

Fairfax County Uniformed Retirement System

**Actuarial Valuation
as of June 30, 2017**

Produced by Cheiron

October 2017

TABLE OF CONTENTS

<i>Section</i>	<i>Page</i>
Letter of Transmittal	i
Foreword.....	iii
Section I Board Summary	1
Section II Assets	12
Section III Liabilities	18
Section IV Contributions.....	21
Section V Accounting Statement Information.....	24
 <i>Appendices</i>	
Appendix A Membership Information	27
Appendix B Actuarial Assumptions and Methods	34
Appendix C Summary of Plan Provisions.....	40

October 24, 2017

Board of Trustees
Fairfax County Uniformed Retirement System
12015 Lee Jackson Memorial Hwy
Suite 350
Fairfax, Virginia 22033

**Re: *Fairfax County Uniformed Retirement System
Actuarial Valuation as of June 30, 2017***

Dear Members of the Board:

At your request, we have conducted our annual actuarial valuation of the Fairfax County Uniformed Retirement System as of June 30, 2017. The results of the valuation are contained in this report. The purpose of this report is to present the annual actuarial valuation of the Fairfax County Uniformed Retirement System. This report is for the use of the Fairfax County Uniformed Retirement System Board of Trustees and its auditors in preparing financial reports in accordance with applicable law and accounting requirements.

Your attention is called to the Foreword in which we refer to the general approach employed in the preparation of this report. We also comment on the sources and reliability of both the data and the actuarial assumptions on which our findings are based. Those comments are the basis for our certification that this report is complete to the best of our knowledge and belief. The results of this report are only applicable to the County contribution for Fiscal Year 2019 and rely on future plan experience conforming to the underlying assumptions. To the extent that actual plan experience deviates from the underlying assumptions, the results would vary accordingly.

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 assumptions, changes in assumptions, and changes in plan provisions or applicable law.

In preparing our report, we relied on information (some oral and some written) supplied by the Retirement System. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standards of Practice No. 23.

This report was prepared exclusively for the Fairfax County Uniformed Retirement System for the purpose described herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

We hereby certify that, to the best of our knowledge, this report and its contents, have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards

Board of Trustees
Fairfax County Uniformed Retirement System
October 24, 2017
Page ii

of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinions contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

Sincerely,
Cheiron



Fiona E. Liston, FSA, EA
Principal Consulting Actuary



Coralie A. Taylor, FSA, EA
Associate Actuary

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

FOREWORD

Cheiron has performed the actuarial valuation of the Fairfax County Uniformed Retirement System as of June 30, 2017. The purpose of this report is to:

- 1) **Measure and disclose**, as of the valuation date, the financial condition of the System;
- 2) **Indicate trends** in the financial progress of the System;
- 3) **Determine the contribution rate** to be paid by the County for Fiscal Year 2019; and
- 4) **Provide specific information** and documentation required for the System's financial reporting.

An actuarial valuation establishes and analyzes system assets and liabilities on a consistent basis and traces the progress of both from one year to the next. It includes measurement of the system's investment performance as well as an analysis of actuarial liability gains and losses.

Section I presents a summary containing our findings and disclosing important trends experienced by the System in recent years.

Section II contains details on various asset measures, together with pertinent performance measurements.

Section III shows similar information on the System's liabilities, measured for actuarial, accounting, and governmental reporting purposes.

Section IV develops the employer contribution rate, determined using actuarial techniques and compares that to the rate developed using the corridor method of funding.

Section V includes the required items to be included in the System's Comprehensive Annual Financial Report (CAFR).

The appendices to this report contain a summary of the System's membership at the valuation date, a summary of the major provisions of the System, and the actuarial methods and assumptions used in the valuations.

In preparing our report, we relied on information (some oral and some written) supplied by the System's staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standards of Practice No. 23.

The actuarial assumptions reflect our understanding of the likely future experience of the System, and the assumptions taken individually represent our best estimate for the future experience of the System. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the System could vary from our results.

Finally, in preparing this report, we have conformed to generally accepted actuarial principles and practices, which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION I - BOARD SUMMARY

General Comments

Fairfax County's annual contribution to this System is determined by using a corridor funding method. Under this funding approach, the County's contribution base rate consists of the normal cost rate plus an expense rate plus certain amortization UAL bases. The UAL base rates are summarized in Section IV. The normal cost rate and actuarial accrued liability will be measured using the entry age funding method. If the corridor funded status falls outside the corridor, a credit (if above 120%) or charge (if below 90%) will be established based on a rolling 15-year amortization equal to the amount necessary to re-enter the corridor. The County is taking steps to increase the 90% corridor floor to 100%. Once this threshold is reached, the 15-year periods will become closed 15-year layers.

The employer contribution rate for Fiscal Year (FY) 2019, as calculated under this method, decreased from 30.35% for FY 2017 to 28.20% of payroll when using the 90% corridor floor. The County's FY 2018 contribution was actually based on a 98% corridor floor, and for FY 2019, we have also provided contribution rates for a 99% floor. On that basis, the contribution in FY 2018 was 38.83%, and for FY 2019 it will be in the range of 36.59% to 37.64%. However, the County has adopted a policy to not reduce the contribution rate until such time that the UAL has been exhausted, thus the contribution rate for FY 2018 and FY 2019 will at a minimum be 38.83% which excludes the amount for the one time change to the social security offset.

This valuation contains information reported in the June 30, 2017 Comprehensive Annual Financial Report (CAFR) of the System. Additional information regarding GASB Statement No. 67 can be found in a separate report.

Trends

The System outperformed the investment assumption during the fiscal year ending in 2017, which caused an actuarial gain on the asset side of the System. The actual return on a market value basis was approximately 10.80%. On an actuarial value basis, the assets returned 6.05% compared with an assumed rate of return of 7.25%. The investment loss recognized for funding purposes was \$96.5 million.

The measurement of liabilities produced a loss this year in the amount of \$6.0 million. This loss was due to experience compared to our assumptions about salary increases, retirement behavior, COLA, and death, etc. Specific components of the loss include:

- The average salary increase was 5.2% for active participants who were in both the June 30, 2016 and June 30, 2017 valuations. This was slightly more than expected based on the actuarial assumption, creating a liability loss of \$2 million.
- The valuation assumed a 2.50% cost-of-living adjustment in 2016 for benefits in pay status. The actual CPI-based COLA was 1.30% last year, creating a liability gain of \$13 million.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION I - BOARD SUMMARY

- An annual component of liability loss is the delayed recognition of new hires throughout the year. This does not contribute to an increase in the System's unfunded liability because both the member and employer contribute from the date of hire. However, when we look only at the liability side, they are a component of the annual liability loss. This year they account for a \$1 million loss.
- There was a \$16 million liability loss component that is made up of various other causes such as members terminating, retiring, dying, or becoming disabled in a way contrary to the assumption, and on retirees and terminated vested members who were not in the 2016 data in that status.

This valuation report also reflects a plan change to reduce the Social Security offset applied to certain disability benefits, which increased liabilities, by \$0.8 million. The County will make an additional contribution in Fiscal Year 2018 to pay for this change.

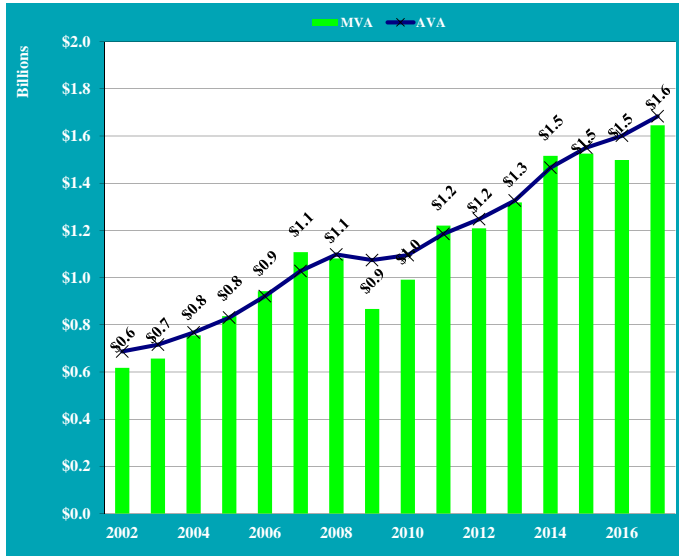
The combination of liability and investment experience, and plan changes, together with County plus member contributions over the last year caused an increase in the System's funding ratio (actuarial value of assets over actuarial accrued liability) from 82.5% at June 30, 2016 to 82.8% at June 30, 2017. For purposes of measuring whether the System remains within the funding corridor, an adjusted funding ratio is used. In this ratio, there is an additional asset recognized in the amount of the unfunded actuarial liability payments being made by the County to pay for benefit increases and assumption changes. On this basis, the System's actuarial funded ratio decreased from 85.4% at June 30, 2016 to 85.0% at June 30, 2017.

It is important to take a step back from the latest results and view them in the context of the System's recent history. On the next three pages, we present a series of charts that display key factors in the valuations over the last 15 years. After the historical review, we present a few projection graphs, showing the possible condition of the System over the next 15 years under various market return scenarios.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION I - BOARD SUMMARY

Growth in Assets

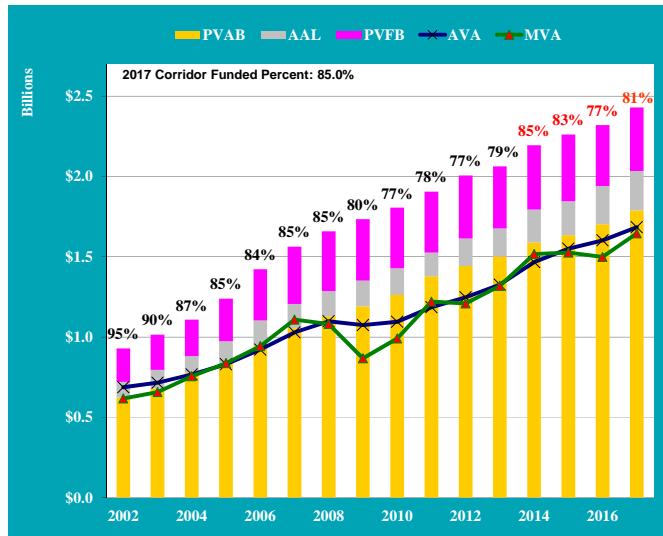


There was an increase in the market value of assets (MVA) (amount in billions shown above bars) over last year due to a return of 10.8%. The actuarial value of assets (AVA) increased due to the continued recognition of recent asset gains. The System has \$38.1 million in unrecognized losses that will be phased in over the next few years.

Over the period of July 1, 2002 to June 30, 2017, the System’s assets returned approximately 6.98% per year measured at actuarial value, compared to the valuation assumption of 7.25% per year.

