HOWARD COUNTY POLICE AND FIRE EMPLOYEES' RETIREMENT PLAN

FINANCIAL STATEMENTS AND REQUIRED SUPPLEMENTARY INFORMATION

YEARS ENDED JUNE 30, 2023 AND 2022

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EMPLOYEES' RETIREMENT PLAN
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CliftonLarsonAllen LLP
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INDEPENDENT AUDITORS' REPORT

Retirement Plan Committee
Howard County Police and Fire Employee's Retirement Plan
Howard County, Maryland

Report on the Audit of the Financial Statements

Opinions

We have audited the accompanying financial statements of Howard County Police and Fire Employee's Retirement Plan (the Plan), as of and for the years ended June 30, 2023 and 2022, and the related notes to the financial statements, which collectively comprise the Plan'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 Plan, as of June 30, 2023 and 2022, and the respective changes in its fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audits 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 Plan 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 opinions.

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 Plan'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.

Retirement Plan Committee
Howard County Police and Fire Employee's Retirement Plan

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 opinions. 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 Plan'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 Plan'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.

Retirement Plan Committee
Howard County Police and Fire Employee's Retirement Plan

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis and the Schedules of Changes in the County's Net Pension Liability and Related Ratios, the Schedule of County Contributions, and the Schedule of Investment Returns, and related notes 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 November 20, 2023, on our consideration of the Plan'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 Plan'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 Plan's internal control over financial reporting and compliance.

CliftonLarsonAllen LLP

CliftonLarsonAllen LLP

Baltimore, Maryland
November 20, 2023

Introduction

The Howard County Police and Fire Employees' Plan (the Plan) is a single-employer defined benefit public employee retirement plan administered by Howard County, Maryland, which provides retirement benefits as well as death and disability benefits and cost-of-living adjustments.

Responsibilities for administration and operation of the Police and Fire Plan are vested in a Retirement Committee with seven members (Committee). The Committee has authority to establish and amend the respective benefit and contribution provisions.

Membership Data

	07/01/2022	07/01/2021	07/01/2020
Active	969	968	947
Retired and beneficiaries	477	451	430
Disabled	36	35	35
Terminated vested	32	24	26
Total	1,514	1,478	1,438

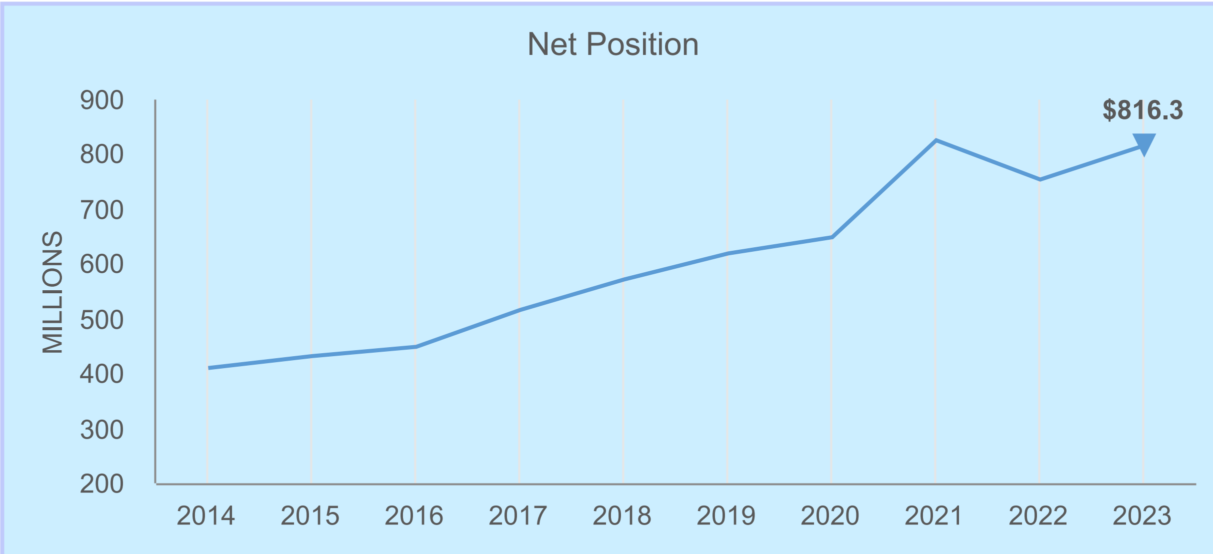
Financial Highlights

The financial statements of the Plan were prepared using the accrual basis of accounting. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan. Employee and employer contributions are recognized as revenues in the period in which employee services are performed and expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made. Investments are reported at fair value.

As of June 30, 2023, the net position was $816.3 million as compared to $754.2 million at June 30, 2022. The increase in net position of $62.1 million can be attributed to global equities trending higher as better than expected economic data and moderating inflation has bolstered expectations around a potential economic soft landing. Real assets and private equity generated negative returns for the fiscal year while all other asset classes were positive. The Trust has outperformed the median public plans (All public plans greater than one billion dollars) for the fiscal year ending June 30, 2023.

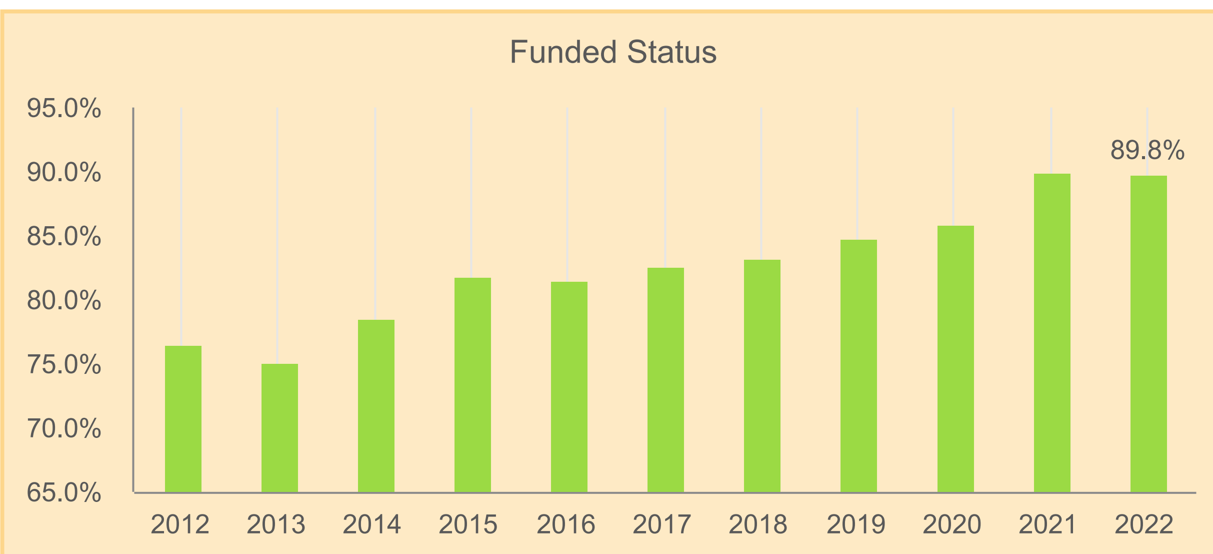
	Fiscal Year*		
	2023	2022	2021
Contributions	$ 43.17	$ 41.98	$ 40.30
Benefit payments	$ 43.06	$ 35.13	$ 34.63
Contribution rates	34.80 %	35.80 %	35.40 %
# of benefit recipients	549	511	485

*$ amounts in millions



Funded Status

The plan's funding objective is to meet long-term benefit obligations through contributions and investment income. The funding ratio, which is the actuarial value of assets divided by the actuarial accrued liability is an estimate of how well the Plan is meeting that objective. A higher ratio indicates the Plan is better funded. The funded ratio of the Plan was 89.8% and 90.0% as of July 1, 2022 and July 1, 2021, respectively.



