund	17,577,790	Remaining Net Position
Total	<u>\$ 178,832,120</u>	

All reserve accounts are funded at levels required by state law.

**NOTE 7 SUBSEQUENT EVENTS**

Subsequent to year-end, the World Health Organization declared the spread of Coronavirus Disease (COVID-19) a worldwide pandemic. The COVID-19 pandemic is having significant effects on global markets, supply chains, businesses, and communities. Specific to the System, both domestic and international equity markets have experienced significant volatility during the period from January 1, 2020 through August 13, 2020. This activity is not reflected in the financial statements as of December 31, 2019 as these events occurred subsequent to year-end and are still developing. Management believes the System is taking appropriate actions to mitigate the impact. However, the full impact of COVID-19 is unknown and cannot be reasonably estimated as these events occurred subsequent to year-end and are still developing.

**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
REQUIRED SUPPLEMENTARY INFORMATION  
YEAR ENDED DECEMBER 31, 2019  
(SEE INDEPENDENT AUDITORS' REPORT)**

**Schedule of Changes in Employer Net Pension Liability and Related Ratios (1)**

	2019	2018	2017	2016	2015	2014
<u>Total Pension Liability (In Thousands)</u>						
Service Cost	\$ 3,700	\$ 3,566	\$ 3,437	\$ 3,247	\$ 3,129	\$ 2,695
Interest	13,583	12,908	11,895	11,623	10,444	9,984
Changes in Benefit Terms	1,591	-	-	-	-	-
Differences Between Expected and Actual Experience	3,848	-	(3,670)	-	(265)	-
Changes of Assumptions	5,878	-	8,772	-	7,362	-
Benefit Payments, Including Refunds of Member Contributions	(8,029)	(7,182)	(6,920)	(5,958)	(5,161)	(5,134)
Net Change in Total Pension Liability	20,571	9,292	13,514	8,912	15,509	7,545
Total Pension Liability - Beginning	181,427	172,135	158,621	149,709	134,200	126,655
Total Pension Liability - Ending (a)	<u>\$ 201,998</u>	<u>\$ 181,427</u>	<u>\$ 172,135</u>	<u>\$ 158,621</u>	<u>\$ 149,709</u>	<u>\$ 134,200</u>
<u>Plan Fiduciary Net Position (In Thousands)</u>						
Contributions - Employer	\$ 10,031	\$ 6,527	\$ 6,491	\$ 6,093	\$ 6,065	\$ 3,946
Contributions - Member	3,449	3,483	3,477	3,274	3,219	3,176
Net Investment Income	27,731	(5,545)	18,137	11,084	(3,354)	4,042
Benefit Payments, Including Refunds of Member Contributions	(8,527)	(7,600)	(7,085)	(5,994)	(5,479)	(5,351)
Reimbursements and Transfers from Other Systems, Net	496	418	239	36	319	538
Administrative Expense	(468)	(444)	(375)	(377)	(364)	(347)
Net Change in Plan Fiduciary Net Position	32,712	(3,161)	20,884	14,116	406	6,004
Plan Fiduciary Net Position - Beginning	146,120	149,281	128,397	114,281	113,875	107,871
Plan Fiduciary Net Position - Ending (b)	<u>\$ 178,832</u>	<u>\$ 146,120</u>	<u>\$ 149,281</u>	<u>\$ 128,397</u>	<u>\$ 114,281</u>	<u>\$ 113,875</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 23,166</u>	<u>\$ 35,307</u>	<u>\$ 22,854</u>	<u>\$ 30,224</u>	<u>\$ 35,428</u>	<u>\$ 20,325</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	88.5 %	80.5 %	86.7 %	80.9 %	76.3 %	84.9 %
Covered Payroll	\$ 34,362	\$ 34,506	\$ 33,250	\$ 33,641	\$ 32,430	\$ 28,044
Net Pension Liability as a Percentage of Covered Payroll	67.4 %	102.3 %	68.7 %	89.8 %	109.2 %	72.5 %

(1) Data is being accumulated annually to present 10 years of the reported information.

See accompanying Notes to Required Supplementary Information.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM  
REQUIRED SUPPLEMENTARY INFORMATION  
YEAR ENDED DECEMBER 31, 2019  
(SEE INDEPENDENT AUDITORS' REPORT)**

**Schedule of Employer Contributions  
(In Thousands)**

	2019	2018	2017	2016	2015
Actuarially Determined Contribution	\$ 10,031	\$ 6,527	\$ 6,491	\$ 6,093	\$ 6,065
Contributions in Relation to the Actuarially Determined Contribution	<u>10,031</u>	<u>6,527</u>	<u>6,491</u>	<u>6,093</u>	<u>6,065</u>
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 35,050	\$ 34,506	\$ 33,250	\$ 33,641	\$ 32,430
Contributions as a Percentage of Covered Payroll	28.6 %	18.9 %	19.5 %	18.1 %	18.7 %
	2014	2013	2012	2011	2010
Actuarially Determined Contribution	\$ 3,946	\$ 3,927	\$ 3,169	\$ 3,156	\$ 3,322
Contributions in Relation to the Actuarially Determined Contribution	<u>3,946</u>	<u>3,927</u>	<u>3,169</u>	<u>3,156</u>	<u>3,322</u>
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 28,044	\$ 28,044	\$ 29,800	\$ 29,800	\$ 28,475
Contributions as a Percentage of Covered Payroll	14.07 %	14.00 %	10.63 %	10.59 %	11.67 %

**Schedule of Investment Returns (1)**

	2019	2018	2017	2016	2015	2014
Annual Money-Weighted Rate of Return, Net of Investment Expense	18.09 %	(1.11)%	18.16 %	9.64 %	(4.04)%	3.48 %

(1) Data is being accumulated annually to present 10 years of the reported information.

See accompanying Notes to Required Supplementary Information.

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**MASSACHUSETTS HOUSING FINANCE AGENCY EMPLOYEES' RETIREMENT SYSTEM**  
**NOTES TO REQUIRED SUPPLEMENTARY INFORMATION**  
**DECEMBER 31, 2019**  
(SEE INDEPENDENT AUDITORS' REPORT)

**NOTE 1 ACTUARIALLY DETERMINED CONTRIBUTION — METHODS AND ASSUMPTIONS**

The following actuarial methods and assumptions apply to the 2019 actuarially determined contributions:

Methods:

Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Fair Value

Assumptions:

Inflation	3.00%
Salary Increases	5.0% grading down to 3.75% after 10 years of service.
Investment Rate of Return	7.5% per year net of investment expenses.
Cost of Living Adjustment	3% of the first \$13,000 of retirement income granted annually.
Mortality	RP-2014 Healthy White Collar Mortability table projected generationally from the year 2006 using MP-2016 (sex-distinct). Disabled mortality is the healthy retiree table set forward two years. Death is assumed to be due to the same cause as the disability 40% of the time.
Retirement Rates	Ages 50-70
Overall Disability	75% ordinary disability; 25% accidental disability.

Investment advisory services are offered through CliftonLarsonAllen Wealth Advisors, LLC,  
an SEC-registered investment advisor. | CliftonLarsonAllen LLP





**COMMONWEALTH OF MASSACHUSETTS**

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