HOWARD COUNTY RETIREMENT PLAN

FINANCIAL STATEMENTS

YEARS ENDED JUNE 30, 2019 AND 2018

HOWARD COUNTY RETIREMENT PLAN
TABLE OF CONTENTS
YEARS ENDED JUNE 30, 2019 AND 2018

INDEPENDENT AUDITORS' REPORT	**1**
MANAGEMENT'S DISCUSSION AND ANALYSIS	**3**
FINANCIAL STATEMENTS	
STATEMENTS OF FIDUCIARY NET POSITION	**6**
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION	**7**
NOTES TO FINANCIAL STATEMENTS	**8**
REQUIRED SUPPLEMENTARY INFORMATION	
SCHEDULES OF CHANGES IN THE COUNTY'S NET PENSION LIABILITY AND RELATED RATIOS	**21**
SCHEDULE OF COUNTY CONTRIBUTIONS	**22**
SCHEDULE OF INVESTMENT RETURNS	**23**

INDEPENDENT AUDITORS' REPORT

Retirement Plan Committee
Howard County Retirement Plan
Howard County, Maryland

Report on the Financial Statements

We have audited the accompanying financial statements of Howard County Retirement Plan (the Plan) as of and for the year ended June 30, 2019 and 2018, and the related notes to the financial statements, which collectively comprise the Plan's basic 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 audits. We conducted our audits 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 audits 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 Plan'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 Plan'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.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the Plan as of June 30, 2019 and 2018, and the respective changes in financial position for the years 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 (MD&A) on pages 3-5, the Schedules of Changes in the County's Net pension Liability and Related Ratios, the Schedules of County Contributions, and the Schedule of Investment Returns on pages 21 through 23 be presented to supplement the basic financial statements. Such information, 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 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 basic financial statements, and other knowledge we obtained during our audits 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, 2019, 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, 2019

Introduction

The Howard County Retirement 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 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.

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.

In 2019, the net position increased $30.4 million or 6.8% to $478.2 million driven by investment income of $32.7 million. Contributions of $18.5 million trailed benefit payments of $19.0 million by $0.5 million. The number of benefit recipients increased to 847, a 6.4% increase over the prior period.

In 2018, the net position increased $37.6 million or 9.2% to $447.8 million driven by investment income of $37.2 million. Contributions of $19.0 million outpaced benefit payments of $16.8 million by $2.2 million. The number of benefit recipients increased to 796, an 8.6% increase over the prior period.

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, 2019 with comparative information as of and for the year ended June 30, 2018. The financial position is comprised of assets, which primarily consist of investments less liabilities, including accounts payable and investment commitments payable.

Investments consist of US 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.

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.

Summary of Financial Information

The following Condensed Statements of Fiduciary Net Position and Changes in Fiduciary Net Position present financial information for the Plan and compares fiscal years 2019, 2018, and 2017.

Assets	2019	2018	2017	2019 Percentage Change	2018 Percentage Change
Receivables	$ 1,821,390	$ 1,728,861	$ 1,824,586	5 %	(5)%
Investments	479,054,578	446,495,212	408,922,644	7 %	9 %
Prepaid Insurance	19,687	19,761	19,750	0 %	0 %
Total Assets	480,895,655	448,243,834	410,766,980	7 %	9 %
Liabilities					
Investment Purchased	2,378,604	167,020	373,017	1324 %	(55)%
Accounts Payable	319,692	317,304	279,078	1 %	14 %
Total Liabilities	2,698,296	484,324	652,095	457 %	(26)%
Net Position Held in Trust for Pension Benefits	$ 478,197,359	$ 447,759,510	$ 410,114,885	7 %	9 %
Additions					
Employer Contributions	$ 14,155,379	$ 14,841,120	$ 14,179,325	(5)%	5 %
Employee Contributions	4,378,114	4,155,758	3,904,407	5 %	6 %
Investment Income	31,355,112	35,807,945	45,446,505	(12)%	(21)%
Total Additions	49,888,605	54,804,823	63,530,237	(9)%	(14)%
Deductions					
Benefit Payments and Refunds	19,012,353	16,809,399	15,378,819	13 %	9 %
Administrative Expense	438,403	350,799	336,066	25 %	4 %
Total Deductions	19,450,756	17,160,198	15,714,885	13 %	9 %
Net Change	30,437,849	37,644,625	47,815,352	(19)%	(21)%
Net Position Held in Trust for Pension Benefits:					
Beginning of Year	447,759,510	410,114,885	362,299,533	9 %	13 %
End of Year	$ 478,197,359	$ 447,759,510	$ 410,114,885	7 %	9 %

