

DAUPHIN COUNTY EMPLOYEE RETIREMENT FUND

SUMMARY REPORT FOR YEAR ENDED

DECEMBER 31, 2018



PREPARED BY THE OFFICE OF THE DAUPHIN COUNTY CONTROLLER
TIMOTHY L. DEFOOR, SECRETARY, DAUPHIN COUNTY RETIREMENT BOARD



Table of Contents



Message from the Controller	2
Dauphin County Retirement Board Members	3
Terminology	4-5
Defined Benefit Pension Plan	6
Plan Membership Status	7
Pension Plan Cash Flow.....	8
Cost of Living Adjustment.....	9
History of Investment Return.....	10
Schedule of Investment Income & Expenses	11
Statement of Plan Assets.....	12
Statement of Changes in Fiduciary Net Position.....	13
Dauphin County Pension Plan Portfolio.....	14
Pension Plan Management Structure	15
2018 Dauphin County Retirees.....	16

*Photos on the front cover and page 15 are courtesy of Visit Hershey Harrisburg

A Message from the Controller

It is with great pleasure that I present to you the second Dauphin County Employee Retirement Fund Summary Report which contains fund activity from January 1, 2018 through December 31, 2018. Since taking office in 2016, I have strived to bring information to the public in an easy-to-understand format to improve transparency of government activities which includes historical data and statistics.

The 2018 summary report includes a glossary at the beginning to help the reader understand important investment and pension terminology. Also included in the summary report are details about Dauphin County Retirement Board granting its first cost-of-living adjustment since 2007. You will also find helpful information on the County's retirement plan membership, the fund's portfolio, the fund's investments and the rate of return, fund expenses and contributions as well as information on the investment managers for 2018.

The Dauphin County Retirement Board operates under the County Pension Law, Act of August 31, 1971, P.L. 398, No. 96, as amended, 16 P.S. §11651, et seq. As provided by law, the Retirement Board members are the County Commissioners, the County Controller and the County Treasurer. The Chairman of the Board of Commissioners is the Chairman of the Retirement Board. The members of the Retirement Board are the trustees of the Fund and are responsible for the management and investment of the Fund. In my role as Dauphin County Controller, I also serve as the Secretary of the Dauphin County Retirement Board. Serving with me on the Retirement Board are Chairman Jeff Haste, Commissioner Mike Pries, Commissioner George Hartwick III, and Treasurer Janis Creason.

I am proud to work alongside the many dedicated and hard-working employees of Dauphin County, and I'm honored to have the responsibility of serving on the Dauphin County Retirement Board. I would like to thank the County staff for supporting our retirees, and our intern, Morgan Dubbs for her contributions in the preparation of this summary report. I hope this report is interesting, helpful and informative to the people who matter most, you the citizens and employees of Dauphin County.



Sincerely,

A handwritten signature in blue ink that reads "Tim". The signature is stylized and appears to be written on a white surface.

Timothy L. DeFoor
Dauphin County Controller

Dauphin County Retirement Board Members



Jeff Haste
Chairman



Mike Pries
Board Member



George P. Hartwick III
Board Member



Timothy L. DeFoor
Secretary



Janis Creason
Board Member

Terminology

Actuary

A professional who assesses and manages the risks of financial investments, insurance policies and other potentially risky ventures.

Actuarial Assumption

An estimate of an uncertain variable input into a financial model, normally for the purposes of calculating premiums or benefits.

Actuarial Valuation

A type of appraisal of a pension fund's assets versus liabilities, using investment, economic and demographic assumptions for the model to determine the funded status of a pension plan.

Actuarial Value

The percentage of total average costs for covered benefits that will be paid by a health insurance plan.

Appreciation

An increase in the value of an asset over time. The increase can occur for a number of reasons, including increased demand or weakening supply, or as a result of changes in inflation or interest rates. This is the opposite of depreciation, which is a decrease over time.

Fair Value

The sale price of an asset agreed upon by a willing buyer and seller, assuming both parties are knowledgeable and enter the transaction freely. Many investments have a fair value that is determined by a market in which the security is traded. Fair value also represents the value of a company's assets and liabilities when a subsidiary company's financial statements are consolidated with a parent company.

Federal Reserve

The central bank of the United States and is arguably the most powerful financial institution in the world. The Federal Reserve System was founded by the U.S. Congress in 1913 to provide the nation with a safe, flexible, and stable monetary and financial system. The Federal Reserve is considered to be independent because its decisions do not have to be ratified by the president or any other government official. However, it is still subject to Congressional oversight . Often known simply as "the Fed."

Fiduciary

A person or organization that acts on behalf of another person or persons to manage assets. Essentially, a fiduciary owes to that other entity the duties of good faith and trust. The highest legal duty of one party to another, being a fiduciary requires being bound ethically to act in the other's best interests.

Fixed-Income Investments

A type of investment in which real return rates or periodic income is received at regular intervals and at reasonably predictable levels. Fixed-income investments can be used to diversify one's portfolio, as they pose less risk than equities and derivative investments. Retired individuals tend to invest heavily in fixed-income investments because of the reliable returns they offer.