Overview of the Basic Financial Statements

In this financial report, the basic financial statements consist of the Statement of Fiduciary Net Position and the Statement of Changes in Fiduciary Net Position with accompanying notes as of and for the year ended June 30, 2023 with comparative information as of and for the year ended June 30, 2022 and June 30, 2021. The financial position is comprised of assets, which primarily consist of investments less liabilities, including accounts payable and investment commitments payable.

The Statement of Changes in Fiduciary Net Position presents the additions to and deductions from the Plan's net position during the year. The Plan receives contributions from participants and the County, as well as income or losses from investments and related activities. The primary deductions are the payment of benefits, which are the Plan's primary objectives. Deductions also include refunds to members who leave the Plan as well as administrative expenses.

Notes to the Basic Financial Statements

The Notes to Financial Statements contain disclosures and discussions which support the data presented in the financial statements. The notes present information about the administration of the Plan, significant accounting policies, and investments. The notes are an integral part of the financial statements and should be considered in conjunction with any review of the financial statements.

Required Supplementary Information (RSI)

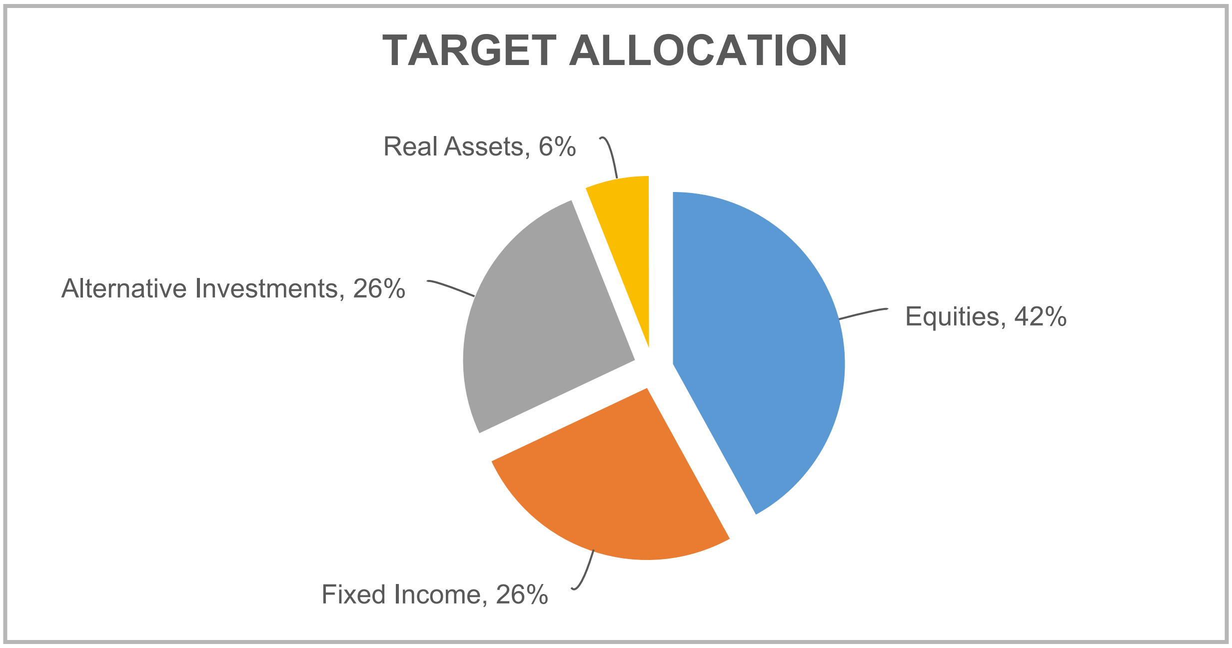
The RSI section provides actuarially determined information about the Plan and displays changes for the Plan's Net Pension Liability (NPL) and related ratios, contributions related to payrolls by the Plan, and money-weighted investment returns.

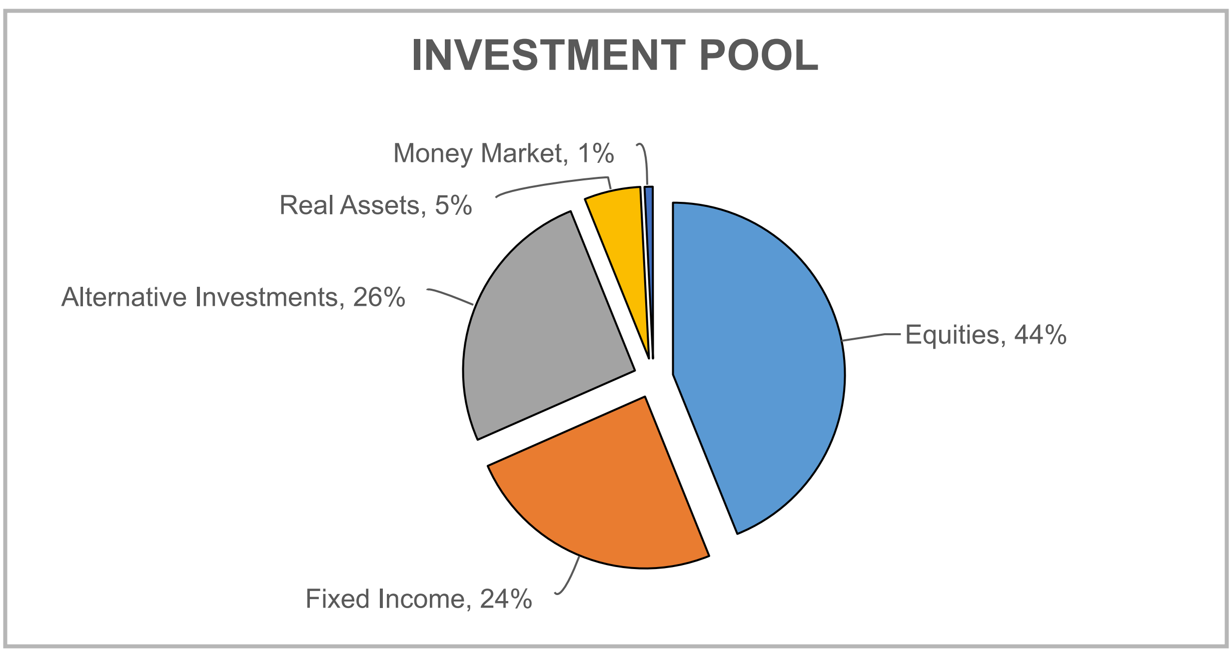
The following Condensed Statements of Fiduciary Net Position and Changes in Fiduciary Net Position present financial information for the Plan and compares fiscal years 2023, 2022, and 2021.

	2023	2022	2021	2023 Percentage Change	2022 Percentage Change
Assets					
Receivables	$ 5,252,624	$ 5,271,181	$ 8,566,776	—%	(38)%
Investments	811,831,514	752,331,748	824,938,334	8%	(9)%
Prepaid Insurance	29,871	29,346	27,341	2%	7%
Total Assets	817,114,009	757,632,275	833,532,451	8%	(9)%
Liabilities					
Investment Purchased	417,357	3,173,383	7,360,135	(87)%	(57)%
Accounts Payable	424,559	301,473	338,603	41%	(11)%
Total Liabilities	841,916	3,474,856	7,698,738	(76)%	(55)%
Net Position Held in Trust for Pension Benefits	$ 816,272,093	$ 754,157,419	$ 825,833,713	8%	(9)%
Additions					
Employer Contributions	$ 33,884,709	$ 33,225,833	$ 31,923,458	2%	4%
Employee Contributions	9,286,782	8,749,312	8,373,851	6%	4%
Net Investment Income (Loss)	62,545,758	(78,058,819)	171,694,798	(180)%	(145)%
Total Additions	105,717,249	(36,083,674)	211,992,107	(393)%	(117)%
Deductions					
Benefit Payments and Refunds	43,061,140	35,133,855	34,634,301	23%	1%
Administrative Expense	541,435	458,765	401,126	18%	14%
Total Deductions	43,602,575	35,592,620	35,035,427	23%	2%
Net Change	62,114,674	(71,676,294)	176,956,680	(187)%	(141)%
Net Position Held in Trust for Pension Benefits:					
Beginning of Year	754,157,419	825,833,713	648,877,033	(9)%	27%
End of Year	$ 816,272,093	$ 754,157,419	$ 825,833,713	8%	(9)%

Investments

Investments consist of U.S. equities (large cap and non-large cap), international equities (international developed markets and international emerging markets), fixed income, real assets, money market and alternatives (private equities and hedge funds). The Plan is a participant in a combined pension investment pool and it does not own an undivided interest in specific assets of the Pool. The investments presented by category are the Plan's proportionate share of the investments by category of the Pool that are reported at fair value.