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

Asset Class	2019	2018	2017
Equities	5.8 %	13.1 %	21.6 %
Fixed Income	7.9 %	0.1 %	3.7 %
Alternative Investments	11.0 %	11.6 %	9.6 %
Real Assets	3.8 %	20.8 %	6.9 %

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. As of July 1, 2018 and July 1, 2017, the funded ratios for the Plan were 95.8% and 95.2% respectively. Additionally, Plan fiduciary net position as a percentage of the total pension liability as of June 30, 2019 and 2018 is 92.73% and 93.51%, respectively.

The Plan paid $19.0 million in retirement benefits and refunds to participants and beneficiaries during 2019, compared to $16.8 million in 2018 and $15.4 million in 2017.

The Plan received $18.5 million in contributions during 2019, $19.0 million in 2018 and $18.1 million in 2017. In 2019, the County contributed the Actuarially Determined Contribution (ADC) of 11.5%. The County contributed 12.4% in 2018 and 2017 which was more than the ADC of 11.7% and 11.6%, respectively, in order to maintain stability from year to year.

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 www.howardcountymd.gov/Departments/Finance/Financial-Information/Audit-Information.

HOWARD COUNTY RETIREMENT PLAN
STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2019 AND 2018

	2019	2018
ASSETS		
Receivables:		
Employer Contributions	$ 914,183	$ 900,000
Member Contributions	290,277	255,729
Interest and Dividends	529,156	463,927
Due from Sale of Investments	81,133	103,119
Other	6,641	6,086
Total Receivables	1,821,390	1,728,861
Investments:		
Money Market	9,445,607	5,889,213
Equities	201,438,898	194,314,524
Fixed Income	133,992,377	123,475,076
Alternative Investments	117,663,332	107,331,850
Real Assets	16,514,364	15,484,549
Total Investments	479,054,578	446,495,212
Prepaid Insurance	19,687	19,761
Total Assets	480,895,655	448,243,834
LIABILITIES		
Investment Purchased	2,378,604	167,020
Accounts Payable	319,692	317,304
Total Liabilities	2,698,296	484,324
Fiduciary Net Position Held in Trust for Pension Benefits	$ 478,197,359	$ 447,759,510

See accompanying Notes to Financial Statements.

HOWARD COUNTY RETIREMENT PLAN
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
YEARS ENDED JUNE 30, 2019 AND 2018

	2019	2018
ADDITIONS		
Contributions:		
Employer	$ 14,155,379	$ 14,841,120
Member	4,378,114	4,155,758
Total Contributions	18,533,493	18,996,878
INVESTMENT INCOME		
Net Appreciation in Fair Value of Investments	19,695,913	25,822,801
Interest	2,232,787	2,011,702
Dividends	10,691,643	9,324,118
Other, Net	67,972	55,151
Total Investment Income	32,688,315	37,213,772
Less: Investment Expense	1,333,203	1,405,827
Net Investment Income	31,355,112	35,807,945
Total Additions	49,888,605	54,804,823
DEDUCTIONS		
Benefits:		
Annuities	17,701,953	16,120,634
Death	819,736	325,170
Refunds of Contributions	490,664	363,595
Total Benefits	19,012,353	16,809,399
Administrative Expenses	438,403	350,799
Total Deductions	19,450,756	17,160,198
NET CHANGE	30,437,849	37,644,625
Fiduciary Net Position Held in Trust for Pension Benefits:		
Beginning of Year	447,759,510	410,114,885
End of Year	$ 478,197,359	$ 447,759,510

See accompanying Notes to Financial Statements.

