

Financial and Actuarial Report

for the Fiscal Years Ended December 31, 2018 & 2017

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Letter from the Board President

To the Members, Survivors and Beneficiaries of the Plan:

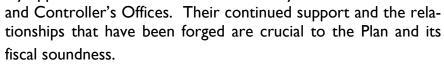
I would like to offer you a recap of some of the exciting news that the Retirement Board has been working on over the last year:

In June of 2018, the Board was pleased to announce the new life insurance provider The Standard, would offer an open enrollment to Retirees. This was the first time an option was available to increase the paid benefit to the maximum total amount of \$10,000, if paid coverage was not elected at the time of retirement. The open enrollment period ran from July 9th — August 31st, 2018. We had an amazing response with over 500 Retirees signing up for the additional paid coverage.

The Retirement Office held two open houses in which staff educated and provided beneficiary and other information. Having received a great deal of positive feedback from the employees, we plan on holding open houses on a regular basis.

In previous reports, I made note that markets can be volatile. And 2018 proved to be no exception to that rule. Because of the fluctuating market conditions, the RBAC worked diligently with the Contribution Rate Working Group (CRWG) to ensure the sustainability of the plan. This can be a difficult job to balance the long term solvency and I commend the work of the CRWG. Not only have we begun to work with our Consultant, Wilshire in implementing a new Investment Policy Statement, the contribution rate was raised in 2019 and is now set at 20%. Today, the Allegheny County and Airport Authority employees contribute 10% of pensionable wages to the retirement fund with their Employers providing the remaining 10% contribution.

I would like to express my appreciation to the staff of the County Executive, Treasurer



On behalf of the trustees of this Board, it is my honor to serve you as President/Treasurer.

John K. Weinstein Allegheny County Treasurer

and Board President

Report of Independent Auditors

We have audited the accompanying financial statements of the Allegheny County Employees' Retirement System (Retirement System) as of December 31, 2018 and 2017, and for the years then ended, and the related notes to the financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

Our responsibility is to express an opinion of these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Allegheny County Employees' Retirement System as of December 31, 2018 and 2017, and the changes in its fiduciary net position for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed more fully in the disclosure about the discount rate in Note 6 to the financial statements, the Allegheny County Employees' Retirement System is projected to reach a depletion date of 2039. Our opinion is not modified with respect to this matter.

Other Matters

Accounting principles generally accepted in the United States of America require that the schedule of changes in net pension liability, the schedule of employer contributions, and the schedule of annual money-weighted rate of return on pages 18 through 21 be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Net Position Restricted for Pensions:

Audited Financial Results

STATEMENTS OF FIDUCIARY NET POSITION DECEMBER 31,

ASSETS

	2018	<u> 2017</u>	
Cash and Cash Equivalents	\$ 19,982,905	\$ 15,395,727	
Investments (at fair value):			
Equity:			
U.S. Common and Preferred Stock	113,362,368	124,424,207	
American Depositary Receipts	2,250,658	2,061,761	
S&P 500 Index Fund	76,574,960	89,140,130	
Non-U.S. Stocks and Equity Mutual Funds	120,866,664	149,232,859	
Bonds and Notes:			
Corporate Certificates of Deposit	3,194,843	2,728,503	
U.S. Government and Related Agency Debt	21,843,589	21,624,759	
Fannie Mae and Freddie Mac Debt	9,912,244	7,143,227	
Fixed Income Mutual Funds	137,450,881	145,338,006	
U.S. Corporate Debt Instruments	63,506,049	66,272,117	
Non-U.S. Government and Corporate Debt	17,945,500	17,531,906	
Other Investments:			
Hedge Funds	1,265,826	1,697,855	
Real Estate Investment Trusts	97,819,299	97,462,544	
Commodities Funds	-	16,579,156	
Venture Capital / Private Equity	187,068,404	183,560,628	
Receivables:			
Amounts Due from Brokers for Sold Investments	2,443,512	992,067	
Accrued Interest and Dividends	1,656,684	1,439,384	
Accrued Employer Contributions	967,933	857,302	
Accrued Employee Contributions	967,933	857,302	
Other Assets	2,569	10,057	
Total Assets	\$ 879.082.821	\$ 944.349.497	
LIABILITIES			
Liabilities:			
Vouchers Payable	\$ 63,452	\$ 21,401	
Accrued Payroll	5,179	3,292	
Payroll Withholdings	2,697	942	
Accrued Liabilities	1,977,830	2,690,992	
Amounts Due to Brokers for Purchased Investments	1,493,885	953,771	
Other Liabilities	25,916	24,258	
	<u> </u>	<u> </u>	
Total Liabilities	<u>\$ 3,568,959</u>	<u>\$ 3,694,656</u>	