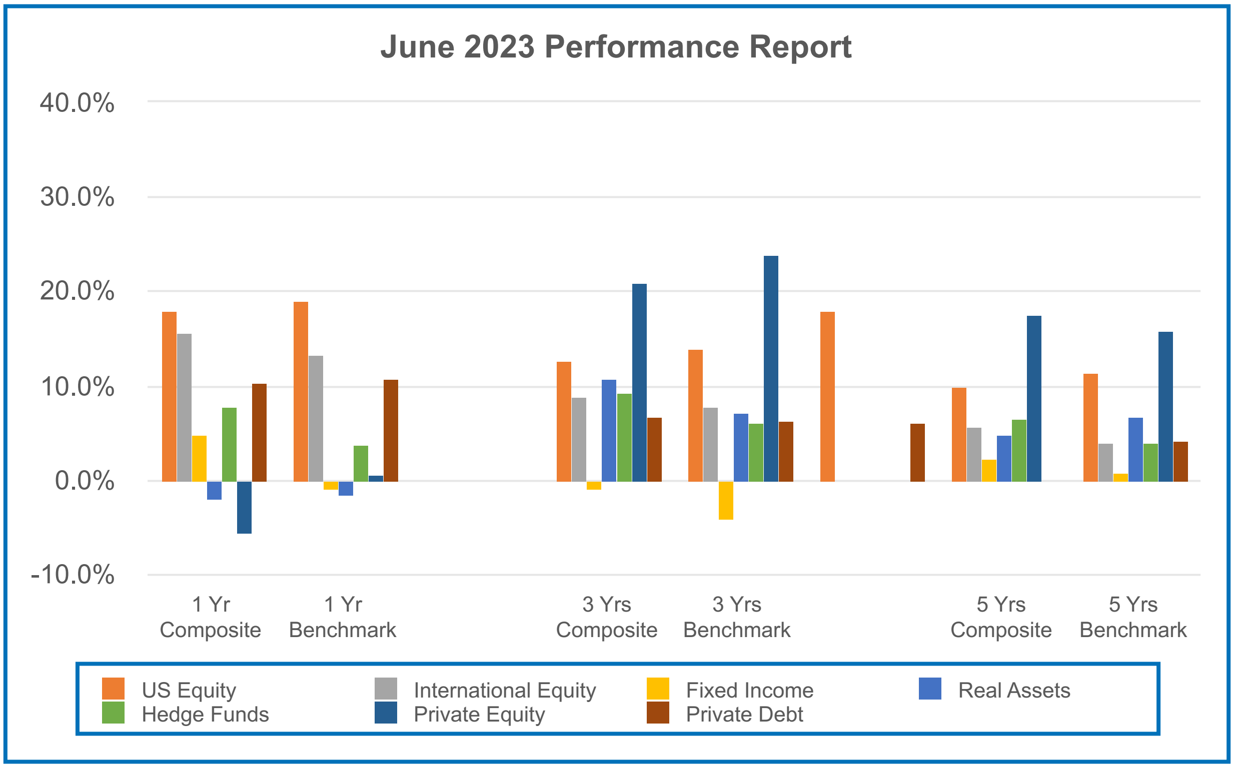




LONG TERM EXPECTED RATE OF RETURN	
Equities	4.87 %
Fixed Income	3.06 %
Alternative Investments	6.75 %
Real Assets	4.35 %

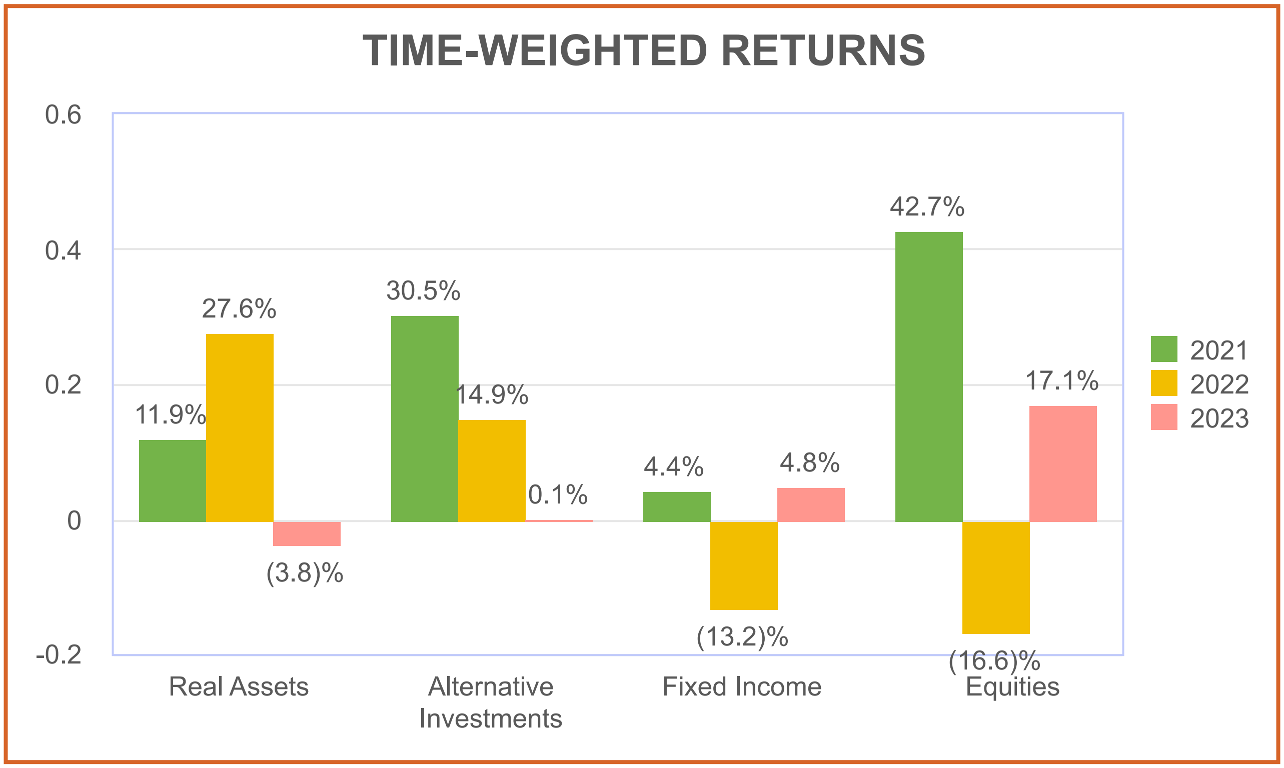
Investment Performance Summary

The retiree's benefit is paid from investment earnings and contributions. Displayed below is a comparison of the portfolio's returns (composite) to its policy benchmark in one year, three years and five years:



Note: The performance listed may not reflect final returns as of the date listed as private markets report investment returns on a quarter basis lag.

The investment Pool's time-weighted returns (gross of fees) are displayed by investment type in the following table.



