

# Montgomery County Employee Retirement Plans

*Comprehensive Annual Financial Report*



## **Employees' Retirement System Retirement Savings Plan Deferred Compensation Plan** *(Trust Funds of Montgomery County, Maryland)*

**Fiscal Year 2018**  
**July 1, 2017 – June 30, 2018**

Prepared by Montgomery County Employee Retirement Plans  
101 Monroe Street, 15<sup>th</sup> Floor  
Rockville, Maryland 20850



**MONTGOMERY COUNTY  
EMPLOYEE RETIREMENT PLANS  
Fiscal Year Ended June 30, 2018  
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## INTRODUCTION SECTION

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## OFFICES OF THE COUNTY EXECUTIVE

Isiah Leggett  
County Executive

Timothy L. Firestine  
Chief Administrative Officer

October 23, 2018

Honorable County Executive and  
Members of the Montgomery County Council

I am pleased to present to you the Comprehensive Annual Financial Report (CAFR) of the Montgomery County Employee Retirement Plans (Plans) for the fiscal year ended June 30, 2018. This annual report is designed to assist you in understanding the structure and current status of the Plans.

### FORMAL TRANSMITTAL OF THE CAFR

This report was prepared pursuant to the provisions of Section 33-51(b) of the Montgomery County Code, 2004, as amended (Code), and includes the independent auditor's report, issued by the County Council's appointed independent public accounting firm. Responsibility for the accuracy of the presented data and the completeness and fairness of the presentation including all disclosures rests with the County. We believe the data, as presented, is accurate in all material respects; that it is presented in a manner designed to fairly set forth the fiduciary net position and the changes in the fiduciary net position of the Plans; and that all disclosures necessary to enable the reader to gain the maximum understanding of the financial affairs of the Plans have been included.

### PROFILE OF THE RETIREMENT PLANS

#### History

The Employees' Retirement System (System) was established in 1965, as a cost-sharing, multiple-employer defined benefit pension plan providing benefits to the employees of the County and other agencies or political subdivisions who elect to participate. Participating agencies and subdivisions include the following: Montgomery County Revenue Authority; Housing Opportunities Commission of Montgomery County; Town of Chevy Chase; Strathmore Hall Foundation, Inc.; Washington Suburban Transit Commission; Montgomery County Employees Federal Credit Union; and certain employees of the State Department of Assessments and Taxation; and the District Court of Maryland. The System is closed to employees hired on or after October 1, 1994, except public safety bargaining unit employees and Guaranteed Retirement Income Plan (GRIP) participants. The Montgomery County Council passed legislation in FY 2009 enabling the County to establish and maintain a GRIP, a cash balance plan that is part of the System, for employees. During FY 2010, eligible County employees who were members of the Retirement Savings Plan (RSP) were granted the option to elect to participate in the GRIP, to transfer their RSP member account balance to the GRIP, and to cease being a member of the RSP. There were 6,004 active members, including 2,118 in the GRIP, and 6,615 retirees and beneficiaries participating in the System as of June 30, 2018.

The RSP was established in 1994 as a cost-sharing multiple-employer defined contribution plan providing benefits to all non-public safety and certain public safety employees hired on or after October 1, 1994. Employees covered by the System may make an irrevocable decision to transfer to the RSP. At June 30, 2018, there were 3,516 active plan members.

The Deferred Compensation Plan (DCP) was established pursuant to Section 457 of the Internal Revenue Code, as amended. During FY 1999, in accordance with Federal legislation, the assets of the County Plan were placed in trust for the sole benefit of participants and their beneficiaries.

### **Benefit Provisions**

The benefit provisions of the System are established by the Code. The System provides for normal service retirement and early service retirement benefits for members who attain age and service requirements. The System also provides options for disability and death benefits to eligible participants. Members are vested after five years of service.

The RSP provides for immediate vesting of employee contributions, and employer contributions are vested after three years of service or upon death, disability, or reaching retirement age.

### **Major Initiatives**

During FY 2018, the Board implemented an integrated asset allocation approach which categorized investments into growth, risk mitigation, and real asset buckets. The Board's Governance Manual was updated to reflect the ongoing evaluation, monitoring and analysis of Environmental, Social, and Governance (ESG) considerations related to analyzing the investments within the portfolio.

In addition to the above initiatives, the Board continued to implement portfolio adjustments which will result in further diversification of the investment portfolio and better management of the System's risk. Toward this effort, new investments were approved in the following sectors: opportunistic, global equities, private markets.

## **INFORMATION USEFUL IN ASSESSING THE RETIREMENT PLANS' ECONOMIC CONDITION**

### **Financial Information**

#### *Accounting System and Reports*

The Plans' financial statements have been prepared under the accrual basis of accounting. Contributions are recognized in the period in which the contributions are due. Benefits, refunds and distributions are recognized when due in accordance with the terms of the Plans.

#### *Management's Discussion and Analysis*

The Management's Discussion and Analysis (MD&A), found on pages 15 to 19 of this report, provides a brief analysis of the financial performance of the Plans and an introduction to the financial statements of the Plans for the year ended June 30, 2018.

#### *Investments*

Montgomery County has established a Board to be responsible for the investment management of the Plans' assets for the exclusive benefit of the members and participants. The Board consists of thirteen members appointed by the County Executive and confirmed by the County Council.

In overseeing the management of the assets of the Plans, the Board has developed sound and prudent investment policies. The Board believes an appropriate balance must be struck between risks taken and returns sought to ensure the long-term health of the defined benefit plan. The Board has adopted an investment policy that works to control the extent of downside risk to which the System is exposed while maximizing the potential for long-term increases in the value of assets. To achieve this objective, System assets are allocated to a broad array of investment sectors as follows: domestic equities 18.3 percent, private equity/debt 10.0 percent, international equities

14.3 percent, global equities 3.1 percent, fixed income 23.3 percent, inflation indexed bonds 12.1 percent, opportunistic 3.1 percent, private real assets 4.8 percent, and public real assets 11.0 percent. For the twelve months ended June 30, 2018, the total time-weighted return achieved by the System's investments was a gain of 9.1 percent, compared to the gain recorded by the System's benchmark index of 6.9 percent and the actuarial assumed rate of return of 7.5 percent.

Section 33-125 of the Montgomery County Code authorizes the Board to establish for members of the RSP a diversified slate of mutual and commingled investment funds from which participants may select options. The Board has developed an investment policy outlining its oversight of the investment products offered.

The Board has also established a diversified slate of mutual and commingled funds for the County's Deferred Compensation Plan which offers a range of options from which participants may select. The Board has constructed an investment policy stipulating investment objectives and oversight by the Board.

### ***Funding***

The System's actuary uses a five-year smoothed market-related value to determine the actuarial value of assets. The smoothing prevents extreme volatility in employer contribution rates due to short-term fluctuations in the investment markets. For the June 30, 2018 valuation, the actuarial value of assets was \$4.1 billion and the aggregate actuarial liability was \$4.3 billion, resulting in a funded status ratio of 95.7%.

The Schedule of Changes in the Employers' net pension liability and related ratios, included as Required Supplementary Information in the Financial Section, expresses the System's fiduciary net position as a percentage of the total pension liability, providing one indication of the System's funding status on a going-concern basis. The actuary has determined that the present net asset base, expected future contributions, and investment earnings thereon, are sufficient to provide for full payment of future benefits under the entry-age normal actuarial cost method.

### ***Internal Control Structure and Budgetary Controls***

The Plans' management is responsible for maintaining internal accounting controls to provide reasonable assurance that transactions are properly authorized and recorded as necessary to permit preparation of financial statements in conformity with U.S. generally accepted accounting principles. We believe the internal controls in effect during the fiscal year ended June 30, 2018 adequately safeguard the Plans' assets and provide reasonable assurance regarding the proper recording of financial transactions. In addition, the Board, in conjunction with the Chief Administrative Officer, approves and actively monitors the annual budgets for each plan. Because the cost of internal controls should not exceed the anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatement.

### ***Independent Audit and Actuarial Certification***

An independent auditor's report and actuarial certification are included in this report.

## **AWARDS AND ACKNOWLEDGEMENTS**

### **Certificate of Achievement for Excellence in Financial Reporting**

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Montgomery County Employee Retirement Plans for its comprehensive annual financial report for the fiscal year ended June 30, 2017. The Certificate of Achievement is a prestigious national award, recognizing conformance with the highest standards for preparation of state and local government financial reports. In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report, whose



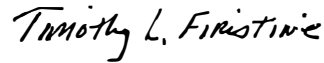
contents conform to program standards. Such a report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. The Montgomery County Employee Retirement Plans have received the Certificate of Achievement for the last eighteen consecutive years. We believe our current comprehensive annual financial report continues to meet the Certificate of Achievement program requirements, and we are submitting it to the GFOA.

**Acknowledgements**

The Plans' CAFR was prepared by the Montgomery County Employee Retirement Plans' staff in conjunction with staff support from the County's Department of Finance. I would like to express my appreciation to the employees who have worked hard throughout the year to ensure the successful operation of the Plans.

Respectfully submitted,



Timothy L. Firestine  
Chief Administrative Officer  
Plan Administrator

## **BOARD OF INVESTMENT TRUSTEES**

### **Brad Stelzer**

Chair

Montgomery County Council Representative

Term Expires March 2021

### **Diane Wurdeman**

Vice Chair

Non-Bargaining Unit Representative

Term Expires March 2020

### **Alexandre A. Espinosa**

Secretary

Montgomery County Director of Finance

Ex-Officio Member

### **Shawn Stokes**

Montgomery County Director

Of Human Resources

Ex-Officio Member

### **Joseph F. Beach**

Public Representative

Term Expires March 2021

### **Jeffrey D. Buddle**

Fire & Rescue Bargaining Unit Designee

### **Marlene Michaelson**

Montgomery County Council Administrator

Ex-Officio Member

### **Jennifer A. Hughes**

Montgomery County Director of

Management and Budget

Ex-Officio Member

### **David J. Locke**

Montgomery County Council

Representative Term Expires March 2020

### **Deborah Snead**

Retired Employees

Representative Term Expires

March 2021

### **Kelda J.C. Simpson**

Police Bargaining Unit Designee

### **George Willie**

Public Representative

Term Expires March 2020

### **Geno Renne**

OPT/SLT Bargaining Unit Designee

## ADMINISTRATIVE ORGANIZATION

### Professional Services

**Actuary**  
Gabriel Roeder Smith & Company

**Auditor**  
CliftonLarsonAllen LLP

**Custodial Bank**  
The Northern Trust Company

### Investment Consultants

Aberdeen Asset Management, Inc.  
Franklin Park

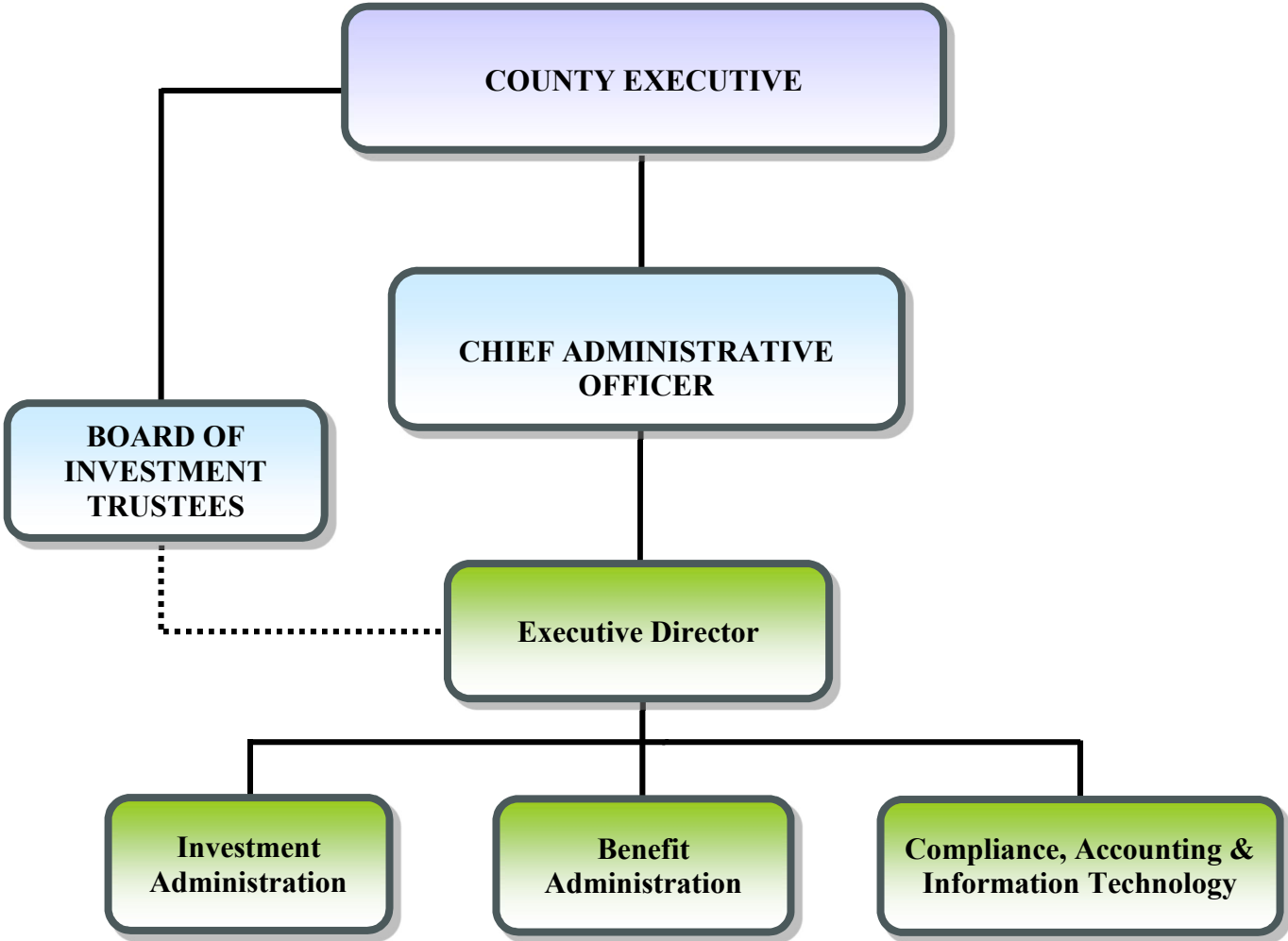
Albourne America, LLC  
Wishire Associates

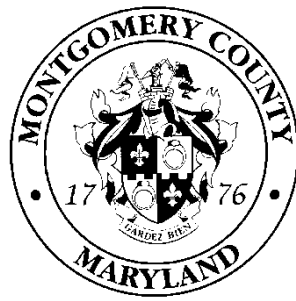
### Investment Managers-Employees' Retirement System

Aberdeen Asset Management, Inc.	Adams Street Partners	AEW Partners
Altaris Capital Partners	Altus Capital Partners	Atlas Capital Resources
Barings	Barrow, Hanley, Mewhinney & Strauss	Bison Capital Partners
BlackRock Financial Management	Bridgewater Associates	BV Investment Partners
Carmel Partners	Castlelake	Center Rock Capital Partners
Chickasaw Capital Management	Clearlake Capital Group	CoreCommodity Management
Davidson Kempner	DW Healthcare Partners	Eagle Asset Management
EMR Capital	EnerVest Ltd.	Federal Capital Partners
First Quadrant LP	Franklin Park	Greyrock Capital Group
Grosvenor Capital Management	Gryphon International	Gryphon Partners
Hampshire Companies	HarbourVest Partners	HBK Capital
Highclere International Investors LLP	Homestead Capital	Hudson Bay Capital Management LP
J.F. Lehman & Company	Jennison Associates	JP Morgan Investment Management
Juniper Capital LP	K1 Investment Management, LLC	Kimmeridge
KPS Capital Partners, LP	Landmark Partners Inc.	LBA Realty
Levine Leichtman Capital Partners	Lime Rock Resources	Loomis Sayles & Co.
Los Angeles Capital Management	Luxor Capital Partners	Lyme Timber Company
Magna Hospitality Group	Marathon Asset Management LLP	Mason Wells
Meridian Realty Partners	MKP Opportunity Partners	Mondrian Investment Partners Ltd.
Morgan Stanley	New Energy Capital	Nomura Asset Management
Odyssey Investment Partners	Pearlmark Real Estate Partners	PineBridge Investments LLC
Pomona Capital	Resource Land Holdings	Rhumblin Advisors
Riverside Partners	Sands Capital Management	Schroder Investment Management
Scopia Capital Management	Senator Investment Group	Siris Capital Group LLC
TA Associates	TA Associates Realty LLC	Tailwater
TC Growth Partners	Thomo Bravo	WCM Investment Management
Wellington Management	Whitehorse Liquidity Partners	Wicks Group
WNG Capital		

\* Public equity commission brokers are listed on page 58.

# Montgomery County Employee Retirement Plans Administrative Organization Chart





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## FINANCIAL SECTION

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## INDEPENDENT AUDITORS' REPORT

The Honorable County Council of Montgomery County, Maryland  
Board of Investment Trustees  
Montgomery County Employee Retirement Plans  
Rockville, Maryland

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

We have audited the accompanying financial statements of the Montgomery County Employee Retirement Plans (the Plans), which comprise the statements of fiduciary net position as of June 30, 2018, and the related statements of changes in fiduciary net position for the year then ended and the related notes to the financial statements, as listed in the table of contents.

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

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

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

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

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

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

### ***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Plans as of June 30, 2018, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

## **Other Matters**

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

### *Other Information*

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Plans' financial statements. The schedules of administrative expenses and investment expenses, the statements of fiduciary net position and changes in fiduciary net position for the Employees' Retirement System, Retirement Savings Plan and the Deferred Compensation Plan (supplementary information) and the introduction, investment, actuarial, and statistical sections, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the financial statements.

The supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information is fairly stated, in all material respects, in relation to the financial statements as a whole.

We also have previously audited, in accordance with auditing standards generally accepted in the United States of America, the Plans' financial statements for the year ended June 30, 2017, which are presented with the accompanying financial statements. That audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Plans' financial statements as a whole. The statements of fiduciary net position as of June 30, 2017, and the related statements of changes in fiduciary net position for the year then ended, are presented for the purposes of additional analysis and are not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the 2017 financial statements. The information has been subjected to the auditing procedures applied in the audit of those financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the statements of fiduciary net position as of June 30, 2017, and the related statements of changes in fiduciary net position for the year then ended are fairly stated in all material respects in relation to the financial statements from which they have been derived.

The introduction, investment, actuarial, and statistical sections, as listed in the table of contents, have not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

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

In accordance with *Government Auditing Standards*, we have also issued our report dated October 23, 2018, on our consideration of the Plans' 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 Plans' 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 Plans' internal control over financial reporting and compliance.

A handwritten signature in cursive script that reads "CliftonLarsonAllen LLP".

**CliftonLarsonAllen LLP**

Baltimore, Maryland  
October 23, 2018



## MANAGEMENT'S DISCUSSION AND ANALYSIS

### INTRODUCTION

The following Management's Discussion and Analysis (MD&A) of the Montgomery County Employee Retirement Plans (Plans) financial performance provides an introduction to the financial statements of the Plans as of and for the year ended June 30, 2018. Since the MD&A is designed to focus on current activities, resulting changes and current known facts, it should be read in conjunction with the transmittal letter in the Introduction Section on page 4, and the financial statements, required supplementary information, and other supplementary information which follow this discussion.

### REQUIRED FINANCIAL STATEMENTS

The financial statements for the Plans have been prepared under the accrual basis of accounting in conformity with U.S. generally accepted accounting principles, promulgated by the Governmental Accounting Standards Board. The Statements of Fiduciary Net Position comprise the Plans' assets and liabilities and provide information about the nature and amount of investments, as well as the liabilities. The Statements of Changes in Fiduciary Net Position report the changes of the Plans' net position, measured by the additions by major sources and deductions by type. Comparative financial statements of the three plans are presented in the latter part of the financial section.