NOTE 1 PLAN DESCRIPTION

Plan Administration

The Howard County Retirement Plan (the Plan) is a single-employer defined benefit public employee retirement system established and administered by Howard County, Maryland (the County), to provide defined pension benefits for those County employees who do not participate in other County and State plans. The Plan was established on July 1, 1995, at which time approximately 73% of the County's employees transferred from the State Retirement and Pension Systems of Maryland to the Plan. 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, 2018 and 2017, the Plan's membership consisted of the following:

	2018	2017
Active	1,816	1,803
Retired and Beneficiaries	787	731
Disabled	15	17
Terminated Vested	196	191
Total	2,814	2,742

The Plan was established, is operated, and may be amended under the provisions of the Howard County Code, Sections 1.400 and 1.401 to 1.478. Essentially all of the County's full-time benefited and part-time benefited employees (excluding career firefighters and sworn police officers) are eligible to participate in the Plan, with exceptions provided for in Howard County Code Section 1.406. The Retirement Plan Committee established by Howard County Code Section 1.455 has full power and authority to administer and operate the Plan in accordance with its terms and in particular the authority contained in subsection 1.454(a). The Pension Oversight Commission established by Howard County Code, Section 1.482 provides ongoing assessment and evaluation of the Plan's operations.

Benefits Provided

Under the Retirement Plan, participants become vested after five years of eligibility service and are entitled to a benefit beginning at age 62. If an employee leaves employment or dies before five years of eligibility service, accumulated employee contributions plus interest are refunded to the employee or 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)

Participating general employees with 30 years of eligibility service, regardless of age, or who attain the age of 62 and older, with 2 to 5 years of eligibility service (for a total of 67 years), are entitled to a normal retirement benefit. For creditable service earned prior to June 30, 2012, the benefit is 1.55% of the participant's average compensation times the participant's creditable service; for creditable service after July 1, 2012, the multiplier is 1.66%. The Plan permits early retirement for participants who attain the age of 55 with at least 15 years of Eligibility Service or have 25 years of eligibility service, regardless of age. For early retirement, the benefit is reduced by 0.5% for each month that the benefit begins prior to normal retirement date.

For participating AFSCME Local 3085 the benefit is 1.66% of the participant's average compensation times all years of creditable service.

Participating Corrections employees are entitled to receive a normal retirement benefit of 2.5% of average compensation multiplied by years of creditable service (up to 20 years) plus 1.0% of average compensation multiplied by creditable service greater than 20 years but less than 30 years (excluding sick leave, which is always credited at 1.0% of average compensation). Normal retirement is the attainment of age of 62 and older, with 2 to 5 years of eligibility service (for a total of 67 years), or the completion of 20 years of eligibility service, regardless of age.

Benefits in pay status are adjusted annually for a postretirement 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 3%.

Contributions

The Plan is authorized to establish or amend the obligation to make contributions under the provisions of Sections 1.423 and 1.465 of the Howard County Code. 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 assets to pay benefits when due. Participant contributions are 8.5% of base pay for participating Corrections employees with less than 20 years of creditable service, 0% of base pay for participating Correction employees with greater than 20 years of creditable service and effective January 1, 2014, 3% of base pay for other participants. The County funds the remainder of the cost of employees' participation in the Plan which was 11.5% of covered payroll in fiscal year 2019 and 12.4% in fiscal year 2018. In fiscal year 2018, the County contribution to the Plan was in excess of the actuarially determined contribution which was determined through an actuarial valuation performed at July 1, 2017. 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 consisting of money market funds are reported at amortized cost, which approximates fair value. Securities traded on a national or international exchange are valued at either the last reported sales price, evaluated bid, broker quoted, or pool-specific pricing. The fair value of real estate investments is approximated by the net asset value of the Plan's share of ownership of the co-mingled real estate investment funds. Fair value of other securities is determined by the mean of the most recent bid and asked prices as obtained from dealers that make markets in such securities.

The Plan invests in assets measured at NAV and included private equity, equity hedge, real assets and international equity 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 recorded when the payments are made.

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 30, 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.

Reclassification

Certain amounts in the 2018 financial statements have been reclassified to conform to the 2019 presentation. These reclassifications had no effect on net position, or changes thereto.

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.