Additional Information

The Plan's financial statements are presented in accordance with accounting principles generally accepted in the United States of America and are available at Howard County's web page at www.howardcountymd.gov/finance/finance-audits.

HOWARD COUNTY POLICE AND FIRE EMPLOYEES' RETIREMENT PLAN
STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2023 AND 2022

	2023	2022
ASSETS		
Receivables:		
Employer Contributions	$ 1,149,664	$ 2,230,522
Member Contributions	309,002	614,358
Interest and Dividends	425,884	758,225
Due from Sale of Investments	3,354,186	1,654,803
Other	13,888	13,273
Total Receivables	5,252,624	5,271,181
Investments:		
Money Market	5,696,813	14,165,428
Equities	356,692,062	320,942,808
Fixed Income	199,012,255	187,313,416
Alternative Investments	207,345,555	196,535,753
Real Assets	43,084,829	33,374,343
Total Investments	811,831,514	752,331,748
Prepaid Insurance	29,871	29,346
Total Assets	817,114,009	757,632,275
LIABILITIES		
Investment Purchases	417,357	3,173,383
Accounts Payable	424,559	299,118
Other	—	2,355
Total Liabilities	841,916	3,474,856
Fiduciary Net Position Held in Trust for Pension Benefits	$ 816,272,093	$ 754,157,419

See accompanying Notes to Financial Statements

HOWARD COUNTY POLICE AND FIRE EMPLOYEES' RETIREMENT PLAN
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
YEARS ENDED JUNE 30, 2023 AND 2022

	2023	2022
ADDITIONS:		
CONTRIBUTIONS		
Employer	$ 33,884,709	$ 33,225,833
Member	9,286,782	8,749,312
Total Contributions	43,171,491	41,975,145
INVESTMENT INCOME		
Net Change in Fair Value of Investments	47,832,157	(101,103,296)
Interest	2,915,165	2,200,647
Dividends	13,247,706	22,476,063
Other, Net	215,538	100,302
Total Investment Income (Loss)	64,210,566	(76,326,284)
Less: Investment Expense	1,664,808	1,732,535
Net Investment Income (Loss)	62,545,758	(78,058,819)
Total Additions	105,717,249	(36,083,674)
DEDUCTIONS:		
BENEFITS		
Annuities	42,370,456	34,867,294
Refunds of Contributions	690,684	266,561
Total Benefits	43,061,140	35,133,855
ADMINISTRATIVE EXPENSES	541,435	458,765
Total Deductions	43,602,575	35,592,620
NET CHANGE	62,114,674	(71,676,294)
FIDUCIARY NET POSITION HELD IN TRUST FOR PENSION BENEFITS:		
Beginning of Year	754,157,419	825,833,713
End of Year	$ 816,272,093	$ 754,157,419

See accompanying Notes to Financial Statements.

NOTE 1 PLAN DESCRIPTION

Plan Administration

The Howard County Police and Fire Employees' Retirement Plan (the Plan) is a single-employer defined benefit public employee retirement system established and administered by Howard County (the County), Maryland, to provide defined pension benefits for career firefighters and sworn police officers. The Plan is considered part of the County's financial reporting entity and is included in the County's financial statements as a pension trust fund. The accompanying financial statements present only the operations of the Plan and are not intended to present the financial position and results of operations of the County.

Plan Membership

At July 1, 2022 and 2021, the Plan's membership consisted of the following:

	2022	2021
Active	969	968
Retired and Beneficiaries	477	451
Disabled	36	35
Terminated Vested	32	24
Total	1,514	1,478

The Plan was established, is operated, and may be amended under the provisions of Sections 1.400 and 1.401A to 1.478A of the Howard County Code. All of the County's full-time career firefighters and sworn police officers are eligible to participate in the Plan. The Retirement Plan Committee established by Howard County Code Section 1.455A has full power and authority to administer and operate the Plan in accordance with its terms and in particular the authority contained in subsection 1.454A. The Pension Oversight Commission established by Howard County Code, Section 1.482 provides ongoing assessment and evaluation of the Plan's operations.

Benefits Provided

All of the County's full-time career police and fire officers hired on or after July 1, 1990 must enroll in the Police and Fire Plan. The Plan provides retirement benefits as well as death and disability benefits and cost-of-living adjustments.

Participants become vested after 5 years of eligibility service and are entitled to a benefit beginning at age 62. Terminated vested employees with less than 20 years of service will receive a benefit equal to 2.5% of average compensation times the number of years of creditable service, payable at age 62. If an employee leaves employment or dies before 5 years of eligibility service, accumulated employee contributions plus interest are refunded to the employee or the designated beneficiary. A participant who becomes totally and permanently disabled may retire prior to normal retirement and receive a benefit. Both disability and death benefits vary if incurred in the line of duty.

NOTE 1 PLAN DESCRIPTION (CONTINUED)

Benefits Provided (Continued)

Employees who attain the age of 62 with at least 5 years of eligibility service and employees who have completed 20 years of eligibility service, if at least 10 years were served as a covered employee, are entitled to a normal retirement benefit. The amount will vary, based on the number of years of creditable service, from 50% (with 20 years of service) to 80% (with 30 years of service) of average compensation for police; and from 50% (with 20 years of service) to 70% (with 30 years of service) of average compensation for firefighters.

Benefits in pay status are adjusted annually for a post retirement cost of living adjustment (COLA). The Plan uses the Consumer Price Index (CPI-U) for the Baltimore-Columbia-Towson area as published by the Bureau of Labor Statistics to calculate the change in retiree allowances each July. The maximum annual COLA is 2%.

Contributions

The Plan is authorized to establish or amend the obligations to make contributions under the provisions of the Howard County Code, Sections 1.423A and 1.465A. The Plan's funding policy provides for periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate adequate assets to pay benefits when due. Participant contributions are 11.6% of base pay for participating Police Department Employees and 7.7% of base pay for participating Fire and Rescue Department Employees. The County funds the remainder of the cost of employees' participation in the Plan, which was 34.80% of covered payroll in fiscal year 2023 and 35.8% in 2022. The County contribution to the Plan is determined through an actuarial valuation performed by Bolton Partners, Inc. for each fiscal year. In fiscal year 2023, the County contribution to the Plan was in excess of the actuarially determined contribution. This increase in contribution was adopted in order to maintain stability from year to year. Expenses incurred in the administration and operation of the Plan are funded by the Plan.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND PLAN ASSET MATTERS

Method Used to Value Investments

The Plan's investments are maintained in a combined investment pool. The Plan does not own an undivided interest in specific assets of the Pool. The investments presented by category are the Plan's proportionate share of the investments by category of the Pool and are reported at fair value. Short-term investments such as money market investments are reported at amortized cost, which approximates fair value. Securities traded on a national or international exchanges are valued at the last reported sales price at current exchange rates. Securities that do not have an established market are reported at estimated fair value derived from third-party pricing services. Purchases and sales of investments are recorded on a trade date basis. The fair values of real estate investments are based on net asset values (NAV) provided by the investment managers. The fair value of non-pooled investments is determined annually and is based on current market prices. The fair value of investments in open-end mutual funds is determined based on the fund's current share price.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND PLAN ASSET MATTERS (CONTINUED)

Method Used to Value Investments (Continued)

The Plan invests in assets measured at NAV and include private equity, private credit, hedge funds, real assets and real estate funds funds, which are collectively considered alternative investments. Alternative investments include interests in limited partnerships and limited liability companies invested in venture capital, private equities, and other investments. These investments are recorded based on net asset value amounts established by the respective fund managers as a practical approximation of fair value. Because alternative investments are not readily marketable, the estimated value is subject to uncertainty and, therefore, may differ materially from the amount reported.

Basis of Accounting

The Plan's financial statements are prepared using the accrual basis of accounting. Employer and employee contributions are recognized as revenue in the period in which employee services are performed and expenses and refunds are recorded when the corresponding liabilities are incurred, regardless of when payment is made. Benefits are due and payable in accordance with the benefit terms.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates that affect the reported amounts in the financial statements and accompanying notes. Actual results could differ from those estimates.