FIDUCIARY NET POSITION

\$ 875,513,862

\$ 940,654,841

Audited Financial Results

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION DECEMBER 31,

	2018	2017
Additions:		
Contributions:		
Employee	\$ 38,344,289	\$ 35,184,080
Employer	38,142,513	35,123,482
Total Contributions	76,486,802	70,307,562
Investment Income:		
Net Appreciation (Depreciation) in Fair Value of Investments	(43,343,857)	107,999,823
Interest	5,367,873	4,715,004
Dividends	7,120,811	6,119,044
Partnership Income	3,333,354	7,452,936
Stock Loan Income	49,179	<u>89,956</u>
	(27,472,640)	126,376,763
Less: Investment Management Fees	5,580,439	10,972,813
Total Investment Income - net	(33,053,079)	115,403,950
Miscellaneous Income	36,890	206,171
Total Additions - Net	43,470,613	185,917,683
Deductions:		
Benefit Payments	101,701,023	96,244,878
Refunds of Employee Contributions	5,305,324	5,333,853
Salaries, Wages and Related Expenses	298,845	179,947
Administrative & Miscellaneous Expenses	1,306,400	1,274,180
Total Deductions	108,611,592	103,032,858
Net Increase (Decrease) in Net Position	(65,140,979)	82,884,825
Net Position Restricted for Pensions at Beginning of Year	940,654,841	857,770,016
Net Position Restricted for Pensions at End of Year	\$ 875,513,862	\$ 940,654,841

Source: Allegheny County Employees' Retirement System December 31, 2018 Audit performed by Case Sabatini. Full Audit can be viewed at www.alleghenycounty.us/retirement/reports/reports.aspx or pdf by request

Actuarial Certification

I certify that I have performed an actuarial valuation of the above plan as of January I, 2018 in accordance with generally accepted actuarial principle applied consistently with the preceding valuation. I meet the Qualification Standards of the American Academy of Actuaries to render this actuarial opinion.

I certify that the information in this Executive summary is consistent with the formal report of the valuation.

_ / And -/ X	10/4/2018
Bradford L. Rigby, ASA, EA, MAAA	Date
Frank Caronics	10/4/2018
Frank Canonico, EA, MAAA.	Date

Paul D. Halliwell, Project Coordinator

Date

Summary of Principal Actuarial Results

	January 1, 2018	January 1, 2017
Demographics		
Active Participants		
Number	7,200	7,246
Average Age	47.1	47.2
Average Age at Hire	34.6	34.6
Average Past Service	12.5	12.7
Total Payroll (prior year)	\$378,782	\$365,353
Covered Payroll*	392,350	378,412
Average Pay	52,609	50,421
Median Pay	47,412	45,842
Inactive Participants		
Number in Pay Status	4,830	4,790
Average Age in Pay Status	73.6	73.8
Average Monthly Benefit	\$1,693	\$1,626
Median Monthly Benefit	1,402	1,339
Police/Fire	3,168	2,799
Sheriffs/Guards/POs	2,830	2,548
Non-uniformed	1,259	1,121
Number of Terminated Vested	268	232
Average Age of Terminated Vested	49.5	49.7
Average Monthly Benefit	\$1,222	\$1,013
Median Monthly Benefit	908	798
Police/Fire	2,875	1,982
Sheriffs/Guards/POs	1,276	955
Non-uniformed	881	750
Total Participants	12,298	12,268
Total Active Member and Employer Contributions		
Dollars (actual)		\$70,308
Dollars (actual) Dollars (expected)	\$74,546	Ψ70,300
Percentage of Payroll	19%	18%

^{*}Projected to next year using salary increase assumption.