Assets and Liabilities

The three colored bars represent the three different measures of liability mentioned in this report. The amount represented by the top of the pink bars, the present value of future benefits (PVFB), is the amount needed to provide all benefits for the current participants and their beneficiaries. If the System had assets equal to the PVFB, no contributions would, in theory, be needed for the current members. For funding purposes, the target amount is represented by the top of the gray bar. Through the 2013 valuation, we compare the actuarial value of assets to this measure of liability in developing the funded percent (black numbers). Starting in 2014, the comparison uses the market value of assets (red numbers). These are the percentages shown in the graph labels.

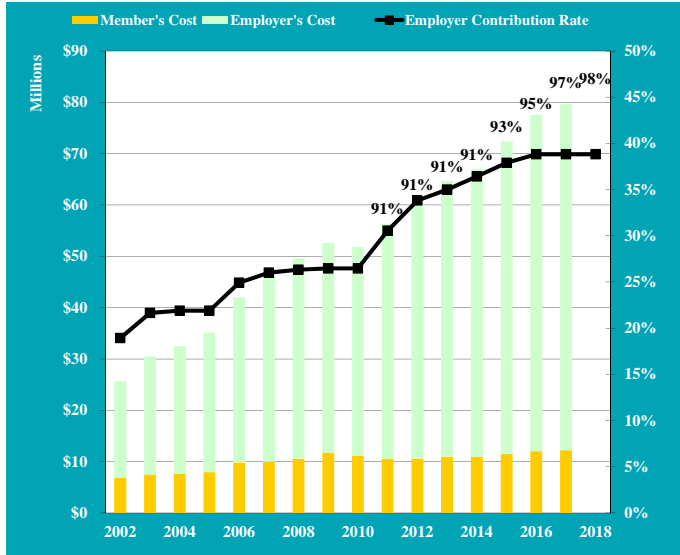


**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION I - BOARD SUMMARY

Contribution Rates

The stacked bars in this graph show the contributions made by both the County and the members (left hand scale). The black line shows the County contribution rate as a percent of payroll (right hand scale).

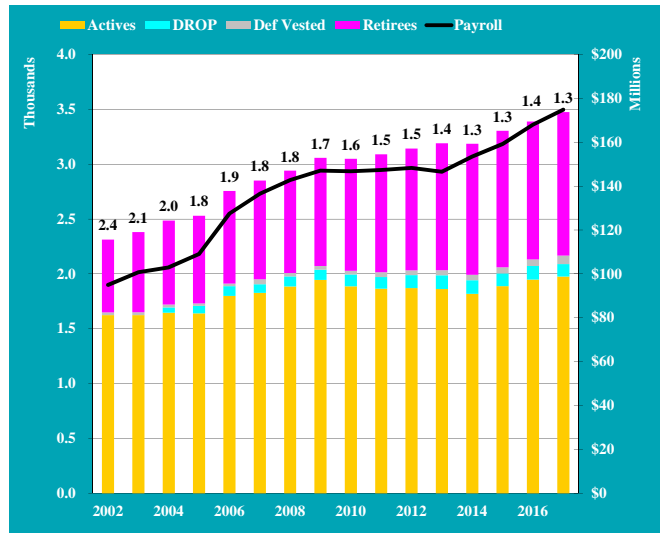


The member contribution rate is set by the County Ordinance. The County contribution rate is set by the actuarial process, as constrained by the corridor method. Note there is a lag in the rate shown. For example, the 2017 value is the rate prepared by the 2015 valuation and implemented for the period June 30, 2016 to June 30, 2017. Starting with FY 2011, the County contribution has been based on a corridor floor greater than 90%. The data labels show the change in this metric.

Participant Trends

As with many systems in this country, there has been a steady growth in the number of retired members as the System has matured. The active-to-inactive ratio has decreased from 2.4 actives to each inactive in 2002 to 1.3 actives for each inactive today. While this would be an alarming trend in a pay-as-you-go system, the pool of invested assets has been established in anticipation of this development.

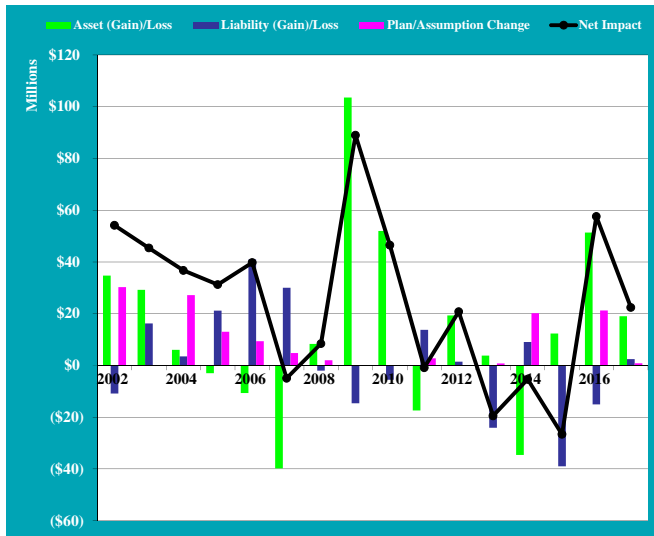
Starting in 2004, the chart also shows the number of DROP participants. Neither employer nor member contributions are made on their behalf, which leads to a slightly lower growth in effective covered payroll for this System.



**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION I - BOARD SUMMARY

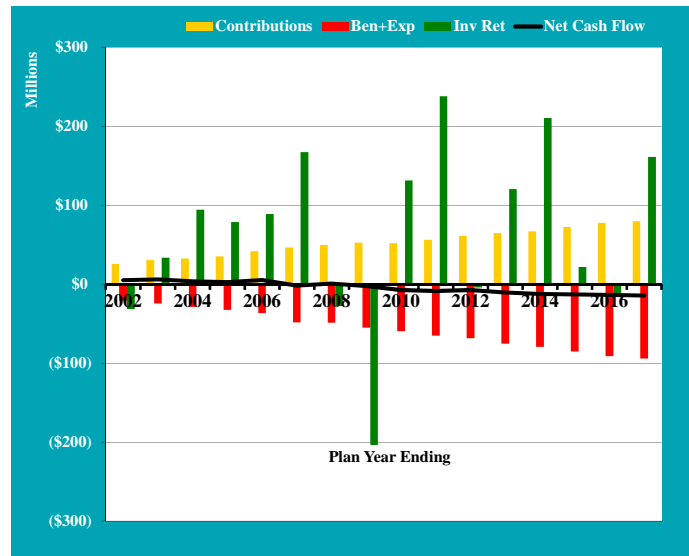
Gains and Losses



This graph shows the annual gains and losses experienced by the System, along with the change in unfunded actuarial liability (UAL) due to plan amendments and changes in assumptions. The black line shows the net impact of all such changes in a given year. Positive numbers represent increases in the UAL while negative numbers show reductions.

Cash Flow

The graph shows the annual cash flows into and out of the System. The graph shows the magnitude of the investment returns on the market value (green bars) compared to the contributions (yellow bars). The net cash flow (line) is comparing the contributions to benefits and expenses (red bar). Negative cash flow is expected for a mature plan such as this one. The implications of a plan with negative cash flow are that the impact of market fluctuations can be more severe. This is, because as assets are being depleted to pay benefits in down markets, less principal is available to be reinvested during periods of favorable returns.



**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION I - BOARD SUMMARY

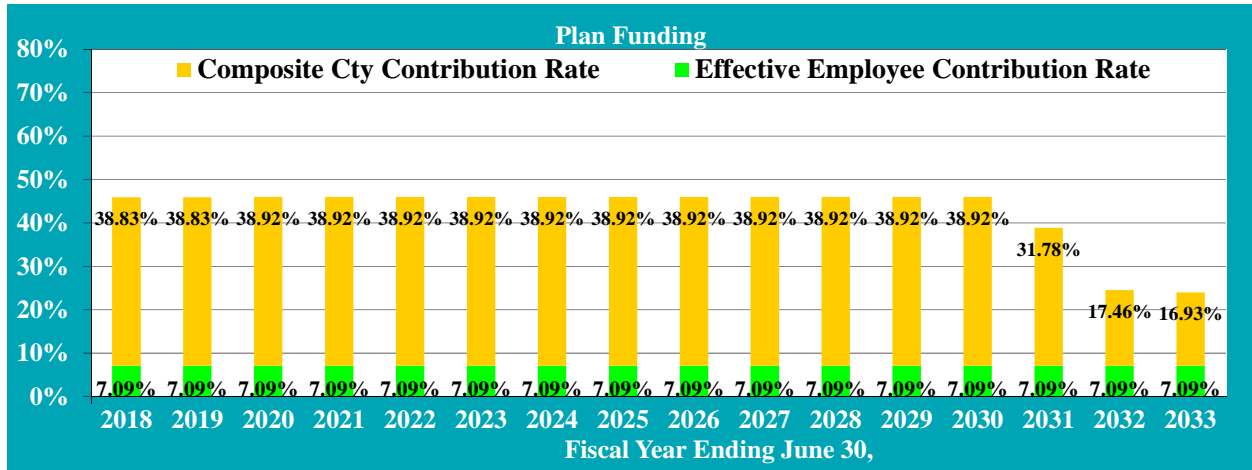
Future Outlook

Base-line Projections

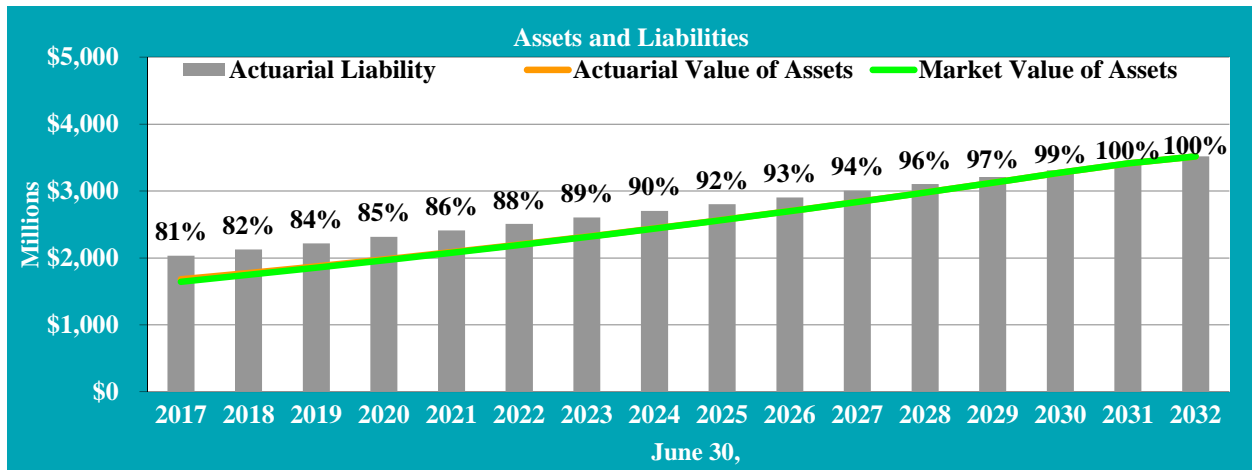
The two graphs below show the expected progress of the System over the next 15 years assuming the System’s assets earn 7.25% on their *market value*.