The following strategic asset allocation policy was adopted by the Plan on March 21, 2002, last amended on April 25, 2019, and remained in effect as of June 30, 2019:

Asset Class	Target Allocation
Equities	40.0 %
Fixed Income	30.0
Alternative Investments	23.0
Real Assets	7.0
Total	100.0 %

Concentrations

The Plan held investments in the following organizations that represent 5% or more of the pension plan's fiduciary net position: Ballie Gifford (6%), Blackstone (6%), Dodge and Cox (12%), Invesco (6%), LSV (6%), Mondrian (6%), PIMCO (11%), 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, 2019 were as follows:

Investment Type	Fair Value/ NAV	Weighted Average Maturity (in Years)
Corporate Bonds	$ 23,941,275	11.93
U.S. Government - Sponsored Enterprises	18,257,123	25.13
Government Issued/Treasuries	4,955,065	7.04
Other Asset-Backed Securities	2,975,646	22.78
Collateralized Mortgage Obligations	2,162,405	39.77
Municipal Securities	1,024,075	16.40
Commingled Funds and Preferred Stock Identified as Fixed Income for Reporting Purposes	80,676,788	Not available
Total	$ 133,992,377	
Portfolio Weighted Average Maturity of Available Categories		17.82

Standard & Poor's Rating or Comparable	Fair Value
AAA to A-	$ 7,930,243
BBB to BB-	19,854,534
Not rated	106,207,600
Total	$ 133,992,377

The Plan's fixed income investments by maturity and type at June 30, 2018 were as follows:

Investment Type	Fair Value/ NAV	Weighted Average Maturity (in Years)
Corporate Bonds	$ 19,127,952	12.05
U.S. Government - Sponsored Enterprises	14,580,066	23.82
Government Issued/Treasuries	10,509,604	3.82
Collateralized Mortgage Obligations	2,384,152	40.25
Municipal Securities	1,110,743	15.07
Other Asset-Backed Securities	497,173	19.83
Credit Card Receivables	487,780	4.71
Auto Loan Receivable	239,677	8.05
Commingled Funds and Preferred Stock Identified as Fixed Income for Reporting Purposes	74,537,929	Not available
Total	$ 123,475,076	
Portfolio Weighted Average Maturity of Available Categories		15.22

NOTE 3 INVESTMENTS (CONTINUED)

Risks and Uncertainties (Continued)

Interest Rate Risk (Continued)

Standard & Poor's Rating or Comparable	Fair Value
AAA to A-	$ 4,836,152
BBB to BB-	16,627,175
Not rated	102,011,749
Total	$ 123,475,076

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, 2019, the Plan's investments did not exceed 5% with any one issuer other than as identified on page 11.

Custodial Credit Risk

State Street Bank invests in the Government Short-Term Investment Fund (GSTIF), which is included in money markets on the Statements of Fiduciary Net Position, on behalf of the Plan. At fiscal year-end, the amount in this fund at amortized cost which approximates fair value was $8,645,738, which was partially used for settlement of open purchases of $2,378,604. All other investments of the fund are held by State Street Bank as trustee in the Plan's names.

Credit Risk - Currency Forward Contract

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 has participated in a mutual fund that holds three-month currency forward contracts. This strategy is undertaken to protect the dollar value of underlying international investments. The hedging is restricted to 100% of the underlying asset value and 50% of the total Fund value. At fiscal year-end, there were no hedges in place.

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 40.0% at any given time. The Plan was exposed to foreign currency risk through the pools investment in Euro denominated alternative investments. The Pool total of these investments was $17,753,986 and $19,054,279 at June 30, 2019 and June 30, 2018, respectively. The Plan's proportionate share was $7,733,755 and $8,371,239 at June 30, 2019 and June 30, 2018, respectively.

Rate of Return

For the year ended June 30, 2019, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 7.50%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amount actually invested.

NOTE 3 INVESTMENTS (CONTINUED)

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 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.

NOTE 4 FAIR VALUE MEASUREMENT (CONTINUED)

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:

		Fair Value Measurement Using		
	June 30, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant 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)	$ 2,162,405	$ -	$ 2,162,405	$ -
Corporate Bonds	23,941,276	-	23,941,276	-
Commingled Funds (Fixed Income)	50,421,461	-	50,421,461	-
FHLMC and FNMA Bonds	18,257,124	-	18,257,124	-
U.S. Treasury Securities	4,955,065	-	4,955,065	-
Municipal Bonds	1,024,075	-	1,024,075	-
Other Asset Backed Securities	2,975,646	-	2,975,646	-
Preferred Stock	570,873	570,873	-	-
Total Debt Securities	104,307,925	570,873	103,737,052	-
Equity Securities:				
Common Stocks	103,136,946	103,136,946	-	-
Small Company Portfolio	9,935,993	9,935,993	-	-
Emerging Markets Value Portfolio	41,503,083	41,503,083	-	-
Real Estate Investment Trusts (REITS)	1,912,300	1,912,300	-	-
Total Equity Securities	156,488,322	156,488,322	-	-
Total Investment by Fair Value Level	260,796,247	$ 157,059,195	$ 103,737,052	$ -
Investments Measured at the Net Asset Value (NAV):				
Private Equity Funds	64,529,961			
Equity Hedge Funds	53,133,371			
Real Assets Funds	16,514,364			
International Equity Funds	26,363,557			
Commingled fund within International Equities	18,587,019			
Commingled fund within International Fixed Income	19,867,609			
Commingled fund within Domestic Fixed Income	9,816,843			
Total Investments Measured at the NAV	208,812,724			
Total investments Measured at Fair Value*	$ 469,608,971			