Income Taxes

The Internal Revenue Service issued a determination letter on September 28, 2016, which stated that the Plan and its underlying trust qualify under the applicable provisions of the Internal Revenue Code and therefore are exempt from Federal income taxes.

NOTE 3 INVESTMENTS

Investment Policy

The Plan's policy in regard to the allocation of invested assets is established and administered by the Retirement Plan Committee. Specific investment goals stated in the policy are reviewed at least annually and, when appropriate, new goals and standards are adopted by the Retirement Plan Committee. The policy is expected to provide diversification of assets in an effort to maximize investment return to the Plan consistent with prudent market and economic risk. All of the Plan's assets are to remain invested at all times in the asset classes as designated by the policy.

NOTE 3 INVESTMENTS (CONTINUED)

Investment Policy (Continued)

The following strategic asset allocation policy was adopted by the Plan on March 2002, last amended on April 2021 and April 2023.

Asset Class	Target Allocation
Equities	42.0 %
Fixed Income	26.0
Alternative Investments	26.0
Real Assets	6.0
Total	100.0 %

Concentrations - Fiscal Year 2023

The Plan held investments in the following organizations that represent 5% or more of the pension plan's fiduciary net position: Baillie Gifford (5%), BlackRock (8%), Blackstone (5%), Dodge and Cox (5%), LSV (7%), Magnitude (5%), Mondrian (5%), U.S. Treasury Index Non Lending (5%), and Westfield (8%).

Concentrations - Fiscal Year 2022

The Plan held investments in the following organizations that represent 5% or more of the pension plan's fiduciary net position: Baillie Gifford (5%), BlackRock (8%), Blackstone (5%), Dodge and Cox (6%), LSV (7%), Magnitude (5%), Mondrian (5%), PIMCO (6%), and Westfield (7%).

Risks and Uncertainties

The Plan invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market, foreign currency and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statements of fiduciary net position.

NOTE 3 INVESTMENTS (CONTINUED)

Risks and Uncertainties (Continued)

Interest Rate Risk

The Plan's investment policy does not place any limits on the professional investment managers with respect to the duration of investments for the Plan. The Plan's fixed income investments by maturity and type at June 30, 2023 were as follows:

Investment Type	Fair Value/ NAV	Weighted Average Maturity (in Years)
Corporate Bonds	$ 16,072,256	13.45
U.S. Government - Sponsored Enterprises	14,414,421	25.65
Government Issued/Treasuries	4,075,808	25.70
Other Asset-Backed Securities	1,945,331	26.71
Collateralized Mortgage Obligations	1,997,086	38.81
Municipal Securities	713,043	14.28
Commingled Funds and Preferred Stock Identified as Fixed Income for Reporting Purposes*	159,794,310	Not Applicable
Total	$ 199,012,255	
Portfolio Weighted Average Maturity of Available		21.17

The Plan's fixed income investments by maturity and type at June 30, 2022 were as follows:

Investment Type	Fair Value/ NAV	Weighted Average Maturity (in Years)
Corporate Bonds	$ 17,028,348	14.24
U.S. Government - Sponsored Enterprises	12,445,366	25.29
Government Issued/Treasuries	44,200,412	12.79
Other Asset-Backed Securities	2,433,549	20.23
Collateralized Mortgage Obligations	3,695,797	43.84
Municipal Securities	741,795	15.33
Interest Rate Swap	(210,139)	4.79
Commingled Funds and Preferred Stock Identified as Fixed Income for Reporting Purposes	106,978,288	Not Applicable
Total	$ 187,313,416	
Portfolio Weighted Average Maturity of Available		16.73

NOTE 3 INVESTMENTS (CONTINUED)

Risks and Uncertainties (Continued)

Credit Risk

The demand deposit accounts (DDA's) held by State Street Bank are unrated, as are the mutual funds used by the plan. At fiscal year-end, the Plan's fixed income investments had the following risk characteristics in fiscal years 2023 and 2022:

Standard & Poor's Rating or Comparable	Fiscal Year 2023 Fair Value
AA to A-	$ 3,928,255
BBB to BB-	14,115,922
Not Rated	180,968,078
Total	$ 199,012,255

Standard & Poor's Rating or Comparable	Fiscal Year 2022 Fair Value
AA to A-	$ 4,930,814
BBB to BB-	15,272,879
Not Rated	167,109,723
Total	$ 187,313,416

Concentration of Credit Risk

The Plan's investment policy does not establish any limitation on the percentage that the Plan may have with any one issuer, other than to state that the Plan's assets are to be diversified in accordance with Modern Portfolio Theory. At June 30, 2023 and June 30, 2022, the Plan's investments did not exceed 5% with any one issuer other than as identified on page 16.

Custodial Credit Risk

State Street Bank invests in interest bearing DDA's in the name of the Plan for all accounts and pays interest equal to the effective Federal Funds rate, which is included in money markets on the Statements of Fiduciary Net Position. At fiscal year-end, the amount in this fund at amortized cost which approximates fair value was $5,696,813 which was partially used for settlement of open purchases of $417,357. All other investments of the fund are held by State Street Bank as trustee in the Plan's name.

Credit Risk - Currency Forward Contract , Futures and Options

One of the Plan's investment objectives is to diversify assets in accordance with the Modern Portfolio Theory (MPT) in order to reduce overall risk. Consistent with this objective, the Plan invested in some funds that hold currency forward contracts and invests in warrants, options and futures. The strategy is undertaken to protect the dollar value of underlying international investments. The Plan's share of market value/gain or losses from currency forward-contracts, warrants, options, futures and cash were ($34,311), $16,074, ($113), $228,694 and $217,478, respectively for the fiscal year.

NOTE 3 INVESTMENTS (CONTINUED)

Risks and Uncertainties (Continued)

Derivatives - Interest Rate Swaps

In accordance with the investment policy, during fiscal year 2023, the private debt fund invested in interest rate swaps which are forward contracts between two parties to exchange or swap one stream of interest payments for another, over a set period of time. Interest rate swaps can exchange fixed or floating rates in order to reduce or increase exposure to fluctuations in interest rates. In fiscal year 2023, the private credit fund reported $47,992 in interest rate swap and interest rate cap at market.

Foreign Currency Risk

The Plan's exposure to foreign currency risk derives from its investments in foreign currency or instruments denominated in foreign currency. Investments in such securities are limited to a maximum net currency exposure of 34.5% at any given time. These pool of assets may also include hedged assets, therefore, reducing the overall currency risk. The Plan was exposed to foreign currency risk through the Pools investment in Euro denominated alternative investments. The Pool total of these investments was $16,341,761 and $15,970,464 at June 30,2023 and June 30, 2022, respectively. The Plan's proportionate share was $9,398,053 and $9,130,987 at June 30, 2023 and June 30, 2022, respectively.

Rate of Return

For the fiscal years ended June 30, 2023 and June 30, 2022, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, were 8.2% and (8.5%), respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amount actually invested.

Investments Purchased and Due from Sales of Investments

Investment transactions are recorded on a trade plus three days or less timetable resulting in an amount due to and due from State Street Bank (the "Plan's Trustee") at year-end.

NOTE 4 FAIR VALUE MEASUREMENT

The Plan investments are reported at fair value. The Plan categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles, as follows:

- *Level 1* – Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Plan has the ability to access.

- *Level 2* – Inputs to the valuation methodology include: quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in inactive markets; inputs other than quoted prices that are observable for the asset or liability; inputs that are derived principally from or corroborated by observable market data by correlation of other means. If the asset or liability has a

NOTE 4 FAIR VALUE MEASUREMENT (CONTINUED)

- specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability.