The floor of the County’s corridor contribution calculation was increased to 98% for FY 2018. In FY 2019, the amortization target could range from 98 to 99% and continue increasing until the amortization target is 100%. In addition to the increasing corridor floor, the County does not intend to reduce the contribution rate until the System is 100% funded.

The graph entitled “Plan Funding” illustrates the FY 2019 floor at 99% with an increase to 100% for FY 2020.



The “Assets and Liabilities” graph shows the projected funding status over the next 15 years. The funded ratio slowly increases over the entire period until reaching 100% by 2031.



**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION I - BOARD SUMMARY

The future funding status of this System will be influenced by the investment earnings. The prior projection assumed the System would earn 7.25% each and every year, which is extremely unlikely.

In the projections that follow, we show the risk to the System under volatile markets. Since 1980, the System has averaged an 8.93% return per year. In the following charts, we show results assuming returns over the next 15 years average 4.75%, 7.25%, and 9.75%. Different patterns of returns will produce different results from those shown here.

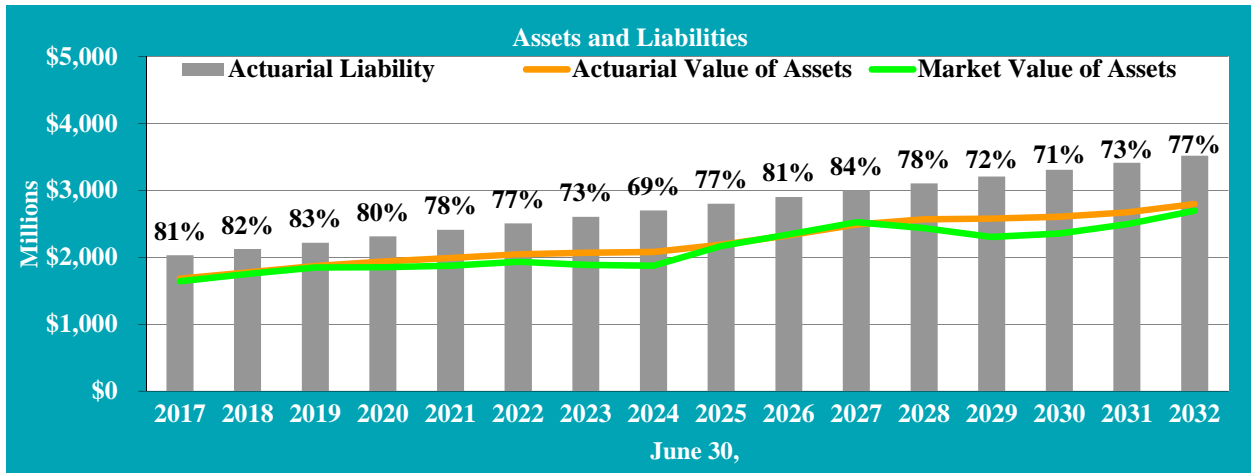
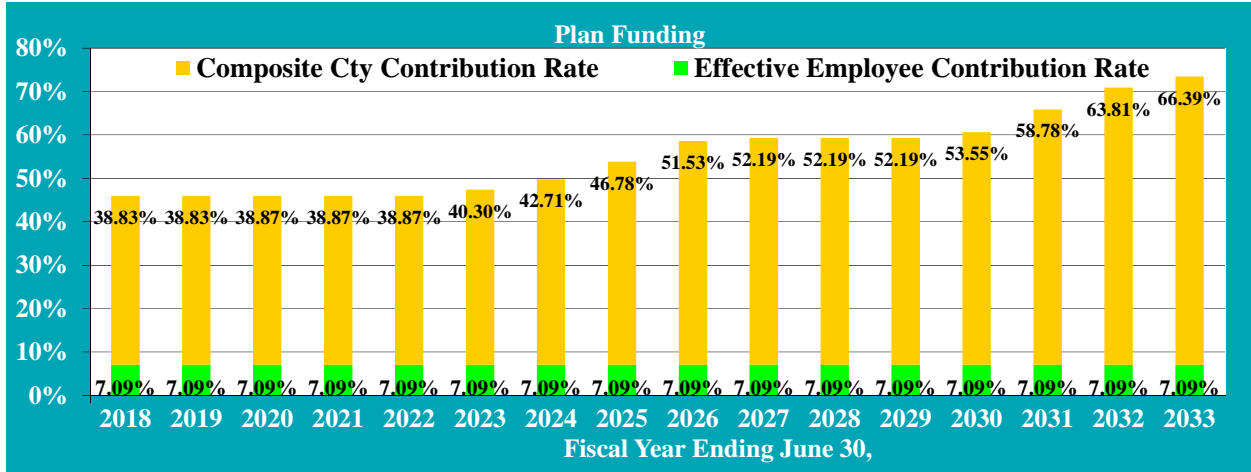
Table I-1			
Fiscal Year Ending June 30,	Average 4.75%	Average 7.25%	Average 9.75%
2018	7.42%	2.09%	(6.10)%
2019	6.80	6.92	4.29
2020	1.42	17.47	17.90
2021	2.73	29.76	32.31
2022	4.91	19.17	(9.23)
2023	(0.44)	5.36	12.22
2024	1.23	10.78	17.56
2025	17.34	4.05	(14.20)
2026	9.25	15.35	14.94
2027	9.00	(0.69)	14.58
2028	(2.36)	1.80	28.20
2029	(4.00)	(8.62)	24.67
2030	3.95	4.40	3.70
2031	7.02	(0.84)	7.12
2032	8.92	7.58	9.97
Average	4.75%	7.25%	9.75%

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION I - BOARD SUMMARY

Alternative Projection -- with average return of 4.75% in the period

Under this scenario, the corridor contribution rate increases from 39% to about 66% of payroll. The System's funding drops to as low as 69%, even with the ramping up of contributions.

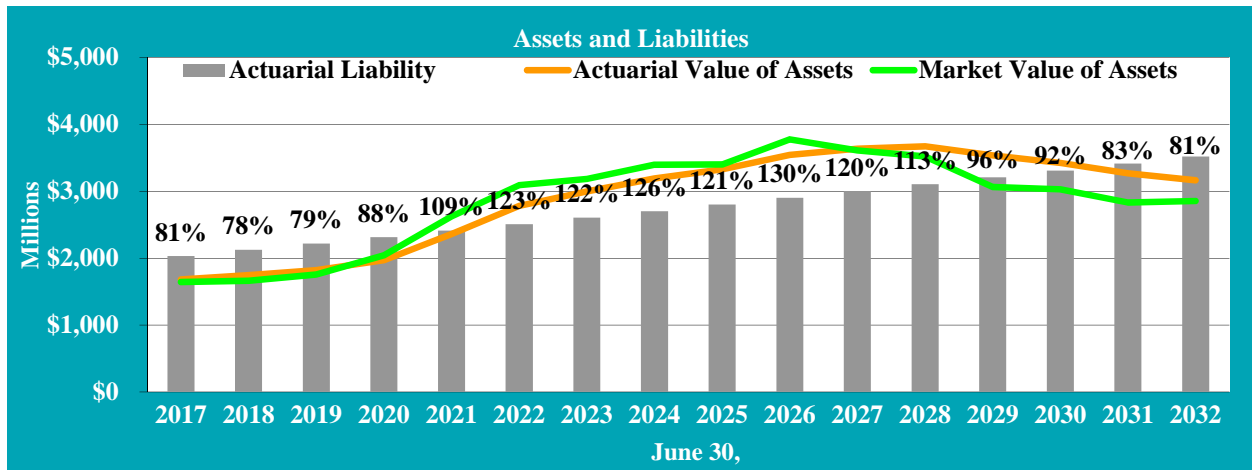
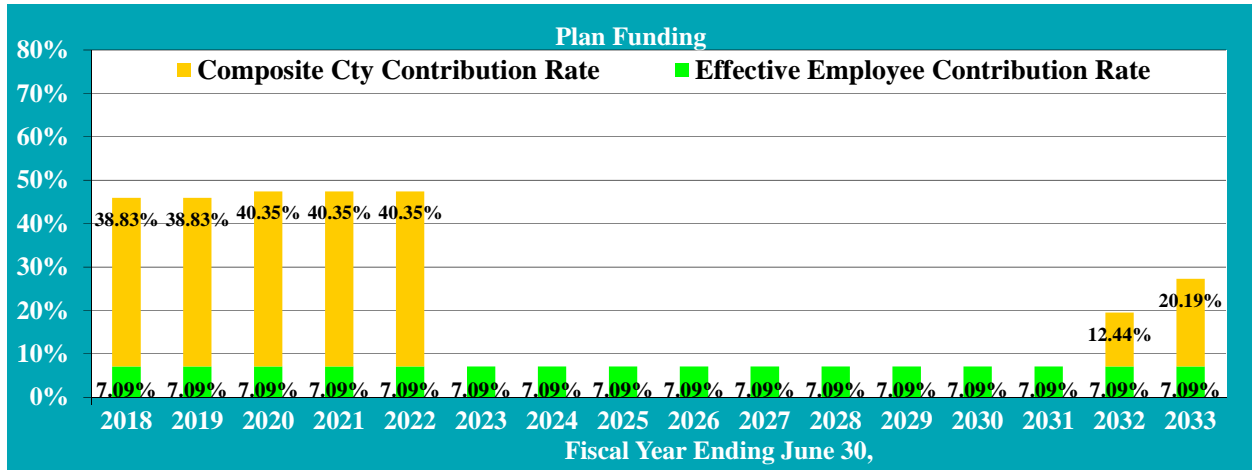


**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION I - BOARD SUMMARY

Alternative Projection – with average return of 7.25% in the period

Under this scenario, the corridor contribution rate increases over the next few years as the corridor floor is increased to 100%. After that time, the contribution drops dramatically as returns continue to push the funded percent over the 120% top of the corridor.