### FINANCIAL ANALYSIS OF THE MONTGOMERY COUNTY EMPLOYEE RETIREMENT PLANS

Shown below is a condensed presentation of the net position of the Employees' Retirement System (ERS), Retirement Savings Plan (RSP), and Deferred Compensation Plan (DCP) at June 30:

Net Position (Millions)						
	ERS		RSP		DCP	
	2018	2017	2018	2017	2018	2017
<b>Assets:</b>						
Cash and investments	\$ 4,283.2	\$ 4,123.6	\$ 444.5	\$ 392.3	\$ 430.3	\$ 389.4
Receivables	24.2	21.1	1.7	1.9	1.1	1.0
<b>Total assets</b>	<b>4,307.4</b>	<b>4,144.7</b>	<b>446.2</b>	<b>394.2</b>	<b>431.4</b>	<b>390.4</b>
<b>Liabilities</b>	158.1	211.2	0.0	0.0	-	-
<b>Total net position</b>	<b>\$ 4,149.3</b>	<b>\$ 3,933.5</b>	<b>\$ 446.2</b>	<b>\$ 394.2</b>	<b>\$ 431.4</b>	<b>\$ 390.4</b>

Shown below is a condensed summary of the changes in net position of the ERS, RSP, and DCP for the years ended June 30:

<b>Change in Net Position</b> (Millions)						
	<b>ERS</b>		<b>RSP</b>		<b>DCP</b>	
	2018	2017	2018	2017	2018	2017
<b>Additions:</b>						
Employer contributions	\$ 93.1	\$ 95.5	\$ 20.3	\$ 19.8	\$ -	\$ -
Member contributions	29.0	27.9	10.8	10.3	20.6	19.5
Net investment income	340.1	413.3	36.6	43.6	43.1	47.6
<b>Total additions</b>	<u>462.2</u>	<u>536.7</u>	<u>67.7</u>	<u>73.7</u>	<u>63.7</u>	<u>67.1</u>
<b>Deductions:</b>						
Benefits	238.9	235.1	-	-	-	-
Refunds	4.6	6.5	15.4	15.2	22.7	25.7
Administrative expenses	2.9	3.2	0.3	0.3	-	-
<b>Total deductions</b>	<u>246.4</u>	<u>244.8</u>	<u>15.7</u>	<u>15.5</u>	<u>22.7</u>	<u>25.7</u>
<b>Total change in net position</b>	<u>\$ 215.8</u>	<u>\$ 291.9</u>	<u>\$ 52.0</u>	<u>\$ 58.2</u>	<u>\$ 41.0</u>	<u>\$ 41.4</u>

The following schedules provide a comparative summary and an analysis of each Plan's assets, liabilities and net position, at June 30:

<b>Employees' Retirement System</b> <b>Net Position</b> (Millions)			
	<u>2018</u>	<u>2017</u>	<u>Percentage</u> <u>Change</u>
<b>Assets:</b>			
Cash and investments	\$ 4,283.2	\$ 4,123.6	3.9 %
Receivables	24.2	21.1	14.7
<b>Total assets</b>	<u>4,307.4</u>	<u>4,144.7</u>	3.9
<b>Liabilities:</b>			
Benefits payable and other liabilities	5.2	5.8	(10.3)
Obligations under securities lending agreements	152.9	205.4	(25.6)
<b>Total liabilities</b>	<u>158.1</u>	<u>211.2</u>	(25.1)
<b>Total net position</b>	<u>\$ 4,149.3</u>	<u>\$ 3,933.5</u>	5.5 %

The table shown above reflects an increase of \$215.8 million, a 5.5 percent increase in the net position for the ERS during fiscal year (FY) 2018, due to the strong investment returns achieved by the Fund.

<b>Retirement Savings Plan</b>			
<b>Net Position</b>			
<b>(Millions)</b>			
	<b>2018</b>	<b>2017</b>	<b>Percentage Change</b>
<b>Assets:</b>			
Cash and investments	\$ 444.5	\$ 392.3	13.3 %
Receivables	1.7	1.9	(10.5)
<b>Total net position</b>	<b>\$ 446.2</b>	<b>\$ 394.2</b>	<b>13.2 %</b>

During FY 2018, the net position increased 13.2 percent to \$446.2 million. The change is due to the strong financial market performance during FY 2018.

<b>Deferred Compensation Plan</b>			
<b>Net Position</b>			
<b>(Millions)</b>			
	<b>2018</b>	<b>2017</b>	<b>Percentage Change</b>
<b>Assets:</b>			
Cash and investments	\$ 430.3	\$ 389.4	10.5 %
Receivables	1.1	1.0	10.0
<b>Total net position</b>	<b>\$ 431.4</b>	<b>\$ 390.4</b>	<b>10.5 %</b>

The net position of the DCP increased 10.5 percent to \$431.4 million during FY 2018. The change is attributable to the strong financial market performance during FY 2018.

## ADDITIONS

The primary sources of additions for the Plans include member and employer (where applicable) contributions and investment income. The following tables compare the source and amount of additions for each Plan during FY 2018 and FY 2017.

<b>Employees' Retirement System</b>			
<b>Contributions and Investment Income</b>			
<b>(Millions)</b>			
	<b>2018</b>	<b>2017</b>	<b>Percentage Change</b>
Employer contributions	\$ 93.1	\$ 95.5	(2.5) %
Member contributions	29.0	27.9	3.9
Net investment income	340.1	413.3	(17.7)
	<b>\$ 462.2</b>	<b>\$ 536.7</b>	<b>(13.9) %</b>

The decrease in the employer contributions is due to the favorable experience versus the actuarial assumptions related to the retiree COLA and investment returns.

Net investment income decreased by 17.7 percent during FY 2018 due to the financial markets being stronger in FY 2017 versus FY 2018.

The net investment income for the ERS totaled \$340.1 million for FY 2018, comprised of \$276.0 million in net appreciation in fair value of investments, \$83.2 million in dividends and interest, \$1.5 million from securities lending activities, and \$20.6 million related to investment expenses. This is compared to net investment income of \$413.3 million in FY 2017. The decrease in investment earnings compared to the previous fiscal year is due to the financial markets being stronger in FY 2017.

<b>Retirement Savings Plan</b>			
<b>Contributions and Investment Income</b>			
(Millions)			
	<u>2018</u>	<u>2017</u>	<u>Percentage Change</u>
Employer contributions	\$ 20.3	\$ 19.8	2.5 %
Member contributions	10.8	10.3	4.8
Net investment income	<u>36.6</u>	<u>43.6</u>	(16.1)
	<u>\$ 67.7</u>	<u>\$ 73.7</u>	(8.1) %

The increase in member contributions in FY 2018 was due to the salary adjustments and increased rollover contributions. The investment income was lower in FY 2018 versus FY 2017 due to the stronger financial market during FY 2017.

<b>Deferred Compensation Plan</b>			
<b>Contributions and Investment Income</b>			
(Millions)			
	<u>2018</u>	<u>2017</u>	<u>Percentage Change</u>
Member contributions	\$ 20.6	\$ 19.5	5.6 %
Net investment income	<u>43.1</u>	<u>47.6</u>	(9.5)
	<u>\$ 63.7</u>	<u>\$ 67.1</u>	(5.1) %

Member contributions to the DCP were \$20.6 million for FY 2018, an increase of 5.6 percent from the FY 2017 level due to the greater rollover contributions compared to the prior fiscal year. Net investment income for the DCP totaled \$43.1 million in FY18 compared to an income of \$47.6 million in the previous fiscal year due to the financial markets being stronger in FY 2017.

## DEDUCTIONS

The primary sources of deductions from the Plans include the payment of retiree and survivor benefits, participant refunds and distributions, and administrative expenses. The following tables show the use and amount of deductions for each plan during FY 2018 and 2017.

<b>Employees' Retirement System</b>			
<b>Deductions by Type</b>			
<b>(Millions)</b>			
	<u>2018</u>	<u>2017</u>	<u>Percentage Change</u>
Benefits	\$ 238.9	\$ 235.1	1.6 %
Refunds	4.6	6.5	(29.2)
Administrative expenses	2.9	3.2	(9.4)
	<u>\$ 246.4</u>	<u>\$ 244.8</u>	0.7 %

During FY 2018, refunds decreased by \$1.9 million or 29.2 percent. Administrative expenses were lower by 9.4 percent primarily due to the operating system of the benefit administration system being fully amortized in FY 2017.

<b>Retirement Savings Plan</b>			
<b>Deductions by Type</b>			
<b>(Millions)</b>			
	<u>2018</u>	<u>2017</u>	<u>Percentage Change</u>
Distributions	\$ 15.4	\$ 15.2	1.3 %
Administrative expenses	0.3	0.3	-
	<u>\$ 15.7</u>	<u>\$ 15.5</u>	1.3 %

The deductions related to the RSP are comprised of distributions and administrative costs. During FY 2018, distributions paid from the RSP increased by 1.3 percent from the FY 2017 level due to increased withdrawals. Administrative expenses remained at the same level as FY 2017.

<b>Deferred Compensation Plan</b>			
<b>Deductions by Type</b>			
<b>(Millions)</b>			
	<u>2018</u>	<u>2017</u>	<u>Percentage Change</u>
Distributions	\$ 22.7	\$ 25.7	(11.7) %

During FY 2018, distributions paid from the DCP decreased by 11.7 percent from the FY 2017 level due to fewer inactive participants electing to withdraw or rollover their account balances compared to FY 2017.

For additional information regarding this report, please contact the Board of Investment Trustees at 240-777-8220.

MONTGOMERY COUNTY EMPLOYEE RETIREMENT PLANS  
STATEMENTS OF FIDUCIARY NET POSITION  
JUNE 30, 2018

	<b>Employees' Retirement System</b>	<b>Retirement Savings Plan</b>	<b>Deferred Compensation Plan</b>
<b>ASSETS</b>			
Equity in County's pooled cash and investments	\$ 2,014,964	\$ 591,684	\$ -
Investments:			
Government and agency obligations	535,053,176	-	-
Municipal/Provincial obligations	8,431,521	-	-
Asset-backed securities	700,355	-	-
Corporate bonds	657,342,966	-	-
Collateralized mortgage obligations	379,768	-	-
Commerical mortgage-backed securities	2,283,013	-	-
Common and preferred stock	1,718,906,869	-	-
Mutual and commingled funds	488,075,929	443,877,730	430,321,129
Short-term investments	106,196,816	-	-
Cash collateral received under securities lending agreements	152,967,307	-	-
Private real assets	198,112,470	-	-
Private equity/debt	412,741,287	-	-
<b>Total investments</b>	<b>4,281,191,477</b>	<b>443,877,730</b>	<b>430,321,129</b>
Dividend, interest, and other receivables	16,824,844	-	-
Contributions receivable	7,425,120	1,726,632	1,094,555
<b>Total assets</b>	<b>4,307,456,405</b>	<b>446,196,046</b>	<b>431,415,684</b>
<b>LIABILITIES</b>			
Payable for collateral received under securities lending agreements	152,967,307	-	-
Benefits payable and other liabilities	5,181,657	44,802	-
<b>Total liabilities</b>	<b>158,148,964</b>	<b>44,802</b>	<b>-</b>
<b>Net position restricted for pensions</b>	<b>\$ 4,149,307,441</b>	<b>\$ 446,151,244</b>	<b>\$ 431,415,684</b>

See accompanying notes to financial statements.

MONTGOMERY COUNTY EMPLOYEE RETIREMENT PLANS  
 STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION  
 FOR THE YEAR ENDED JUNE 30, 2018

	<b>Employees' Retirement System</b>	<b>Retirement Savings Plan</b>	<b>Deferred Compensation Plan</b>
<b>ADDITIONS</b>			
Contributions:			
Employer	\$ 93,163,298	\$ 20,348,143	\$ -
Members	<u>28,964,769</u>	<u>10,800,958</u>	<u>20,574,411</u>
Total contributions	<u>122,128,067</u>	<u>31,149,101</u>	<u>20,574,411</u>
Investment income	359,155,481	36,565,418	43,153,596
Less investment expenses	<u>20,576,087</u>	<u>4,968</u>	<u>-</u>
Net gain from investment activities	<u>338,579,394</u>	<u>36,560,450</u>	<u>43,153,596</u>
Income from securities lending	3,867,343	-	-
Less securities lending expenses	<u>2,362,243</u>	<u>-</u>	<u>-</u>
Net income from securities lending	<u>1,505,100</u>	<u>-</u>	<u>-</u>
Total additions	<u>462,212,561</u>	<u>67,709,551</u>	<u>63,728,007</u>
<b>DEDUCTIONS</b>			
Retiree benefits	178,267,822	-	-
Disability benefits	50,864,259	-	-
Survivor benefits	9,783,701	-	-
Refunds and distributions	4,624,066	15,386,970	22,718,661
Administrative expenses	<u>2,870,683</u>	<u>328,586</u>	<u>-</u>
Total deductions	<u>246,410,531</u>	<u>15,715,556</u>	<u>22,718,661</u>
Net increase	<u>215,802,030</u>	<u>51,993,995</u>	<u>41,009,346</u>
<b>Net position restricted for pensions</b>			
Beginning of year	<u>3,933,505,411</u>	<u>394,157,249</u>	<u>390,406,338</u>
End of year	<u>\$ 4,149,307,441</u>	<u>\$ 446,151,244</u>	<u>\$ 431,415,684</u>

See accompanying notes to financial statements.

**MONTGOMERY COUNTY EMPLOYEE RETIREMENT PLANS  
NOTES TO FINANCIAL STATEMENTS**

YEAR ENDED JUNE 30, 2018

**INTRODUCTION**

The Montgomery County Employee Retirement Plans (Plans) are offered to Montgomery County (County) employees whose eligibility to participate is based on employment status and other factors. Each of the Plans described below was established under a separate section of the Montgomery County Code (Code). The accompanying notes summarize the significant accounting policies and plan provisions for each of the Plans, including the Employees' Retirement System, a defined benefit pension plan; the Retirement Savings Plan, a defined contribution plan; and the Deferred Compensation Plan, a plan established pursuant to Section 457 of the Internal Revenue Code.

**EMPLOYEES' RETIREMENT SYSTEM - Defined Benefit Pension Plan**

The Montgomery County Employees' Retirement System (System or Plan) is considered part of the County's financial reporting entity and is included in the County's basic financial statements as a pension and other employee benefit trust fund. The accompanying financial statements present only the operations of the System in conformity with accounting principles generally accepted in the United States of America (GAAP) applicable to public employee retirement systems. They are not intended to present fairly the financial position and results of operations of the entire County.

The Montgomery County Council passed legislation in FY 2009 enabling the County to establish and maintain a Guaranteed Retirement Income Plan (GRIP), a cash balance plan that is part of the Plan, for employees. During FY 2010 eligible County employees who were members of the Retirement Savings Plan (RSP) were granted the option to elect to participate in the GRIP and to transfer their RSP member account balance to the GRIP and cease being a member of the RSP.

**A. Plan Description and Contribution Information**

*Plan Membership.* At June 30, 2018, the date of the latest actuarial valuation, membership in the System consisted of:

Retirees and beneficiaries receiving benefits	6,615
Terminated plan members entitled to but not yet receiving benefits	489
Active plan members	6,004

*Plan Administration.* The System, a cost-sharing multiple-employer defined benefit pension plan, was established in 1965 and is sponsored by the County. Eight other agencies and political subdivisions have elected to participate. The System is closed to employees hired on or after October 1, 1994, except public safety bargaining unit employees and GRIP participants. All covered full-time employees of the County and participating agencies must become members of the System as a condition of employment. All covered career part-time employees of the County and participating agencies may become members on an individual basis.

*Contributions.* The System is a contributory plan with employees contributing a percentage of their base annual salary. Contribution rates range from 6 percent to 11.25 percent of regular earnings annually based on group classification and contributions earn interest at the rate of 4 percent per annum as specified under Section 33-39(b) of the Code. The County and each participating agency are required to contribute the remaining amounts necessary to fund the System using the actuarial basis as specified in Section 33-40 of the Code. Employee contributions for the Elected Officials' Plan are 4 percent of regular earnings.

The GRIP, as defined in Section 33-35 of the Code, requires non-public safety employees to contribute 4 percent of regular earnings up to the Social Security wage base and 8 percent above the Social Security wage base. Public safety employees are required to contribute 3 percent of regular earnings up to the Social Security wage base and 6 percent above the Social Security wage base. Section 33-40 of the Code requires the County and each participating agency to contribute 8 percent and 10 percent of regular earnings for non-public safety and public safety employees, respectively.



*Benefit Provisions.* Benefit provisions are established under the Code beginning with Section 33-35. All benefits vest at five years of service. There are different retirement groups within the System. Members enrolled before July 1, 1978, belong to either the optional non-integrated group or the optional integrated group. Members enrolled on or after July 1, 1978, belong to the mandatory integrated group. Within the groups are different retirement membership classes. The retirement group assigned depends upon the job classification of the member (i.e., non-public safety, police, fire, sheriffs and correctional staff). Normal and early retirement eligibility, the formula for determining the amount of benefit, and the cost of living adjustment varies depending upon the retirement group and retirement membership class. Normal retirement is a percentage of earnings multiplied by years of credited service. Earnings for optional non-integrated group members and optional integrated group members is defined as the high 12 months and for mandatory integrated plan members, the high 36 months. The percentage of earnings, the maximum years of credited service and the cost of living adjustment varies depending upon the retirement membership class and group. Members who retire early receive normal retirement benefits reduced by a minimum of 2 percent to a maximum of 60 percent depending on the number of years early retirement precedes normal retirement. The System provides options for disability and death benefits to eligible participants. Annual cost-of-living adjustments are provided to retirees and beneficiaries based on the percentage change in the Consumer Price Index.

*Deferred Retirement Option Plans (DROP).* Legislation enacted by the Montgomery County Council in November 1999 required the Chief Administrative Officer of the County to establish Deferred Retirement Option Plans, or DROP Plans, allowing any employee who is a member of a specified membership group or bargaining unit, and who meets certain eligibility requirements, to elect to “retire” but continue to work for a specified time period, during which pension payments are deferred. When the member’s participation in the DROP Plan ends, the member must stop working for the County, draw a pension benefit based on the member’s credited service and earnings as of the date that the member began to participate in the DROP Plan, and receive the value of the DROP Plan payoff. The assets held by the System pursuant to DROP Plans at June 30, 2018 were \$28,804,193.

For members of the GRIP, employee contributions and earnings thereon vest immediately and employer contributions and earnings thereon are vested after three years of service or upon death, disability, or reaching retirement age. At separation, a participant’s benefit is determined based upon the account balance which includes contributions and earnings.

## **B. Summary of Significant Accounting Policies**

*Basis of Accounting.* The System’s financial statements have been prepared under the accrual basis of accounting. Member and employer contributions are recognized in the period in which the contributions are required to be made as specified under the County Code. Benefits and refunds are recognized when due in accordance with the terms of the Plan. The cost of administering the Plan is paid by the System.

*Method Used to Value Investments.* Investments are stated at fair value. The fair value is generally based on quoted market prices at June 30, 2018. Fair value for private investment funds, including private equity, private debt and private real assets, are determined using unit values supplied by the fund managers, which are based upon the fund managers’ appraisals of the funds’ underlying holdings. Such values involve subjective judgment and may differ from amounts which would be realized if such holdings were actually sold. The fair value of limited partnership investments are based on valuations of the underlying assets of the limited partnerships as reported by the general partner. Cash received as collateral on securities lending transactions and investments made with such cash are stated at fair value along with a related liability for collateral received.

*Equity in County’s Pooled Cash and Investments.* The System maintains its short-term cash with the County, which invests cash and allocates interest earned, on a quarterly basis to the System based on the System’s average daily balance of its equity in pooled cash. The County’s policy is to fully collateralize the cash maintained in the pool.

*Accounting Changes.* GASB Statement No. 82, *Pension Issues*, which was adopted during the year ended June 30, 2018. This Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. There was no impact on the System’s financial statements from the implementation of this standard.

### C. Net Pension Liability

The components of the net pension liability of the System as of June 30, 2018, were as follows:

<b>Total Pension Liability (a)</b>	<b>Plan Fiduciary Net Position (b)</b>	<b>Net Pension Liability (a-b)</b>	<b>Plan Fiduciary Net Position as a % of Total Pension Liability (b/a)</b>
\$4,342,327,355	\$4,149,307,441	\$193,019,914	95.55%

Additional information as of the latest actuarial valuation is as follows.

Valuation date	June 30, 2018
Actuarial cost method	Individual Entry Age Normal
Amortization method for funding	Level percentage of payroll, separate closed period bases for Public Safety and GRIP, single closed period amortization base for non-Public Safety.
Amortization period for funding	For Public Safety and GRIP: Initial amortization period of 20 years for the base established July 1, 2015. Initial amortization period of 20 years for subsequent bases. For non-Public Safety: Single closed amortization period of 9 years established July 1, 2015. Average amortization period of 7.0 years for total ERS.
Asset valuation method	Market Value
Actuarial assumptions:	
Investment rate of return	7.50% per year
Projected salary increases depending on service	3.25%-9.50%
Cost-of-living (inflation rate) adjustments	2.75% on the benefit attributable to credited service earned prior to June 30, 2011. 2.3% on the benefit attribution to credited service earned on or after July 1, 2011, reflecting the 2.5% cap.
Post-retirement Increases	Consumer Price Index - by Group
Mortality rates after retirement	RP-2014 Healthy Annuitant Mortality Table, sex-distinct for healthy mortality. Rates are set forward six years for male disabled mortality and eight years for the female disabled mortality assumption. To provide a margin for future mortality improvements, generational mortality improvements from 2014 using projection scale MP-2014 was used.

An experience study was conducted for the period July 1, 2009 to July 1, 2014 in September 2015. The results of the experience study have been incorporated into the financial statements where applicable. An actuarial experience study is conducted every five years.

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. Best estimates of geometric real rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2018 (see the discussion of the System's investment policy) are summarized in the table on the next page:

Asset Class	Long-Term Expected Real Rate of Return
Domestic Equities	4.20 %
International Equities	4.20
Emerging Market Equities	4.20
Global Equities	4.45
Private Equity	5.98
Private Debt	4.70
High Yield Bonds	3.00
Directional Hedge Funds	4.05
Long Duration Fixed Income	1.90
Cash	0.10
Diversifying Hedge Funds	2.99
Global ILs	2.95
Private Real Assets	7.28
Public Real Assets	4.99

*Discount Rate.* The discount rate used to measure the total pension liability was 7.5%. The projection of cash flows to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate and contributions from the County and other participating agencies will be made at contractually required rates, actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

*Sensitivity of the Net Pension Liability to Changes in the Discount Rate.* The following presents the net pension liability of the System calculated using the discount rate of 7.5%, as well as what the System's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current rate:

	1% Decrease 6.50%	Current Discount Rate 7.50%	1% Increase 8.50%
Net pension liability	\$664,799,737	\$193,019,914	\$(213,081,741)

#### **D. Trustees of the Plan**

The County established a Board of Investment Trustees (Board) for the System to be responsible for the investment management of the System's assets for the exclusive benefit of the members. The Board consists of thirteen members appointed by the County Executive and confirmed by the County Council.