Fund Custodian

A financial institution that holds customers' securities for safekeeping so as to minimize the risk of their theft or loss. A custodian holds securities and other assets in electronic or physical form. Since they are responsible for the safety of assets and securities that may be worth hundreds of millions or even billions of dollars, custodians tend to be large and reputable firms. A custodian is sometimes referred to as a "custodian bank."

Growth Stock

A share in a company that is anticipated to grow at a rate significantly above the average for the market. These stocks generally do not pay dividends, as the companies usually want to reinvest any earnings in order to accelerate growth in the short term. Investors then earn money through capital gains when they eventually sell their shares.

Market Value

The price an asset would fetch in the marketplace. Market value is also commonly used to refer to the market capitalization of a publicly traded company and is obtained by multiplying the number of its outstanding shares by the current share price.

Net Position

The value of one's investment position, calculated as the position's market value less the initial cost of entering that position.

Present Value

The current value of a future sum of money or stream of cash flows given a specified rate of return. Future cash flows are discounted at the discount rate, and the higher the discount rate, the lower the present value of the future cash flows. Determining the appropriate discount rate is the key to properly valuing future cash flows, whether they be earnings or obligations.

Rate of Return

The net gain or loss on an investment over a specified time period, expressed as a percentage of the investment's initial cost. Gains on investments are defined as income received plus any capital gains realized on the sale of the investment. Rate of return can also be defined as the net amount of discounted cash flows received on an investment.

Value Stock

A stock that tends to trade at a lower price relative to its fundamentals, such as dividends, earnings and sales, making them appealing to value investors.

Volatility

A statistical measure of the dispersion of returns for a given security or market index. In most cases, the higher the volatility, the riskier the security. Volatility can either be measured by using the standard deviation or variance between returns from that same security or market index. Commonly, the higher the volatility, the riskier the security.

Yield

The income return on an investment, such as the interest or dividends received from holding a particular security. The yield is usually expressed as an annual percentage rate based on the investment's cost, current market value, or face value. Yields may be considered known or anticipated depending on the security in question as certain securities may experience fluctuations in value.

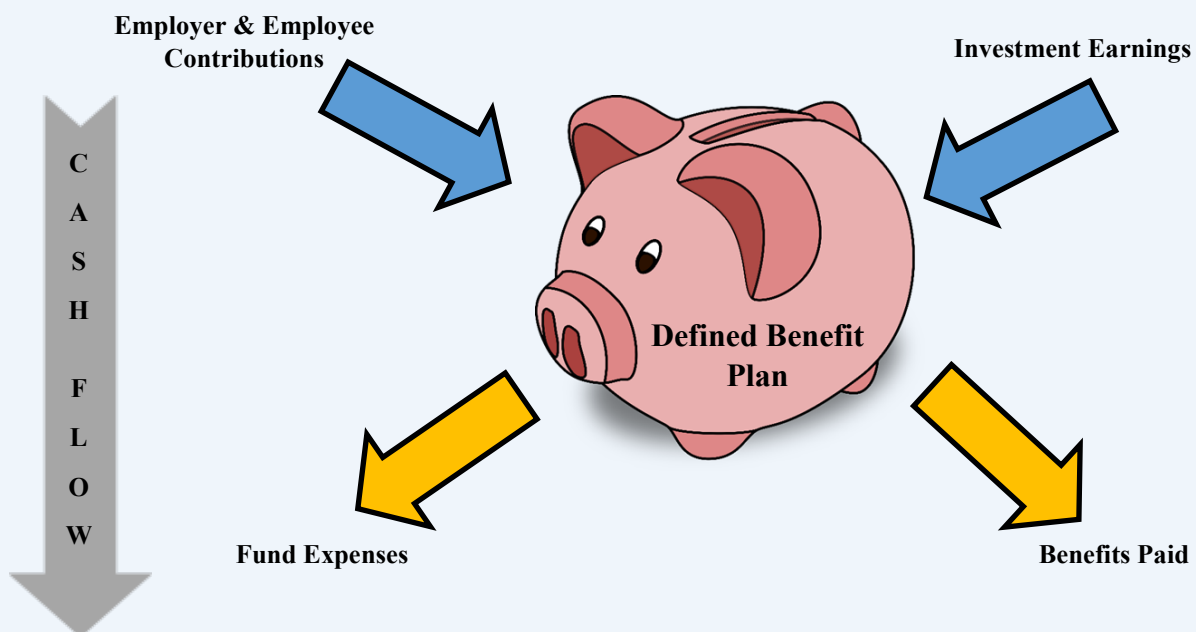
*All terms and definitions in the Glossary of Terminology were sourced from Investopedia.com

Defined Benefit Pension Plan

The Dauphin County Retirement Trust Fund (Fund) is a single employer contributory defined benefit plan covering all full-time employees of the County and part-time employees exceeding 1,000 hours per year. Management of the fund is vested in the Retirement Board, which consists of 5 members: 3 County Commissioners, the County Controller, and the County Treasurer. The Plan provides retirement, disability, and death benefits to its members and their beneficiaries.