* Net of money market funds totaling $9,445,607 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)

		Fair Value Measurement Using		
	June 30, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant 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)	$ 2,384,152	$ -	$ 2,384,152	$ -
Corporate Bonds	19,127,952	-	19,127,952	-
Auto Loan Receivables	239,677	-	239,677	-
Credit Card Receivables	487,780	-	487,780	-
Commingled Funds (Fixed Income)	46,946,295	-	46,946,295	-
FHLMC and FNMA Bonds	14,580,066	-	14,580,066	-
U.S. Treasury Securities	10,509,604	-	10,509,604	-
Municipal Bonds	1,110,743	-	1,110,743	-
Other Asset Backed Securities	497,173	-	497,173	-
Preferred Stock	565,536	565,536	-	-
Total Debt Securities	96,448,978	565,536	95,883,442	-
Equity Securities:				
Common Stocks	98,056,427	98,056,427	-	-
Small Company Portfolio	10,643,039	10,643,039	-	-
Emerging Markets Value Portfolio	57,595,100	57,595,100	-	-
Real Estate Investment Trusts (REITS)	1,749,598	1,749,598	-	-
Total Equity Securities	168,044,164	168,044,164	-	-
Total Investment by Fair Value Level	264,493,142	$ 168,609,700	$ 95,883,442	$ -
Asset Value (NAV):				
Private Equity Funds	55,875,366			
Equity Hedge Funds	51,456,484			
Real Assets Funds	15,484,549			
International Equity Funds	26,270,361			
Commingled Fund within International Fixed Income	17,575,756			
Commingled Fund within Domestic Fixed Income	9,450,341			
Total Investments Measured at the NAV	176,112,857			
Total investments Measured at Fair Value*	$ 440,605,999			

* Net of money market funds totaling $5,889,213 which includes securities that have remaining maturities of less than 1 year and may be measured at amortized cost.

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.

NOTE 4 FAIR VALUE MEASUREMENT (CONTINUED)

he 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 Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Private Equity	$ 64,529,961	$ 19,163,351	Illiquid	N/A
Hedge Fund 1	26,275,212	-	Quarterly	65 days
Hedge Fund 2	26,858,159	-	Semi Annually	95 days
Real Asset Funds	16,514,364	17,173,495	Illiquid	N/A
International Equity Funds	26,363,557	-	Monthly	15 days
Commingled Fund within International Equities	18,587,019	-	Weekly	4 days
Commingled Fund within International Fixed Income	19,867,609	-	Bi-monthly	5 days
Commingled Fund within Domestic Fixed Income	9,816,843	-	Daily	2 days
Total	$ 208,812,724			

1. Private Equity Funds: This represents investments through Fund of Fund (FOF) vehicles and invest in both debt and equity strategies. Exposures are diversified by manager, region, strategy, and vintage year. Managers retained pursue distressed debt, venture, or buyout strategies. This type also includes investment in the private equity secondary market. The FOF investments have 10-40 underlying managers/funds building broad exposures for diversified performance. 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. Capital commitments are made to these types of investments and funds are invested through a call down structure.

2. Equity 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 90-100 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.

3. Real Asset Funds: This represents funds that invest in institutional real estate (office, multi-family, industrial, and retail) and natural resources strategies. The fair values of the investments in these strategies are determined using the NAV per share (or its equivalent) of the Plan’s ownership interest in partnership’s capital. The real estate strategies deployed include a US focused property strategy (core to core plus) and a global FOF strategy. The global FOF manager invests in 20-30 underlying managers/ funds. The natural resources investments are through FOF strategies. The natural resource managers invest in 10-25 underlying relationships as they build a diversified portfolio with exposure to oil, natural gas, agriculture, timber and other natural resources. 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.