#### **E. Investments**

Section 33-61C of the Code, authorizes the Board to act with the care, skill, prudence and diligence under the circumstances that a prudent person acting in a similar capacity and familiar with the same matters would use to conduct a similar enterprise with similar purposes. The Code also requires that such investments be diversified so as to minimize the risk of large losses unless it is clearly not prudent to diversify under the circumstances. The Board has adopted an investment policy that works to control the extent of downside risk to which the System is exposed while maximizing the potential for long term increases in the value of assets. The overall investment policies do not address specific levels of credit risk, interest rate risk or foreign currency risk. The Board believes that risks can be managed, but not eliminated, by establishing constraints on the investment portfolios and by monitoring the financial markets, the System's asset allocation and the investment managers hired by the System. Each investment manager has a specific benchmark and investment guidelines appropriate for the type of investments they are managing.

The following was the Board's adopted asset allocation policy as of June 30, 2018:

<b>Asset Class</b>	<b>Target Allocation</b>
Domestic Equities	12.70 %
International Equities	10.00
Emerging Market Equities	2.50
Global Equities	2.80
Private Equity	12.00
Private Debt	6.00
High Yield Bonds	6.00
Directional Hedge Funds	2.50
<b>Total Growth</b>	<b>54.50</b>
Long Duration Fixed Income	11.00
Cash	1.00
Diversifying Hedge Funds	2.50
<b>Total Risk Mitigation</b>	<b>14.50</b>
Global ILs	12.00
Private Real Assets	12.00
Public Real Assets	7.00
<b>Total Real Assets/Inflation Protection</b>	<b>31.00</b>
<b>Total</b>	<b>100.00 %</b>

*Rate of Return.* The annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, for FY 2018 was 8.60%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

*Fair Value Measurement.* The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level I measurements) and the lowest priority to unobservable inputs (level III measurements).

Level I– Unadjusted quoted prices for identical assets or liabilities in active markets.

Level II – Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets are not active; and model-derived valuations in which all significant inputs are observable.

Level III – Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy. In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The System's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability. The table on the next page shows the fair value leveling of the System's investments.

	6/30/2018	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
		Level I	Level II	Level III
<b>Investments by fair value level</b>				
Debt securities				
Government and agency obligations	\$ 201,371,859	\$ -	\$ 199,341,671	\$ 2,030,188
Municipal/Provincial obligations	8,431,521	-	8,431,521	-
Asset-backed securities	700,355	-	700,355	-
Corporate bonds	603,029,552	-	602,514,949	514,603
Collateralized mortgage obligations	379,768	-	379,768	-
Commercial mortgage-backed securities	2,283,013	-	2,283,013	-
Total debt securities	816,196,068	-	813,651,277	2,544,791
Equity securities				
Consumer goods	212,616,395	210,696,728	1,919,667	-
Energy	84,402,660	83,951,845	419,002	31,813
Financial services	143,531,893	143,200,400	-	331,493
Health care	143,722,601	143,722,601	-	-
Industrials	180,162,471	179,957,624	22,065	182,782
Information technology	175,127,773	175,108,740	-	19,033
Materials	52,469,861	52,466,306	-	3,555
Telecommunication services	6,631,892	6,631,892	-	-
Utilities	29,764,162	29,764,162	-	-
Real Estate	201,677,506	197,627,782	4,049,724	-
Total equity securities	1,230,107,214	\$ 1,223,128,080	\$ 6,410,458	\$ 568,676
Securities lending collateral fund	152,967,307	-	152,967,307	-
Total investments by fair value level	2,199,270,589	\$ 1,223,128,080	\$ 973,029,042	\$ 3,113,467
<b>Investments measured at the net asset value (NAV)</b>				
Commingled equity funds	493,454,751			
Commingled bond funds	389,121,952			
Commingled real asset funds	182,142,247			
Commingled funds (other)	4,771,098			
Hedge funds	294,539,072			
Private real assets	198,112,470			
Private equity/debt	412,741,287			
Total investments measured at the NAV	1,974,882,877			
<b>Investments measured at amortized cost</b>				
Short-term investments	106,196,816			
Total investments measured at amortized cost	106,196,816			
Synthetic guaranteed investments contracts measured at contract value	841,195			
Total investments	\$ 4,281,191,477			
<b>Investment derivative instruments:</b>				
Futures contracts	\$ (9,115,656)	\$ (9,115,656)	\$ -	
Foreign exchange contracts	(489,765)	-	(489,765)	
Total investment derivative instruments	\$ (9,605,421)	\$ (9,115,656)	\$ (489,765)	

Equity securities classified in Level I are valued using prices quoted in active markets for those securities.

Debt securities classified in Level II and Level III are valued using either a bid evaluation, or matrix pricing technique. Bid evaluations may include market quotations, yields, maturities, call features and ratings. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices. Level II debt securities have non-proprietary information that was readily available to market participants, from multiple independent sources, which are known to be actively involved in the market. Level III debt securities use proprietary information or single source pricing. Equity securities classified in Level II are securities whose values are derived daily from associated traded securities. Equity securities classified in Level III are valued with last trade data having limited trading volume. Short-term investments are cash or cash equivalents and generally include investments in money market-type securities reported at cost plus accrued interest, which approximates market or fair value.

The valuation method for investments measured at the net asset value (NAV) per share, or equivalent, is presented in the table below.

**Investments Measured at the NAV**

	<b>Fair Value</b>	<b>Unfunded Commitments</b>	<b>Redemption Frequency</b>	<b>Redemption Notice Period</b>
Commingled equity funds	\$ 493,454,751	\$ -	Daily, Monthly	0-15 days
Commingled bond funds	389,121,952	-	Daily	1-2 days
Commingled real asset funds	182,142,247	-	Daily, Bi-weekly, Monthly	0-5 days
Commingled funds (other)	4,771,098	-	Daily	None
Hedge funds	294,539,072	-	Monthly, Quarterly	5-125 days
Private real assets	198,112,470	116,290,041	Not eligible	N/A
Private equity/debt	412,741,287	160,557,078	Not eligible	N/A
Total investments measured at the NAV	\$ 1,974,882,877	\$ 276,847,119		

*Commingled Bond Funds, Equity Funds and Real Asset Funds.* Five bond funds, six equity funds and four real asset funds are considered to be commingled in nature. The fair value of the investments in these types of funds has been determined using the NAV per share of the investments.

*Hedge Funds.* The fair values of the investments in this type have been determined using the NAV per share of the investments. Nine funds are categorized in this category. All funds in this category could be subject to varying degrees of redemption restrictions based on market conditions that may impact their underlying portfolios.

*Private Real Assets.* The portfolio consists of twenty-eight private real asset limited partnerships. Private real asset funds include U.S. real estate, oil and gas, timber, agriculture and other real asset investments. The fair value of these funds has been determined using the net asset values as of June 30, 2018. Net asset values one quarter in arrears plus current quarter cash flows are used when the most recent information is not available. These funds are not eligible for redemption. Distributions are received as underlying investments within the funds are liquidated, which on average can occur over a span of 5 to 10 years.

*Private Equity/Debt.* The portfolio consists of sixty-one private equity/debt limited partnerships. Private equity funds include buyout, turnaround, fund-of-funds, and growth equity investments. Private debt funds include distressed and structured equity investments. The fair value of these funds has been determined using the net asset values as of June 30, 2018. Net asset values one quarter in arrears plus current quarter cash flows are used when the most recent information is not available. These funds are not eligible for redemption. Distributions are received as underlying investments within the funds are liquidated, which on average can occur over a span of 3 to 10 years.

*Interest Rate Risk.* Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the investment. The Board's investment policies and guidelines manage interest rate risk by establishing duration constraints on each fixed income manager's portfolio based on the duration of each manager's respective benchmark. Duration is a measure of interest rate risk based on a bond price's sensitivity to a 100-basis point change in interest rates. The greater the duration of a bond, or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates and vice-versa. Duration of eight would mean that, given a 100-basis point change up/down in rates, a bond's price would move down/up by 8 percent. As of June 30, 2018, the System's fixed income portfolio had the following sensitivity to changes in interest rates included in the table on the next page:

<b>Type of Investment</b>	<b>Effective Duration in Years</b>	<b>Fair Value</b>	<b>Percentage of Portfolio</b>
U.S. Government Obligations	16.64	\$ 192,675,927	14.71 %
Foreign Government Obligations	5.90	8,695,932	0.66
Collateralized Mortgage Obligations	(0.92)	379,768	0.03
Commercial Mortgage-Backed Securities	2.88	2,283,013	0.17
Municipal/Provincial Obligations	11.71	8,431,521	0.64
Corporate Bonds	7.11	603,029,552	46.06
Asset-Backed Securities	N/A	700,355	0.05
Fixed Income Pooled Funds	N/A	387,994,731	29.63
Short-term Investments and Others *	N/A	105,360,952	8.05
<b>Total Fixed Income Securities</b>		<b>\$ 1,309,551,751</b>	<b>100.00 %</b>

\*Short-term investments consist of U.S. Treasury and government sponsored securities, money market funds, commercial paper, certificates of deposit, repurchase agreements, asset backed securities, notes and bonds issued by U.S. corporations, and other allowable instruments that meet short-term maturity or average life, diversification, and credit quality restrictions.

*Credit Risk/Concentration of Credit Risk.* Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Board's investment policies and guidelines limit the percentage of the total fund and individual manager's account which can be invested in fixed income securities rated below investment grade. In addition, the Board's investment policies and guidelines, for the majority of public fund managers, limit the percentage of each investment manager's account that may be allocated to any one security, position, issuer or affiliated issuer, to less than 5 percent of the fair value of the investment manager's account. The System does not have investments (other than those issued or explicitly guaranteed by the U.S. Government or pooled investments) in any one company that represents 5 percent or more of net assets.

The quality ratings of investments in fixed income securities as described by nationally recognized rating organizations as of June 30, 2018 are as follows:

<b>Type of Investment</b>	<b>Quality Rating</b>	<b>Fair Value</b>	<b>Percentage of Portfolio</b>
U.S. Government Obligations*	AAA	\$ 192,675,927	14.71 %
Foreign Government Obligations	A	3,774,673	0.28
	BBB	1,006,228	0.08
	Unrated	3,915,031	0.30
	BB-	1,216,741	0.09
Commercial Mortgage-Backed Securities	B-	1,066,272	0.08
	Unrated	379,768	0.03
Collateralized Mortgage-Backed Securities	AAA	1,652,767	0.13
	AA	4,922,839	0.38
	BBB	302,835	0.02
	B	1,398,238	0.10
Municipal/Provincial Bonds	Unrated	154,842	0.01
	AAA	6,254,871	0.48
	AA	15,088,726	1.15
	A	86,241,020	6.59
	BBB	134,096,934	10.24
	BB	152,228,419	11.62
	B	129,786,200	9.91
	CCC	48,259,782	3.69
	CC	458,844	0.04
	D	287,275	0.02
Corporate Bonds	Unrated	30,327,481	2.32
	Unrated	700,355	0.05
Asset-Backed Securities	Unrated	700,355	0.05
Fixed Income Pooled Funds	Unrated	387,994,731	29.63
Short-term Investments and others	Unrated	105,360,952	8.05
<b>Total Fixed Income Securities</b>		<b>\$ 1,309,551,751</b>	<b>100.00 %</b>

\*Obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government are not considered to have credit risk and do not have purchase limitations.

*Foreign Currency Risk.* Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. The Board's International Investing Policy's objective is to achieve long-term capital appreciation and current income by investing in diversified portfolios of non-U.S. equities and bonds. The System has indirect exposure to foreign currency risk as of June 30, 2018 as follows:

<b>International Securities</b>	<b>Equity</b>	<b>Fixed Income</b>	<b>Short-term and Other</b>	<b>Total Non-U.S. Dollar</b>
Euro	\$ 175,826,933	\$ -	\$ 6,119,870	\$ 181,946,803
Japanese yen	120,073,179	-	(4,225,468)	115,847,711
British pound sterling	84,083,930	722,682	38,510,383	123,316,995
Hong Kong dollar	42,482,643	-	-	42,482,643
Swiss franc	15,427,661	-	-	15,427,661
Danish krone	15,785,520	-	-	15,785,520
Singapore dollar	14,790,028	-	(40,237,534)	(25,447,506)
Mexican peso	2,500,086	5,930,352	42,039	8,472,477
South Korean won	4,431,886	-	133,595	4,565,481
Swedish krona	16,201,886	-	(63,990,509)	(47,788,623)
Other Currencies	40,361,142	1,393,135	87,592,163	129,346,440
Total International Securities	<u>\$ 531,964,894</u>	<u>\$ 8,046,169</u>	<u>\$ 23,944,539</u>	<u>\$ 563,955,602</u>

*Derivatives.* In accordance with the Board's Statement of Investment Policy and Objectives, the System regularly invests in derivative financial instruments in the normal course of its investing activities to manage exposure to certain risks within the fund. During FY 2018, the System invested directly in various derivatives including exchange-traded futures contracts, forward currency contracts, and swaps. Investment managers are prohibited from purchasing securities on margin or using leverage unless specifically permitted within the investment manager's guidelines. These investments generally contain market risk resulting from fluctuations in interest and currency rates. The credit risk of these investments is associated with the creditworthiness of the related parties to the contracts. The System could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. The Board's Statement of Investment Policy and Objectives seeks to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. In addition, the System has indirect exposure to market and credit risk through its ownership interests in certain mutual and commingled funds which may hold derivative financial instruments. The System is not a dealer, but an end-user of these instruments.

The notional or contractual amounts of derivatives indicate the extent of the System's involvement in the various types of derivative financial instruments and do not measure the System's exposure to credit or market risk and do not necessarily represent amounts exchanged by the parties. The amounts exchanged are determined by reference to the notional amounts and the other terms of the derivatives.

As permitted by the Board's policies, the System holds off-financial statement derivatives in the form of exchange-traded financial futures, and foreign currency exchange contracts.

Futures contracts are contracts in which the buyer agrees to purchase and the seller agrees to make delivery of a specified financial instrument at a predetermined date and price. Gains and losses on futures contracts are settled daily. Futures contracts are standardized and are traded on exchanges. The exchange assumes the risk that a counterparty will not pay. As of June 30, 2018, the System held 231 long US Treasury futures contracts with a fair value of \$30,046,547 and 233 short US Treasury futures contracts with a fair value of (\$39,162,203).

Foreign exchange contracts involve an agreement to exchange the currency of one country for the currency of another country at an agreed-upon price and settlement date. Foreign exchange contracts contain market risk resulting from fluctuations in currency rates. The credit risk is associated with the creditworthiness of the related parties to the contracts. As of June 30, 2018, the System held \$486,662,841 buy foreign exchange contracts and (\$468,375,184) sell foreign exchange contracts. The unrealized loss on the System's contracts was \$(489,765).



*Securities Lending.* Board policy permits the System to lend its securities to broker-dealers and other entities (borrowers) for collateral that will be returned for the same securities in the future. The System's custodian is the agent in lending the System's securities for collateral of 102 percent for domestic and 105 percent for international securities. The custodian receives cash, securities or irrevocable bank letters of credit as collateral. All securities loans can be terminated on demand by either the System or the borrower. Cash collateral received from the borrower is invested by the lending agent, as an agent for the System, in a short-term investment pool in the name of the System, with guidelines approved by the Board. Such investments are considered a collateralized investment pool. The relationship between the maturities of the investment pool and the System's loans is affected by the maturities of securities loans made by other plan entities that invest cash collateral in the investment pool, which the System cannot determine. The System records a liability for the return of the cash collateral shown as collateral held for securities lending in the statement of fiduciary net position. The agent indemnifies the System by agreeing to purchase replacement securities, or return the cash collateral thereof, in the event a borrower fails to return loaned securities or pay distributions thereon. There were no such failures by any borrower during the fiscal year, nor were there any losses during the period resulting from a default of the borrower or lending agent.

As of June 30, 2018, the fair value of securities on loan was \$456,723,618. Cash received as collateral and the related liability of \$152,967,307 as of June 30, 2018, is shown on the Statement of Fiduciary Net Position. Securities received as collateral are not reported as assets since the System does not have the ability to pledge or sell the collateral securities absent borrower default. Securities lending revenues and expenses amounting to \$3,867,343 and \$2,362,243, respectively, have been classified with investment income and investment expenses, respectively, in the accompanying financial statements.

The following represents the balances relating to the securities lending transactions at June 30, 2018:

<b>Securities Lent</b>	<b>Underlying Securities</b>	<b>Non-Cash Collateral Value</b>	<b>Cash Collateral Investment Value</b>
Lent for Cash Collateral:			
Government Obligations	\$ 11,009,518	\$ -	\$ 11,263,121
Corporate Bonds	76,922,872	-	78,810,072
Equities	61,252,430	-	62,894,114
Lent for Non-Cash Collateral:			
Government Obligations	105,960,964	112,857,429	-
Corporate Bonds	4,386,291	4,670,395	-
Equities	197,191,543	209,369,725	-
Total	<u>\$ 456,723,618</u>	<u>\$ 326,897,549</u>	<u>\$ 152,967,307</u>

At year-end, the System has no credit risk exposure to borrowers because the amounts the System owes the borrowers exceeded the amounts the borrowers owe the System. The System is fully indemnified by its custodial bank against any losses incurred as a result of borrower default.

*Custodial Credit Risk.* Custodial credit risk is the risk that, in the event of the failure of the counterparty, the System will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. At June 30, 2018, there were no funds held by a counterparty that was acting as the System's agent in securities lending transactions.

#### **F. Allocated Insurance Contract**

On August 1, 1986, the County entered into an agreement with Aetna Life Insurance Company (Aetna) wherein Aetna accepted future responsibility for monthly payments to all members retired prior to January 1, 1986, in exchange for a lump sum payment. The County is liable for cost of living increases effective January 1, 1986, and later. Monthly payments made under this agreement have not been recognized in the System's financial statements.

## **G. Income Taxes**

The Internal Revenue Service issued a determination letter in October 2016, which stated that the System and its underlying trust qualify under the applicable provisions of the Internal Revenue Code and are exempt from federal income taxes. In the opinion of the plan administrator, the System and its underlying trust have operated within the terms of the System and are qualified under the applicable provisions of the Internal Revenue Code.

## **RETIREMENT SAVINGS PLAN - Defined Contribution Pension Plan**

The Montgomery County Retirement Savings Plan (Plan) is considered part of the County's financial reporting entity and is included in the County's basic financial statements as a pension and other employee benefit trust fund. The accompanying financial statements present only the operations of the Plan in conformity with GAAP. They are not intended to present fairly the financial position and results of operations of the entire County.

The Montgomery County Council passed legislation in FY 2009 enabling the County to establish and maintain a Guaranteed Retirement Income Plan (GRIP), a cash balance plan that is part of the Employees' Retirement System, for employees. During FY 2010, eligible County employees who were members of the Retirement Savings Plan (Plan) were granted the option to elect to participate in the GRIP and to transfer their Plan member account balance to the GRIP and cease being a member of the Plan.

### **A. Plan Description and Contribution Information**

*Membership.* At June 30, 2018 membership in the Plan consisted of:

Active plan members	3,516
Inactive plan members	1,013

*Plan Description.* The Plan, a cost-sharing multiple-employer defined contribution plan, was established in 1994 and is sponsored by the County. Eight other agencies or political subdivisions have elected to participate. All non-public safety and certain public safety employees not represented by a collective bargaining agreement and hired on or after October 1, 1994 are covered by the Plan unless they elect to participate in the GRIP. Eligible employees covered by the Montgomery County Employees' Retirement System may make an irrevocable decision to transfer to this Plan.

*Contributions.* For fiscal year 2018, under Section 33-116 of the Code, the Plan required non-public safety employees to contribute 4 percent of regular earnings up to the Social Security wage base and 8 percent above the Social Security wage base. Public safety employees are required to contribute 3 percent of regular earnings up to the Social Security wage base and 6 percent above the Social Security wage base. Section 33-117 of the Code requires the County and each participating agency to contribute 8 percent and 10 percent of regular earnings for non-public safety and public safety employees, respectively. In accordance with IRS regulations and the County Code, \$300,000 in accumulated revenue was used to reduce employer contributions in FY 2018.

*Benefit Provisions.* Employee contributions and earnings thereon vest immediately and employer contributions and earnings thereon are vested after three years of service or upon death, disability, or reaching retirement age. Members are fully vested upon reaching normal retirement (age 62) regardless of years of service. At separation, a participant's benefit is determined based upon the account balance which includes contributions and investment earnings.

### **B. Summary of Significant Accounting Policies**

*Basis of Accounting.* The Plan's financial statements have been prepared under the accrual basis of accounting. Member contributions are recognized in the period in which the contributions are required to be made as specified in the County Code. Benefits, refunds and distributions are recognized when due in accordance with the terms of the Plan. The cost of administering the Plan is paid by the County and participating agencies.

*Method Used to Value Investments.* Investments are stated at fair value. The fair value is based on net asset value or quoted market prices at June 30, 2018.

*Equity in County's Pooled Cash and Investments.* The Plan maintains its short-term cash with the County, which invests cash and allocates interest earned, on a quarterly basis to the Plan based on the Plan's average daily balance of its equity in pooled cash. The County's policy is to fully collateralize the cash maintained in the pool.