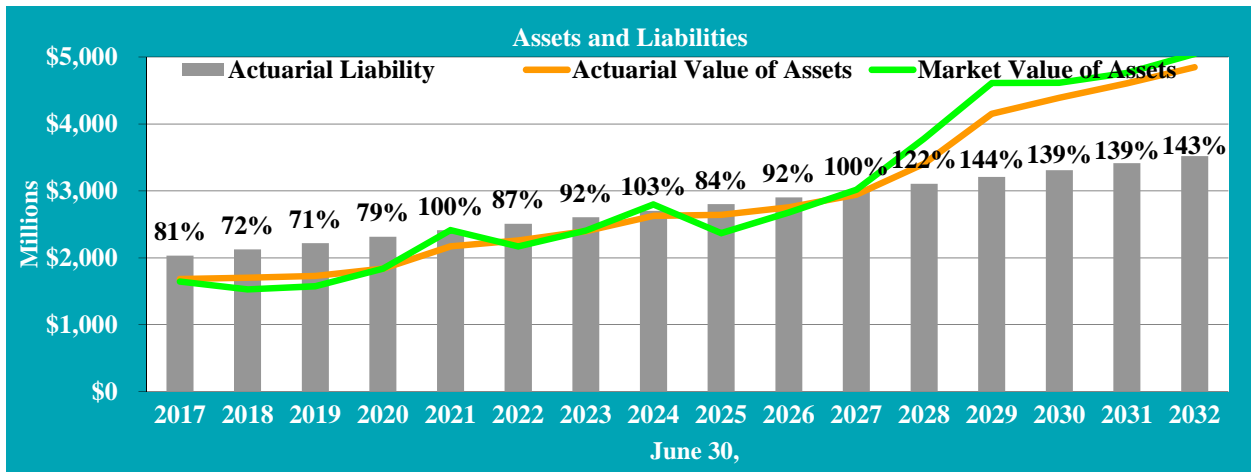
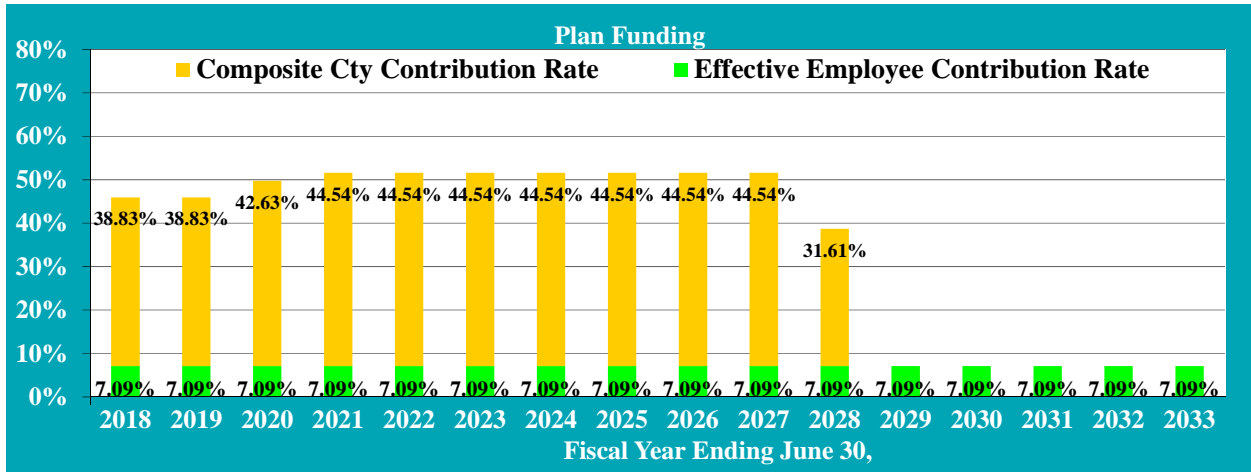


**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION I - BOARD SUMMARY

Alternative Projection -- with average return of 9.75% in the period

Similar to the prior scenario, the corridor contribution rate increases in the early years due to the assumed underperformance. The highest contribution rate of 44.54% is maintained until the System reaches full funding. This determination is made using the corridor assets. By the end of the projection period, the member contribution rate is the only amount being contributed.



**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION I - BOARD SUMMARY

Table I-2 Summary of Principal Plan Results			
Valuation as of:	6/30/2016	6/30/2017	% Chg.
<u>Participant Counts</u>			
Actives (excluding DROP)	1,948	1,975	1.4%
DROPs	123	115	(6.5)%
Terminated Vesteds	61	76	24.6%
In Pay Status	<u>1,256</u>	<u>1,309</u>	4.2%
Total	3,388	3,475	2.6%
Annual Salaries of Active Members	\$ 167,965,582	\$ 174,888,440	4.1%
Annual Retirement Allowances for Retired Members and Beneficiaries (Base amount only – not supplements)	\$ 74,503,164	\$ 79,645,135	6.9%
<u>Assets and Liabilities</u>			
Actuarial Accrued Liability (AL)	\$ 1,940,457,230	\$ 2,033,689,452	4.8%
Assets for Valuation Purposes (AVA)	<u>1,601,320,543</u>	<u>1,683,381,052</u>	5.1%
Unfunded Actuarial Liability	\$ 339,136,687	\$ 350,308,400	3.3%
Actuarial Value Funding Ratio (AVA/AL)	82.5%	82.8%	
Market Value Funding Ratio (MVA/AL)	77.2%	80.9%	
Present Value of Accrued Benefits	\$ 1,702,319,153	\$ 1,788,709,134	5.1%
Market Value of Assets	<u>1,498,702,845</u>	<u>1,645,263,844</u>	9.8%
Unfunded Accrued Liability (not less than \$0)	\$ 203,616,308	\$ 143,445,290	(29.6)%
Accrued Benefit Funding Ratio	88.0%	92.0%	
<u>Contributions as a Percentage of Payroll</u>			
	Fiscal Year 2018	Fiscal Year 2019	
<u>Corridor Method:</u>			
Normal Cost Contribution	16.97%	17.09%	
Increase Due to Amortized Changes	8.30%	5.60%	
Administrative Expense	<u>0.25%</u>	<u>0.25%</u>	
Base Rate	25.52%	22.94%	
Amortize to 98%	38.69%	36.59%	
Amortize to 99%	39.73%	37.64% ¹	

¹ The County has a policy of not paying any less than the existing rate until such a time as the UAL has been exhausted. Both the FY 2018 and FY 2019 will be held at the 38.83% rate in effect for FY 2017.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION II - ASSETS

Pension system assets play a key role in the financial operation of the System and in the decisions the Trustees may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact upon benefit levels, County contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on the System's assets including:

- **Disclosure** of the System's assets at June 30, 2016 and June 30, 2017,
- Statement of the **changes** in market values during the year,
- Development of the **actuarial value of assets**,
- An assessment of **investment performance**, and
- A projection of the System's expected **cash flows** for the next 10 years.

Disclosure

The market value of assets represents "snap-shot or cash-out" values, which provide the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not suitable for long-range planning.

The actuarial values are market values that have been smoothed; they are used for evaluating the System's ongoing liability to meet its obligations.

Current methods employed by this system set the actuarial value equal to the expected value plus 33 $\frac{1}{3}$ % of the difference between the expected value of assets and the actual market value, where the expected value is equal to the prior year's actuarial value, rolled forward with actual contributions, benefit payments, and administrative expenses plus interest imputed at the prior year investment return assumption of 7.25%.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION II - ASSETS

Table II-1		
Statement of Assets at Market Value		
	6/30/2016	6/30/2017
<u>Assets</u>		
Equity in County's Pooled Cash,		
Contributions Receivable and Other Assets	\$ 6,099,260	\$ 7,116,786
Accrued Interest and Dividends Receivable	2,483,724	2,562,346
Receivable from Sale of Investments	21,335,909	39,496,420
Equipment	272	(44,986)
US Government Obligations	28,931,620	24,325,473
Asset-Backed Securities	94,558,677	77,724,391
Other Bonds and Notes	121,989,223	102,440,500
Common and Preferred Stock	169,059,146	265,154,092
Pooled and Mutual Funds	955,819,142	1,048,504,785
Short-Term Investments	123,384,810	125,249,878
Cash Collateral Received Under Securities Lending Agreements	15,980,331	19,261,663
Total Assets	\$ 1,539,642,114	\$ 1,711,791,348
<u>Liabilities</u>		
Payable for Collateral Received Under Securities Lending Agreements	\$ 15,980,331	\$ 19,261,663
Payable for Purchase of Investments	22,170,521	43,651,043
Accounts Payable and Accrued Expenses	2,788,417	3,614,798
Total Liabilities	\$ 40,939,269	\$ 66,527,504
Net Assets Available for Benefits	\$ 1,498,702,845	\$ 1,645,263,844

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION II - ASSETS

Table II-2 Changes in Market Values		
Value of Assets – July 1, 2016		\$ 1,498,702,845
<u>Additions</u>		
Contributions:		
County Contributions	\$ 67,410,252	
Employee Contributions	12,223,468	
Total Contributions		\$ 79,633,720
Investment Income:		
Net Appreciation (Depreciation) in Fair Value of Investments	\$ 148,471,944	
Interest	12,057,848	
Dividends	12,308,029	
Total Investment Income	\$ 172,837,821	
Investment Activity Expenses:		
Management Fees	\$ (11,309,062)	
Custodian Fees	(74,160)	
Consulting Expense	(321,753)	
Allocated Administrative Expenses	(225,627)	
Total Investment Activity Expenses	\$ (11,930,602)	
From Securities Lending Activities:		
Securities Lending Income	\$ 286,091	
Securities Lending Expenses		
Borrowers Rebates	(179,596)	
Management Fees	0	
Net Income from Securities Lending Activities	\$ 106,495	
Net Investment Income		\$ 161,013,714
Total Additions		\$ 240,647,434
<u>Deductions</u>		
Annuity Benefits	\$ (83,777,110)	
Disability Benefits	(7,884,990)	
Survivor Benefits	(1,182,524)	
Refunds and Other Expenses	(764,247)	
Administrative Expenses	(477,564)	
Total Deductions		\$ (94,086,435)
<u>Total</u>		
Net Increase (Decrease)		\$ 146,560,999
Value of Assets – June 30, 2017		\$ 1,645,263,844

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION II - ASSETS

Actuarial Value of Assets

The actuarial value of assets represents a “smoothed” value developed by the actuary to reduce, or eliminate, erratic results which could develop from short-term fluctuations in the market value of assets. For this system, the actuarial value has been calculated by adding 33⅓% of the difference between market value and expected value to the expected value. The following table illustrates the calculation of the actuarial value of assets for the June 30, 2017 valuation.