NOTE 4 FAIR VALUE MEASUREMENT (CONTINUED)

4. International Equity Funds: This represents investments primarily in value oriented equity securities of international developed markets (non-U.S. issuers; e.g., MSCI EAFE) with the objective of achieving a long-term return above a passive benchmark (EAFE). This manager focuses on a dividend discount model value based philosophy for publicly traded equity. All securities are recorded at fair value. 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 Fund 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.

5. Commingled Fund within International Equities: This represents investments made in predominantly listed large and mega capitalization securities in emerging markets. The objective of this fund is to achieve a long-term return above a passive benchmark (e.g. MSCI EM Index). The manager employs a flexible, research intensive investment approach to own high quality businesses over the long term. NAVs are normally calculated as of 4:00pm Eastern Time for each business day the relevant exchange is open.

6. Commingled Fund within International Fixed Income: This represents investments primarily in a globally diversified portfolio of high quality sovereign bonds and currencies in emerging markets (non U.S. issuers; e.g. MSCI EM). 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 nonbusiness day).

7. Commingled Fund within Domestic Fixed Income: The strategy is managed using an “indexing” investment approach, by which the manager attempts to approximate, before expenses, the performance of the Index (e.g. Bloomberg Barclays U.S. Treasury Inflation Protected Securities Index) over the long term. The manager expects that it will typically seek to replicate Index returns for the Portfolio through investments in the “cash” markets – actual holdings of debt securities and other instruments – rather than through “notional” or “synthetic” positions achieved through the use of derivatives, such as futures contracts or swap transactions (except in the unusual case where the manager believes that use of derivatives is necessary to achieve an exposure that is not readily available through the cash markets). NAVs are normally calculated as of 4:00pm Eastern Time for each business day the relevant exchange is open.

NOTE 5 NET PENSION LIABILITY OF THE COUNTY

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

	2019	2018
Total Pension Liability	$ 515,665,662	$ 478,827,618
Plan Fiduciary Net Position	(478,197,359)	(447,759,510)
County's Net Pension Liability	$ 37,468,303	$ 31,068,108
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	92.73%	93.51%

Actuarial Assumptions

The total pension liability in the July 1, 2018 actuarial valuation rolled forward to June 30, 2019 was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.70%
Salary increases	Varies by service, 3.75% to 6.50%, including inflation
Investment rate of return	7.45%, net of pension plan investment expense, including inflation
Mortality	RP-2014 Combined Healthy tables with generational projection from 2006 base year using scale MP-2017.

The actuarial assumptions used in this valuation, for GASB 67 purposes, were generally based on the 2018 Experience Study covering the period from July 1, 2013 through June 30, 2017. Economic assumptions and the demographic assumptions were updated to reflect the 2013-2017 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 best estimates of arithmetic real rates of return for each major asset class are reviewed every four years.

NOTE 5 NET PENSION LIABILITY OF THE COUNTY (CONTINUED)

Actuarial Assumptions (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, 2019 (see Note 3), are summarized in the following table:

Asset Class	Long-Term Expected Real Rate of Return
Equities	4.93 %
Fixed income	1.91 %
Alternative investments	6.05 %
Real assets	4.59 %

Discount Rate

The discount rate used to measure the total pension liability was 7.45%. 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

The following presents the net pension liability of the County, calculated using the discount rate of 7.45%, 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 (6.45%) or 1 percentage point higher (8.45%) than the current rate:

	1% Decrease (6.45%)	Current Discount Rate (7.45%)	1% Increase (8.45%)
County's Net Pension Liability	$ 106,093,630	$ 37,468,303	$ (19,626,035)

HOWARD COUNTY RETIREMENT PLAN
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN THE COUNTY'S NET PENSION LIABILITY AND RELATED RATIOS
(DOLLAR AMOUNTS IN THOUSANDS)
LAST 10 FISCAL YEARS