### C. Trustees of the Plan

The County established a Board of Investment Trustees (Board) for the RSP to oversee the investment program. The Board consists of thirteen members appointed by the County Executive and confirmed by the County Council.

### D. Investments

Section 33-125 of the Code authorizes the Board to establish a diversified slate of mutual and commingled investment funds from which participants may select an option. The Board exercises the Standard of Care as delineated in Section 33-61 of the Code. As of June 30, 2018, the fair value of the mutual and commingled investment funds was \$443,877,730, of which \$107,694,963 was invested in international mutual funds.

*Fair Value Measurement.* The Plan categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level I measurements) and the lowest priority to unobservable inputs (level III measurements).

Level I– Unadjusted quoted prices for identical assets or liabilities in active markets.

Level II – Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets are not active; and model-derived valuations in which all significant inputs are observable.

Level III – Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy. In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The Plan’s assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability. The table below shows the fair value leveling of the Plan’s investments.

	6/30/2018	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Level I	Significant Other Observable Inputs Level II	Significant Unobservable Inputs Level III
<b>Investments by fair value level</b>				
Equity securities - self directed	\$ 6,557,005	\$ 6,557,005	\$ -	\$ -
<b>Total investments by fair value level</b>	<b>6,557,005</b>	<b>\$ 6,557,005</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Investments measured at the net asset value (NAV)</b>				
Commingled equity funds	75,055,160			
Commingled bond funds	10,991,603			
Commingled funds (other)	342,574,751			
<b>Total investments measured at the NAV</b>	<b>428,621,514</b>			
Commingled Fund - Synthetic guaranteed investments contracts measured at contract value	8,699,211			
<b>Total investments</b>	<b>\$ 443,877,730</b>			

Equity securities classified in Level I are valued using prices quoted in active markets for those securities.

The valuation method for investments measured at the net asset value (NAV) per share, or equivalent, is presented in the table below.

**Investments Measured at the NAV**

	<b>Fair Value</b>	<b>Unfunded Commitments</b>	<b>Redemption Frequency</b>	<b>Redemption Notice Period</b>
Commingled equity funds	\$ 248,900,084	\$ -	Daily	None
Commingled bond funds	38,175,289	-	Daily	None
Commingled funds (other)	84,828,202	-	Daily	None
<b>Total investments measured at the NAV</b>	<b>\$ 371,903,575</b>	<b>\$ -</b>		

*Commingled Bond Funds, Equity Funds and Other Funds.* Five bond funds and eleven equity funds are considered commingled in nature. Other commingled funds include eleven life cycle funds and one other fund. The fair value of the investments in these types of funds have been determined using the NAV per share of the investments.

**E. Income Taxes**

The Internal Revenue Service issued a determination letter in October 2016, which stated that the Plan and its underlying trust qualify under the applicable provisions of the Internal Revenue Code and are exempt from federal income taxes. In the opinion of the plan administrator, the Plan and its underlying trust have operated within the terms of the Plan and are qualified under the applicable provisions of the Internal Revenue Code.

## **DEFERRED COMPENSATION PLAN**

During FY 2005, the Montgomery County Council passed legislation enabling the County to establish and maintain one or more additional deferred compensation plans for employees covered by a collective bargaining agreement. All County non-represented employees, those County represented employees who elected to participate, and employees who were retired at the time of transfer, continue to participate in the Montgomery County Deferred Compensation Plan administered by the County (the County Plan). County represented employees who elected and all represented employees hired after March 1, 2005 participate in the newly created Montgomery County Union Employees Deferred Compensation Plan (the Union Plan) administered by the bargaining units. The purpose of these Plans is to extend to employees deferred compensation plans pursuant to Section 457 of the Internal Revenue Code of 1986, as amended.

The accompanying financial statements present only the operations of the County Plan in conformity with GAAP. They are not intended to present fairly the financial position and results of operations of the entire County. The assets of the Union Plan are not included in the accompanying financial statements since neither the County nor the Board of Investment Trustees (Board) have fiduciary or other responsibility for the Union Plan except as required by federal law, including any regulation, ruling, or other guidance issued under law.

### **A. Plan Description and Contribution Information**

*Plan Description.* During 1999, in accordance with Federal legislation, the assets were placed in Trust for the sole benefit of participants and their beneficiaries. Trust responsibilities for the County Plan are assigned to the Board. The Board has a third-party administrator contract to provide investment vehicles and administrative services to plan participants. Under the County Plan, contributions are sent to the providers for different types of investments as selected by the participants. A separate account, which reflects the monies deferred, investment of the monies, and related investment earnings is maintained for each participant by the third-party administrator. Withdrawals are made upon retirement, termination of employment, death, and/or in unforeseeable emergencies.

*Plan Contributions.* In accordance with Section 457 of the IRC, the Plan limits the amount of an employee's annual contributions to an amount not to exceed the lesser of \$18,000 in 2017 and \$18,500 in 2018 or 100% of the employee's eligible compensation. The Plan also provides certain catch-up contribution provisions for participants age 50 or older and for participants within three years of their normal retirement age. Amounts contributed by employees are deferred for federal and state income tax purposes until benefits are paid to the employees. Under Section 33-11 of the County Code, all eligible employees hired after July 1, 2008 are automatically enrolled in the Plan with a 1% contribution unless they elect out within 60 days from the date of hire. If they do not opt out of the Plan within 60 days from the date of hire, they begin making a contribution equivalent to 1% of their salary.

### **B. Summary of Significant Accounting Policies**

*Basis of Accounting.* The County Plan's financial statements have been prepared under the accrual basis of accounting. Member contributions are recognized in the period in which the contributions are made. Distributions are recognized when paid in accordance with the terms of the County Plan, and administrative costs are recognized as incurred.

*Method Used to Value Investments.* Investments are stated at fair value. The fair value is based on net asset value or quoted market prices at June 30, 2018.

### **C. Trustees of the Plan**

The County established a Board to oversee the investment program of the County Plan. The Board consists of thirteen members appointed by the County Executive and confirmed by the County Council.

### **D. Investments**

The Board is required to establish a diversified slate of mutual and commingled funds from which participants may select investment options. The Board exercises the Standard of Care as delineated in Section 33-61 of the Code. As of June 30, 2018, the fair value of the mutual and commingled investment funds was \$430,321,129, of which \$64,877,214 was invested in international mutual funds.

*Fair Value Measurement.* The Plan categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level I measurements) and the lowest priority to unobservable inputs (level III measurements).

Level I– Unadjusted quoted prices for identical assets or liabilities in active markets.

Level II – Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets are not active; and model-derived valuations in which all significant inputs are observable.

Level III – Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy. In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The Plan’s assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability. The table below shows the fair value leveling of the Plan’s investments.

	6/30/2018	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
		Level I	Level II	Level III
<b>Investments by fair value level</b>				
Equity securities - self directed	\$ 12,109,724	\$ 12,109,724	\$ -	\$ -
Total investments by fair value level	12,109,724	\$ 12,109,724	\$ -	\$ -
<b>Investments measured at the net asset value (NAV)</b>				
Commingled equity funds	248,900,084			
Commingled bond funds	38,175,289			
Commingled funds (other)	84,828,202			
Total investments measured at the NAV	371,903,575			
Commingled Fund - Synthetic guaranteed investments contracts measured at contract value	46,307,830			
Total investments	\$ 430,321,129			

Equity securities classified in Level I are valued using prices quoted in active markets for those securities.

The valuation method for investments measured at the net asset value (NAV) per share, or equivalent, is presented in the table below.

#### Investments Measured at the NAV

	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Commingled equity funds	\$ 248,900,084	\$ -	Daily	None
Commingled bond funds	38,175,289	-	Daily	None
Commingled funds (other)	84,828,202	-	Daily	None
Total investments measured at the NAV	\$ 371,903,575	\$ -		

*Commingled Bond Funds, Equity Funds and Other Funds.* Five bond funds and eleven equity funds are considered to be commingled in nature. Other commingled funds include eleven life cycle funds and one other fund. The fair value of the investments in these types of funds have been determined using the NAV per share of the investments.





## REQUIRED SUPPLEMENTARY INFORMATION

Historical trend information about the Employees' Retirement System (System) defined benefit pension plan is presented below as required supplementary information. This information is intended to help users assess the System's funding status on a going-concern basis, assess progress made in accumulating assets to pay benefits when due, and make comparisons with other public employee retirement systems.

### SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

Fiscal year ending June 30,	2018	2017	2016	2015	2014
<b>Total Pension Liability</b>					
Service Cost	\$ 74,269,457	\$ 71,688,228	\$ 70,847,993	\$ 74,984,370	\$ 70,019,055
Interest on the Total Pension Liability	314,427,728	307,446,425	300,076,908	291,040,049	281,988,785
Benefit Changes	-	-	-	3,626,601	-
Difference between Actual and Expected Experience	(78,304,829)	(44,766,772)	(34,032,308)	602,431	-
Assumption Changes	-	-	-	(12,706,870)	-
Benefit Payments	(238,915,782)	(235,124,234)	(230,695,791)	(230,646,729)	(229,664,720)
Refunds	(4,624,066)	(6,473,277)	(5,887,137)	(2,874,357)	(4,329,834)
<b>Net Change in Total Pension Liability</b>	<b>66,852,508</b>	<b>92,770,370</b>	<b>100,309,665</b>	<b>124,025,495</b>	<b>118,013,286</b>
<b>Total Pension Liability - Beginning</b>	<b>4,275,474,847</b>	<b>4,182,704,477</b>	<b>4,082,394,812</b>	<b>3,958,369,317</b>	<b>3,840,356,031</b>
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 4,342,327,355</b>	<b>\$ 4,275,474,847</b>	<b>\$ 4,182,704,477</b>	<b>\$ 4,082,394,812</b>	<b>\$ 3,958,369,317</b>
<b>Plan Fiduciary Net Position</b>					
Contributions - Employer	\$ 93,163,298	\$ 95,398,957	\$ 134,806,256	\$ 151,301,867	\$ 144,709,675
Contributions - Member	28,964,769	27,940,416	27,056,040	26,627,493	26,462,839
Net Investment Income	340,084,494	413,346,704	57,676,057	67,070,433	534,397,733
Benefit Payments	(238,915,782)	(235,124,234)	(230,695,791)	(230,646,729)	(229,664,720)
Refunds	(4,624,066)	(6,473,277)	(5,887,137)	(2,874,357)	(4,329,834)
Administrative Expenses	(2,870,683)	(3,185,769)	(3,014,055)	(2,684,560)	(2,953,807)
Other	-	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>215,802,030</b>	<b>291,902,797</b>	<b>(20,058,630)</b>	<b>8,794,147</b>	<b>468,621,886</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>3,933,505,411</b>	<b>3,641,602,614</b>	<b>3,661,661,244</b>	<b>3,652,867,097</b>	<b>3,184,245,211</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 4,149,307,441</b>	<b>\$ 3,933,505,411</b>	<b>\$ 3,641,602,614</b>	<b>\$ 3,661,661,244</b>	<b>\$ 3,652,867,097</b>
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>193,019,914</b>	<b>341,969,436</b>	<b>541,101,863</b>	<b>420,733,568</b>	<b>305,502,220</b>
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>					
	95.55%	92.00%	87.06%	89.69%	92.28%
<b>Covered Payroll</b>	<b>\$ 467,974,450</b>	<b>\$ 444,274,516</b>	<b>\$ 427,622,475</b>	<b>\$ 418,728,584</b>	<b>\$ 402,899,096</b>
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	<b>41.25%</b>	<b>76.97%</b>	<b>126.54%</b>	<b>100.48%</b>	<b>75.83%</b>

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

## SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ended June 30	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2009	\$ 109,567,014	\$ 109,567,014	\$ -	\$ 376,895,171	29.07 %
2010	113,957,784	113,957,784	-	431,226,155	26.43
2011	109,343,933	109,343,933	-	405,336,529	26.98
2012	107,855,595	107,855,595	-	398,460,248	27.07
2013	127,887,620	127,887,620	-	395,988,026	32.30
2014	144,709,675	144,709,675	-	402,899,096	35.92
2015	151,301,867	151,301,867	-	418,728,584	36.13
2016	134,806,256	134,806,256	-	427,622,475	31.52
2017	95,398,957	95,398,957	-	444,274,516	21.47
2018	93,163,298	93,163,298	-	467,974,450	19.91

### NOTES TO SCHEDULE OF EMPLOYER CONTRIBUTIONS

**Valuation Date:** July 1, 2017  
**Notes:** Actuarially determined contribution rates are calculated 24 months prior to the end of the fiscal year in which contributions are reported.

**Methods and Assumptions Used to Determine Contribution Rates:**

Actuarial Cost Method	Individual Entry Age Normal
Amortization Method	Level percentage of pay, separate closed period bases
Remaining Amortization Period	Initial amortization period of 20 years for the base established July 1, 2015. Initial amortization period of 20 years for subsequent bases. Average remaining amortization period of 10.0 years as of July 1, 2017.
Asset Valuation Method	5-year smoothed market
Inflation	2.75% per year
Salary Increases	3.25%-9.50%
Investment Rate of Return	7.50% per year
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition and years of service. Last updated for the 2015 valuation pursuant to an experience study of the period 2009-2014.
Mortality	RP-2014 Healthy Annuitant Mortality Table, sex-distinct for healthy mortality. Rates are set forward six years for the male disabled mortality and eight years for the female disabled mortality assumption. To provide a margin for future mortality improvements, generational mortality improvements from 2014 using projection scale MP-2014 was used.

**Other Information:**

**Notes:** Effective July 1, 2015, a DROP was implemented for eligible uniformed correctional officers and sworn deputy sheriffs participating in Group E. Effective July 1, 2015, updated actuarial assumptions were used in the valuation, which first affect fiscal year 2017 contributions and are summarized above.

Amortization Period (beginning with the valuation as of July 1, 2015): For Public Safety and GRIP: Initial amortization period of 20 years for the base established July 1, 2015. Initial amortization period of 20 years for subsequent bases. For non-Public Safety: Single closed amortization period of nine years established July 1, 2015.

**SCHEDULE OF INVESTMENT RETURNS**

Fiscal year ending June 30	2018	2017	2016	2015	2014
Annual money weighted rate of return, net of investment expenses	8.60%	11.65%	1.42%	2.19%	16.95%

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

SCHEDULE OF ADMINISTRATIVE EXPENSES  
EMPLOYEES' RETIREMENT SYSTEM  
FOR THE YEAR ENDED JUNE 30, 2018

Personnel Services:	
Salaries and wages	\$ 1,330,546
Retirement contributions	83,186
Insurance	112,530
Social security	91,010
Total personnel services	<u>1,617,272</u>
Professional Services:	
Actuarial	168,837
Independent public accountants	31,320
Outside legal	74,566
Computer technical support	147,811
Other professional services	8,444
Temporary	15,623
Total professional services	<u>446,601</u>
Benefit Processing:	
Disbursement services	35,312
Recordkeeping services	108,739
Disability management	538,364
Total benefit processing	<u>682,415</u>
Due diligence and continuing education	<u>32,072</u>
Office Management:	
Office equipment and supplies	91,173
Miscellaneous	1,150
Total office management	<u>92,323</u>
Total administrative expenses	<u>\$ 2,870,683</u>

SCHEDULE OF INVESTMENT EXPENSES  
EMPLOYEES' RETIREMENT SYSTEM  
FOR THE YEAR ENDED JUNE 30, 2018

Investment Management Expenses:	
Aberdeen Asset Management Inc	\$ 556,450
Barings	466,548
Barrow Hanley Mewhinney & Strauss LLC	583,203
BlackRock Financial Management	147,538
Bridgewater Associates	5,417,637
Chickasaw Capital Management LLC	218,827
CoreCommodity Management LLC	165,998
Eagle Asset Management	620,238
First Quadrant L.P.	362,009
Gryphon International Investment	896,882
Highclere	728,426
Institutional Limited Partners Association	2,500
Jennison Associates LLC	539,383
JP Morgan Investment Management	367,164
Los Angeles Capital Management	629,838
Loomis Sayles	949,020
Marathon	1,119,715
Mondrian Investment Partners Ltd.	761,084
Morgan Stanley Investment Management Inc	97,870
Nomura Asset Management	1,028,734
RhumbLine Advisors	16,285
Sands Capital Management	781,981
Schroder Investment Management North America Inc.	379,388
WCM	355,928
Wellington Management	671,485
Wellington Trust Company	363,654
The Northern Trust Company	463,725
Abel Noser Corp.	5,000
Aetna Life Insurance Company	2,566
Albourne America LLC	400,000
Bloomberg Financial Systems	17,976
Aberdeen Asset Management, Inc.	561,550
Franklin Park	541,654
MSCI	11,500
Wilshire Associates	344,333
	<hr/>
Total investment management expenses	20,576,087
	<hr/>
Securities lending borrower rebates	2,096,956
Securities lending agent fees	265,287
	<hr/>
Total securities lending expenses	2,362,243
	<hr/>
Total investment expenses	\$ 22,938,330
	<hr/>

EMPLOYEES' RETIREMENT SYSTEM  
STATEMENTS OF FIDUCIARY NET POSITION  
JUNE 30, 2018 AND 2017

	<b>2018</b>	<b>2017</b>
<b>ASSETS</b>		
Equity in County's pooled cash and investments	\$ 2,014,964	\$ 86,255
Investments:		
Government and agency obligations	535,053,176	494,936,771
Municipal/Provincial bonds	8,431,521	8,802,535
Asset-backed securities	700,355	575,265
Corporate bonds	657,342,966	652,601,536
Collateralized mortgage obligations	379,768	938,220
Commercial mortgage-backed securities	2,283,013	1,636,717
Common and preferred stock	1,718,906,869	1,683,366,447
Mutual and commingled funds	488,075,929	444,710,885
Short-term investments	106,196,816	101,410,350
Cash collateral received under securities lending agreements	152,967,307	205,422,910
Private real assets	198,112,470	191,725,989
Private equity/debt	412,741,287	337,417,190
Total investments	<u>4,281,191,477</u>	<u>4,123,544,815</u>
Dividend, interest, and other receivables	16,824,844	14,113,462
Contributions receivable	<u>7,425,120</u>	<u>7,025,652</u>
Total assets	<u>4,307,456,405</u>	<u>4,144,770,184</u>
<b>LIABILITIES</b>		
Payable for collateral received under securities lending agreements	152,967,307	205,422,910
Benefits payable and other liabilities	<u>5,181,657</u>	<u>5,841,863</u>
Total liabilities	<u>158,148,964</u>	<u>211,264,773</u>
<b>Net Position restricted for pensions</b>	<u>\$ 4,149,307,441</u>	<u>\$ 3,933,505,411</u>

EMPLOYEES' RETIREMENT SYSTEM  
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEARS ENDED JUNE 30, 2018 AND 2017

	<b>2018</b>	<b>2017</b>
<b>ADDITIONS</b>		
Contributions:		
Employer	\$ 93,163,298	\$ 95,398,957
Members	<u>28,964,769</u>	<u>27,940,416</u>
Total contributions	<u>122,128,067</u>	<u>123,339,373</u>
Investment Income:		
Net appreciation in fair value of investments	275,945,858	351,866,186
Dividends and interest	<u>83,209,623</u>	<u>78,385,466</u>
Total income from investment activities	<u>359,155,481</u>	<u>430,251,652</u>
Less investment expenses	<u>20,576,087</u>	<u>18,438,444</u>
Net income from investment activities	<u>338,579,394</u>	<u>411,813,208</u>
Income from securities lending	3,867,343	2,895,806
Less securities lending expenses	<u>2,362,243</u>	<u>1,362,310</u>
Net income from securities lending	<u>1,505,100</u>	<u>1,533,496</u>
Total additions	<u>462,212,561</u>	<u>536,686,077</u>
<b>DEDUCTIONS</b>		
Retiree benefits	178,267,822	175,048,760
Disability benefits	50,864,259	50,741,385
Survivor benefits	9,783,701	9,334,089
Refunds and distributions	4,624,066	6,473,277
Administrative expenses	<u>2,870,683</u>	<u>3,185,769</u>
Total deductions	<u>246,410,531</u>	<u>244,783,280</u>
Net increase in net position	215,802,030	291,902,797
<b>NET POSITION RESTRICTED FOR PENSIONS</b>		
Beginning of year	<u>3,933,505,411</u>	<u>3,641,602,614</u>
Ending of year	<u>\$ 4,149,307,441</u>	<u>\$ 3,933,505,411</u>

RETIREMENT SAVINGS PLAN  
 STATEMENTS OF FIDUCIARY NET  
 POSITION JUNE 30, 2018 AND 2017

	<b>2018</b>	<b>2017</b>
<b>ASSETS</b>		
Equity in County's pooled cash and investments	\$ 591,684	\$ 658,883
Investments	443,877,730	391,669,152
Contributions receivable	<u>1,726,632</u>	<u>1,867,028</u>
Total assets	<u>446,196,046</u>	<u>394,195,063</u>
<b>LIABILITIES</b>		
Accrued expenses	<u>44,802</u>	<u>37,814</u>
<b>Net position held in trust for pension benefits</b>	<u>\$ 446,151,244</u>	<u>\$ 394,157,249</u>



RETIREMENT SAVINGS PLAN  
 STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION  
 FOR THE YEARS ENDED JUNE 30, 2018 AND 2017