The pension plan is identified as a “defined benefit” plan because it provides a benefit that is specified by a calculation that accounts for length of employment, salary history, and benefit class. A defined benefit plan differs from a defined contribution plan as employees are guaranteed a specific benefit upon retirement. Additionally, retirement benefits for plan members are calculated as a percentage of the member’s highest 3-year average salary multiplied by the member’s years of service multiplied by class basis. Annual County contributions are calculated and recommended by Korn Ferry Hay Group, the County’s actuary.

In addition to the county benefits, employees contribute a minimum 5% of annual pay, which provides an additional employee benefit “cash balance.” Employees may also choose to contribute up to an additional 10% of gross pay after taxes. Plan members with 20 years of service are eligible to retire at age 55, while any plan member that has attained age 60 is eligible to retire. All plan members are eligible for disability benefits after 5 years of service if disabled while in service and unable to continue as a County employee. Disability retirement benefits are equal to 25% of the highest average salary at the time of retirement. The death benefits for a member who dies with 10 years of service prior to retirement is the total present value of the member’s retirement paid in a lump sum.



Plan Membership Status

The graph below displays membership status for employees participating in the plan from 2015 through 2018. As of December 31, 2018, there were 2,856 Plan members. Of these members, 1,447 were active members, 1,170 were retired members or beneficiaries currently receiving benefits, and 239 are terminated Plan participants entitled to but not yet receiving benefits.

Active member- An individual currently employed by the County that is contributing to the Pension Plan. An active member does not include a member receiving disability benefits.

- Includes full time employees and part time employees exceeding 1,000 hours per year

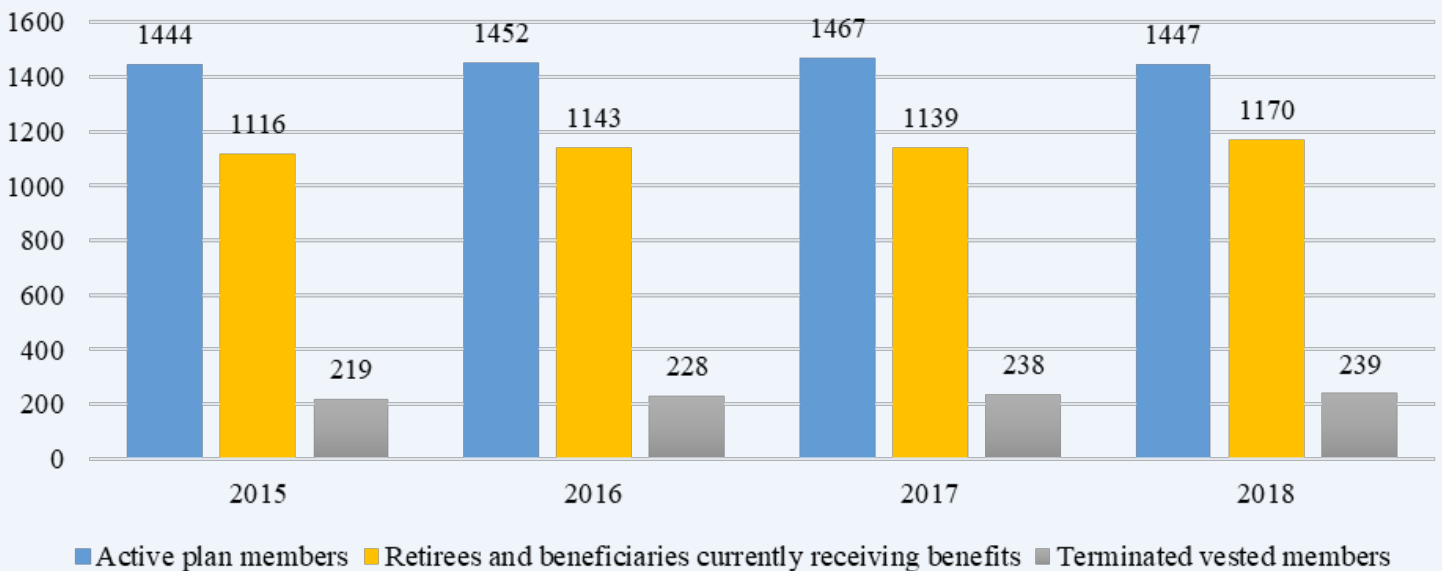
Terminated vested member- Former employee who earned vested benefits by working for five (5) years or more has terminated employment with the County and is not yet receiving retirement benefits.

- Such participants can receive benefit payments from the Plan once they reach the Plan's normal retirement age or, if the Plan allows, the Plan's early retirement age

Retiree/beneficiary- A Plan member who is retired and receiving benefits, or their beneficiary.