- *Level 3* – Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The assets or liabilities fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. The table below reflects the Plan's proportionate share of the Pool's investments by type and fair value hierarchy established by accounting principles generally accepted in the United States of America as of June 30:

	June 30, 2023	Markets for Identical Assets (Level 1)	Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by Fair Value Level				
Debt Securities:				
Collateralized Mortgage Obligations				
(Fannie Mae and Freddie Mac and GNMA)	$ 1,997,086	$ —	$ 1,997,086	$ —
Corporate Bonds	16,072,256	—	16,072,256	—
Commingled Funds (Fixed Income)	61,891,308	31,339,425	30,551,883	—
FHLMC and FNMA Bonds	14,414,421	—	14,414,421	—
U.S. Treasury Securities	4,075,809	—	4,075,809	—
Municipal Bonds	713,043	—	713,043	—
Other Asset Backed Securities	1,945,331	—	1,945,331	—
Preferred Stock	571,215	571,215	—	—
Total Debt Securities	101,680,469	31,910,640	69,769,829	—
Equity Securities:				
Common Stocks	219,902,070	219,902,070	—	—
Emerging Market Equity Portfolio	65,241,998	65,241,998	—	—
Real Estate Investment Trusts (REITS)	1,179,440	1,179,440	—	—
Total Equity Securities	286,323,508	286,323,508	—	—
Total Investment by Fair Value Level	388,003,977	$ 318,234,148	$ 69,769,829	$ —
Investments Measured at the Net Asset Value (NAV):				
Private Equity Funds	113,039,018			
Private Credit Funds	16,444,583			
Hedge Funds	77,861,954			
Real Assets Funds	43,084,829			
International Equity Funds	44,606,881			
Commingled Fund within International Equities	25,761,672			
Commingled Fund within International fixed Income	19,184,688			
Commingled Fund within domestic fixed Income	78,147,099			
Total Investments Measured at the NAV	418,130,724			
Total Investments Measured at Fair Value*	$ 806,134,701			

*Net of money market funds totaling $5,696,813 which includes securities that have maturities of less than one year and may be measured at amortized cost.

NOTE 4 FAIR VALUE MEASUREMENT (CONTINUED)

		Fair Value Measurement Using		
	June 30, 2022	Quoted Prices in Active Markets for Identical Assets (Level 1)	Other Observable Inputs (Level 2)	Significant Unobservabl Inputs (Level 3)
Investments by Fair Value Level				
Debt Securities:				
Collateralized Mortgage Obligations				
(Fannie Mae and Freddie Mac and GNMA)	$ 3,695,797	$ —	$ 3,695,797	$ —
Corporate Bonds	17,028,348	—	17,028,348	—
Commingled Funds (Fixed Income)	57,780,523	29,610,312	28,170,211	—
FHLMC and FNMA Bonds	12,445,366	—	12,445,366	—
U.S. Treasury Securities	44,200,412	—	44,200,412	—
Short term investment in fixed securities	5,617,094		5,617,094	
Municipal Bonds	741,795	—	741,795	—
Other Asset Backed Securities	2,433,549	—	2,433,549	—
Preferred Stock	642,021	642,021	—	—
Total Debt Securities	144,584,905	30,252,333	114,332,572	—
Equity Securities:				
Common Stocks	201,442,182	201,442,182	—	—
Emerging Market Equity Portfolio	57,362,444	57,362,444	—	—
Real Estate Investment Trusts (REITS)	1,201,410	1,201,410	—	—
Total Equity Securities	260,006,036	260,006,036	—	—
Total Investment by Fair Value Level	404,590,941	290,258,369	114,332,572	—
Investments Measured at the Net Asset Value (NAV):				
Private Equity Funds	117,869,087			
Private Credit Funds	6,485,854			
Hedge Funds	72,180,811			
Real Assets Funds	33,374,343			
International Equity Funds	39,285,728			
Commingled Fund within International Equities	21,651,044			
Commingled Fund within International Fixed Income	28,602,352			
Commingled Fund within Domestic Fixed Income	14,069,867			
Total Investments Measured at the NAV	333,519,086			
Total investments Measured at Fair Value*	$ 738,110,027			

* Net of money market funds totaling $14,165,428, which includes securities that have remaining maturities of less than 1 year and may be measured at amortized cost.

NOTE 4 FAIR VALUE MEASUREMENT (CONTINUED

Investments Measured at Fair Value

		Fair Value Measurement Using		
	June 30, 2022	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments Derivative Instruments				
Interest Rate Swap - Long	5,818,971		5,818,971	
Interest Rate Swap - Short	(6,029,110)		(6,029,110)	
Futures - Cash Collateral	266,432		266,432	
Total Investments Derivative Instruments	$ 56,293		$ 56,293	

NOTE 4 FAIR VALUE MEASUREMENT (CONTINUED)

Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt securities classified in Level 2 of the fair value hierarchy refers to securities not traded on an active market but for which observable market inputs are readily available. Fixed income securities are priced on a daily basis, market to market, using a variety of third-party pricing sources, market data and methodologies.

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

	Fair Value	Unfunded Commitment	Redemption Frequency (if Currently Eligible)	Redempti Notice Period
Private Equity Funds	$113,039,018	$44,027,700	Illiquid	N/A
Private Credit Funds	16,444,583	13,640,941	Illiquid	N/A
Hedge Fund 1	40,843,474	—	Quarterly	65 days
Hedge Fund 2	37,018,480	—	Semi Annually	95 days
Real Assets Funds	43,084,829	11,181,925	Illiquid	N/A
International Equity Funds	44,606,881	—	Monthly	15 days
Commingled Fund within International Equities	25,761,672	—	Weekly	3 days
Commingled Fund within International Fixed Income	19,184,688	—	Bi-monthly	5 days
Commingled Fund within Domestic Fixed Income	78,147,099	—	Daily	1 day
Total	$418,130,724			

Private Equity Funds

Private equity investment strategies include buyout, venture capital, growth capital, and special situations. The Private Equity portfolio seeks to deliver long-term, risk-adjusted returns superior to those of comparable public markets. Investments in the asset class are achieved primarily through commingled, closed-end funds and may also include fund of funds, direct and co-investment opportunities. Exposures are diversified by manager, region, strategy, and vintage year. Private equity investments are illiquid, and distributions are received over the life of the investments, which can range between 10 and 15 years. These investments do not have set redemption schedules; therefore options for exit are limited to sale on the secondary market. Capital commitments are made to these types of investments and funds are invested through a call down structure. The fair value of the partnership interest is based on NAV provided by the General Partner. The partnership's financial statements are audited annually as of December 31 and the NAV is adjusted quarterly by additional contributions to and distributions from the partnership, the net earnings and losses, and unrealized gains and losses resulting from changes in fair value, as determined by the General Partner.

Private Debt Funds

Private credit investment strategies will focus on identifying market dislocations and credit-intensive assets, specifically in loan portfolios, corporate securities, structured credit, hard assets and special opportunities. The Private Credit portfolio invests in commingled funds. The objective of the fund is to provide income from the premium yields along with a return over Liquid Credit over the life of the fund, which can range between 6 and 8 or more years. The fund employs a flexible and opportunistic mandate allowing for investments in a variety of strategies irrespective of market conditions and geographies. These investments do not have set redemption schedules therefore

Note 4 FAIR VALUE MEASUREMENT (CONTINUED)

options for exit are limited to sale on the secondary market. Capital commitments are made to these types of investments and funds are invested through a call down structure. The fair value of the partnership interest is based on NAV provided by the General Partner. The partnership's financial statements are audited annually as of December 31 and the NAV is adjusted quarterly by additional contributions to and distributions from the partnership, the net earnings and losses, and unrealized gains and losses resulting from changes in fair value, as determined by the General Partner.