Summary of Principal Actuarial Results

	January 1, 2018	January I, 2017
	(\$ Amounts in 000s)	(\$ Amounts in 000s)
Interest Rate	<u>7.75%</u>	<u>7.75%</u>
Accrued Benefit Funded Status		
Accrued Benefit Liability	\$1,412,062	\$1,353,760
Market Value of Assets	<u>940,655</u>	<u>857,770</u>
Accrued Benefit Funded Ratio	<u>66.6%</u>	<u>63.4%</u>
Accrued Liability Funded Status		
Actuarial Liability	\$1,618,336	\$1,555,335
Actuarial Value of Assets	<u>940,655</u>	<u>857,770</u>
Funded Ratio	<u>58.1%</u>	<u>55.2%</u>
Total Funded Status		
Value of Total Liabilities	\$1,866,690	<u>\$1,794,577</u>
Value of Total Assets		
(Market Value of Existing Assets and Present		
Value of Future Contributions)	1,443,587	<u>1,317,420</u>
Total Ratio	<u>77.3%</u>	<u>73.4%</u>
Total Normal Cost		
Dollar	<u>\$34,313</u>	<u>\$33,040</u>
% of Payroll	<u>8.75%</u>	<u>8.73%</u>

Source: Allegheny County Employees' Retirement System Actuarial Report January 1, 2018 performed by Cowden. Full Report can be viewed at http://www.alleghenycounty.us/retirement/reports/reports.aspx or pdf by request.

Consultant Reports

Wilshire Associates Incorporated

Economy & Markets

The U.S. economy continued to grow in 2018, with Real GDP growth of 2.9%. GDP growth accelerated from the 2017 rate of 2.3%. Most components of GDP were additive to growth for the year, led by personal consumption expenditure, but somewhat offset by declining fixed residential investment and rising imports. Job growth continued at a healthy rate in 2018, with total nonfarm employment increasing at an average of 223,000 jobs per month, while the unemployment rate settled below 4.0% for the first time since 2000 and reached its lowest level since 1969.

The U.S. stock market winning streak ended at nine calendar years, as a -14.3% decline in the Wilshire 5000 Index in the Fourth Quarter of 2018 pushed the index to a -5.3% decline for the calendar year. This marked the worst quarter for U.S. equities since 2011 and the first down year since the credit crisis sell-off in 2008. The U.S. stock market index had been down by double-digits for the year in late-December before gaining nearly 7% during the final few trading days of 2018. Concerns of an economic slow-down weighed on stock prices, as did fears that additional rate increases by the Federal Reserve could weaken future prospects for economic growth. Despite holding up better in the Fourth Quarter selloff, value stocks underperformed growth names once again in 2018, while large-cap stocks outperformed small-cap stocks for the quarter and year.

Equity markets outside of the U.S. suffered double-digit losses in 2018 after producing stellar 2017 returns. Developed (MSCI EAFE Index) and emerging markets (MSCI Emerging Markets Index) declined -13.4% and -14.2%, respectively, with much of those losses coming in the fourth quarter. While the EU began the year in sound economic condition, growth declined steadily while gains in unemployment stalled and industrial production reversed course. Despite some positive signals on U.S.-China trade, investors were cautious while awaiting a scheduled meeting in January before fully evaluating the current global trade environment.

Within fixed income, the Treasury curve briefly inverted by year-end, but only in the short to intermediate range. For the year, yields rose, particularly in the shorter end of the yield curve. Despite falling 0.37% during the Fourth Quarter, the 10-year Treasury finished 2018 at 2.69% after starting the year at 2.40%. The Federal Reserve raised its benchmark rate by 0.25% during their December meeting, the fourth such increase of the year, but decreased their projection for 2019 to only two rate increases from the previous three increases.

RBAC Total Fund

The Retirement Board of Allegheny County (RBAC) Pension Fund ended 2018 with a total asset value of \$875.5 million, down \$65.1 million for the year. Additionally, RBAC paid out nearly \$102 million in benefit payments during 2018.