- Eligible for retirement at age 60, or age 55 with 20 years of credited service

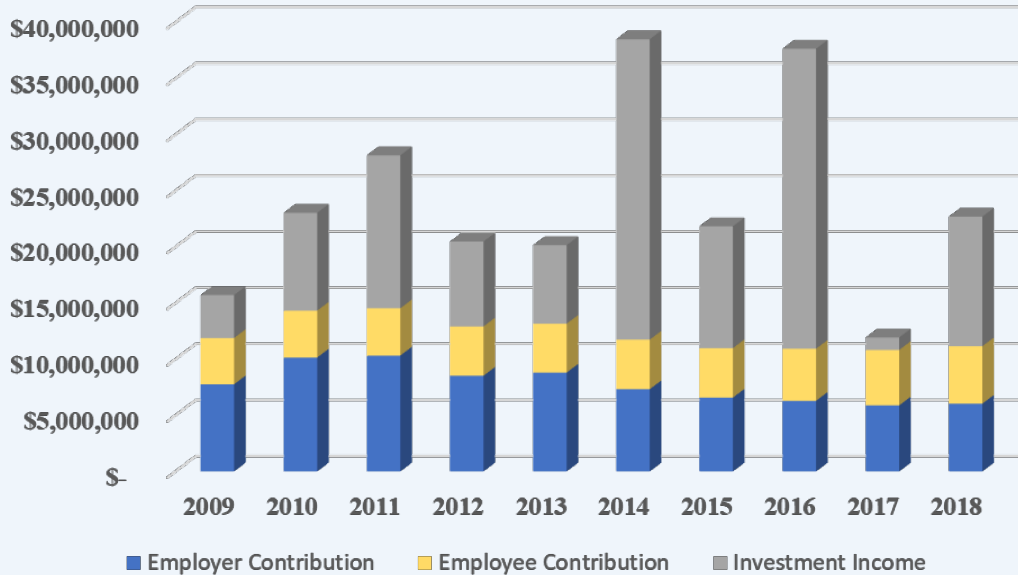
Retirement Plan Membership Status



Pension Plan Cash Flow

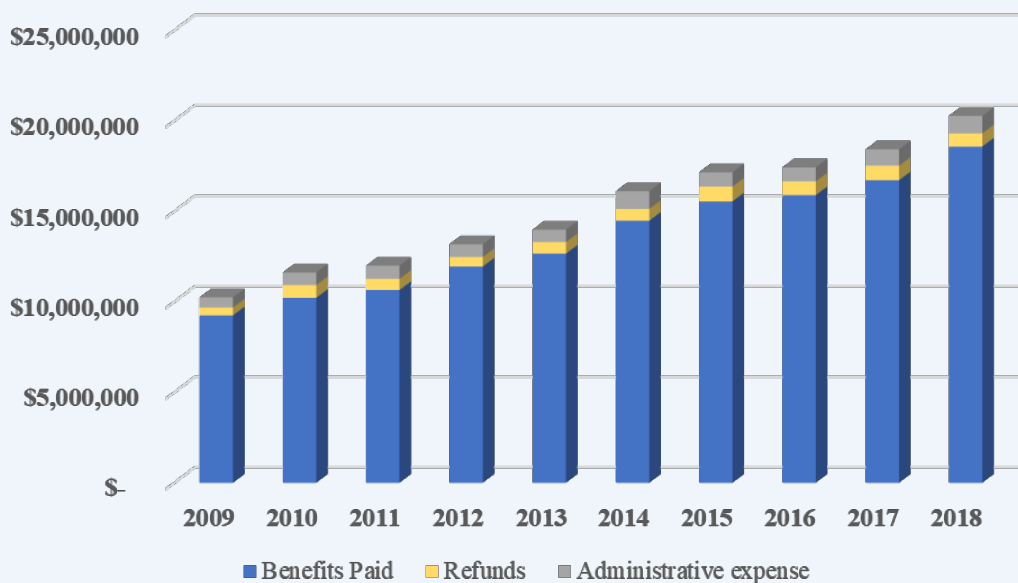
Revenue by Type

In 2018, Dauphin County reported a total Pension Plan revenue of \$22,663,977. The revenue consists of investment income, employee contribution, and employer contribution. This amount has increased by 90.4% since 2017.



Expense by Type

Dauphin County has accounted for a total of \$20,252,414 in expenses for the year 2018, a value 10% greater than expenses from the previous year. These expenses are broken into the categories of benefits paid, refunds, and administrative expenses.



Cost of Living Adjustment (COLA)

The cost-of-living adjustment is an increase to a retiree’s pension payment to account for inflation. The cost-of-living must be reviewed at least once in every three (3) years and adjustments are provided at the discretion of the Dauphin County Employees’ Retirement Board. Only pension plans with an 80% or higher funded ratio can approve a COLA. The Board granted its first cost-of-living increase in January of 1972, and since then as follows:

Effective Dates of Increase	
1/1/1973	1/1/1998
2/1/1975	1/1/1999
7/1/1979	1/1/2006
1/1/1985	1/1/2007
1/1/1992	1/1/2019
1/1/1997	

In 2018, Dauphin County granted its first COLA since 2007. This cost-of-living adjustment was 1.7%. This adjustment increased the amount payable to those members who retired in 2017 and prior years by \$2,351,654. To fund this adjustment, the County increased their actuarially determined contribution by roughly \$338,702 for each year over a ten (10) year period, beginning with 2019 contributions. This funding requirement also increased the present value of future benefits for retired members.