	2018	2017
<b>ADDITIONS</b>		
Contributions:		
Employers	\$ 20,348,143	\$ 19,782,538
Members	<u>10,800,958</u>	<u>10,303,239</u>
Total contributions	<u>31,149,101</u>	<u>30,085,777</u>
Investment income	36,229,190	42,877,670
Other income - forfeitures	<u>336,228</u>	<u>725,208</u>
Net investment income	<u>36,565,418</u>	<u>43,602,878</u>
Less investment expenses	<u>4,968</u>	<u>4,929</u>
Total additions	<u>67,709,551</u>	<u>73,683,726</u>
<b>DEDUCTIONS</b>		
Distributions	15,386,970	15,220,134
Administrative expenses	<u>328,586</u>	<u>267,100</u>
Total deductions	<u>15,715,556</u>	<u>15,487,234</u>
Net increase	51,993,995	58,196,492
Net Position - beginning of year	<u>394,157,249</u>	<u>335,960,757</u>
Net Position - end of year	<u>\$ 446,151,244</u>	<u>\$ 394,157,249</u>

DEFERRED COMPENSATION PLAN  
 STATEMENTS OF FIDUCIARY NET POSITION  
 JUNE 30, 2018 AND 2017

	<b>2018</b>	<b>2017</b>
<b>ASSETS</b>		
Equity in County's pooled cash and investments	\$ -	\$ 9,285
Investments	430,321,129	389,445,345
Contributions receivable	<u>1,094,555</u>	<u>951,708</u>
<b>Net position held in trust for pension benefits</b>	<u>\$ 431,415,684</u>	<u>\$ 390,406,338</u>

DEFERRED COMPENSATION PLAN  
 STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION  
 FOR THE FISCAL YEARS ENDED JUNE 30, 2018 AND 2017

	<b>2018</b>	<b>2017</b>
<b>ADDITIONS</b>		
Contributions - members	\$ 20,574,411	\$ 19,511,533
Investment income	<u>43,153,596</u>	<u>47,589,737</u>
Total additions	<u>63,728,007</u>	<u>67,101,270</u>
<b>DEDUCTIONS</b>		
Distributions	<u>22,718,661</u>	<u>25,665,790</u>
Total deductions	<u>22,718,661</u>	<u>25,665,790</u>
Net increase	41,009,346	41,435,480
Net position - beginning of year	<u>390,406,338</u>	<u>348,970,858</u>
Net position - end of year	<u>\$ 431,415,684</u>	<u>\$ 390,406,338</u>



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## **INVESTMENT SECTION**

### **Employees' Retirement System**

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## EMPLOYEES' RETIREMENT SYSTEM

### INVESTMENT PERFORMANCE, POLICY, STATISTICS AND ACTIVITY

The Board of Investment Trustees (Board), and the investment staff, are responsible for managing the \$4.1 billion Employees' Retirement System (the System), invested solely in the interests of its beneficiaries. It is a significant responsibility due to the majority of the average retiree's benefit coming from investment earnings on contributions from members, the County, and participating agencies. According to Wilshire Associates, a national consulting firm, the median return among U.S. public pension plans over \$1 billion in size in FY 2018 was a gain of 8.6%, gross of fees. The System's return for the fiscal year was a gain of 9.1% gross of fees, ranking in the top third of the universe. The key drivers of the performance for the twelve month period ending June 30, 2018 were the System's domestic and private equity holdings. The same study ranked the System's three-year return of 7.6% and the five-year return of 8.6% in the upper third and above median, respectively. The System's ten-year return of 7.5% ranks in the top decile of the peer group universe. The gross return for the one-year period was above the performance benchmark established by the Board by 213 basis points, with returns for the three-year and five-year periods exceeding the performance benchmarks by 142 basis points and 151 basis points, respectively. Returns for the System are calculated on a time weighted basis (except where noted on page 52).

In the investment of public funds, adequate funding of employee retirement benefits at a reasonable and affordable cost is a paramount concern. An appropriate balance must be struck between risks taken and returns sought to ensure the long term health of the System. The Board has adopted an investment policy that works to control the extent of downside risk to which the System is exposed while maximizing the potential for long term increases in the value of assets.

Specific investment objectives include:

- To realize the actuarial assumed rate of return of 7.5 percent.
- To manage portfolio risk so as to limit potential downside fluctuations in the value of the total System assets.
- To realize as high a rate of total return as possible consistent with the above.

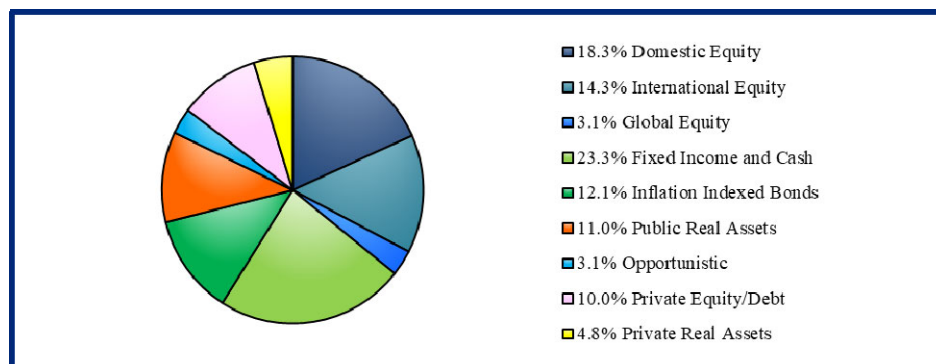
To achieve these objectives, the following investment policies are employed:

- Allocate System assets to a broad array of investment sectors and strategies.
- Maintain the asset allocation in compliance with the Board's rebalancing policy (+/- 5.0% for major asset classes and +/- 1.5% to 3.0% for sub-asset classes).
- Monitor the individual investment managers' market value to ensure compliance with the Board's Manager Funding Policy.
- Evaluate the performance of all investment managers against their specific performance and style objectives, assigned risk, and the returns achieved by other similar managers.
- Evaluate the System's overall risk exposure and modify investments through rebalancing when necessary.

During FY 2018, the Board implemented an integrated asset allocation approach which categorized investments into growth, risk mitigation, and real asset buckets. The Board's Governance Manual was updated to reflect the ongoing evaluation, monitoring and analysis of Environmental, Social, and Governance (ESG) considerations related to analyzing the investments within the portfolio.

In addition to the above initiatives, the Board continued to implement adjustments which will result in further diversification of the investment portfolio and better management of the System's risk. Toward this effort, new investments were approved in the following sectors: opportunistic, global equities, private markets. The following pages reflect comments on the investment portfolio and were prepared by the Board of Investment Trustees Staff.

## ASSET ALLOCATION – JUNE 30, 2018



## INVESTMENT PERFORMANCE – ANNUALIZED RETURNS – JUNE 30, 2018

	1 Year	3 Year	5 Year
<b>Total Fund Time-Weighted Returns</b>			
MCERS	9.1 <sup>A</sup> %	7.6 <sup>A</sup> %	8.6 <sup>A</sup> %
Policy Benchmark	6.9 <sup>A</sup>	6.2 <sup>A</sup>	7.1 <sup>A</sup>
<b>Domestic Equities</b>			
MCERS	17.1	11.9	14.2
Russell 3000 Benchmark	14.8	11.6	13.3
<b>Private Equities</b>			
MCERS	25.4 <sup>B</sup>	16.8 <sup>B</sup>	17.1 <sup>B</sup>
Russell 3000 + 300 Bpts Benchmark	17.9 <sup>B</sup>	14.2 <sup>B</sup>	16.6 <sup>B</sup>
<b>International Equities</b>			
MCERS	8.1	6.6	7.4
Custom International Equity Benchmark	7.6	5.2	6.1
<b>Global Equities</b>			
MCERS	10.1	7.4	6.5
MSCI All Country World Benchmark	10.7	8.2	9.4
<b>Private Real Assets</b>			
MCERS	8.4 <sup>B</sup>	9.8 <sup>B</sup>	11.7 <sup>B</sup>
CPI + 500 Bpts Benchmark	7.8 <sup>B</sup>	6.8 <sup>B</sup>	6.5 <sup>B</sup>
<b>Private Debt</b>			
MCERS	9.4 <sup>B</sup>	10.1 <sup>B</sup>	10.2 <sup>B</sup>
BofA ML U.S. HY Cons. + 300 Bpts Benchmark	5.3 <sup>B</sup>	8.2 <sup>B</sup>	7.8 <sup>B</sup>
<b>Fixed Income</b>			
MCERS	1.5	5.2	6.0
Custom Fixed Income Benchmark	0.9	4.7	5.1
<b>Opportunistic</b>			
MCERS	6.5	1.4	2.5
HFRI Fund of Funds Composite Benchmark	5.2	1.9	3.5
<b>Public Real Assets</b>			
MCERS	7.5	1.6	(0.2)
Custom Public Real Asset Benchmark	5.4	1.1	(0.1)
<b>Global Inflation Indexed Bonds</b>			
MCERS	9.8	7.4	9.5
Custom IIB Benchmark	5.5	6.0	6.4

Return data for the System was calculated on a time weighted basis (except where noted). Returns shown are provided by the System's custodian bank, The Northern Trust Company. Valuations are based on published national securities exchange prices, where available, and all valuations are reconciled between the various investment managers and the custodian bank. Returns are gross of fees paid to investment managers except where noted.

A: Total Fund returns utilize lagged valuations for private equity, private debt, and private real assets investments.

B: Returns computed on dollar-weighted basis and are net of investment management fees.

## PORTFOLIO HIGHLIGHTS

### PUBLIC EQUITY

The market value of the total Public Equity Portfolio as of June 30, 2018 represented approximately 35.7% of the total Fund, split between Domestic Equity at 18.3%, International Equity at 14.3%, and Global Equity at 3.1%. The Domestic Equity Portfolio outperformed the Russell 3000 Benchmark by 2.3% for the one year ending June 30, 2018. U.S. equity markets rallied during the fiscal year finishing up another year with double digits returns. After taking a pause early in the year due to concerns about the impact of rising interest rates as well as U.S.-China trade sanctions, the markets finished the fiscal year on a strong note. The domestic markets posted strong results driven by positive economic reports and robust corporate earnings. Throughout the fiscal year, the U.S. markets reached all-time highs supported by positive macroeconomic data, which included strong GDP reports as well as the strength in consumer confidence and employment data.

As of June 30, 2018, the International Equity Portfolio was allocated as follows: 70.0% EAFE, 19.9% emerging markets, and 10.1% small capitalization stocks. The International Equity Portfolio outperformed the custom international equity benchmark by 0.45% for the fiscal year ending June 30, 2018. Both the international developed and emerging markets underperformed the U.S. markets during the fiscal year. Within developed international markets, Asia showed stronger performance versus Europe which was sold off due to disappointing corporate earnings and concerns over the outlook for global trade. After outperforming strongly for three consecutive quarters, emerging markets ended the fiscal year with a sharp decline due to the escalating trade tensions between the U.S. and China. Along with China, the other three largest emerging markets, Brazil, Russia, and India also sold off at the end of the fiscal year.

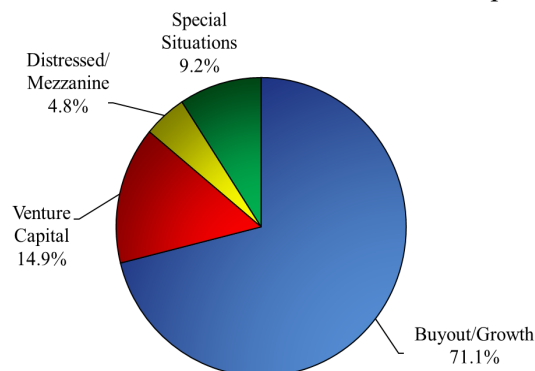
#### Equity: Top 15 Holdings

The top 15 holdings in the Public Equity Portfolio comprised 3.30% of ERS assets at June 30, 2018. In comparison to the top 15 holdings at June 30, 2017, Amazon, VISA, AIA, Fresenius, Alibaba, Smith, Salesforce, GN Store, Alphabet, and Facebook remained while Netflix, Prologis, Kon Ahold Delhaize, Vonovia, and Total BNP Paribas were added.

Equity	Shares	Value
Amazon Com	9,117	\$ 15,497,077
VISA	94,755	12,550,300
AIA Group	1,123,000	9,819,424
Netflix	24,013	9,399,409
Fresenius SE&KGAA	113,740	9,136,444
Prologis	134,664	8,846,078
Alibaba	47,400	8,794,122
Kon Ahold Delhaize	338,297	8,099,038
Vonovia	169,330	8,058,303
Smith (DS)	1,154,847	7,946,667
Salesforce Com	55,725	7,600,890
GN Store Nord	165,405	7,537,377
Alphabet	6,624	7,479,755
Facebook	38,261	7,434,878
Total Eur	117,789	7,180,157

### PRIVATE EQUITY

The System began investing in private equity in 2003 to achieve returns greater than those available in the public equity markets and to gain exposure to diversified alpha sources. At June 30, 2018, the Private Equity Portfolio comprised 8.7% and approximately 80.4% of the dollars committed had been called. On a long-term basis, the Private Equity program seeks to outperform the Russell 3000 Index by 3.0%. System returns are calculated on a dollar-weighted or internal-rate-of-return (IRR) basis, and the annualized return since inception (2003) through June 30, 2018 was 10.7%. By comparison, the dollar-weighted return for the Russell 3000 Index plus 3.0% for the same period was 12.5%. The return from 2009, when the System moved from fund-of-funds to a direct program, is 20.6% as of June 30, 2018 compared to the 16.9% return of the Russell 3000 plus 3.0% benchmark.



As compared to the prior fiscal year, U.S. buyout investment activity was down both in terms of invested capital as well as the number of deals. Buyout fundraising decreased from last year’s post-crisis peak as the number of funds launched decreased 21% and the amount of capital raised decreased 9% from \$493.2 billion to \$447.9 billion. Buyout exit activity was slightly down for the year based on both the number of exits and the deal size. For U.S. buyouts, purchase valuations saw their steepest drop since 2009 and leverage levels decreased slightly during the fiscal year. U.S. venture investment activity continued its downward trend this year with pullbacks across late, early, and seed/angel stage markets. Venture IPO activity also saw a slight decline from the prior fiscal year.

## PRIVATE DEBT

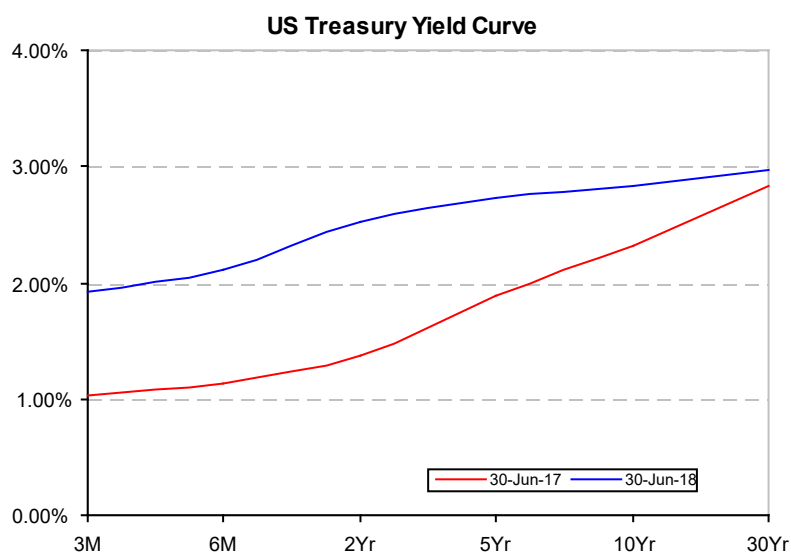
The System began investing a portion of its portfolio in Private Debt in 2014 to target higher yielding credit opportunities and further diversify the portfolio. The market value of the Private Debt Portfolio as of June 30, 2018 represented 1.3% of the total Fund, and to date, approximately 78% of the total committed capital has been called. On a dollar weighted, or IRR basis, the annualized return since inception is 10.2%, outperforming the benchmark index, BofA Merrill Lynch High Yield Master II Index plus 3.0%, by 2.4%.

Strong economic conditions and investor demand continue to create favorable conditions for U.S. middle-market companies seeking to borrow capital; however, distressed and special situations private debt strategies have seen less investor interest with corporate default rates remaining near secular lows. These strategies will encounter more favorable deployment conditions in the event that economic conditions worsen. Even with interest rates rising, Private Debt remains an asset class that is expected to generate strong risk adjusted returns, as the duration of private credit investments are generally shorter relative to long-term bonds. Fundraising activity in the second half of the fiscal year was down slightly from the first half, as fund dry powder in the industry sits at all time highs. The MCERS Private Debt Portfolio primarily consists of managers who focus on lending to privately held middle-market companies in need of less dilutive forms of growth capital.

## FIXED INCOME

The System invests a portion of its portfolio in fixed income securities to reduce the volatility of the total Fund, generate income, and provide a measure of downside protection in the event of a slowing economic environment. The market value of the Fixed Income Portfolio as of June 30, 2018 represented 21.8% of the total Fund. During the fiscal year, the high yield portfolio returned 3.66%, exceeding the benchmark’s return by 1.12%. The long duration portfolio returned a loss of 0.58%, outperforming its benchmark return by 0.20%.

During the fiscal year, the U.S. Treasury yield curve flattened significantly, as yields rose across all measurable points on the curve during the fiscal year. The spread between 2-year and 30-year Treasuries, a primary gauge of yield curve steepness, narrowed by 101 bps. Since June 30, 2017, the Federal Reserve increased short-term interest rates three times (in 25 bp increments), which drove yields on the short-end of the curve higher. Yields on the curve’s long-end were up modestly, as expectations around growth and inflation remain relatively stable.





As of June 30, 2018, the 10-year yield stood at 2.8%, or 114 bps higher than the same period one year earlier.

## Fixed Income: Top 15 Holdings

Fifteen Largest Fixed Income Holdings	Interest Rate	Maturity Date	Fair Value
United States Treasury Bonds	4.4 %	May 15, 2040	\$ 40,125,963
United States Treasury Bonds	2.5	February 15, 2045	21,567,635
United States Treasury Bonds	2.9	May 15, 2043	18,407,911
United States Treasury Bonds	2.5	February 15, 2046	17,751,740
United States Treasury Bonds	2.8	August 15, 2047	16,538,627
United States Treasury Bonds	2.9	August 15, 2045	13,455,935
United States Treasury Bonds	2.5	May 15, 2046	11,458,354
United States Treasury Bonds	4.6	February 15, 2040	10,512,941
United States Treasury Bonds	3.0	May 15, 2047	8,990,265
United States Treasury Bonds	2.3	August 15, 2027	7,377,076
United States Treasury Bonds	3.0	May 15, 2045	5,656,791
Bank of America	6.0	October 15, 2036	4,954,324
United States Treasury Bonds	2.8	August 15, 2047	4,652,008
United States Treasury Bonds	2.8	November 15, 2047	4,033,293
Goldman Sachs	3.5	November 16, 2026	3,654,852

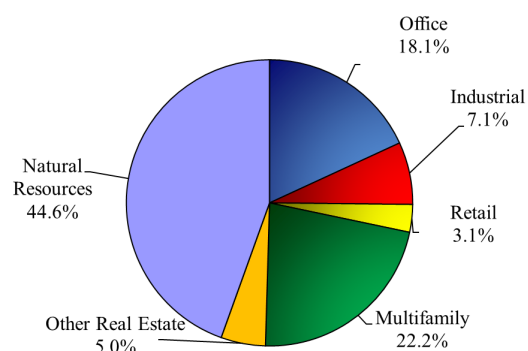
## OPPORTUNISTIC

The System invests a portion of its portfolio in absolute return strategies (hedge funds) to enhance risk adjusted returns and reduce total Fund volatility. The Opportunistic investments are classified as being either Directional (Growth) or Diversifying (Risk Mitigation). The market value of the Opportunistic Portfolio as of June 30, 2018 represented approximately 3.1% of the total Fund.

Hedge fund performance, as measured by the HFRI Fund of Funds Composite Index, returned 5.5%, net of fees, for the one-year period as of June 30, 2018. Equity Long/Short and Event Driven funds posted the strongest performance, while Global Macro strategies continued to lag, as the low volatility and interest rate environment made it challenging for macro funds to generate attractive returns. While hedge funds have struggled to post returns in excess of the equity markets since the 2008 financial crisis, industry assets under management increased to a record high of \$3.6 trillion as of June 30, 2018.

## PRIVATE REAL ASSETS

The System began investing in value-added and opportunistic private real estate and natural resources in 2006 to attain real returns less correlated with the broad public securities markets. Returns are computed on a dollar-weighted or internal rate-of-return basis, and from inception (2006) to June 30, 2018 the investments generated an annualized gain of 5.7%. By comparison, the dollar-weighted return for the benchmark CPI + 5.0% for the same period was a gain of 6.7%. The Private Real Assets Portfolio comprised 4.8% of the Fund at June 30, 2018 with approximately 75% of the dollars committed called. The return from 2009, when the System moved to a direct program, through June 30, 2017 is 10.6% compared to the 6.7% return of the benchmark, CPI + 5.0%.



During the fiscal year, U.S real estate transaction activity increased slightly while capitalization rates were unchanged. U.S real estate demand has remained strong from foreign investors in Asia, Europe and Canada. Domestic energy investments continued to grow due to steady price appreciation. The Permian Basin in West Texas has attracted the majority of capital due to the low cost of production as well as productivity gains. US farmland asset values are being pressured due to declining net income levels as a result of lower agriculture prices and higher farm sector debt levels.