Emerging Market Debt Strategy
This represents investments primarily in a globally diversified portfolio of high quality sovereign bonds and currencies in emerging markets (non U.S. issuers). The objective of this fund is to generate income, preserve capital, and enhance principal above a passive benchmark (JP Morgan GBI-EM Global Diversified Index). NAV for the Fund is only calculated twice a month on the last business day and the 15th (or next business day if the 15th is a non-business day). The ownership interest is only in the units of the Fund, not the underlying holding or securities of the Fund.

Hedge Funds
This represents investments in two Hedge FOF managers. Each FOF manager invests in underlying hedge funds to provide a broadly diversified portfolio. One invests with 10-20 underlying managers/funds to execute its global market strategy. The other invests in 20-40 underlying managers/funds in a relative value mandate. The hedge fund strategy is designed to diversify by manager/fund to reduce single manager/fund risk while offering portfolio diversification and provide a return profile that is uncorrelated to the rest of the assets in the portfolio. The fair values of the investments are determined using the NAV per share (or its equivalent) of the investments. These funds have liquidity restrictions of 3 to 6 months.

Real Assets Strategies
This represents funds that invest in Private Real Estate and Private Real Assets. The objective of the portfolio seeks to provide portfolio diversification, current income, and protection against unanticipated inflation. Real Estate investments are often classified by core or non-core (value-added or opportunistic). The Real Estate strategies deployed include a U.S. focused property strategy (core/core plus) and a global Fund of Funds (FOF) strategy. The global FOF manager invests across Directs, Primaries, and Secondaries. Within Private Real assets, the natural resources investments are deployed through a FOF strategy and may invest in 10-25 underlying relationships as they build a diversified portfolio with exposure to oil, natural gas, agriculture, timber, and other natural resources. The infrastructure managers will invest in direct portfolio companies in communications, transportations, and energy transition sectors. Capital commitments are made to these types of investments and funds are invested through a call down structure. These funds have liquidity restrictions for the life of the investment, 7-10 years. Options for exit are limited to sale on the secondary market. The fair value of the partnership interest is based on NAV provided by the General Partner. The partnership's financial statements are audited annually as of December 31 and the NAV is adjusted quarterly by additional contributions to and distributions from the partnership, the net earnings and losses, and unrealized gains and losses resulting from changes in fair value, as determined by the General Partner.

International Developed Equity Strategies
This represents investments primarily in equity securities of international developed markets (non-U.S. issuers) with the objective of achieving a long-term return above a passive benchmark (MSCI EAFE). The managers implemented are complimentary as one focuses on growth oriented companies and the other has a value focus. Foreign securities are valued on the basis of quotations from the primary market in which they

Note 4 FAIR VALUE MEASUREMENT (CONTINUED)

are traded and translated at each valuation date from the local currency into U.S. dollars using current exchange rates. The Funds may enter into forward foreign currency exchange contracts primarily to hedge against foreign currency exchange rate risks on its non-U.S. dollar-denominated investment securities.

International Emerging Equities

This represents investments within international markets to further diversify the developed market segments by investing in developing markets that have lower correlations with developed economies. The managers implemented are complimentary as one focuses on growth-oriented companies and the other has a value focus. Foreign securities are valued on the basis of quotations from the primary market in which they are traded and translated at each valuation date from the local currency into U.S. dollars using current exchange rates. The Funds may enter into forward foreign currency exchange contracts primarily to hedge against foreign currency exchange rate risks on its non-U.S. dollar-denominated investment securities. The objective of the international emerging equity portfolio is to achieve a long-term return above a passive benchmark (MSCI EM Index).

Core Fixed Income Strategies

This represents investments within U.S. Investment Grade Fixed Income. The primary role of this portfolio is intended to provide income and downside protection to the portfolio in periods of financial market stress. Core fixed income is made up of U.S. Treasuries and liquid credit. The primary role of the U.S. Treasuries portfolio is to provide capital preservation, liquidity, and to increase the diversification of the Plan as a whole. Treasuries and TIPS are passively managed. The primary role of the Liquid Credit strategy is to generate added yield compared to Treasuries over a full market cycle and provide diversification for the Plan. This manager will be well diversified, and may include, but is not limited to, investment grade and non-investment grade corporate debt, emerging market debt, and asset-backed securities. The objective of the Core Fixed Income portfolio is to achieve a long-term return above a passive benchmark (Bloomberg U.S. Aggregate Bond Index).

Absolute Return Strategy

This represents an investment that has an unconstrained nature allowing for broad implementation across global fixed income markets and includes allocations to global interest rates, global credit sectors, securitized assets, emerging market debt, foreign currencies, and derivative markets. In addition, this strategy is a best-ideas and has emphasis on income and downside protection, with little interest rate exposures. The objective of the strategy is to provide a diverse composite of global exposures and targets a return above the 90 Day U.S. Treasury Bill.

High Yield Bond Strategy

This represents a High Yield bond managers that will invest in below investment grade debt instruments issued by domestic corporations. Because of the perceived greater risk of default, these bonds pay a higher yield than investment grade corporate debt. In order to add alpha or reduce volatility, this strategy will invest a small piece of the portfolio in bank loans, which are floating rate securities that typically carry a below investment grade rating. Other non-benchmark sectors may include convertible bonds, preferred equity, and investment grade corporate. The objective of the strategy is to achieve a long-term return above a passive benchmark (ICE BofA High Yield Master II Constrained).

NOTE 4 FAIR VALUE MEASUREMENT (CONTINUED)

U.S. Equity Strategies
This represents Investment strategies that provide broad diversified exposure to the U.S. equity market, in both large and small cap market segments, as well as diversified exposure to different style segments (growth and value). U.S. equity strategies are implemented with passive and active managers. The objective of the U.S. equity portfolio is to achieve a long-term return above a passive benchmark (Russell 3000 Index).

NOTE 5 DEFERRED RETIREMENT OPTION PROGRAM

The Plan offers a program called Deferred Retirement Option Plan (DROP). This is a voluntary benefit program which offers qualified active Participants, who would be entitled to retire and receive benefits, the option to continue working. An individual DROP record is created and is credited with the monthly retirement benefits that would have been paid during the DROP period had the participant actually retired. The record is also credited with the required employee contributions and interest. The DROP record is paid to the employee, in addition to the benefit payment entitled under the defined benefit plan based on the earlier years of service, when the employee eventually retires. Participating members may elect distribution as one lump sum payment, a rollover or in monthly payments. The balance held by the Plan as of June 30, 2023 and 2022 was $14,599,615 and $18,069,639, respectively.

NOTE 6 NET PENSION LIABILITY OF THE COUNTY

The components of the net pension liability of the County at June 30 were as follows:

	2023	2022
Total Pension Liability	$958,519,607	$ 884,799,952
Plan Fiduciary Net Position	(816,272,093)	(754,157,419)
County's Net Pension Liability	$142,247,514	$ 130,642,533
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	85.16 %	85.23 %

Actuarial Assumptions

The total pension liability in the July 1, 2022 actuarial valuation rolled forward to June 30, 2023 was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.50%
Salary Increases	Varies by service, 4.00% to 7.25%, including inflation for Police and 4.00% to 10.00%, including inflation for Fire.
Investment Rate of Return	7.25%, net of pension plan investment expense, including inflation
Mortality	Pub-2010 Safety Employees/Retirees/ Disables/Contingent Survivors Amount Weighted Mortality with generational projection from the 2010 base year using scale MP 2021

The actuarial assumptions used in this valuation, for GASB 67 purposes, were generally based on the 2022 Experience Study covering the period from July 1, 2017 through June 30, 2021. Economic assumptions and the demographic assumptions were updated to reflect the 2017-2021 experience study.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and estimate of arithmetic real rates of return for each major asset class are reviewed no less frequently than every four years.