2018 COLA Calculation	
Step 1. $(253.085)^A - (248.919)^B = 4.166$	Calculation for the change in CPI from August 31, 2017 to August 31, 2018. These figures reflect the average CPI for the 12-month period ending August 31.
Step 2. $4.166 / 248.919 = .01673 \times 100 = 1.673\% \text{ COLA}$	Taking the figure from step 1, divide it by the CPI from the earlier year. Multiply by 100 to calculate percentage change and arrive at COLA.
Applying COLA to Benefits	
Step 3. $(1.01673) \times (\text{Monthly Benefit Payment}) = \text{Adjusted Benefit Payment}$	Taking the COLA as a decimal, add a 1 to represent your current monthly payment. Multiply by monthly payment to arrive at adjusted payment.
A: 253.085 = 12 Month Average CPI Ending August 31, 2018 B: 248.919 = 12 Month Average CPI Ending August 31, 2017	Data derived from Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (CPI-U) for the PA, NJ, DE, & MD areas.

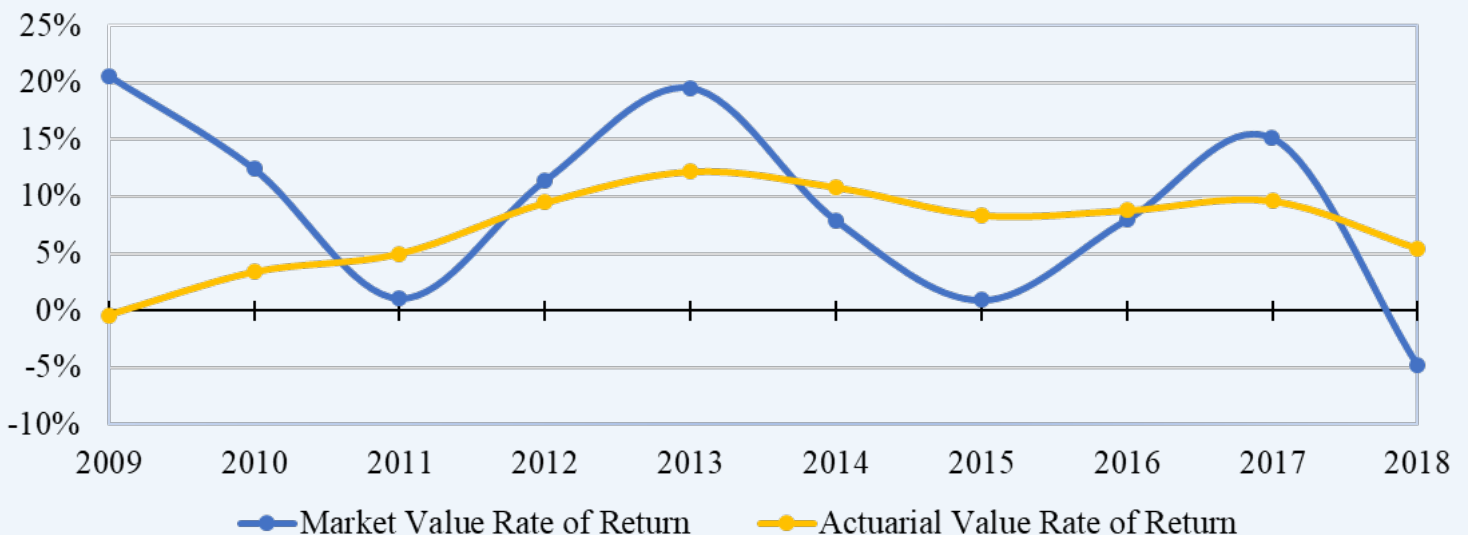
History of Investment Returns

As of December 31, 2018, market value of the investment portfolio was \$312,336,921. In 2018 the portfolio experienced a net investment loss of \$25,054,937, which resulted in a loss for the net investment return for the year. In the fourth quarter a second correction for 2018 was experienced as stock market investors concerns grew over whether the U.S. economy met its peak earnings growth potential. Continued trade negotiations and uncertainty regarding the Federal Reserve's monetary policy led to a tumultuous end to 2018. While market volatility spiked in the fourth quarter of 2018, the U.S. is entering its 10th consecutive year of economic expansion following the global economic crisis. Real GDP measured 3.5% for the third quarter, suggesting that the U.S. is far from experiencing a negative growth rate.

After seeing stocks outperform in the 3rd quarter with a 7.2% return of the S&P 500, this key index declined in the 4th quarter by 13.5% creating a negative 4.4% total return for the year.