## **PUBLIC REAL ASSETS**

The System began investing in Public Real Assets in January 2009 to further diversify the portfolio, reduce risk, and provide a hedge against inflation. The market value of the total Public Real Assets Portfolio as of June 30, 2018 represented approximately 11.1% of the total Fund and was allocated as follows: 53.0% global real estate securities, 29.2% commodities, and 17.8% listed infrastructure.

Listed global real estate security prices advanced on a stronger economic outlook while yields remained relatively flat. The commodity sector advanced as gains in the energy complex outweighed losses in the agriculture sector. Global listed infrastructure securities were up slightly for the recent fiscal year as strong gains in the communications tower sector outweighed losses in the energy sector and emerging markets. For the fiscal year, the Public Real Asset Portfolio underperformed the custom benchmark by 2.1%.

## **GLOBAL INFLATION INDEXED BONDS**

The System allocates a portion of Fund assets to inflation-indexed bonds which provide protection against inflation risk, as well as providing a globally diversified return stream to manage volatility. The Inflation-Indexed Bond Portfolio represented 12.2% of total Fund assets at June 30, 2018. The Portfolio, which also includes an absolute return fund overlay, returned 9.8% during the fiscal year, outperforming the custom benchmark's return of 5.5%.

During the fiscal year, global real yields rose, putting pressure on inflation-linked bond prices primarily due to relatively higher inflation expectations in the U.S. as compared to the rest of the developed world. As a result, the Portfolio's absolute return fund overlay was the primary source of outperformance, returning 4.26% for the one-year period ended June 30, 2018. The absolute return fund's most significant gains came from long U.S. dollar and short U.S. rates positions.

<b>Inflation-Indexed Bonds - Country Exposures</b>	
United States	45 %
United Kingdom	20
Canada	10
France	10
Germany	7
Sweden	5
Australia	3

## INVESTMENT MANAGERS

The diversified investment structure as of June 30, 2018 is reflected in the following table, which lists System managers by asset class and style.

<u>Public Equity</u>	<u>Investment Style</u>	<u>Opportunistic</u>	<u>Investment Style</u>
<b>Domestic Equity</b>		Davidson Kempner Capital Management*	Event Driven
Barrow, Hanley, Mewhinney & Strauss	Large Cap Value	Grosvenor Capital Management*	Fund-of-Funds
Eagle Asset Management	Small Cap Growth	HBK Capital Management*	Relative Value
JP Morgan Investment Management*	Large Cap Core Plus	Hudson Bay Capital Mgmt*	Relative Value
Los Angeles Capital Management*	Large Cap Alpha	Luxor Capital Partners*	Event Driven
RhumbLine Advisors	Russell 1000 Index	MKP Opportunity Partners*	Global Macro
Sands Capital Management	Large Cap Growth	Scopia Capital Management*	Equity Long/Short
Wellington Management	Small Cap Value	Senator Investment Group*	Event Driven
<b>International Equity</b>		<b>Private Equity</b>	
Gryphon Int'l Investment Corp.	EAFE	Adams Street Partners*	Fund-of-Funds
Highclere Int'l Investors LLP*	Small Cap	Altus Capital Partners*	Buyout
Marathon Asset Management LLP	EAFE	Altaris Capital Partners*	Buyout
Mondrian Investment Partners Ltd*	Emerging Markets	Atlas Capital Resources*	Turnaround
<b>Global Equity</b>		BV Investment Partners*	Growth Equity
Aberdeen Asset Management*	Global	Clearlake Capital Group*	Turnaround
WCM Investment Management	Global	DW Healthcare Partners*	Buyout
<b>Private Real Assets</b>		Franklin Park*	Fund-of-Funds
Aberdeen*	Fund-of-Funds	J.F. Lehman & Company*	Buyout
AEW Partners*	Real Estate	HarbourVest Partners*	Fund-of-Funds
Carmel Partners*	Real Estate	K1 Investment Mgmt.*	Growth/Buyout
EMR Capital*	Mining	KPS Capital Partners*	Turnaround
EnerVest, Ltd.*	Energy	Landmark Partners*	Fund-of-Funds
Federal Capital Partners*	Real Estate	Mason Wells*	Buyout
Hampshire Companies*	Real Estate	Odyssey Inv. Partners*	Buyout
Homestead Capital*	Agriculture	Pomona Capital*	Fund-of-Funds
Juniper Capital*	Energy	Riverside Partners*	Buyout
Kimmeridge Energy*	Energy	Siris Capital Group*	Buyout
LBA Realty*	Real Estate	Sunstone Partners*	Growth Equity
Lime Rock Resources*	Energy	TA Associates*	Growth Equity
Lyme Timber Company*	Timber	Thoma Bravo*	Buyout
Meridian Realty Partners*	Real Estate	Wicks Group*	Buyout
Pearlmark Real Estate Ptrs*	Real Estate	<b>Fixed Income</b>	
Resource Land Holdings*	Diversified Natural Resources	BlackRock Financial Mgt.*	Core
TA Associates Realty LLC*	Real Estate	Loomis Sayles & Co.	High Yield
Tailwater Capital*	Energy	Jennison Associates	Long Duration
<b>Public Real Assets</b>		Nomura Asset Management	High Yield
Barings	Real Estate	Schroder Investment Mgt.	Long Duration
BlackRock Financial Mgt.*	Commodities	<b>Inflation-Indexed Bonds</b>	
BlackRock Financial Mgt.*	Real Estate	Bridgewater Associates*	Passive
Chickasaw Capital Management	MLPs	<b>Foreign Currency</b>	
CoreCommodity Mgt.*	Commodities	First Quadrant LP*	Foreign Currency
Wellington Management*	Commodities		
<b>Private Debt</b>			
Bison Capital Partners*	Structured Equity		
Castlelake*	Distressed		
Clearlake Capital Group*	Distressed		
Greyrock Capital Group*	Structured Equity		
Levine Leichtman Capital Partners*	Structured Equity		
New Energy Capital Partners*	Structured Equity		
PineBridge Investments*	Structured Equity		
Whitehorse Liquidity Partners *	Structured Equity		

\* Pooled Funds

A complete list of the portfolio holdings are available upon request. Please contact the Montgomery County Employee Retirement Plans at 240-777-8220.

## PUBLIC EQUITY COMMISSIONS

January 1, 2017 Through December 31, 2017

Brokers	Shares Traded	Total Commissions	Commissions per Share
Society Generale	1,358,857	\$ 22,000	\$ 0.016
Goldman Sachs	815,615	22,000	0.027
Sanford Bernstein	737,923	22,000	0.030
Instinet Europe	370,300	12,000	0.032
Deutsche Bank	1,326,628	9,000	0.007
Morgan Stanley	318,812	9,000	0.028
Weeden & Co	306,985	9,000	0.029
SG Securities (HK)	1,151,265	8,000	0.007
Bloomberg	434,466	7,000	0.016
Fidelity	341,194	7,000	0.021
Other Brokers	18,864,745	177,000	0.009
<b>Total</b>	<b>26,026,790</b>	<b>\$ 304,000</b>	<b>\$ 0.222</b>

## INVESTMENT SUMMARY

	June 30, 2018 Fair Value	Percent of Total Value	June 30, 2017 Fair Value	Percent of Total Value
Government and agency obligations	\$ 535,053,176	13.0 %	\$ 494,936,771	12.6 %
Municipal/Provincial obligations	8,431,521	0.2	8,802,535	0.2
Asset-backed securities	700,355	0.0	575,265	0.0
Corporate bonds	657,342,966	15.9	652,601,536	16.7
Collateralized mortgage obligations	379,768	0.0	938,220	0.0
Commerical mortgage-backed securities	2,283,013	0.1	1,636,717	0.0
Common and preferred stock	1,718,906,869	41.6	1,683,366,447	43.0
Mutual and commingled funds	488,075,929	11.8	444,710,885	11.4
Short-term investments	106,196,816	2.6	101,410,350	2.6
Private real assets	198,112,470	4.8	191,725,989	4.9
Private equity/debt	412,741,287	10.0	337,417,190	8.6
<b>Total</b>	<b>\$ 4,128,224,170</b>	<b>100.0 %</b>	<b>\$ 3,918,121,905</b>	<b>100.0 %</b>

Cash collateral received under securities lending agreements is not included in the investment summary shown above.



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**ACTUARIAL SECTION**  
**Employees' Retirement System**

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October 22, 2018

Ms. Linda Herman  
Executive Director  
Montgomery County Employee Retirement Plans  
101 Monroe Street, 15<sup>th</sup> Floor  
Rockville, Maryland 20850

Dear Linda:

At your request, we have performed an actuarial valuation for funding purposes, and a separate actuarial valuation for accounting purposes, of the Montgomery County Employees' Retirement System ("System") as of July 1, 2018. The purpose of the funding actuarial valuation, which is performed annually, is to determine the funding status and annual contribution requirements of the System. The actuarial valuations were performed specifically at your request and are intended for use by the System and Montgomery County ("County") and those designated by the System and the County. This report may be provided to parties other than the System and County only in its entirety and only with the permission of the System and County. GRS is not responsible for unauthorized use of this report.

### **Funding Objective**

The funding objective for the System is to collect employer and employee contributions sufficient to pay the benefits of the Montgomery County Employees' Retirement System when due and to achieve a funded ratio of 100 percent at the end of the amortization period. The total contribution rate is equal to the normal cost rate plus amortization of the unfunded liability as a level percentage of payroll. The unfunded liability as of July 1, 2015 (and in each future year) for the Non-Public Safety groups (Groups A and H) is amortized over a single closed period of 9 years (6 years remaining at the actuarial valuation as of July 1, 2018, to amortize the total unfunded liability). The unfunded liability as of July 1, 2015, for the Public Safety groups (Groups E, F, G and J) and GRIP was amortized over a closed period of 20 years (17 years remaining at the actuarial valuation as of July 1, 2018) and the unfunded liability bases established in each subsequent year are amortized over separate 20-year closed periods. The single equivalent amortization period for the System in total as of July 1, 2018, is 7.0 years. This funding policy is consistent with generally accepted actuarial standards for the funding of retirement systems. The total contribution rate minus the average employee contribution rate equals the County contribution rate. The funding actuarial valuation as of July 1, 2018, establishes the County contribution rate for the fiscal year beginning July 1, 2019.

### **Actuarial Assumptions and Methods**

The actuarial cost method used in this valuation is the same as the method used in the prior actuarial valuation. The actuarial cost method utilized by the System for both non-GRIP and GRIP members is the individual Entry-Age Normal method. The objective of this method is to finance the benefits of the System as a level percentage of payroll over the members' careers. Any Unfunded Actuarial Accrued

Liability (UAAL) under this method is separately financed. All actuarial gains and losses under this method are reflected in the UAAL. The actuarial assumptions used in the actuarial valuation as of July 1, 2018, are the same as those used in the actuarial valuation as of July 1, 2017. The actuarial assumptions are based on an experience review for the five-year period ending July 1, 2014.

The actuarial assumptions and methods used, including the economic and demographic assumptions, the actuarial cost method and asset method, meet the parameters set forth in the Actuarial Standards of Practice issued by the Actuarial Standards Board for the funding of public sector pension plans and are set by the County as authorized under Montgomery County Code. Actuarial assumptions and actuarial methods required under GASB Statement Nos. 67 and 68 were used in the preparation of the accounting disclosures and schedules required by GASB Statement Nos. 67 and 68.

### **Benefit Provisions**

There have been no plan changes reflected in the actuarial valuation as of July 1, 2018, since the actuarial valuation at July 1, 2017.

### **Participant Data**

A total of 6,004 active members (excluding DRSP and DROP) were included in the actuarial valuation as of July 1, 2018. Between the 2017 and 2018 actuarial valuations, the number of active employees increased by 266 members, or 4.6 percent. The average annual actuarial valuation pay (excluding DRSP and DROP) increased by 0.7 percent, from \$77,427 to \$77,944 between the 2017 and 2018 actuarial valuation. The number of benefit recipients (including DRSP and DROP) increased from 6,516 to 6,615, or 1.5 percent, since the last actuarial valuation. The average monthly benefit increased by 2.7 percent, from \$3,135 to \$3,219.

### **Aetna Contract**

There is a group of retirees who have benefits that are insured by Aetna. The total benefit amounts reported for these members in the actuarial valuation report include the insured benefit amount. The actuarial liabilities calculated in the actuarial valuation report exclude the value of the insured benefits. The liabilities for these members that are included in the actuarial valuation are for the cost of living adjustments provided and are paid by the Montgomery County Employees' Retirement System.

### **Actuarial Valuation Assets**

On a market value basis, the Plan assets had an investment return of approximately 8.57 percent (net of investment expenses). Recognition of investment gains during fiscal years ending 2014, 2017 and 2018 were partially offset by recognition of the fiscal year end 2015 and 2016 investment losses. The net investment gains resulted in an estimated net asset rate of return of 7.81 percent on an actuarial value of assets basis, which compares to the assumed rate of return of 7.50 percent.

**Reliance on Others**

The actuarial valuation was based upon information furnished by the County Staff, concerning benefits provided by the Montgomery County Employees' Retirement System, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the County Staff.

The trend data in the Financial Section and the schedules and other data in this Section are prepared by County Staff with our input.

**Accounting Schedules under GASB Statement Nos. 67 and 68**

The total pension liability (actuarial accrued liability) is based on an actuarial valuation date of July 1, 2017, with results projected to July 1, 2018, assuming no liability gains and losses, under the Entry Age Normal actuarial cost method. A single discount rate of 7.50 percent, which is the same rate that is used in the funding actuarial valuation, was used to measure the total pension liability. All other assumptions and methods used in the funding actuarial valuation for calculation of the actuarial accrued liabilities as of July 1, 2018, were used in the GASB Statement Nos. 67 and 68 actuarial valuation for calculation of the total pension liability for fiscal year ending June 30, 2018.

The net pension liability is measured as the total pension liability, less the amount of the pension plan's fiduciary net position (market value of assets) as of June 30, 2018.

**Certification**

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Montgomery County Employees' Retirement System as of the valuation date of July 1, 2018, based on the data and actuarial techniques described above and applicable statutes. All calculations have been made in conformity with generally accepted actuarial principles and practices, and all actuarial assumptions used in this report are reasonable for the purposes of this actuarial valuation and meet the parameters set forth in the Actuarial Standards of Practice issued by the Actuarial Standards Board. Lance J. Weiss and Amy Williams are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements in this report.



This actuarial valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

This report should not be relied on for any purpose other than the purpose stated.

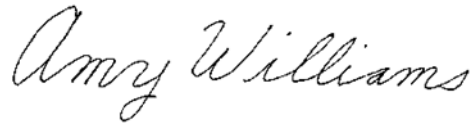
The signing actuaries are independent of the plan sponsor.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

Handwritten signature of Lance J. Weiss in cursive script.

Lance J. Weiss, E.A., M.A.A.A., F.C.A.  
Senior Consultant and Team Leader

Handwritten signature of Amy Williams in cursive script.

Amy Williams, A.S.A., M.A.A.A., F.C.A.  
Consultant

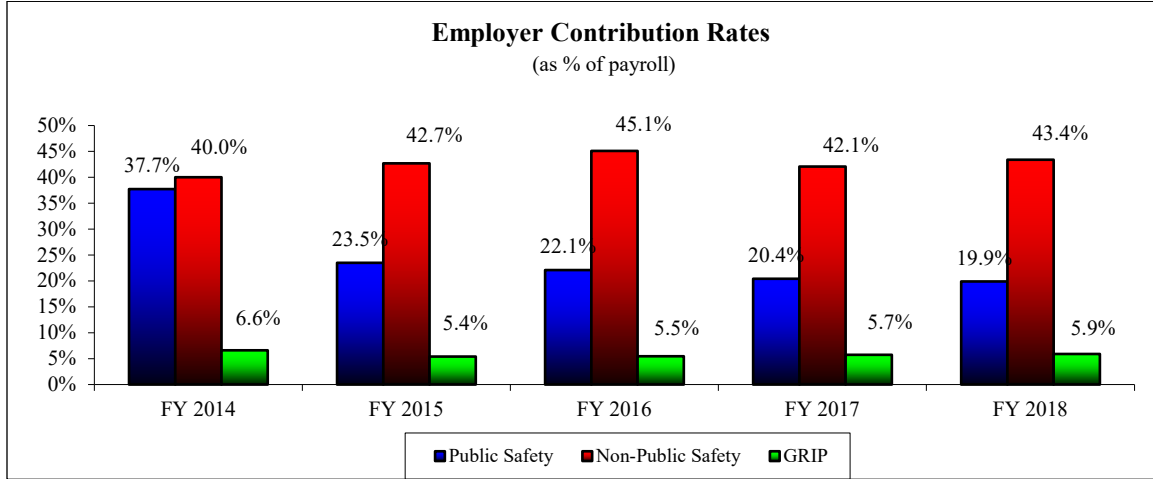
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## SUMMARY OF VALUATION RESULTS EMPLOYEES' RETIREMENT SYSTEM

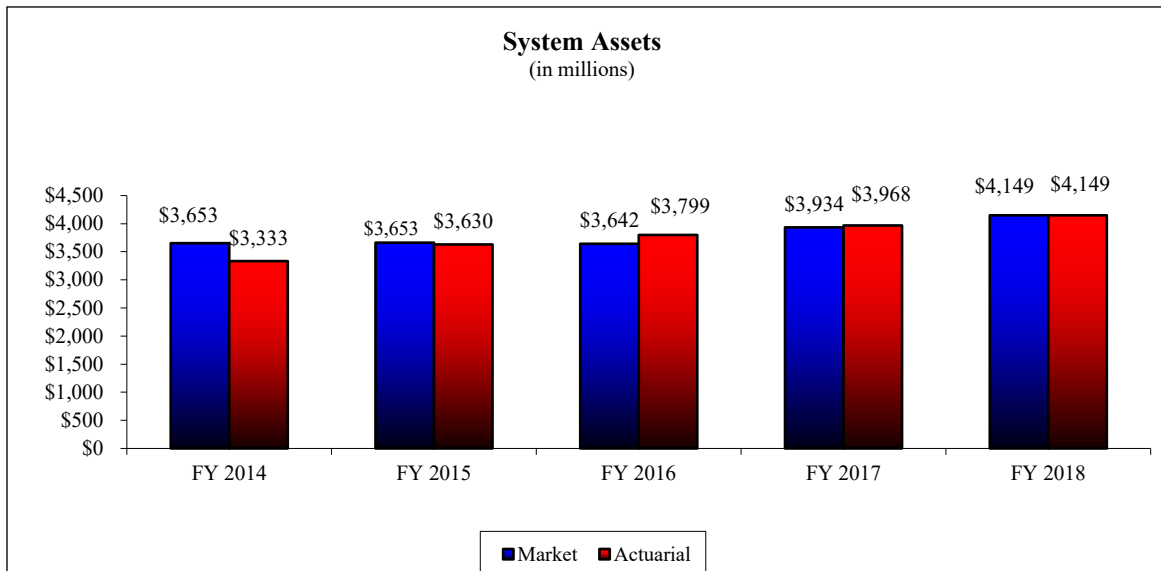
### A. Overview

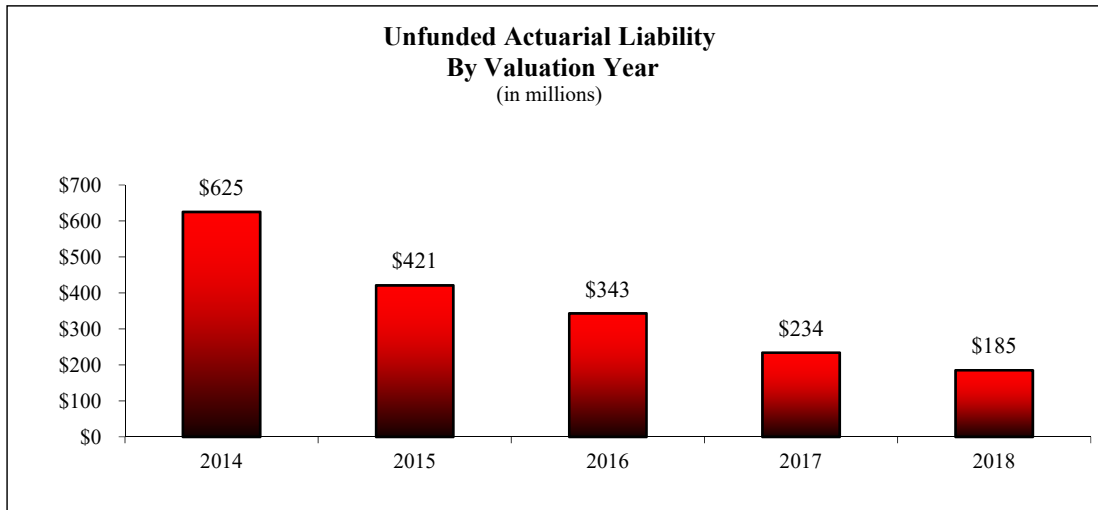
This report presents the results of our June 30, 2018 actuarial valuation of the Montgomery County Employees' Retirement System.