Table II-3 Development of Actuarial Value of Assets as of June 30, 2017		
1.	Actuarial Value of Assets at June 30, 2016	\$ 1,601,320,543
2.	Amount in (1) with Interest to June 30, 2017	1,717,416,282
3.	Employer and Member Contributions for the Plan Year Ended June 30, 2017	79,633,720
4.	Interest on Contributions Assuming Received Uniformly Throughout the Year to June 30, 2017	2,886,722
5.	Disbursements from Trust Except Investment Expenses, July 1, 2016 Through June 30, 2017	(94,086,435)
6.	Interest on Disbursements Assuming Payments Made Uniformly Throughout the Year to June 30, 2017	(3,410,633)
7.	Expected Value of Assets at June 30, 2017 = (2) + (3) + (4) + (5) + (6)	1,702,439,656
8.	Market Value of Assets at June 30, 2017	<u>1,645,263,844</u>
9.	Excess of (8) Over (7)	\$ (57,175,812)
10.	Actuarial Value of Assets at June 30, 2017 = (7) + 33-1/3% of (9)	\$ 1,683,381,052

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION II - ASSETS

Investment Performance

The market value of assets (MVA) returned 10.80% during 2017, which is more than the assumed 7.25% return. A return of 6.05% on the actuarial value of assets (AVA) is primarily the result of the asset smoothing method being utilized for the calculation of the actuarial value of assets. Since only 33 $\frac{1}{3}$ % of the gain or loss from the performance of the System is recognized in a given year, in periods of very good performance, the AVA can lag significantly behind the MVA. In a period of negative returns, the AVA does not decline as rapidly as the MVA.

Table II-4 Annual Rates of Return				
Year Ending <u>June 30,</u>	Market <u>Value</u>	Actuarial <u>Value</u>	Total Return Standard & Poor's 500 <u>Index</u>	Barclays Global Aggregate <u>Index</u> ¹
1993	12.2%	10.0%	13.6%	13.2%
1994	1.4%	6.3%	1.3%	(1.5)%
1995	14.6%	9.3%	26.1%	12.8%
1996	15.0%	14.2% ²	26.0%	4.7% ³
1997	17.2%	12.9%	34.6%	8.2%
1998	16.2%	10.8%	30.2%	10.5%
1999	9.6%	13.4%	22.7%	3.1%
2000	5.2%	10.4%	7.3%	4.6%
2001	(2.8)%	5.7%	(14.8)%	11.2%
2002	(4.9)%	2.3%	(18.0)%	8.6%
2003	5.4%	3.3%	0.3%	10.4%
2004	14.3%	6.7%	19.1%	0.3%
2005	10.4%	7.9%	6.3%	6.8%
2006	10.5%	8.8%	8.6%	(0.8)%
2007	17.8%	11.8%	20.6%	6.1%
2008	(2.5)%	6.7%	(13.1)%	7.1%
2009	(19.6)%	(1.9)%	(26.2)%	5.5%
2010	15.2%	2.6%	14.4%	9.5%
2011	24.1%	9.1%	30.8%	3.9%
2012	(0.3)%	5.9%	5.4%	7.5%
2013	10.0%	7.2%	20.6%	(0.1)%
2014	16.0%	10.0%	24.6%	4.4%
2015	1.4%	6.7%	7.4%	1.8%
2016	(0.9)%	4.2%	4.0%	6.0%
2017	10.8%	6.1%	17.9%	(0.3)%

¹ Figures shown prior to 1987 are Salomon Brothers Long Term Bond Index.

² Figures shown prior to 1997 are Shearson Lehman Government/Corporate Bond Index.

³ The actuarial return in 1996 reflects the adjustment to a revised actuarial valuation method.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION II - ASSETS

Expected benefit payments are projected for the closed group valued at June 30, 2017. Projecting any further than 10 years using a closed-group would not yield reliable predictions due to the omission of new hires.

Expected employer contributions are projected based on the current County contribution rate of 39.28% for FY 2018, and then using the amortize to 99% rate for FY 2018 and amortize to 100% for FY 2019. This projection assumes no further gains or losses, a 2.75% annual increase in the total covered payroll and models the anticipated impact of new hires coming in with altered plan provisions.

Table II-5		
Projection of System's Benefit Payments and Employer Contributions		
Year Beginning	Expected	Expected
<u>July 1,</u>	<u>Benefit Payments</u>	<u>County Contributions</u>
2017	\$ 96,107,000	\$ 67,909,000
2018	102,408,000	69,777,000
2019	107,119,000	71,696,000
2020	114,408,000	73,667,000
2021	122,068,000	75,693,000
2022	129,530,000	77,775,000
2023	136,518,000	79,913,000
2024	143,804,000	82,111,000
2025	151,704,000	84,369,000
2026	159,151,000	86,689,000

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION III - LIABILITIES

In this section, we present detailed information on system liabilities including:

- **Disclosure** of system liabilities at June 30, 2016 and June 30, 2017,
- Statement of **changes** in these liabilities during the year, and
- A **projection** of future liabilities.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them.

- **Present Value of Benefits:** Used for analyzing the financial outlook of the System, this represents the amount of money needed today to fund all future benefits and expenses of the System, assuming participants continue to accrue benefits and all assumptions are met.
- **Actuarial Accrued Liability:** Used for funding calculations and GASB disclosures, this liability is calculated taking the present value of benefits above and subtracting the present value of future member contributions and future employer normal costs under an acceptable actuarial funding method. This method is referred to as the **Entry Age Normal** funding method.
- **Present Value of Accrued Liabilities:** Used for communicating the current level of liabilities, this liability represents the total amount of money needed today to fully pay off the current accrued obligations of the System, assuming no future accruals of benefits and that all assumptions are met, including the 7.25% investment return. These liabilities are also used to assess whether the System can meet its current benefit commitments.

None of the liability figures disclosed in this report is meant to be a measure of the System's settlement liability.

The following table discloses each of these liabilities for the current and prior valuations. With respect to each disclosure, a subtraction of the appropriate value of the System's assets yields, for each respective type, a **net surplus** or an **unfunded liability**.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION III - LIABILITIES

Table III-1		
Liabilities/Net (Surplus)/Unfunded		
	June 30, 2016	June 30, 2017
Present Value of Future Benefits		
Active Participant Benefits (excluding DROP)	\$ 1,164,883,338	\$ 1,213,296,704
DROP Participant Benefits	167,279,062	159,726,600
Retiree Benefits	978,657,862	1,046,091,139
Terminated Vested and Inactive Members	8,907,427	10,512,523
Present Value of Benefits (PVB)	\$ 2,319,727,689	\$ 2,429,626,966
Market Value of Assets (MVA)	\$ 1,498,702,845	\$ 1,645,263,844
Future Employee Contributions	108,985,400	112,813,921
Future County Contributions	712,039,444	671,549,201
Total Resources	\$ 2,319,727,689	\$ 2,429,626,966
Actuarial Accrued Liability		
Present Value of Benefits (PVB)	\$ 2,319,727,689	\$ 2,429,626,966
Present Value of Future Normal Costs (PVFNC)		
County Portion	270,285,059	283,123,593
Employee Portion	108,985,400	112,813,921
Actuarial Accrued Liability	\$ 1,940,457,230	\$ 2,033,689,452
(AAL = PVB - PVFNC)		
Actuarial Value of Assets (AVA)	1,601,320,543	1,683,381,052
Net (Surplus)/Unfunded (AAL – AVA)	\$ 339,136,687	\$ 350,308,400
Present Value of Accrued Benefits		
Present Value of Benefits (PVB)	\$ 2,319,727,689	\$ 2,429,626,966
Present Value of Future Benefit Accruals (PVFBA)	617,408,536	640,917,832
Present Value of Accrued Benefits	\$ 1,702,319,153	\$ 1,788,709,134
(PVAB = PVB – PVFBA)		
Market Value of Assets (MVA)	\$ 1,498,702,845	\$ 1,645,263,844
Net Unfunded, not less than \$0 (PVAB – MVA)	\$ 203,616,308	\$ 143,445,290

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION III - LIABILITIES

Changes in Liabilities

Each of the liabilities disclosed in the prior table is expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- Plan amendments increasing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method

Unfunded liabilities will change because of all of the above and due to changes in System assets resulting from the following:

- Employer contributions less than the full actuarial contribution
- Investment earnings different than expected
- A change in the method used to measure system assets

In each valuation, we report on those elements of change that are of particular significance, potentially affecting the long-term financial outlook of the System. Below we present key changes in liabilities since the last valuation.

Table III-2			
	Present Value of Benefits	Actuarial Accrued Liability	Present Value of Accrued Benefits
Liabilities 6/30/2016	\$ 2,319,727,689	\$ 1,940,457,230	\$ 1,702,319,153
Liabilities 6/30/2017	<u>2,429,626,966</u>	<u>2,033,689,452</u>	<u>1,788,709,134</u>
Liability Increase (Decrease)	\$ 109,899,277	\$ 93,232,222	\$ 86,389,981
Change Due to:			
Plan Amendment	\$ 828,343	\$ 839,456	\$ 819,820
Actuarial (Gain)/Loss	<i>Not Calculated</i>	6,047,672	<i>Not Calculated</i>
Method and Assumption Change	0	0	0
Benefits Accumulated and Other Sources	109,070,934	86,345,094	85,570,161

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION IV - CONTRIBUTIONS

In the process of evaluating the financial condition of any pension system, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funding status of the system. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that is both stable and predictable.

For this system, the funding method employed is the **Entry Age Actuarial Cost Method**. Under this method, there are three components to the total contribution: the **normal cost rate**, the **unfunded actuarial liability rate** (UAL rate), and the **administrative expense rate**. The normal cost rate is determined in the following steps. First, an individual normal cost rate is determined by taking the value, as of entry age into the System, of each member's projected future benefits. This value is then divided by the value, also at entry age, of the member's expected future salary. Second, the normal cost rate is multiplied by current salary and added together to obtain the total System normal cost. This is divided by total salary to convert it to the total System normal cost rate. Finally, the total normal cost rate is reduced by the average member contribution rate to produce the County's normal cost rate.

Budgeted Rate (Based on Corridor Method)

The County's total contribution rate is equal to the normal cost rate plus rate changes due to amendments passed or assumption changes adopted since July 1, 2001, plus the expense rate as long as the System's actuarial funded status remains within a corridor of 90% to 120%. The normal cost rate and actuarial accrued liability will continue to be measured using the entry age funding method. If the funded status falls outside the corridor, a credit (if above 120%) or charge (if below 90%) will be established based on a 15-year amortization equal to the amount necessary to re-enter the corridor. Once the funded status is within the corridor, the contribution rate will return to the normal cost rate, plus expense rate, plus amortization of post-2001 changes.

Table IV-1	
Changes Since 2001	Impact on UAL Rate
2004 Retiree Increase	+ 1.70%
2004 DROP	+ 0.53%
2005 Assumption Changes	+ 0.91%
2006 DPSC Transfer	+ 0.62%
2007 Reduce Disability Offset to 40%	+ 0.30%
2008 Reduce Disability Offset to 30%	+ 0.12%
2010 Assumption Changes	+ 0.17%
2013 Reduce Disability Offset to 25%	+ 0.05%
2014 Reduce Disability Offset to 15%	+ 0.10%
2016 Assumption Changes	<u>+ 1.10%</u>
Total Increase	+ 5.60%

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION IV - CONTRIBUTIONS

The table below presents and compares the budgeted rate for the System for this valuation and the prior one. In both cases, the amortization follows the corridor method amortization to Total County Rate using 90%.