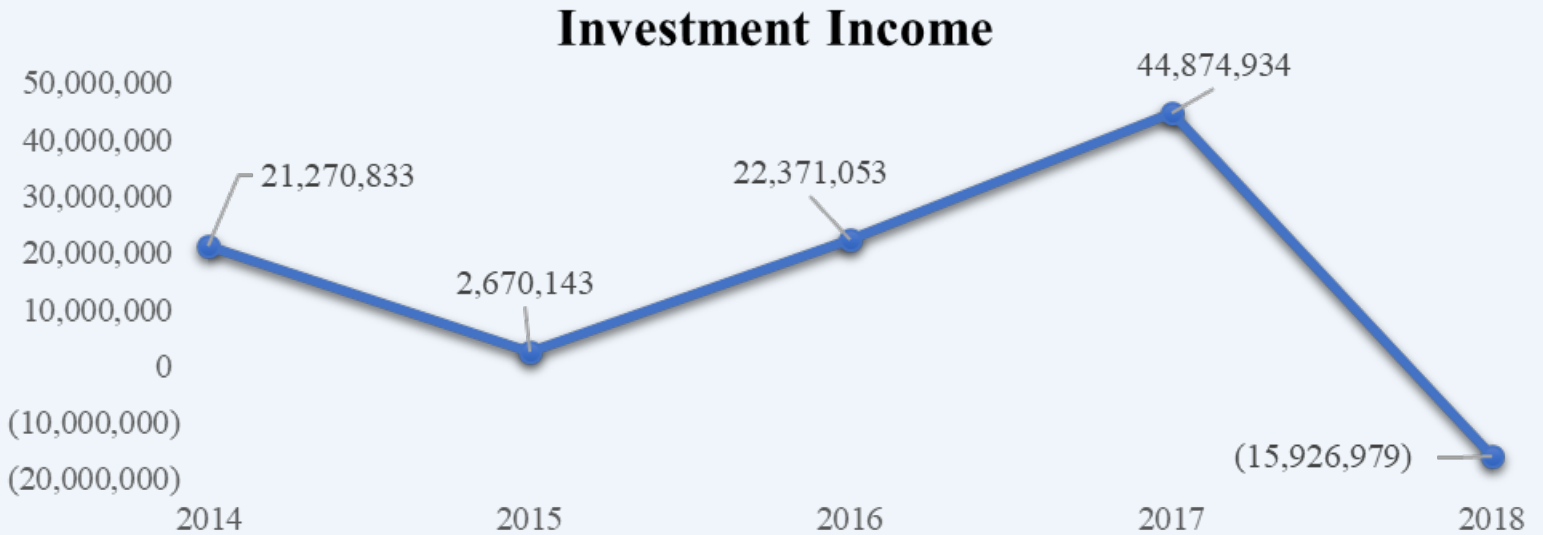
Throughout the past 10 years, from 2009 to 2018, the plan averaged a market value rate of return of 8.9%. From 2014 to 2018, a span of 5 years, the average rate of return was 5.2%. Within the past 3 years, the plan realized an average rate of return of 6.1%. This exponential decrease, in 2018, was the result for an unseen return in the fourth quarter. According to JPMorgan, S&P 500 companies should strike a more balanced tone and provide guidance for mid-single-digit earnings per share (EPS) growth for 2019, expanding to \$173 this year from \$165 in 2018.

Investment Return Rates



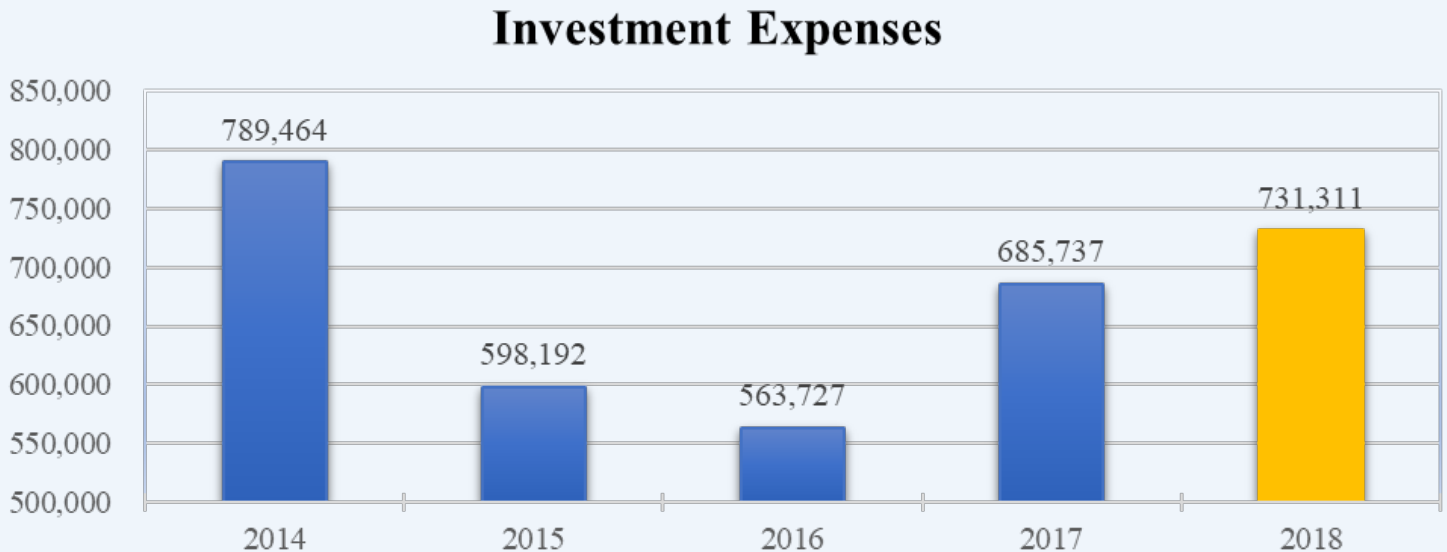
Schedule of Investment Returns

For the year ending December 31, 2018, the County's Fund had an investment loss of \$15,926,979. This compares to a 2017 investment gain of \$44,874,934. This loss of income can be explained by the stock market fluctuations at the conclusion of 2018.