NOTE 6 NET PENSION LIABILITY OF THE COUNTY (CONTINUED)

Best estimates of geometric real rates of return for each major asset class, included in the Plan's target allocation as of June 30, 2023 (see Note 3), are summarized in the following table:

Asset Class	Long-Term Expected Real Rate of Return
Equities	4.87%
Fixed Income	3.06%
Alternative Investments	6.75%
Real Assets	4.35%

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 employee contributions will be made at the current contribution rate and that the County contributions will be made at rates equal to the difference between total actuarially determined contribution rates and the employee rate. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. 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

As of June 30, 2023

The following presents the net pension liability of the County, calculated using the discount rate of 7.25%, as well as what the County'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)%
County's Net Pension Liability	$ 272,734,264	$ 142,247,514	$ 34,823,220

As of June 30, 2022

The following presents the net pension liability of the County, calculated using the discount rate of 7.25%, as well as what the County'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)%
County's Net Pension Liability	$ 257,066,143	$ 130,642,533	$ 27,342,556

HOWARD COUNTY POLICE AND FIRE EMPLOYEES' RETIREMENT PLAN
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN THE COUNTY'S NET PENSION LIABILITY AND RELATED RATIO
(DOLLAR AMOUNTS IN THOUSANDS)
LAST 10 FISCAL YEARS
(SEE INDEPENDENT AUDITORS' REPORT)

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
TOTAL PENSION LIABILITY										
Service Cost	$ 26,091	$ 25,875	$ 24,446	$ 23,123	$ 22,278	$ 21,109	$ 19,163	$ 18,974	$ 17,708	$ 17,535
Interest	62,587	58,775	56,037	53,578	50,713	46,900	43,426	39,998	36,208	33,630
Changes of Benefit Terms	636	—	—	—	—	—	—	(1,705)	—	—
Differences Between Expected and Actual Experience	16,760	(3,780)	(2,382)	(8,607)	(2,667)	13,530	6,319	7,599	(1,596)	—
Changes of Assumptions	10,707	10,802	5,066	4,770	3,936	—	—	—	16,621	14,989
Benefit Payments, Including Refunds of Member Contributions	(43,061)	(35,133)	(34,634)	(34,320)	(27,572)	(24,755)	(20,422)	(17,890)	(18,941)	(15,679)
Net Change in Total Pension Liability	73,720	56,539	48,533	38,544	46,688	56,784	48,486	46,976	50,000	50,475
Total Pension Liability - Beginning	884,800	828,261	779,728	741,184	694,496	637,712	589,226	542,250	492,250	441,775
Total Pension Liability - Ending (a)	$ 958,520	$ 884,800	$ 828,261	$ 779,728	$ 741,184	$ 694,496	$ 637,712	$ 589,226	$ 542,250	$ 492,250
PLAN FIDUCIARY NET POSITION										
Contributions - Employer	$ 33,885	$ 33,226	$ 31,923	$ 31,105	$ 27,720	$ 26,337	$ 24,729	$ 21,636	$ 22,530	$ 20,822
Contributions - Member	9,287	8,749	8,374	8,184	8,125	7,859	7,387	7,041	7,006	6,526
Net Investment Income	62,545	(78,059)	171,695	24,964	39,639	46,560	55,956	6,459	11,531	54,733
Benefit Payments, Including Refunds of Member Contributions	(43,061)	(35,134)	— (34,634)	(34,321)	(27,571)	(24,755)	(20,421)	(17,889)	(18,941)	(15,679)
Administrative Expense	(541)	(459)	(401)	(413)	(457)	(355)	(344)	(327)	(368)	(271)
Net Change in Plan Fiduciary Net Position	62,115	(71,677)	176,957	29,519	47,456	55,646	67,307	16,920	21,758	66,131
Plan Fiduciary Net Position - Beginning	754,157	825,834	648,877	619,358	571,902	516,256	448,949	432,029	410,271	344,140
Plan Fiduciary Net Position - Ending (b)	$ 816,272	$ 754,157	$ 825,834	$ 648,877	$ 619,358	$ 571,902	$ 516,256	$ 448,949	$ 432,029	$ 410,271
County's Net Pension Liability - Ending (a)-(b)	$ 142,248	$ 130,643	$ 2,427	$ 130,851	$ 121,826	$ 122,594	$ 121,456	$ 140,277	$ 110,221	$ 81,979
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	85.16 %	85.23 %	99.71 %	83.22 %	83.56 %	82.35 %	80.95 %	76.19 %	79.67 %	83.35 %
Covered Payroll	$ 97,370	$ 92,810	$ 90,179	$ 87,868	$ 83,746	$ 81,037	$ 80,814	$ 72,121	$ 70,406	$ 67,169
County's Net Pension Liability as a Percentage of Covered Payroll	146.09 %	140.76 %	2.69 %	148.92 %	145.47 %	151.28 %	150.29 %	194.50 %	156.55 %	122.05 %
Expected Average Remaining Service Years of all Participants	8	9	9	9	9	9	9	10	10	9

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Notes to Schedule:

Benefit changes. The plan was amended to provide all non-management firefighters with 2.5% of average compensation for sick leave credit that results in total credited service exceeding 30 years.

Changes of Assumptions. Pursuant to the most recent Experience Study dated September 15, 2022, the salary increases, base mortality and mortality improvement, retirement rates, termination rates for police only and marriage assumptions were changed.

HOWARD COUNTY POLICE AND FIRE EMPLOYEES' RETIREMENT PLAN
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF COUNTY CONTRIBUTIONS
(DOLLAR AMOUNTS IN THOUSANDS)
LAST 10 FISCAL YEARS
(SEE INDEPENDENT AUDITORS' REPORT)

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Actuarially Determined Contribution	$ 33,300	$ 33,226	$ 30,841	$ 31,105	$ 27,720	$ 26,337	$ 24,729	$ 21,636	$ 22,530	$ 20,822
Contributions in Relation to the Actuarially Determined Contribution	33,885	33,226	31,923	31,105	27,720	26,337	24,729	21,636	22,530	20,822
Contribution Deficiency (Excess)	$ (585)	$ —	$ (1,082)	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Covered Payroll	$ 97,370	$ 92,810	$ 90,179	$ 87,868	$ 83,746	$ 81,037	$ 80,814	$ 72,121	$ 70,406	$ 67,169
Contributions as a Percentage of Covered Payroll	34.80 %	35.80 %	35.40 %	35.40 %	33.10 %	32.50 %	30.60 %	30.00 %	32.00 %	31.00 %

ADC rate for FY 21 and FY 23 was 34.2%.

Notes to Schedule

Valuation Date and Actuarial Assumptions:

The actuarially determined contribution amounts are calculated as of the beginning of the fiscal year (July 1) for the fiscal year immediately following the current fiscal year. Actuarial valuations are performed every year. The assumptions shown below are those used in the 7/1/2021 actuarial valuation to calculate the FY 2023 ADC. Assumptions used to determine contributions in the past may not have been the same.

Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level percent of pay increasing 2.75% per year
Remaining Amortization Period	Remaining amortization periods range from 1 to 15 years.
Asset Valuation Method	5-year smoothed market
Inflation	2.50%
Salary Increases	Varies by service. 4.25% to 7.50%, including inflation for Police and 4.25% to 7.75%, including inflation for Fire.
Investment Rate of Return	7.25%, net of pension plan investment expense including inflation
Retirement Age	Rates vary by participant age and service.
Mortality	RP-2014 Combined Healthy tables with generational projection from 2006 base year using scale MP-2017.
Cost of Living Increases	2.00%

HOWARD COUNTY POLICE AND FIRE EMPLOYEES' RETIREMENT PLAN
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF INVESTMENT RETURNS
LAST 10 FISCAL YEARS
(SEE INDEPENDENT AUDITORS' REPORT)

Fiscal Year Ending	Annual Money-Weighted Rate of Return, Net of Investment Expenses
6/30/2023	8.20 %
6/30/2022	(8.50)%
6/30/2021	25.92 %
6/30/2020	4.10 %
6/30/2019	7.50 %
6/30/2018	8.55 %
6/30/2017	12.18 %
6/30/2016	1.38 %
6/30/2015	2.95 %
6/30/2014	15.62 %