Table IV-2		
Actuarially Determined Rate (for Corridor Contribution)		
Valuation Date	June 30, 2016	June 30, 2017
Fiscal Year	2018	2019
Normal Cost Rate	16.97%	17.09%
UAL Rate	8.30%	5.60%
Amortization of Amount Outside Corridor (to 90%)	4.83%	5.26%
Expense Rate	<u>0.25%</u>	<u>0.25%</u>
Total County Rate	30.35%	28.20%
Total Rate with Alternative Amortization Targets of		
98%	38.69% ¹	36.59%
99%	39.73%	37.64% ²

¹The actual contribution rate being paid by the County in FY 2018 is 38.83%.

²The County has a policy of not paying any less than the existing rate until such a time as the UAL has been exhausted. FY 2019 will be held at the 38.83% rate in effect for FY 2018.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION IV - CONTRIBUTIONS

Table IV-3 Development of Corridor Contribution Rate		
	June 30, 2016 (for FY 2018)	June 30, 2017 (for FY 2019)
1. Present Value of Future Benefits		
a. Active Employees	\$ 1,164,883,338	\$ 1,213,296,704
b. DROP	167,279,062	159,726,600
c. Retired Members	978,657,862	1,046,091,139
d. Vested Terminated and Inactive Members	<u>8,907,427</u>	<u>10,512,523</u>
e. Total Present Value	\$ 2,319,727,689	\$ 2,429,626,966
2. Present Value of Future Normal Costs		
a. County Portion	\$ 270,285,059	\$ 283,123,593
b. Employee Portion	<u>108,985,400</u>	<u>112,813,921</u>
c. Total Present Value	\$ 379,270,459	\$ 395,937,514
3. Actuarial Accrued Liability (1) – (2)	\$ 1,940,457,230	\$ 2,033,689,452
4. Actuarial Value of Assets for Corridor Purposes		
a. Actuarial Assets	\$ 1,601,320,543	\$ 1,683,381,052
b. Outstanding Balance of Plan and Assumption Changes	<u>55,113,933</u>	<u>45,004,212</u>
c. Adjusted Assets (a) + (b)	\$ 1,656,434,476	\$ 1,728,385,264
5. Funding Ratio for Corridor Test	85.4%	85.0%
6. Liability to be Amortized if outside Corridor		
a. [98% or 99%] x (3) - (4)(c)	\$ 245,213,610	\$ 284,967,294
b. (4)(c) - 120%x(3)	0	0
7. Active Member Payroll	\$ 167,965,582	\$ 174,888,440
8. Unfunded Liability Amortization Factor	11.0842	11.0842
9. Amortization as a % of Payroll (6)/(7)/(8)	13.17%	14.70%
10. County Contribution Results (Corridor)		
a. Normal Cost Rate	16.97%	17.09%
b. Administrative Expense Rate	0.25%	0.25%
c. Plan Change Amortizations	8.30%	5.60%
d. Amortization Outside Corridor (9)	<u>13.17%</u>	<u>14.70%</u>
e. Total County Contribution Rate June 30 ¹	38.69%	37.64%

¹The actual contribution rate to be paid by the County in FY 2019 will be held at 38.83%.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION V - ACCOUNTING STATEMENT INFORMATION

ASC Topic 960 of the Financial Accounting Standards Board (FASB) describes certain disclosures regarding a plan's funded status.

The FASB ASC Topic 960 disclosures provide a quasi "snap shot" view of how the System's assets compare to its liabilities if contributions stopped and accrued benefit claims had to be satisfied. However, due to potential legal requirements and the possibility that alternative interest rates would have to be used to determine the liabilities, these values may not be a good indication of the amount of money it would take to buy the benefits for all members if the System were to terminate.

FASB ASC Topic 960 specifies that a comparison of the present value of accrued (accumulated) benefits with the market value of the assets as of the valuation date must be provided. The relevant amounts as of June 30, 2016 and June 30, 2017 are exhibited in Table V-1, which also includes a reconciliation of liabilities determined as of the prior valuation, June 30, 2016 to the liabilities as of June 30, 2017.

Table V-2 is a history of gains and losses in Accrued Liability, and Table V-3 is the Solvency Test, which shows the portion of Accrued Liability covered by Assets. See our report dated September 27, 2017 for the required disclosures under GASB Statement No. 67.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION V - ACCOUNTING STATEMENT INFORMATION

Table V-1 Accounting Statement Information		
	June 30, 2016	June 30, 2017
A. FASB ASC Topic 960 Basis		
1. Present Value of Benefits Accrued and Vested to Date		
a. Members Currently Receiving Payments	\$ 978,657,862	\$ 1,046,091,139
b. Vested Terminated and Inactive Members	8,907,427	10,512,523
c. DROP	167,279,062	159,726,600
d. Active Members	<u>307,114,555</u>	<u>437,016,444</u>
e. Total PVVB	\$ 1,461,958,906	\$ 1,653,346,706
2. Present Value of Non-Vested Accrued Benefits for Active Members	<u>240,360,247</u>	<u>135,362,428</u>
3. Total Present Value of Accrued Benefits	\$ 1,702,319,153	\$ 1,788,709,134
4. Assets at Market Value	<u>1,498,702,845</u>	<u>1,645,263,844</u>
5. Unfunded Present Value of Accrued Benefits, But Not Less Than Zero	\$ 203,616,308	\$ 143,445,290
6. Ratio of Assets to Value of Benefits (4) / (3)	88.0%	92.0%
B. Statement of Changes in Present Value of Accrued Benefits		
Actuarial Present Value of Accrued Benefits as of July 1, 2016		\$ 1,702,319,153
Increase (Decrease) During Years Attributable to:		
Passage of Time		\$ 120,084,254
Benefit Paid – FY 2017		(93,608,871)
Assumption Changes		0
Benefit Change		819,820
Benefits Accrued, Other Gains/Losses		<u>59,094,778</u>
Net Increase (Decrease)		\$ 86,389,981
Actuarial Present Value of Accrued Benefits as of June 30, 2017		\$ 1,788,709,134

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

SECTION V - ACCOUNTING STATEMENT INFORMATION

Table V-2 Analysis of Financial Experience Gains and Losses in Accrued Liability During Years Ended June 30 Resulting from Differences Between Assumed Experience and Actual Experience						
Type of Activity	Gain (or Loss) for Year ending June 30,					
	2012	2013	2014	2015	2016	2017
Investment Income	\$ (19,330,917)	\$ (3,805,385)	\$ 34,542,175	\$ (12,354,967)	\$ (51,308,849)	\$ (19,058,604)
Combined Liability Experience	<u>(1,456,752)</u>	<u>24,088,845</u>	<u>(9,026,264)</u>	<u>38,954,945</u>	<u>15,038,096</u>	<u>(6,047,672)</u>
Gain (or Loss) During Year from Financial Experience	\$ (20,787,669)	\$ 20,283,460	\$ 25,515,911	\$ 26,599,978	\$ (36,270,753)	\$ (25,106,276)
Non-Recurring Items	<u>0</u>	<u>(813,016)</u>	<u>(20,177,168)</u>	<u>0</u>	<u>(21,285,640)</u>	<u>(839,465)</u>
Composite Gain (or Loss) During Year	\$ (20,787,669)	\$ 19,470,444	\$ 5,338,743	\$ 26,599,978	\$ (57,556,393)	\$ (25,945,741)

Table V-3 Solvency Test Aggregate Accrued Liabilities For									
Valuation Date June 30,	(1) Active Member Contributions		(2) Retirees Vested Terms, Beneficiaries & DROP		(3) Active Members (Employer Financed Portion)		Portion of Accrued Liabilities by Reported Assets		
	Reported Assets*	(1)	(2)	(3)					
2012	\$ 120,373,016	\$ 981,922,550	\$ 511,358,566	\$ 1,247,526,438	100%	100%	28%		
2013	130,979,546	1,042,085,650	503,200,502	1,326,424,772	100%	100%	30%		
2014	137,482,080	1,094,584,634	561,785,579	1,466,110,756	100%	100%	42%		
2015	145,293,199	1,126,142,315	573,284,029	1,550,327,414	100%	100%	49%		
2016	155,579,540	978,657,862	806,219,828	1,601,320,543	100%	100%	58%		
2017	154,777,842	1,046,091,139	832,820,471	1,683,381,052	100%	100%	58%		

*Reported Assets are the actuarial value of assets in this demonstration.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX A - MEMBERSHIP INFORMATION

The data for this valuation was provided electronically by the Fairfax County Retirement System staff. Cheiron did not perform a formal audit on the data. However, we did perform checks of the data for reasonableness and consistency in accordance with Actuarial Standards of Practice No. 23 – Data Quality. The data was collected as of December 31, 2016.

Data reported in this Appendix is as of the December 31, 2016 data collection date. Covered payroll and benefits in pay status reported elsewhere in this report have been adjusted to approximate the June 30, 2017 values.

For inactive participants given with a Joint and Survivor form of benefit and no continuation percentage provided, a survivor percentage of 100% is assumed.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX A - MEMBERSHIP INFORMATION

Summary of Membership Data as of June 30, 2017

Plan	Count	Active Members *		
		Average Age	Average Service	Average Salary
A	0	0.00	0.00	\$ 0
B	44	49.70	23.19	106,369
C	0	0.00	0.00	0
D	1,522	42.22	14.54	90,915
E	409	30.15	1.78	58,723
Total	1,975	39.89	12.09	\$ 84,593

*Excludes DROP participants.

Inactive Members and DROP Participants			
	Count	Total Annual Benefit	Average Monthly Benefit
Service Retirement ¹			
Basic Benefit	1,097	\$ 69,174,875	\$ 5,255
Pre-62 Supplement	28	581,019	1,729
Pre-Social Security Supplement	642	4,859,827	631
Service-Connected Disability ²	163	\$ 7,800,666	\$ 3,988
Ordinary Disability	17	\$ 328,116	\$ 1,608
Beneficiaries	32	\$ 1,000,632	\$ 2,606
DROP	115	\$ 8,007,035	\$ 5,802
Vested Former Members ³	76	\$ 1,180,618	\$ 1,295

¹ Supplements shown include only amounts currently payable. For members who are in Plan B, and have not yet attained age 55, this means their pre-62 supplement will double in future years.

² Benefits are net of offsets for Workers' Compensation and Social Security.