The major findings of the valuation are summarized in the following charts:

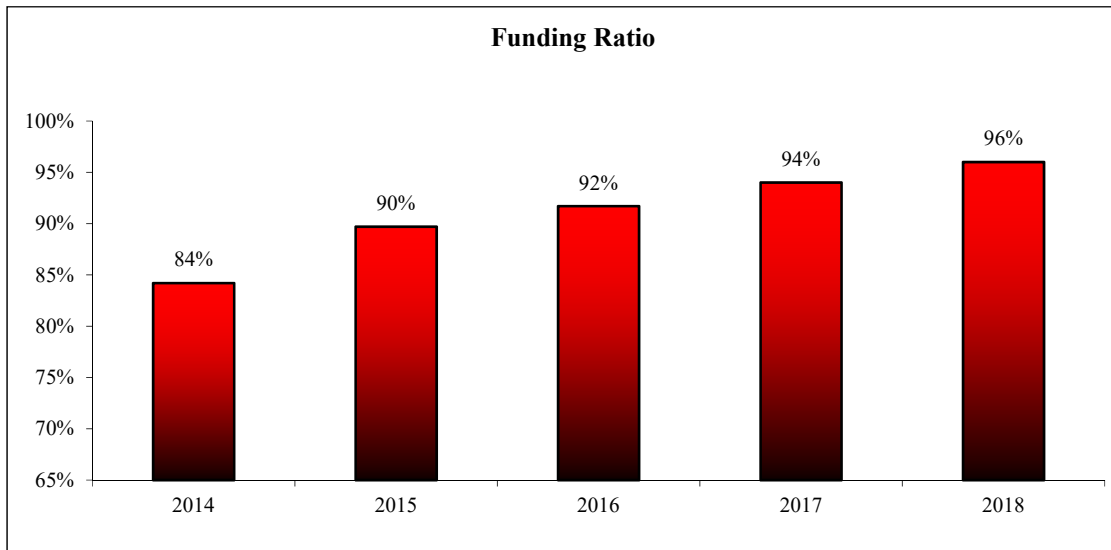


The change in the employer contribution rate in FY 2018 was due to actual System experience versus actuarial assumptions.





The unfunded actuarial liability decreased in FY 2018 primarily due to deferred asset gains and lower than expected cost of living increases for retired members.



The ratio of actuarial assets to the actuarial accrued liability has improved primarily due to the factors noted above.

**B. Summary of Results**

	<u>July 1, 2017</u>	<u>July 1, 2018</u>
Actuarial Liability		
a. Active Members	\$1,413,465,543	\$1,433,472,176
b. Retired Members and Beneficiaries	2,755,835,205	2,865,281,220
c. Vested Former Members	<u>33,332,394</u>	<u>35,543,402</u>
d. Total	<u>\$4,202,633,142</u>	<u>\$4,334,296,798</u>
 Valuation Assets	 \$3,968,497,692	 \$4,149,354,330
 Unfunded Actuarial Accrued Liability	 \$234,135,450	 \$184,942,468
 Normal Cost		
a. Gross Normal Cost	\$77,378,957	\$80,558,188
b. Anticipated Employee Contributions	<u>\$25,437,890</u>	<u>\$26,349,166</u>
c. County Normal Cost (a -b)	<u>\$51,941,067</u>	<u>\$54,209,022</u>
 Amortization Payment	 \$30,669,473	 \$27,714,338
 County Contribution Required at Date Shown	 \$82,610,540	 \$81,923,360
 County FY 2018/FY 2019 Contribution (as a % of covered payroll)		
Public Safety Employees	20.42%	19.88%
Non-Public Safety Employees	42.08%	43.38%
Guaranteed Retirement Income Plan	5.74%	5.93%

## C. Valuation Highlights

### 1. System Assets

As of June 30, 2018, the System had assets, valued at market, of \$4.149 billion, as compared to \$3.934 billion at June 30, 2017. The increase of \$216 million was attributable to the following:

- a. An increase of \$122 million from employer and employee contributions;
- b. An increase of \$340 million from investment gain;
- c. A decrease of \$246 million due to the payment of benefits to System participants and administrative expenses.

When measured on an actuarial basis, System assets were \$4.149 billion at June 30, 2018, and \$3.968 billion at June 30, 2017. The asset valuation method smooths the fluctuations generated by intermittent market gains and losses. This method phases-in investment gains and losses arising during and after the 1994 fiscal year over a five-year period from the date established. Effective July 1, 1997, the calculation of the actuarial value of assets was changed to exclude the present value of estimated accrued contributions.

### 2. System Liabilities

The Unfunded Actuarial Liability decreased by \$49 million, from \$234 million at July 1, 2017, to \$185 million at July 1, 2018, as follows:

Unfunded Actuarial Liability at beginning of year	\$ 234,135,450
Unfunded Actuarial Liability at end of year	<u>184,942,468</u>
Decrease in Unfunded Actuarial Liability	<u>\$ 49,192,982</u>

The decrease in Unfunded Actuarial Liability for the year ended June 30, 2018, is comprised of the following:

Decrease due to gain on actuarial value of assets	\$ 12,111,506
Decrease due to demographic gain and other factors	9,600,634
Decrease due to amortization payment and contributions	<u>27,480,842</u>
Decrease in Unfunded Actuarial Liability	<u>\$ 49,192,982</u>

### 3. System Contributions

Contributions to the System include a “normal cost” rate which covers the portion of projected liabilities related to service of members. In addition, an amortization payment is made to fund the unfunded liability related to changes made to benefits in previous years which are being funded over a specific period of time.

The increase/decrease in the employer contribution rate is attributable to the following:

	<b>Non-Public Safety (non-GRIP)</b>		<b>Public Safety (non-GRIP)</b>		<b>GRIP</b>
Employer contribution rate - June 30, 2017	42.08	%	20.42	%	5.74 %
Decrease due to gain on actuarial value of assets	(1.35)		(0.21)		(0.02)
Increase/decrease due to actuarial gains & losses	2.65		(0.33)		0.21
Increase/decrease due to plan changes	0.00		0.00		0.00
Increase/decrease due to assumption and method changes	<u>0.00</u>		<u>0.00</u>		<u>0.00</u>
Employer contribution rate - June 30, 2018	<u>43.38</u>	%	<u>19.88</u>	%	<u>5.93</u> %

### 4. Membership

The active membership of the System increased from 5,738 at June 30, 2017 to 6,004 at June 30, 2018. The System was closed to all new employees hired after October 1, 1994, except public safety, bargaining unit employees and GRIP participants. Inactive members, including retirees and beneficiaries, increased from 6,516 at June 30, 2017 to 6,615 at June 30, 2018 and the number of former members with vested rights increased from 480 to 489.

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS  
EMPLOYEES' RETIREMENT SYSTEM**

**A. Funding Method**

The funding method used for the System's valuation is the "Individual Entry-Age Normal" actuarial cost method. The objective of this method is to finance the benefits of the System as a level percentage of payroll over the members' careers. The normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement. Each annual normal cost is a constant percentage of the member's year by year projected covered pay. An *actuarial liability* is calculated at the valuation date as the present value of benefits allocated to service prior to that date. The *Unfunded Actuarial Liability* at the valuation date is the excess of the actuarial liability over the assets of the System.

**B. Actuarial Value of Assets**

The actuarial value of assets is used for purposes of determining the County's contribution to the System. The asset adjustment method dampens the volatility of asset values that could occur because of short term fluctuations in market conditions. Use of an asset smoothing method is consistent with the long term nature of the actuarial valuation process. Assets are valued at market value but with a phase-in of investment gains and losses arising after July 1, 1994, over a 5-year period. The gains and losses are net of expenses. Effective July 1, 1997, the calculation of the actuarial value of assets does not include the present value of accrued contributions.

**ACTUARIAL ASSUMPTIONS AND METHODS  
EMPLOYEES' RETIREMENT SYSTEM**

**A. Demographic Assumptions**

**1. Mortality**

**MP-2014 Employee and Healthy Annuitant (non-disabled)**

Age	Pre-Retirement Future Life Expectancy (years) in 2018		Post-Retirement Future Life Expectancy (years) in 2018		Age	Pre-Retirement Future Life Expectancy (years) in 2018		Post-Retirement Future Life Expectancy (years) in 2018	
	Men	Women	Men	Women		Men	Women	Men	Women
20	69.39	73.64	67.08	70.02	65	22.77	26.73	21.98	24.08
25	64.07	68.31	61.67	64.58	70	18.38	21.92	17.81	19.70
30	58.74	62.99	56.31	59.20	75	14.33	17.31	13.93	15.61
35	53.40	57.67	51.01	53.90	80	10.65	12.94	10.45	11.90
40	48.07	52.37	45.80	48.68	85	7.49	9.01	7.49	8.67
45	42.76	47.10	40.69	43.56	90	5.16	6.11	5.18	6.06
50	37.53	41.88	35.74	38.52	95	3.59	4.18	3.59	4.18
55	32.42	36.74	30.96	33.56	100	2.56	2.92	2.56	2.92
60	27.47	31.69	26.38	28.73	105	1.92	2.13	1.92	2.13

**2. Rates of Termination of Employment (prior to retirement eligibility)**

Years of Service	Non-Public Safety and GRIP		Public Safety			
	Male	Female	Group E		Group F and G	
	Male	Female	Male	Female	Male	Female
0	11.50%	12.50%	12.00%	15.00%	6.00%	9.00%
1	9.50	10.50	10.00	12.00	5.00	7.00
2	8.00	9.50	6.00	7.00	4.00	5.00
3	6.00	6.50	5.00	6.50	3.00	4.50
4	4.50	4.50	4.00	4.00	2.50	3.50
5	4.00	4.25	3.90	3.90	2.25	3.00
6	4.00	4.25	3.80	3.80	2.00	2.75
7	4.00	4.25	3.70	3.70	1.75	2.50
8	4.00	4.25	3.60	3.60	1.50	2.00
9	4.00	4.25	3.50	3.50	1.25	1.75
10	3.25	2.75	2.00	2.00	1.00	1.50
11	3.25	2.75	1.50	1.50	0.75	1.25
12	3.25	2.75	1.00	1.00	0.50	1.00
13	3.25	2.75	1.00	1.00	0.50	0.75
14	3.25	2.75	1.00	1.00	0.50	0.50
15+	2.00	2.50	1.00	1.00	0.50	0.50

Vested participants that terminate are assumed to elect the option with the greater present value:

- 1) A refund of their accumulated contributions with interest or
- 2) A deferred benefit.



### 3. Disability

**Annual Disabilities per 1,000 Members**

Age	Non-Public Safety Employees		Public Safety Employees					
	Male	Female	Group E		Group F		Group G	
			Male	Female	Male	Female	Male	Female
20	0	0	1	0	1	1	1	1
25	1	0	1	1	2	3	2	3
30	1	0	2	2	4	8	4	8
35	1	1	3	3	5	12	5	12
40	2	1	4	5	7	16	9	16
45	3	3	7	12	13	44	16	44
50	6	4	11	17	22	59	26	59
55	7	4	14	17	27	62	35	62
60	8	4	14	17	27	62	35	62

### 4. Deaths

**Disabled Mortality  
 Future Life Expectancy (years) in 2018**

Age	Men	Women
20	60.91	61.82
25	55.52	56.42
30	50.19	51.11
35	44.96	45.91
40	39.87	40.80
45	34.93	35.77
50	30.15	30.82
55	25.54	26.02
60	21.15	21.49
65	17.03	17.27
70	13.26	13.44
75	9.89	10.02
80	7.06	7.15

### 5. Rates of Retirement

Age	Non Public Safety		GRIP	
	Under 30 Years of Service	30 Years of Service & Over	Under 15 Years of Service	15 Years of Service & Over
45 – 49	2.0%	2.0%	0.0%	0.0%
50 – 54	3.0	15.0	0.0	0.0
55	6.0	15.0	3.0	3.0
56	6.0	15.0	3.0	3.0
57	6.0	15.0	6.0	6.0
58	8.0	15.0	6.0	6.0
59	8.0	15.0	6.0	6.0
60	13.0	18.0	6.0	10.0
61	13.0	18.0	6.0	10.0
62	13.0	18.0	8.0	25.0
63	13.0	18.0	8.0	25.0
64	13.0	18.0	8.0	25.0
65 – 69	20.0	25.0	20.0	30.0
70 – 74	40.0	40.0	50.0	50.0
75	100.0	100.0	100.0	100.0

Age	Public Safety								
	Group E		Group F			Group G			
	Under 25 Years of Service	25 Years of Service & Over	Under 25 Years of Service	25 Years of Service	26 Years of Service & Over	Under 20 or 21 - 24 Years of Service	20 Years of Service	25 Years of Service & Over	
Under 42	3.5%	3.5%	2.5%	20.0%	2.5%	2.5%	10.0%	5.0%	
42 – 44	3.5	3.5	2.5	20.0	2.5	5.0	10.0	5.0	
45	3.5	8.0	2.5	20.0	2.5	7.5	10.0	10.0	
46	3.5	8.0	3.5	20.0	3.5	7.5	10.0	10.0	
47	3.5	8.0	4.5	20.0	4.5	7.5	10.0	10.0	
48	3.5	8.0	5.5	20.0	5.5	7.5	10.0	10.0	
49	3.5	8.0	6.5	20.0	6.5	7.5	10.0	10.0	
50	10.0	10.0	10.0	20.0	20.0	10.0	15.0	17.5	
51	10.0	10.0	10.0	20.0	20.0	10.0	15.0	17.5	
52	10.0	12.0	10.0	20.0	20.0	12.5	20.0	25.0	
53	10.0	12.0	15.0	25.0	25.0	12.5	20.0	25.0	
54	10.0	12.0	15.0	25.0	25.0	12.5	20.0	25.0	
55 – 59	15.0	30.0	15.0	40.0	40.0	20.0	40.0	35.0	
60 – 64	25.0	50.0	25.0	70.0	70.0	40.0	40.0	40.0	
65	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

**6. Sick Leave Credit**

Service credit is increased by 2.2% for Group A employees, 2.5% for Group E employees, 4.0% for Group F employees, 3.1% for Group G employees, and 1.6% for Group H employees to account for additional credit from unused sick leave. Sick leave is capped at 2 years.

**7. Marital assumption**

80% of active participants are assumed to be married. Women are assumed to be three years younger than their spouses.

**B. Economic Assumptions**

1. Investment Return: 7.5% compound per annum
2. Cost-of-Living Increases: 2.75% on credited service earned prior to June 30, 2011. 2.3% on credited service earned on or after July 1, 2011, reflecting the 2.5% cap
3. Increase in Social Security Wage Base: 3.25% compound per annum
4. Expense load: Assumed administrative expenses are based on 105% of the average of the administrative expenses over the past three years. For FY 2020 this figure is \$3,174,700.
5. Salary Increase: Merit and promotional increases assumed to be based on service as shown below:

<b>Non-Public</b>							
<b>Service</b>	<b>Safety*</b>	<b>Service</b>	<b>Group E</b>	<b>Service</b>	<b>Group F</b>	<b>Service</b>	<b>Group G</b>
1	6.00%	1	9.50%	1 – 3	8.00%	1	9.50%
2	5.50	2	9.00	4	6.50	2	9.00
3	5.00	3	7.00	5	6.00	3	7.00
4	4.50	4	6.50	6	5.50	4	6.50
5 – 10	4.00	5	6.00	7	5.00	5 – 10	6.00
11+	3.25	6	5.50	8	4.50	11 – 15	4.50
		7	5.00	9 – 20	4.00	16 – 20	4.00
		8	4.50	21+	3.25	21+	3.25
		9 – 20	4.00				
		21+	3.25				

\* Includes GRIP

## ANALYSIS OF FINANCIAL EXPERIENCE

### Gains and Loss in Accrued Liability During Years Ended June 30 Resulting from Differences Between Assumed Experience and Actual Experience

Type of Activity	2015	2016	2017	2018
Investment gain/(loss)	\$ 107,001,671	\$ (23,178,967)	\$ 10,966,494	\$ 12,111,506
Combined liability experience	<u>81,145,514</u>	<u>86,796,201</u>	<u>80,948,741</u>	<u>21,671,951</u>
Gain/(loss) during year	<u>\$ 188,147,185</u>	<u>\$ 63,617,234</u>	<u>\$ 91,915,235</u>	<u>\$ 33,783,457</u>

## SOLVENCY TEST

### Aggregate Accrued Liability

Valuation Date	(1) Active Members Contributions	(2) Retirees, Vested Terms, Beneficiaries	(3) Active Members (Employer Financed Portion)	Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets (%)		
	(1)	(2)	(3)				
6/30/2011	236,934,960	2,181,816,842	1,325,970,792	2,869,422,276	100	100	34
6/30/2012	210,537,737	2,465,714,392	1,092,493,833	2,891,435,563	100	100	20
6/30/2013	248,331,006	2,526,844,154	1,046,205,572	3,012,547,244	100	100	23
6/30/2014	265,055,643	2,585,446,584	1,108,427,491	3,333,484,724	100	100	44
6/30/2015	280,135,577	2,698,040,722	1,072,560,553	3,630,075,610	100	100	61
6/30/2016	297,715,372	2,747,575,831	1,095,769,765	3,798,555,275	100	100	69
6/30/2017	314,707,102	2,789,167,599	1,098,758,441	3,968,497,692	100	100	79
6/30/2018	327,611,097	2,900,824,622	1,105,861,079	4,149,435,330	100	100	83

**SCHEDULE OF RETIREES AND SURVIVORS**  
**During Years Ended June 30**

	New Retirees and Disableds	Survivors	Total
<b>July 1, 2011</b>	<b>5,319</b>	<b>393</b>	<b>5,712</b>
New retirements & disabilities	201	0	201
Deaths with beneficiaries	(47)	47	0
Deaths/benefits ended	(87)	(2)	(89)
<b>July 1, 2012</b>	<b>5,386</b>	<b>438</b>	<b>5,824</b>
New retirements & disabilities	269	0	269
Deaths with beneficiaries	(38)	38	0
Deaths/benefits ended	(104)	(28)	(132)
<b>July 1, 2013</b>	<b>5,513</b>	<b>448</b>	<b>5,961</b>
New retirements & disabilities	400	0	400
Deaths with beneficiaries	(23)	23	0
Deaths/benefits ended	(100)	(19)	(119)
<b>July 1, 2014</b>	<b>5,790</b>	<b>452</b>	<b>6,242</b>
New retirements & disabilities	264	0	264
Deaths with beneficiaries	(24)	24	0
Deaths/benefits ended	(98)	(28)	(126)
<b>July 1, 2015</b>	<b>5,932</b>	<b>448</b>	<b>6,380</b>
New retirements & disabilities	203	0	203
Deaths with beneficiaries	(20)	20	0
Deaths/benefits ended	(107)	(23)	(130)
<b>July 1, 2016</b>	<b>6,008</b>	<b>445</b>	<b>6,453</b>
New retirements & disabilities	207	0	207
Deaths with beneficiaries	(30)	30	0
Deaths/benefits ended	(122)	(22)	(144)
<b>July 1, 2017</b>	<b>6,063</b>	<b>453</b>	<b>6,516</b>
New retirements & disabilities	271	0	271
Deaths with beneficiaries	(40)	40	0
Deaths/benefits ended	(144)	(28)	(172)
<b>July 1, 2018</b>	<b>6,150</b>	<b>465</b>	<b>6,615</b>

**SCHEDULE OF ANNUAL ALLOWANCE  
During Years Ended June 30**

	<u>New Retirees and Disableds</u>	<u>Survivors</u>	<u>Total</u>
<b>July 2011</b>	<b>\$ 189,681,503</b>	<b>\$ 6,512,606</b>	<b>\$ 196,194,109</b>
Average Annual Allowance	35,661	16,572	34,348
Annual Allowances Added to the Rolls	8,947,253	1,102,270	10,049,523
Annual Allowances Removed From the Rolls	(2,498,388)	(34,529)	(2,532,917)
<b>July 2012</b>	<b>\$ 196,130,368</b>	<b>\$ 7,580,347</b>	<b>\$ 203,710,715</b>
Average Annual Allowance	36,415	17,307	34,978
Annual Allowances Added to the Rolls	11,709,284	867,622	12,576,906
Annual Allowances Removed From the Rolls	(5,027,794)	(572,950)	(5,600,744)
<b>July 2013</b>	<b>\$ 202,811,858</b>	<b>\$ 7,875,019</b>	<b>\$ 210,686,877</b>
Average Annual Allowance	36,788	17,578	35,344
Annual Allowances Added to the Rolls	21,907,364	699,388	22,606,753
Annual Allowances Removed From the Rolls	(3,506,950)	(217,824)	(3,724,774)
<b>July 2014</b>	<b>\$ 221,212,272</b>	<b>\$ 8,356,583</b>	<b>\$ 229,568,855</b>
Average Annual Allowance	38,206	18,488	36,778
Annual Allowances Added to the Rolls	8,938,666	612,732	9,551,398
Annual Allowances Removed From the Rolls	(3,140,736)	(366,643)	(3,507,379)
<b>July 2015</b>	<b>\$ 227,010,202</b>	<b>\$ 8,602,672</b>	<b>\$ 235,612,874</b>
Average Annual Allowance	38,269	19,202	36,930
Annual Allowances Added to the Rolls	8,783,325	490,043	9,273,368
Annual Allowances Removed From the Rolls	(3,486,640)	(535,806)	(4,022,446)
<b>July 2016</b>	<b>\$ 232,306,887</b>	<b>\$ 8,556,909</b>	<b>\$ 240,863,796</b>
Average Annual Allowance	38,666	19,229	37,326
Annual Allowances Added to the Rolls	8,587,719	633,990	9,221,709
Annual Allowances Removed From the Rolls	(4,617,442)	(329,036)	(4,946,478)
<b>July 2017</b>	<b>\$ 236,277,164</b>	<b>\$ 8,861,864</b>	<b>\$ 245,139,028</b>
Average Annual Allowance	38,970	19,563	37,621
Annual Allowances Added to the Rolls	13,309,491	1,046,785	14,356,276
Annual Allowances Removed From the Rolls	(3,360,205)	(595,678)	(3,955,883)
<b>July 2018</b>	<b>\$ 246,226,450</b>	<b>\$ 9,312,971</b>	<b>\$ 255,539,421</b>
<b>Average Annual Allowance</b>	<b>40,037</b>	<b>20,028</b>	<b>38,630</b>

### Schedule of Active Member Valuation Data

<u>Valuation Date</u>	<u>Number</u>	<u>Annual Payroll</u>	<u>Annual Average Pay</u>	<u>% Increase in Average Pay</u>
July 1, 2011	5,515	405,336,529	73,497	-1.38
July 1, 2012	5,554	398,460,248	71,743	-2.39
July 1, 2013	5,606	395,988,026	70,636	-1.54
July 1, 2014	5,535	402,899,096	72,791	3.05
July 1, 2015	5,541	418,728,584	75,569	3.82
July 1, 2016	5,513	427,622,475	77,566	2.64
July 1, 2017	5,738	444,274,516	77,427	-0.18
July 1, 2018	6,004	467,974,450	77,944	0.67



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## **STATISTICAL SECTION**

### **Employee Retirement Plans**

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## STATISTICAL SECTION

The Statistical Section presents detailed information in the areas shown below, as a context for understanding what the information in the Financial Section says about the overall financial health of the Employee Retirement Plans:

The schedules beginning on page 80 are designed to show financial trend information to assist users in understanding and assessing how the Employee Retirement Plans' financial position has changed over the past ten years. The financial trend schedules presented are:

- Changes in Fiduciary Net Position – Information to help the reader understand the Plans' historical contributions, earnings, and expenses.
- Benefit, Refund and Distribution Deductions from Fiduciary Net Position – Information to help the reader understand the historical benefits, refund, and distribution deductions.