Schedule of Investment Related Expenses

Investment related expenses include fees paid to Investment Managers, the Fund Custodian, and various consulting fees. As the year 2018, the County's "out of pocket" investment expenses were \$731,311.

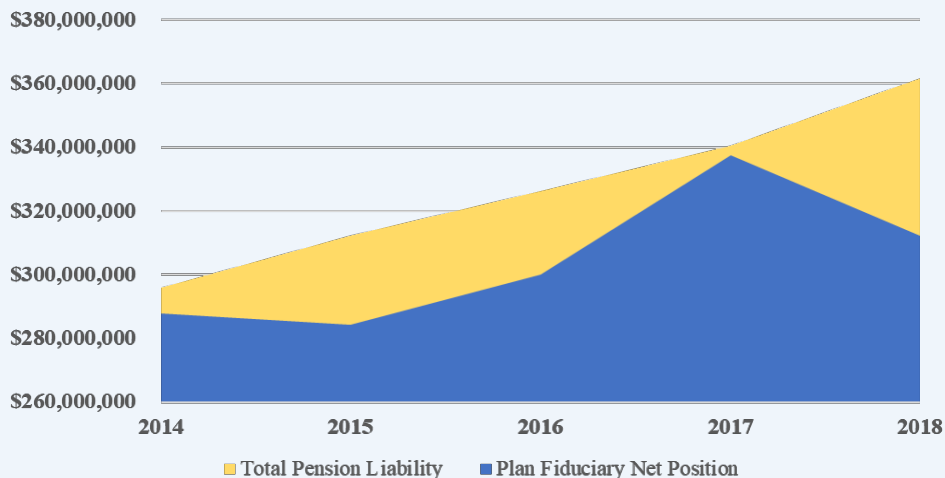


Statement of Plan Assets

December 31, 2018

Assets	2018 Totals
Cash and Cash Equivalents	\$ 2,799,980
Investment by Fair Value Level:	
U.S. Government Securities	7,715,497
Corporate Bonds	20,820,632
Fixed Income Mutual Fund	28,344,637
Equity Mutual Funds	110,334,302
Savings, CD's, and Time Deposit	3,975,326
Investments Measured at the Net Asset Level:	
Limited Partnership	17,855,975
Global Managed Equity Fund	40,590,081
Global Multi-Cap Quality Trust Fund	28,928,705
Global Opportunities Equity Fund	33,233,845
Multi Strategy Trust Fund	15,766,902
Other	2,070,240
Total Investment	309,636, 142
Interest and Dividend Receivable	116,307
Employee Contribution Receivable	168,560
Total Assets as of December 31, 2018	\$ 312,720,989

County's Net Pension Liability



See Page 40 in CAFR for more information

Statement of Changes in Fiduciary Net Position

County of Dauphin, Pennsylvania

Year Ended December 31, 2018

Additions:	
Contributions:	
County	\$ 6,004,307
Plan Members	5,120,149
Total Contributions	<u>11,124,456</u>
Investment Income:	
Net Loss in Fair Value of Investments	\$ (20,336,329)
Interest	1,303,476
Dividends	2,456,145
Net Accrued Interest/ Other	649,730
Total Investment Income	<u>(15,926,978)</u>
Less: Investment Expense	731,311
Net Investment Income	<u>(16,658,289)</u>
Total Additions	<u>(5,533,833)</u>
Deductions:	
Pension Benefits:	\$ 18,558,276
Refunds of Member Contributions	730,014
Administrative Expenses	232,813
Total Deductions	<u>19,521,103</u>
Decrease in Net Position	<u>(25,054,936)</u>
Net Assets Held In Trust For Pension Benefits:	
Beginning of Year	\$ 337,391,858
End of Year	<u>\$ 312,336,921</u>