³ Benefits are payable at age 55.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX A - MEMBERSHIP INFORMATION

Data Reconciliation from June 30, 2016 to June 30, 2017								
	Active	DROP	Terminated Vested	Retired	Service- Connected Disability	Ordinary Disability	Beneficiary	Total
Participant count as of July 1, 2016	1,948	123	61	1,038	168	18	32	3,388
New Hires / Re-hires	137		(3)					134
Terminated Vested	(15)		15					0
DROP	(46)	46						0
Retired	(10)	(54)	(4)	68				0
Deceased with beneficiary								0
Deceased without beneficiary	(4)			(13)	(5)	(1)		(23)
Benefits Expired								0
Ordinary Disability								0
Service-Connected Disability								0
Return of Contributions	(35)		(4)					(39)
Corrections			11	4				15
Change	27	(8)	15	59	(5)	(1)	0	87
Participant count as of June 30, 2017	1,975	115	76	1,097	163	17	32	3,475

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX A - MEMBERSHIP INFORMATION

Distribution of Active Participants - - Plan B

COUNTS BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	6	0	0	6
45 to 49	0	0	0	0	1	17	3	0	21
50 to 54	0	0	0	0	0	8	3	1	12
55 to 59	0	0	0	0	0	2	1	0	3
60 to 64	0	0	0	0	0	0	0	1	1
65 & up	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	1	34	7	2	44

TOTAL SALARY BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
25 to 29	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	708,398	0	0	708,398
45 to 49	0	0	0	0	95,598	1,792,838	380,194	0	2,268,630
50 to 54	0	0	0	0	0	783,004	296,541	91,647	1,171,192
55 to 59	0	0	0	0	0	184,944	105,416	0	290,360
60 to 64	0	0	0	0	0	0	0	139,959	139,959
65 & up	0	0	0	0	0	101,691	0	0	101,691
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 95,598	\$ 3,570,875	\$ 782,151	\$ 231,607	\$ 4,680,230

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX A - MEMBERSHIP INFORMATION

Distribution of Active Participants - - Plan D

COUNTS BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	0	2	1	0	0	0	0	0	3
25 to 29	0	29	46	3	0	0	0	0	78
30 to 34	0	22	139	83	0	0	0	0	244
35 to 39	0	12	82	158	57	0	0	0	309
40 to 44	0	4	40	92	120	30	1	0	287
45 to 49	0	4	22	74	97	116	28	1	342
50 to 54	0	1	8	40	29	53	28	19	178
55 to 59	0	1	4	9	13	23	5	10	65
60 to 64	0	1	1	4	4	0	0	1	11
65 & up	0	0	1	2	0	1	0	1	5
Total	0	76	344	465	320	223	62	32	1,522

TOTAL SALARY BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	\$ 0	\$ 121,217	\$ 65,737	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 186,954
25 to 29	0	1,991,112	3,250,267	219,496	0	0	0	0	5,460,875
30 to 34	0	1,464,537	9,925,060	7,003,833	0	0	0	0	18,393,430
35 to 39	0	815,807	5,924,116	13,517,681	5,712,626	0	0	0	25,970,229
40 to 44	0	259,394	2,857,700	7,992,182	12,295,308	3,561,321	111,378	0	27,077,283
45 to 49	0	294,055	1,547,372	6,486,582	9,848,249	13,412,358	3,386,970	150,236	35,125,822
50 to 54	0	67,399	568,950	3,299,233	2,743,754	5,929,966	3,106,981	2,387,588	18,103,872
55 to 59	0	72,075	301,460	718,541	1,250,399	2,623,037	511,533	1,241,314	6,718,358
60 to 64	0	65,271	75,131	322,491	350,975	0	0	104,729	918,598
65 & up	0	0	56,033	137,890	0	101,127	0	122,182	417,232
Total	\$ 0	\$ 5,150,867	\$ 24,571,826	\$ 39,697,929	\$ 32,201,310	\$ 25,627,811	\$ 7,116,862	\$ 4,006,049	\$ 138,372,653

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX A - MEMBERSHIP INFORMATION

Distribution of Active Participants - - Plan E

COUNTS BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	35	41	0	0	0	0	0	0	76
25 to 29	53	110	0	0	0	0	0	0	163
30 to 34	19	83	1	0	0	0	0	0	103
35 to 39	13	21	0	0	0	0	0	0	34
40 to 44	6	12	0	0	0	0	0	0	18
45 to 49	1	3	0	0	0	0	0	0	4
50 to 54	3	4	0	0	0	0	0	0	7
55 to 59	1	2	0	0	0	0	0	0	3
60 to 64	0	1	0	0	0	0	0	0	1
65 & up	0	0	0	0	0	0	0	0	0
Total	131	277	1	0	0	0	0	0	409

TOTAL SALARY BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	\$ 1,849,852	\$ 2,468,762	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,318,615
25 to 29	2,785,692	6,653,663	0	0	0	0	0	0	9,439,355
30 to 34	1,051,835	5,078,545	68,563	0	0	0	0	0	6,198,943
35 to 39	686,186	1,254,852	0	0	0	0	0	0	1,941,038
40 to 44	339,557	726,033	0	0	0	0	0	0	1,065,590
45 to 49	54,445	207,654	0	0	0	0	0	0	262,099
50 to 54	186,213	235,900	0	0	0	0	0	0	422,113
55 to 59	51,423	258,980	0	0	0	0	0	0	310,403
60 to 64	0	59,641	0	0	0	0	0	0	59,641
65 & up	0	0	0	0	0	0	0	0	0
Total	\$ 7,005,202	\$ 16,944,030	\$ 68,563	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 24,017,796

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX A - MEMBERSHIP INFORMATION

Distribution of Active Participants - - Total

COUNTS BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	35	43	1	0	0	0	0	0	0	79
25 to 29	53	139	46	3	0	0	0	0	0	241
30 to 34	19	105	140	83	0	0	0	0	0	347
35 to 39	13	33	82	158	57	0	0	0	0	343
40 to 44	6	16	40	92	120	36	1	0	0	311
45 to 49	1	7	22	74	98	133	31	1	1	367
50 to 54	3	5	8	40	29	61	31	20	20	197
55 to 59	1	3	4	9	13	25	6	10	10	71
60 to 64	0	2	1	4	4	0	0	2	2	13
65 & up	0	0	1	2	0	2	0	1	1	6
Total	131	353	345	465	321	257	69	34	34	1,975

TOTAL SALARY BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	\$ 1,849,852	\$ 2,589,979	\$ 65,737	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,505,568
25 to 29	2,785,692	8,644,775	3,250,267	219,496	0	0	0	0	0	14,900,230
30 to 34	1,051,835	6,543,082	9,993,623	7,003,833	0	0	0	0	0	24,592,373
35 to 39	686,186	2,070,659	5,924,116	13,517,681	5,712,626	0	0	0	0	27,911,267
40 to 44	339,557	985,427	2,857,700	7,992,182	12,295,308	4,269,719	111,378	0	0	28,851,271
45 to 49	54,445	501,709	1,547,372	6,486,582	9,943,846	15,205,196	3,767,164	150,236	150,236	37,656,551
50 to 54	186,213	303,299	568,950	3,299,233	2,743,754	6,712,971	3,403,522	2,479,235	2,479,235	19,697,177
55 to 59	51,423	331,055	301,460	718,541	1,250,399	2,807,981	616,949	1,241,314	1,241,314	7,319,121
60 to 64	0	124,913	75,131	322,491	350,975	0	0	244,688	244,688	1,118,198
65 & up	0	0	56,033	137,890	0	202,818	0	122,182	122,182	518,923
Total	\$ 7,005,202	\$ 22,094,898	\$ 24,640,389	\$ 39,697,929	\$ 32,296,908	\$ 29,198,686	\$ 7,899,013	\$ 4,237,655	\$ 4,237,655	\$ 167,070,679



**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

A. Long-Term Assumptions Used to Determine System Costs and Liabilities

1. Demographic Assumptions

a. Healthy Mortality

Annual Deaths Per 10,000 Members Mortality Projected to 2017		
Age	Male	Female
20	4	2
25	5	2
30	5	2
35	6	3
40	7	4
45	11	7
50	46	27
55	64	37
60	86	55
65	125	84
70	191	134
75	309	219
80	521	370
85	908	655
90	1,602	1,175
95	2,524	1,937
100	3,581	2,873

110% and 100% of the RP-2014 Healthy Annuitant Mortality Table for males and females, respectively, backed down to 2006 then projected using the RPEC-2015 model, with an ultimate rate of 0.65% for ages 20-85 grading down to an ultimate rate of 0% for ages 115-120 and convergence to the ultimate rate in the year 2015. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

5% of pre-retirement deaths are assumed to be service-connected.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

b. Disabled Mortality

Annual Deaths Per 10,000 Members Mortality Projected to 2017		
Age	Male	Female
45	174	106
50	209	135
55	237	170
60	269	205
65	326	251
70	418	337
75	569	493
80	811	745

100% and 115% of the RP-2014 Disabled Annuitant Mortality Table for males and females, respectively, backed down to 2006 then projected using the RPEC-2015 model, with an ultimate rate of 0.65% for ages 20-85 grading down to an ultimate rate of 0% for ages 115-120 and convergence to the ultimate rate in the year 2015. The valuation uses fully generational projection of mortality improvements. Sample rates shown are projected through the valuation date.

c. Termination of Employment (Prior to Normal Retirement Eligibility)

Annual Terminations Per 1,000 Members	
Service	Male and Female
0	122
5	25
10	8
15	5
20	5
25	0

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

d. Disability

Annual Disabilities Per 1,000 Members*	
Age	Male and Female
20	1
25	1
30	1
35	1
40	2
45	3
50	5
55	8
60	8

* Disabilities are assumed to be all service-connected. Of these, 30% are assumed to receive Social Security benefits and 38% are assumed to receive Workers' Compensation benefits. 5% of all service-connected disabilities are at the 90% severe level.

e. Retirement/DROP

Years of Service	Retirement/DROP*
5-24	20%
25	30
26	30
27	27
28	25
29	28
30	25
31	30
32	35
33	35
34	35
35+	100

* 75% of those who leave under this decrement are assumed to DROP, with the other 25% taking immediate retirement.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

f. Merit/Seniority Salary Increase (in addition to across-the-board increase)

Year of Service	Merit/Seniority Increase
0	6.50%
5	3.00%
10	1.55%
15	3.00%
20	3.00%
25+	1.00%

g. Family Composition

For purposes of valuing the pre-retirement death benefit, an assumption is made concerning how many employees are married. The assumption used in this valuation is that 80% of employees are married at death while active and that the female spouse is three years younger than the male spouse.

h. Sick Leave Credit

Unused sick leave balances as reported for each active member are used as of the valuation date. Future sick leave accruals are assumed to accrue at 100% of each participant's annual average but are capped at 124 hours per year.