The RBAC Total Fund underperformed its benchmark in 2018, returning -3.4% vs. the benchmark which returned -2.1%. Relative to an institutional fund peer universe, however, RBAC outperformed the median plan in the TUCS Total Return of Master Trusts – Public Universe for the year, and over the trailing three- and five-year periods as well. Public equities were the largest drivers of negative performance in 2018, on an absolute and relative basis.

The U.S. Equity Composite underperformed the Wilshire 5000 Index during 2018, returning -7.0% while the index returned -5.3%. Active management in the U.S. Equity composite detracted in 2018, but the composite was roughly in line with peers for the year, ranking in the 57th percentile. Over the trailing three-, five-, and ten-year periods, the composite ranked in the top half of a peer group universe of U.S. equity portfolios.

The Non-U.S. Equity Composite underperformed in 2018, returning -17.1% while the index declined by -14.8%. Baillie Gifford was the largest detractor to relative underperformance, trailing the index by 2.4% when compared to the MSCI All Country World ex U.S. (Net) Index (-16.6% vs. -14.2%). Since being added to the portfolio in 2009, the fund has outperformed by a 2.8% annualized, and was one of the managers that drove fund outperformance in 2017.

Consultant Reports (Cont.)

Wilshire Associates Incorporated (Cont.)

Within Fixed Income, the Core Fixed Income Composite lagged the benchmark in 2018, down -0.4% while the Bloomberg Barclays U.S. Aggregate Index was flat for the year. CS McKee was the best performing manager, returning 0.3% for the year, and has been a consistent value-add manager since being introduced to the portfolio in 1982. The High Yield Composite modestly detracted from performance in 2018, after several years of boosting returns.

Amidst a difficult year for many assets classes, there were several areas of the market that produced strong returns in 2018. Real Estate was the top performing composite for 2018, on an absolute and relative basis, returning 11.6% compared to the benchmark NCREIF ODCE Index return of 7.4%. In addition, the Private Equity composite generated a return of 9.9% for the calendar year.

Asset Strategy Consultants

The Retirement Board of Allegheny County (RBAC) portfolio continues to expand the amount invested in Alternative Investment partnerships. We are generally pleased with the reports and updates we receive from the General Partners for these investments.

The Alternative portfolio is approaching the asset allocation target. As a result, the number of new investments may slow until we get better visibility on the partnership companies to be sold this year. These Investments are having a positive impact on the total portfolio performance. The Partnerships own a small interest in many companies and economic sectors.

The RBAC approved several new allocations to General Partners in 2018. If distributions pick up, we will add new funds opportunistically to get to our target allocation. We expect to make fewer allocations to new partnerships as we move into 2019.

The existing investments are continually monitored for liquidity, potential risks, and the stability of the investment team. The roster of Alternative Investments creates a well-diversified pool for the Pension Plan. We hope 2019 will build on the success of 2018.

PFM Asset Management

EMERGING PROGRAM

As of December 31, 2018, local, emerging and minority manager assets totaled \$52.2 million, or 5.6% of total plan assets. The County has approximately \$18.2 million of capital left to allocate to local/emerging/minority managers in order to reach the program's goal of representing 7.5% of total plan assets. During this year, we added an all cap manager to the program. CooksonPeirce Investment Management was funded in January 2019.

BROKERAGE PROGRAM

The Retirement Board of Allegheny County requires that investment managers direct 25% of their trades to Local, Minority, and Women-owned brokerage firms. For the calendar year 2018, 22.29% of the total commission dollars were directed to approved brokers, representing \$16,386 paid to local or minority-owned firms.

For more information and reports, please see the Retirement Office website.

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Solicitor

CAMPBELL DURRANT BEATTY PALOMBO & MILLER, P.C.

Actuary: COWDEN

Financial Consultants:
WILSHIRE ASSOCIATES INC
ASSET STRATEGY CONSULTANTS
PFM ASSET MANAGEMENT

Auditor:

CASE SABATINI

Retirement Board of Allegheny County















County Treasurer JOHN WEINSTEIN	President, Treasurer
TED PUZAK	Vice President, Elected Member
County Controller CHELSA WAGNER	Secretary
County Executive RICH FITZGERALD	Member
FRANK DICRISTOFARO	Elected Member
County Chief of Staff JENNIFER LIPTAK	Executive Appointee
Council Budget Manager SARAH ROKA	Council Appointee

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