The schedules beginning on page 86 display demographic, economic, and operating information. The demographic and economic information is intended to assist users in understanding the environment in which the Employee Retirement Plans operate. The operating information is intended to provide contextual information about the Employee Retirement Plans' operations to assist readers in using financial statement information. The demographic and economic information and the operating information presented include:

- Principal Participating Employers
- Retired Members by Benefit Type
- Average Benefit Amounts
- Retired Members by Type of Retirement
- Average Benefit Payments and Average Final Valuation Pay
- Schedule of Participating Agencies and Political Subdivisions

EMPLOYEES' RETIREMENT SYSTEM  
SCHEDULE OF CHANGE IN FIDUCIARY NET POSITION  
JUNE 30, 2018  
LAST TEN FISCAL YEARS  
(dollars in thousands)

	2009	2010	2011	2012	2013
<b>Additions</b>					
Member contributions	\$ 18,245	\$ 20,431	\$ 18,592	\$ 22,833	\$ 24,854
Employer contributions	109,567	113,958	109,344	107,855	127,888
Transfer of member account asset balances	-	31,530	-	-	-
Investment income (loss) (net of expenses)	<u>(428,525)</u>	<u>304,185</u>	<u>510,018</u>	<u>117,692</u>	<u>307,859</u>
Total additions	<u>(300,713)</u>	<u>470,104</u>	<u>637,954</u>	<u>248,380</u>	<u>460,601</u>
<b>Deductions</b>					
Benefit payments	168,618	169,089	178,792	202,773	208,804
Refunds	668	1,415	1,568	2,495	1,925
Administrative expenses	<u>2,803</u>	<u>2,907</u>	<u>3,079</u>	<u>3,546</u>	<u>2,401</u>
Total deductions	<u>172,089</u>	<u>173,411</u>	<u>183,439</u>	<u>208,814</u>	<u>213,130</u>
<b>Change in net position</b>	<u><u>\$(472,802)</u></u>	<u><u>\$ 296,693</u></u>	<u><u>\$ 454,515</u></u>	<u><u>\$ 39,566</u></u>	<u><u>\$ 247,471</u></u>

EMPLOYEES' RETIREMENT SYSTEM  
SCHEDULE OF BENEFIT AND REFUND DEDUCTIONS FROM FIDUCIARY NET POSITION BY TYPE  
JUNE 30, 2018  
LAST TEN FISCAL YEARS  
(dollars in thousands)

	2009	2010	2011	2012	2013
<b>Type of Benefit</b>					
Service benefits:					
Retirees	\$ 123,560	\$ 122,861	\$ 129,941	\$ 150,413	\$ 153,566
Survivors	7,333	7,620	7,944	8,233	8,602
Disability	<u>37,725</u>	<u>38,608</u>	<u>40,907</u>	<u>44,127</u>	<u>46,636</u>
Total benefits	<u><u>\$ 168,618</u></u>	<u><u>\$ 169,089</u></u>	<u><u>\$ 178,792</u></u>	<u><u>\$ 202,773</u></u>	<u><u>\$ 208,804</u></u>
<b>Refund of Contributions</b>	\$ 668	\$ 1,415	\$ 1,568	\$ 2,495	\$ 1,925

<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
\$ 26,463	\$ 26,627	\$ 27,056	\$ 27,940	\$ 28,965
144,710	151,302	134,806	95,399	93,163
-	-	-	-	-
<u>534,397</u>	<u>67,071</u>	<u>57,676</u>	<u>413,347</u>	<u>340,085</u>
<u>705,570</u>	<u>245,000</u>	<u>219,538</u>	<u>536,686</u>	<u>462,213</u>
229,664	230,647	230,696	235,124	238,916
4,330	2,874	5,887	6,473	4,624
2,954	2,685	3,014	3,186	2,871
<u>236,948</u>	<u>236,206</u>	<u>239,597</u>	<u>244,783</u>	<u>246,411</u>
<u>\$ 468,622</u>	<u>\$ 8,794</u>	<u>\$ (20,059)</u>	<u>\$ 291,903</u>	<u>\$ 215,802</u>

<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
\$ 172,472	\$ 171,785	\$ 171,391	\$ 175,049	\$ 178,268
8,586	8,982	9,017	9,334	9,784
48,606	49,880	50,288	50,741	50,864
<u>\$ 229,664</u>	<u>\$ 230,647</u>	<u>\$ 230,696</u>	<u>\$ 235,124</u>	<u>\$ 238,916</u>
\$ 4,330	\$ 2,874	\$ 5,887	\$ 6,473	\$ 4,624

RETIREMENT SAVINGS PLAN  
SCHEDULE OF CHANGE IN FIDUCIARY NET POSITION  
JUNE 30, 2018  
LAST TEN FISCAL YEARS  
(dollars in thousands)

	2009	2010	2011	2012	2013
<b>Additions</b>					
Member contributions	\$ 11,263	\$ 8,871	\$ 8,686	\$ 8,435	\$ 8,274
Employer contributions	20,625	16,401	16,072	11,792	15,629
Transfer of member account asset balances	-	(31,530)	-	-	-
Investment income (loss) (net of expenses)	<u>(26,722)</u>	<u>14,191</u>	<u>32,877</u>	<u>143</u>	<u>23,716</u>
Total additions	<u>5,166</u>	<u>7,933</u>	<u>57,635</u>	<u>20,370</u>	<u>47,619</u>
<b>Deductions</b>					
Distributions	3,669	3,902	5,854	6,950	9,389
Administrative expenses	<u>300</u>	<u>237</u>	<u>244</u>	<u>305</u>	<u>201</u>
Total deductions	<u>3,969</u>	<u>4,139</u>	<u>6,098</u>	<u>7,255</u>	<u>9,590</u>
<b>Change in net position</b>	<u>\$ 1,197</u>	<u>\$ 3,794</u>	<u>\$ 51,537</u>	<u>\$ 13,115</u>	<u>\$ 38,029</u>

RETIREMENT SAVINGS PLAN  
SCHEDULE OF DISTRIBUTION DEDUCTIONS FROM FIDUCIARY NET POSITION  
JUNE 30, 2018  
LAST TEN FISCAL YEARS  
(dollars in thousands)

	2009	2010	2011	2012	2013
<b>Distributions</b>	\$ 3,669	\$ 3,902	\$ 5,854	\$ 6,950	\$ 9,389

<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
\$ 8,695	\$ 9,728	\$ 10,714	\$ 10,303	\$ 10,801
17,117	18,502	19,682	19,782	20,348
-	-	-	-	-
<u>42,432</u>	<u>7,493</u>	<u>500</u>	<u>43,598</u>	<u>36,561</u>
<u>68,244</u>	<u>35,723</u>	<u>30,896</u>	<u>73,683</u>	<u>67,710</u>
11,682	12,694	10,055	15,220	15,387
197	235	181	267	329
<u>11,879</u>	<u>12,929</u>	<u>10,236</u>	<u>15,487</u>	<u>15,716</u>
<u>\$ 56,365</u>	<u>\$ 22,794</u>	<u>\$ 20,660</u>	<u>\$ 58,196</u>	<u>\$ 51,994</u>

<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
\$ 11,682	\$ 12,694	\$ 10,055	\$ 15,220	\$ 15,387

DEFERRED COMPENSATION PLAN  
SCHEDULE OF CHANGE IN FIDUCIARY NET POSITION  
JUNE 30, 2018  
LAST TEN FISCAL YEARS  
(dollars in thousands)

	2009	2010	2011	2012	2013
<b>Additions</b>					
Member contributions	\$ 18,058	\$ 17,029	\$ 17,029	\$ 14,974	\$ 18,229
Investment income (loss) (net of expenses)	<u>(44,479)</u>	<u>19,411</u>	<u>42,988</u>	<u>286</u>	<u>34,096</u>
Total additions	<u>(26,421)</u>	<u>36,440</u>	<u>60,017</u>	<u>15,260</u>	<u>52,325</u>
<b>Deductions</b>					
Distributions	13,391	8,723	16,178	17,688	19,847
Administrative expenses	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total deductions	<u>13,391</u>	<u>8,723</u>	<u>16,178</u>	<u>17,688</u>	<u>19,847</u>
<b>Change in net position</b>	<u>\$ (39,812)</u>	<u>\$ 27,717</u>	<u>\$ 43,839</u>	<u>\$ (2,428)</u>	<u>\$ 32,478</u>

DEFERRED COMPENSATION PLAN  
SCHEDULE OF DISTRIBUTION DEDUCTIONS FROM FIDUCIARY NET POSITION  
JUNE 30, 2018  
LAST TEN FISCAL YEARS  
(dollars in thousands)

	2009	2010	2011	2012	2013
<b>Distributions</b>	\$ 13,391	\$ 8,723	\$ 16,178	\$ 17,688	\$ 19,847

<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
\$ 17,011	\$ 19,229	\$ 18,761	\$ 19,511	\$ 20,574
<u>48,864</u>	<u>15,259</u>	<u>(63)</u>	<u>47,590</u>	<u>43,154</u>
<u>65,875</u>	<u>34,488</u>	<u>18,698</u>	<u>67,101</u>	<u>63,728</u>
25,506	26,123	22,374	25,666	22,719
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
<u>25,506</u>	<u>26,123</u>	<u>22,374</u>	<u>25,666</u>	<u>22,719</u>
<u>\$ 40,369</u>	<u>\$ 8,365</u>	<u>\$ (3,676)</u>	<u>\$ 41,435</u>	<u>\$ 41,009</u>

<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
\$ 25,506	\$ 26,123	\$ 22,374	\$ 25,666	\$ 22,719

EMPLOYEES' RETIREMENT SYSTEM  
 PRINCIPAL PARTICIPATING EMPLOYERS  
 CURRENT FISCAL YEAR AND NINE YEARS AGO  
 JUNE 30, 2018

<u>Participating Government</u>	<u>2018*</u>		<u>2009</u>	
	<u>Covered Employees</u>	<u>Percentage of Total System</u>	<u>Covered Employees</u>	<u>Percentage of Total System</u>
Montgomery County	5,847	97.4%	4,843	96.4%
Town of Chevy Chase	1	0.0%	5	0.1%
Strathmore Hall	13	0.2%	7	0.1%
Housing Opportunities Commission	136	2.3%	133	2.7%
Revenue Authority	6	0.1%	11	0.2%
Washington Suburban Transit Commission	0	0.0%	1	0.1%
Montgomery County Employees Federal Credit Union	1	0.0%	8	0.2%
State Department of Assessment and Taxation	0	0.0%	3	0.1%
District Court	0	0.0%	1	0.1%
Total	<u>6,004</u>	<u>100%</u>	<u>5,012</u>	<u>100%</u>

\* Includes GRIP participants

EMPLOYEES' RETIREMENT SYSTEM  
 SCHEDULE OF RETIRED MEMBERS BY BENEFIT TYPE  
 JUNE 30, 2018

<u>Fiscal Year</u>	<u>Retiree</u>	<u>Disability</u>	<u>Survivor</u>	<u>Total</u>
2009	3,957	1,036	386	5,379
2010	4,132	1,079	380	5,591
2011	4,245	1,074	393	5,712
2012	4,309	1,077	438	5,824
2013	4,412	1,101	448	5,961
2014	4,669	1,121	452	6,242
2015	4,807	1,125	448	6,380
2016	4,882	1,126	445	6,453
2017	4,947	1,116	453	6,516
2018	5,031	1,119	465	6,615



EMPLOYEES' RETIREMENT SYSTEM  
SCHEDULE OF AVERAGE BENEFIT AMOUNTS  
JUNE 30, 2018

Fiscal Year	Retiree	Disability	Survivor	Total
2009	\$31,226	\$36,414	\$18,997	\$31,347
2010	29,734	35,781	20,052	30,243
2011	30,610	38,088	20,214	31,301
2012	34,907	40,972	18,797	34,817
2013	34,807	42,357	19,201	35,028
2014	36,940	43,360	18,995	36,793
2015	35,736	44,337	20,049	36,152
2016	35,107	44,660	20,263	35,750
2017	35,385	45,467	20,605	36,084
2018	35,434	45,455	21,040	36,117

EMPLOYEES' RETIREMENT SYSTEM  
SCHEDULE OF RETIRED MEMBERS BY TYPE OF RETIREMENT  
JUNE 30, 2018

Amount of Monthly Benefit	Number of Retired Members	Type of Retirement <sup>a</sup>			Option Selected <sup>b</sup>							
		1	2	3	1	2	3	4	5	6	7	
Deferred	489											
\$ 1 – \$ 500	460	396	59	5	237	117	11	6	39	15	35	
501 – 1,000	565	426	117	22	250	132	25	18	42	31	67	
1,001 – 1,500	632	479	97	56	270	140	17	22	54	41	88	
1,501 – 2,000	588	450	55	83	220	138	21	32	21	56	100	
2,001 – 2,500	610	458	45	107	252	143	17	30	21	47	100	
2,501 – 3,000	533	399	26	108	183	115	11	26	21	62	115	
3,001 – 3,500	509	354	23	132	175	108	6	19	27	70	104	
3,501 – 4,000	485	349	15	121	166	116	5	21	19	72	86	
Over 4000	2,233	1,720	28	485	949	468	7	114	64	332	299	
Total	7,104	5,031	465	1,119	2,702	1,477	120	288	308	726	994	

Benefit amounts include total benefit amount for insured retirees (including the benefit amount that is paid by Aetna).  
Counts include DRSP and DROP members.

Notes:

<sup>a</sup> Type of retirement:

- 1—Retiree
- 2—Beneficiary
- 3—Disabled Retiree

<sup>b</sup> Option selected:

- Option 1—Modified Cash Refund
- Option 2—Certain and Continuous
- Option 3—Life Annuity
- Option 4—Joint and Survivor 50%
- Option 5—Joint and Survivor 100%
- Option 6—Other Joint and Survivor Percentage
- Option 7—Social Security Adjustment Option

EMPLOYEES' RETIREMENT SYSTEM  
SCHEDULE OF AVERAGE BENEFIT PAYMENTS AND AVERAGE FINAL VALUATION PAY  
LAST TEN FISCAL YEARS

Retirement Effective Dates	Years Credited Service						
	<u>0-5</u>	<u>5-10</u>	<u>10-15</u>	<u>15-20</u>	<u>20-25</u>	<u>25-30</u>	<u>30+</u>
Period 7/1/2008 to 6/30/2009							
Average monthly benefit*	\$ -	\$ -	\$ 2,821	\$ 2,760	\$ 3,560	\$ 4,309	\$ 5,425
Average final valuation pay**	\$ -	\$ -	\$ 77,385	\$ 77,304	\$ 88,521	\$ 87,167	\$ 98,906
Number of retired members***	-	-	5	20	21	16	12
Period 7/1/2009 to 6/30/2010							
Average monthly benefit*	\$ -	\$ 3,212	\$ 2,747	\$ 2,815	\$ 3,548	\$ 4,008	\$ 5,289
Average final valuation pay**	\$ -	\$ 63,839	\$ 82,064	\$ 83,152	\$ 85,524	\$ 83,495	\$ 86,947
Number of retired members***	-	6	6	43	49	39	68
Period 7/1/2010 to 6/30/2011							
Average monthly benefit*	\$ 1,965	\$ 3,412	\$ 2,674	\$ 3,091	\$ 3,303	\$ 4,136	\$ 5,079
Average final valuation pay**	\$ 46,807	\$ 65,268	\$ 65,263	\$ 85,031	\$ 82,627	\$ 88,067	\$ 84,544
Number of retired members***	1	4	5	37	80	50	57
Period 7/1/2011 to 6/30/2012							
Average monthly benefit*	\$ -	\$ -	\$ 1,738	\$ 1,840	\$ 3,020	\$ 5,064	\$ 5,546
Average final valuation pay**	\$ -	\$ -	\$ 56,551	\$ 61,633	\$ 80,696	\$ 98,400	\$ 90,742
Number of retired members***	-	-	3	14	30	34	57
Period 7/1/2012 to 6/30/2013							
Average monthly benefit*	\$ -	\$ 331	\$ 1,595	\$ 2,147	\$ 3,063	\$ 4,641	\$ 5,845
Average final valuation pay**	\$ -	\$ 50,497	\$ 56,936	\$ 72,901	\$ 76,904	\$ 90,509	\$ 94,904
Number of retired members***	-	1	5	17	46	38	69
Period 7/1/2013 to 6/30/2014							
Average monthly benefit*	\$ -	\$ -	\$ -	\$ 2,636	\$ 2,941	\$ 4,552	\$ 5,790
Average final valuation pay**	\$ -	\$ -	\$ -	\$ 71,521	\$ 75,097	\$ 90,425	\$ 92,772
Number of retired members***	-	-	-	17	53	98	71
Period 7/1/2014 to 6/30/2015							
Average monthly benefit*	\$ -	\$ -	\$ 2,231	\$ 1,654	\$ 3,273	\$ 4,388	\$ 5,062
Average final valuation pay**	\$ -	\$ -	\$ 72,858	\$ 62,439	\$ 82,958	\$ 90,297	\$ 91,982
Number of retired members***	-	-	1	11	49	74	57
Period 7/1/2015 to 6/30/2016							
Average monthly benefit*	\$ -	\$ -	\$ 1,697	\$ 2,309	\$ 3,054	\$ 4,510	\$ 5,274
Average final valuation pay**	\$ -	\$ -	\$ 65,941	\$ 74,376	\$ 84,079	\$ 94,265	\$ 99,878
Number of retired members***	-	-	6	5	32	63	37
Period 7/1/2016 to 6/30/2017							
Average monthly benefit*	\$ -	\$ -	\$ 1,953	\$ 2,427	\$ 3,325	\$ 4,362	\$ 4,991
Average final valuation pay**	\$ -	\$ -	\$ 76,592	\$ 74,271	\$ 85,297	\$ 96,041	\$ 90,799
Number of retired members***	-	-	12	5	27	60	39
Period 7/1/2017 to 6/30/2018							
Average monthly benefit*	\$ -	\$ -	\$ 2,149	\$ 3,074	\$ 3,218	\$ 4,736	\$ 5,781
Average final valuation pay**	\$ -	\$ -	\$ 101,266	\$ 90,712	\$ 81,372	\$ 100,236	\$ 104,711
Number of retired members***	-	-	5	7	31	76	48

\* Based on current benefits only, and does not take into account any future benefits. Includes total benefit amount for insured retirees (including the benefit amount that is paid by Aetna).

\*\* Pay used for last valuation (when member was an active employee).

\*\*\* Only includes participants who went from active to retiree status. Excludes disability retirees.

Beginning with periods after 7/1/2011, counts include members that were in DRSP or DROP in the previous valuation and were retired in the current valuation.

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**SCHEDULE OF PARTICIPATING AGENCIES  
AND POLITICAL SUBDIVISIONS  
EMPLOYEES' RETIREMENT SYSTEM  
RETIREMENT SAVINGS PLAN**

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Town of Chevy Chase  
Strathmore Hall Foundation, Inc.  
Housing Opportunities Commission of Montgomery County  
Montgomery County Revenue Authority  
Washington Suburban Transit Commission  
Montgomery County Employees Federal Credit Union

Certain employees of the:  
State Department of Assessments and Taxation  
District Court of Maryland