2. Economic Assumptions

- a. Rate of Investment Return: 7.25%
- b. Rate of General Wage Increase: 2.75%*
- c. Rate of Increase in Cost of Living: 2.50%**
- d. Rate of Increase in Total Payroll
(for Amortization): 2.75%
- e. Administrative Expenses as a
Percentage of Payroll: 0.25%

* General Wage Increase assumption applies for projecting contributions and developing Social Security benefits.

** Benefit increases are limited to 4% per year.

3. Rationale for Assumptions

The actuarial assumptions were adopted by the Board of Trustees upon the recommendation of the actuary, based on an experience study performed in 2016. The results of this study were presented in a report dated June 2016 and are incorporated into this report by reference.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

4. Changes Since Last Valuation

None

B. Actuarial Methods

1. Funding Method

The Entry Age Normal Cost method is used to determine costs. Under this method, the employer contribution has three components: the normal cost, the payment toward the unfunded actuarial liability, and the expense rate.

The normal cost is a level percent of pay cost, which, along with the member contributions, will pay for projected benefits at retirement for each plan participant.

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and funds accumulated as of the same date is referred to as the unfunded actuarial liability.

The expense rate is added to cover the System's administrative expenses.

Under the Corridor Funding Method, the County's total contribution rate is equal to the normal cost rate, plus the UAL amortization rates for changes due to assumption changes or amendments passed since July 1, 2001 plus the expense rate as long as the System's actuarial funded status remains within a corridor of 90% to 120%. If the funded status falls outside the corridor, a credit (if above 120%) or charge (if below 90%) will be established based on a 15-year amortization equal to the amount necessary to re-enter the corridor. Once the funded status is within the corridor, the contribution rate will return to the normal cost rate, plus expense rate, plus amortization of post-2001 changes.

The 90% corridor floor is being increased to 100% by 2020. As of the 2016 valuation, the floor had reached 98%. Amortization is currently performed using an open 15-year period (with the exception of prior changes identified in Section IV). Once the corridor floor reaches 100% the 15-year period will be closed. Continued use of an open amortization period would result in the System's UAL never being fully exhausted.

2. Actuarial Value of Assets

For purposes of determining the County contribution to the System, we use an actuarial value of assets. The asset adjustment method dampens the volatility in asset values that could occur because of fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process.

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

In determining the actuarial value of assets, we calculate an expected actuarial value based on cash flow for the year and imputed returns at the actuarial assumption. This expected value is compared to the market value, and one-third of the difference is added to the preliminary actuarial value to arrive at the final actuarial value.

3. Valuation Timing

All participant data is collected as of the December 31 prior to the valuation date. Initial valuation runs are performed as of December 31, and the resulting liabilities are then adjusted for six months to the June 30 valuation date. The adjustment takes into account the actual July 1 cost-of-living increase and any other changes that are known to have occurred in that six-month period.

4. Changes Since Last Valuation

None

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX C - SUMMARY OF PLAN PROVISIONS

1. Membership

The plan covers uniformed employees including non-clerical employees of the Fire and Rescue Department, Park Police Department, Sheriff's Department, Helicopter Pilots, Department of Public Safety Communications, and Game Wardens, who are not covered by the Fairfax County Police Officers Retirement System, the Employees' Retirement System, or the VRS. In order to join, an eligible employee must take a physical examination, agree to make required contributions, and may not be within five years of his normal retirement date.

Plan A members as of July 1, 1981 were given the opportunity to join Plan B at that time. Between July 1, 1981 and March 31, 1998, all members were enrolled in Plan B. As of April 1, 1998, Plan A members were given the opportunity to join Plan C, and Plan B members were given the opportunity to join Plan D. On and following April 1, 1998, all members were enrolled in Plan D. On and following January 1, 2013, all members are enrolled in Plan E.

2. Member Contributions

Plan A: 4% of compensation up to Social Security wage base and 5-3/4% of compensation in excess of wage base

Plan B: 7.08% of compensation up to Social Security wage base and 8.83% of compensation in excess of wage base

Plan C: 4% of compensation

Plan D: 7.08% of compensation

Plan E: 7.08% of compensation

Interest is credited at the rate of 5% per year.

Member contributions are made through an "employer pick-up" arrangement, which results in deferral of the taxes on these contributions.

3. Credited Service

All service as a member plus certain purchased prior service is credited. Also, credit is allowed at the rate of one month for 172 hours of accrued unused sick leave. For those hired on or after January 1, 2013, the amount of unused sick leave that may be used is capped at 2,080 hours.

4. Average Final Compensation

Compensation includes salary paid due to regularly scheduled hours worked, holiday hours worked, administrative emergency leave worked, and shift differential paid. It does not include premium pay such as all overtime. Pay at the rate of final salary is credited for any

**FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017**

APPENDIX C - SUMMARY OF PLAN PROVISIONS

unused sick leave period. Average final compensation is the average over the high 36 consecutive months (or shorter period of total service).

Participants whose average final compensation was affected by the 1992-1993 step freeze shall have their average final compensation adjusted.

5. Social Security Wage Base

The amount of wages subject to Social Security (FICA) taxes (\$127,200 in 2017)

6. Social Security Breakpoint

The Social Security breakpoint is the average of past and future Social Security wage bases over an employee's career.

7. Normal Retirement

Eligibility

- (i) age 55 with six years of service, or
- (ii) completion of 25 years of service

Benefit

Plan A Benefit: 2.0% of average final compensation multiplied by credited service, plus, starting at age 55, 100% of the Pre-62 Supplement defined below.

Plan B Benefit: 2.0% of average final compensation multiplied by credited service, plus 50% of the Pre-62 Supplement defined below until age 55 and 100% of the supplement after age 55.

Pre-62 Supplement: Estimated Primary Social Security Benefit multiplied by a ratio, not to exceed one, of the years of credited service as of the date of the calculation, to 25. If the member was hired prior to July 1, 1976, this ratio is equal to one. The supplement is reduced by the Social Security benefits the member is eligible to receive.

Pre-Social Security Supplement (Plans A&B): 0.2% of average final compensation multiplied by credited service.

Plans C, D & E Benefit: 2.5% of average final compensation multiplied by credited service.

Pre-Social Security Supplement (Plans C, D & E): 0.3% of average final compensation multiplied by credited service.

FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017

APPENDIX C - SUMMARY OF PLAN PROVISIONS

All benefits increased by 3%.

8. Early Retirement

Eligibility

20 years of service

Benefit

Plans A&B: Normal retirement benefit, excluding the Pre-Social Security supplement, calculated using average final compensation and service at early retirement, actuarially reduced.

Plan A: The Pre-62 Supplement is not provided until age 55; the full supplement is provided at this time.

Plan B: Prior to age 55, one-half of the Pre-62 Supplement is provided. At age 55, the full supplement is paid.

Plans C, D & E: Normal retirement benefit calculated using average final compensation and service at early retirement, actuarially reduced.

All benefits increased by 3%.

9. DROP (Deferred Retirement Option Program)

Eligibility

All members are eligible for DROP participation upon attaining eligibility for normal service retirement. Members can only participate in DROP once, and their election is irrevocable.

Benefit

The benefit scheduled to begin at normal retirement will be credited to a separate DROP account within the Retirement System, accumulating with interest while the member continues to work for a period of 36 months. Upon completion of the three-year period, DROP participation ends, and participants must terminate employment. At that time, the participant will receive payment of the accumulated DROP benefits and begin receiving his or her monthly retirement benefit (in the same amount as determined at commencement of DROP participation, plus annual cost-of-living increases).

For those hired on or after January 1, 2013, the amount credited to the DROP account will exclude the Pre-Social Security Supplement described in item 7.

FAIRFAX COUNTY UNIFORMED RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JUNE 30, 2017

APPENDIX C - SUMMARY OF PLAN PROVISIONS

The DROP account will be credited with interest at an annual rate of 5%, compounded monthly.

Death or Disability during DROP

Non Service-Connected: The effective date of the death or disability will be treated as the end of the DROP participation.

Service-Connected Disability: The member may elect either (1) to receive the service-connected disability benefits to which he or she would otherwise be entitled (forfeiture of DROP balance) or (2) the normal retirement benefit plus the DROP account balance.

Service-Connected Death: The beneficiary will receive payment of the accumulated DROP benefits and the regular service-connected benefit.

10. Service-Connected Disability

Eligibility

No age or service requirement

Benefit

40% of final compensation less 5% of Social Security disability benefit to which the member is entitled and less 100% of Virginia Workers' Compensation benefit

If severely disabled, the benefit is 90% of final compensation with the same offsets for Social Security and Workers' Compensation.

11. Ordinary Disability

Eligibility

Five years of credited service

Benefit

2% of average final compensation times years of credited service; maximum is 60% of average final compensation, increased by 3%

APPENDIX C - SUMMARY OF PLAN PROVISIONS

12. Service - Connected Death

Eligibility

No age or service requirement

Benefit

Lump sum payment of \$10,000 plus ordinary death benefit

13. Ordinary Death

Eligibility

Less than five years of service

Benefit

Return of employee contributions with interest, payable in a lump sum

Eligibility

Five or more years of service

Benefit

Spouse Allowance: In lieu of the refund of contributions, the spouse of the deceased member may elect an allowance of 50% of the normal retirement benefit, excluding the Pre-Social Security Retirement Age supplement, based on average final compensation and service as of the date of the member's death. The allowance is payable for the life of the spouse but ceases upon the spouse's remarriage, if such remarriage occurs prior to the spouse's age 60.

14. Vesting

Eligibility

Five years of service

Benefit

Normal retirement benefit based on average final compensation and service at date of termination. Benefit is payable in full at age 55 or actuarially reduced and payable at early retirement age. No supplements are payable.

APPENDIX C - SUMMARY OF PLAN PROVISIONS

A member may withdraw his contributions with interest at termination, in which case no vested benefit is payable.

15. Withdrawal

Eligibility

Not eligible for other benefits

Benefit

Contributions with interest

16. Form of Payment

The normal form of payment is a life annuity with a guarantee that at least the amount of member contributions with interest will be paid to the retiree or beneficiaries.

A member may elect an actuarially equivalent “pop-up” Joint and Survivor benefit.

17. Cost-of-Living Adjustment

Each July 1, benefits are increased by the lesser of 4% or the increase in the cost-of-living index for the Washington metropolitan area. The increase is prorated for those who have not been retired for a full year.

Cost-of-living adjustments do not apply to the Pre-62 or Pre-Social Security Supplements or to deferred vested benefits prior to benefit commencement. For Plan A and C benefits, cost-of-living adjustments do not apply to service retirement benefits until the member has attained age 55.

In addition to automatic adjustments, benefits may be further increased on an ad hoc basis, if actuarial experience has been favorable.

18. Changes Since Last Valuation

The service-connected disability benefit offset was reduced from 10% to 5% of any primary Social Security benefit.



Classic Values, Innovative Advice