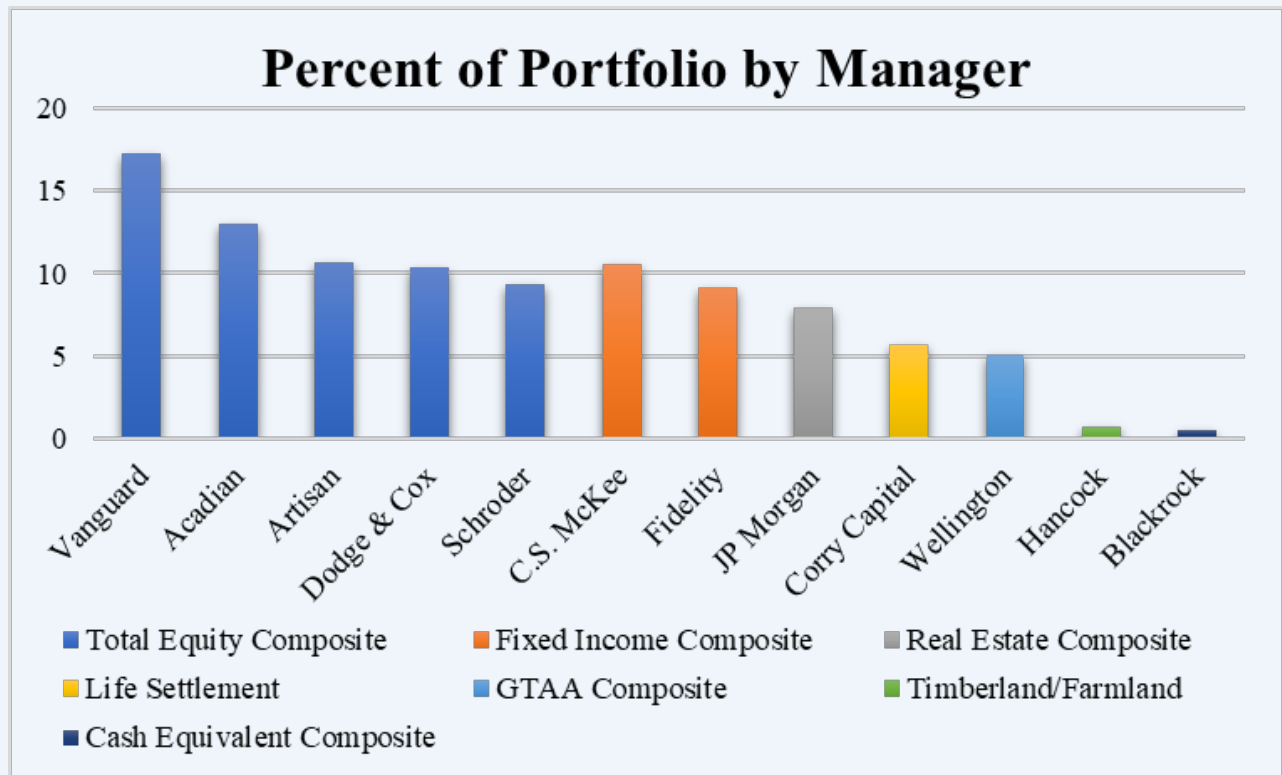
Dauphin County Pension Plan Portfolio

Asset Allocation by Percentage

As of December 2018

Asset Allocation Type	Percentage Allocated
Global Equity	43.3
U.S. Fixed Income	19.6
U.S. Equity	17.2
Real Estate	7.9
Life Settlement	5.7
Global Tactical Asset Allocation	5.1
Timberland/Farmland	0.7
Cash Equivalent	0.5

The primary principle behind portfolio allocation is to minimize risk and maximize returns. Risk is broadly defined as the chance that the return on an investment will differ from the expected rate of return. In this case, risk accounts for the variance of expected contributions, volatility of investments, and the standard deviation of plan returns. The plan's current allocation of assets is mostly a factor of meeting the assumed rate of return and doing so at the lowest level of risk.



Pension Plan Management Structure

Board of Trustees

County Commissioners,
Controller, & Treasurer

Wilmington Trust

Custodian of Pension Fund

Marquette Associates

Advisor of Pension Fund

Korn Ferry Hay Group

Actuary of Pension Fund

Dodge & Cox

Investment Manager

Acadian Asset Management

Investment Manager

Artisan Finance

Investment Manager

Vanguard Group

Investment Manager

Schroder Investment Partners

Investment Manager

Wilmington Management

Investment Manager

Emerald Advisors

Investment Manager

C.S McKee

Investment Manager

Fidelity

Investment Manager

JP Morgan

Investment Manager

Corry Capital Advisors

Investment Manager



2018 Dauphin County Retirees

Bryan Arnold	Andrea Henry	Robert Radebach
John Beitman	Inirida Hernandez	James Reisinger
Thomas Blatt	Donald Hervey	Adrian Robinson
Leonard Carroll	Joanne Hollenbush	Shelley Ruhl
Rose Cartnail	Michele Jeszenka	Michael Shipp
Deborah Clayton	Shirley Keith-Knox	Alan Shumberger
Ahmad Collins	Kay Lengle	Eileen Stover
Ernest Corty	Joan Lewis	Michael Strine
Dominick Derosé	Donato Matarrese II	Sherri Summerford
Connie Donovan	Anna Meck	Rose Swartz
Deborah Essis-Curcillo	Susan Moore	Tina Sweigard
Ronald Fernsler	Marshell Napper	Ronald Swinehart
Walter Fly Jr.	Elizabeth Nichols	Steven Tessier
Bruce Foreman	Dana Noblit	Charles Vance Jr.
Ronald Fuller	Kenneth Nolte Jr.	James Vines
Pamela Garver	Patricia Petrun	Scott Wolfe
Gary Grenoble	Scott Pletcher	Thomas Wong
Kevin Groom		Dennis Woodring

Thank you for your service!



The information contained within this report was compiled from the Dauphin County Employees' Retirement System Quarterly Performance Reports produced by Marquette Associates, Dauphin County Retirement Trust Fund reports produced by Zelenkofske Axelrod LLC, and Actuarial Valuation reports produced by Korn Ferry Hay Group.

DISCLAIMER: The sources of information used in this report are believed to be reliable. Dauphin County has not independently verified all of the information and its accuracy cannot be guaranteed. Opinions, estimates, projections and comments constitute our judgement and are subject to change without notice. References to specific securities are for illustrative purposes only and do not constitute recommendations. Past Performance does not guarantee future results.