	2019	2018	2017	2016	2015	2014*
TOTAL PENSION LIABILITY						
Service Cost	$ 17,330	$ 16,919	$ 15,861	$ 15,093	$ 14,073	$ 12,727
Interest	34,964	32,786	30,959	29,046	27,198	24,974
Changes of Benefit Terms	-	-	-	-	-	3,534
Differences Between Expected and Actual Experience	(5,973)	379	(6,369)	(4,093)	(2,741)	-
Changes of Assumptions	9,529	-	-	-	(851)	10,918
Benefit Payments, Including Refunds of Member Contributions	(19,012)	(16,809)	(15,379)	(13,700)	(12,375)	(11,139)
Net Change in Total Pension Liability	36,838	33,275	25,072	26,346	25,304	41,014
Total Pension Liability - Beginning	478,828	445,553	420,481	394,135	368,831	327,817
Total Pension Liability - Ending (a)	$ 515,666	$ 478,828	$ 445,553	$ 420,481	$ 394,135	$ 368,831
PLAN FIDUCIARY NET POSITION						
Contributions - Employer	$ 14,155	$ 14,841	$ 14,179	$ 13,428	$ 13,967	$ 12,778
Contributions - Member	4,378	4,156	3,904	3,757	3,573	2,979
Net Investment Income	31,355	35,808	45,447	4,743	9,983	45,956
Benefit Payments, Including Refunds of Member Contributions	(19,012)	(16,809)	(15,379)	(13,700)	(12,375)	(11,139)
Administrative Expense	(438)	(351)	(336)	(341)	(311)	(283)
Net Change in Plan Fiduciary Net Position	30,438	37,645	47,815	7,887	14,837	50,291
Plan Fiduciary Net Position - Beginning	447,760	410,115	362,300	354,413	339,576	289,285
Plan Fiduciary Net Position - Ending (b)	$ 478,198	$ 447,760	$ 410,115	$ 362,300	$ 354,413	$ 339,576
County's Net Pension Liability - Ending (a)-(b)	$ 37,468	$ 31,068	$ 35,438	$ 58,181	$ 39,722	$ 29,255
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	92.73%	93.51%	92.05%	86.16%	89.92%	92.07%
Covered Payroll	$ 123,090	$ 119,686	$ 114,349	$ 108,292	$ 103,462	$ 97,542
County's Net Pension Liability as a Percentage of Covered Payroll	30.44%	25.96%	30.99%	53.73%	38.39%	29.99%
Expected Average Remaining Service Years of all Participants	7	7	7	7	7	7

*Information for FY2013 and earlier is not available.

Notes to Schedule:

Benefit changes. None

Changes of assumptions. Based on the recent experience study, the following assumptions were changed: interest rate, post-retirement COLA increases, salary increases, mortality, retirement rates, termination rates and disability rates

HOWARD COUNTY RETIREMENT PLAN
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF COUNTY CONTRIBUTIONS
(DOLLAR AMOUNTS IN THOUSANDS)
LAST 10 FISCAL YEARS

	2019	2018	2017	2016	2015	2014*
Actuarially Determined Contribution[1]	$ 14,155	$ 14,003	$ 13,265	$ 13,428	$ 13,967	$ 12,778
Contributions in Relation to the Actuarially Determined Contribution	14,155	14,841	14,179	13,428	13,967	12,778
Contribution Deficiency (Excess)	$ -	$ (838)	$ (914)	$ -	$ -	$ -
Covered Payroll	$ 123,090	$ 119,685	$ 114,349	$ 108,292	$ 103,462	$ 97,542
Contributions as a Percentage of Covered Payroll	11.50%	12.40%	12.40%	12.40%	13.50%	13.10%

[1] ADC rates for FY18 and FY17 were 11.7% & 11.6%, respectively.

* Information for FY2013 and earlier is not available.

Notes to Schedule

Valuation date:
The actuarial valuation date is the beginning of the fiscal year.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Projected Unit Credit (Entry Age used for GASB 67 purposes)
Amortization method	Level percent of pay increasing 2.75% per year
Remaining amortization period	Remaining Amortization periods range from 4 to 21 years.
Asset valuation method	5-year smoothed market
Inflation	2.70%
Salary increases	Varies by service. 3.75% to 6.50%, including inflation
Investment rate of return	7.45%, before expenses, 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	2.70%

HOWARD COUNTY RETIREMENT PLAN
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF INVESTMENT RETURNS
(DOLLAR AMOUNTS IN THOUSANDS)
LAST 10 FISCAL YEARS

Fiscal Year Ending	Annual Money-Weighted Rate of Return, Net of Investment Expenses
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 %
6/30/2013	11.33 %
6/30/2012	(1.21)%
6/30/2011	20.56 %
6/30/2010	15.42 %