

Financial and Actuarial Report

for the Fiscal Years Ended December 31, 2019 & 2018

Table of Contents

Letter from the Board President	.Page 3
Report of Independent Auditors	.Page 4
Audited Financial Results	.Page 5
Actuarial Certification	.Page 7
Summary of Actuarial Results	Page 8
Consultant Reports	Page 10
Retirement Board of Allegheny County	.Back Page

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:

On June 14, 2019 the Retirement Board hosted the 2019 pension summit. It was attended by fiduciaries of defined benefit and other public pension plans from Allegheny and surrounding counties, including labor unions and the City of Pittsburgh. The event was Emceed by Allegheny Conference on Community Development's Chief Corporate Relations Officer and host of "Our Region's Business", Bill Flanagan. Opening Remarks were given by Allegheny County Treasurer and RBAC President, John K. Weinstein and PA State Treasurer, Joe Torsella. Topics discussed by various experts throughout the day included the Current State of Public Pensions; Education on Procedures for Updating Pension Plans; Market Cycles; Managing Risk from an Actuarial Perspective; and Trustee Education.

The Retirement Office along with Duncan Financial, hosted two off site Saturday seminars at the CCAC North and Monroeville Campuses. The presentations that are given once a quarter in hour intervals were made into a half day session that included information on completing your pension paperwork; Social Security benefits; and Medicare. The Retirement Office Staff were onsite with our mobile office to run estimates; help with paperwork; and answer any questions upcoming retirees had. We received a lot of positive feedback on these seminars and plan on holding more of them.

I would like to express my appreciation to the staff of the Retirement, County Executive, Treasurer and Controller's Offices. Their continued support and the relationships

that have been forged are crucial to the Plan and its fiscal soundness.

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, 2019 and 2018, 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, 2019 and 2018, 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 2043. 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.

Audited Financial Results

STATEMENTS OF FIDUCIARY NET POSITION DECEMBER 31,

ASSETS

Cash and Cash Equivalents 15,093,687 19,982,905 Investments (at fair value): Equity: U.S. Common and Preferred Stock 112,604,383 113,362,368 American Depositary Receipts 1,316,876 2,250,658 S&P 500 Index Fund 93,250,540 76,574,960 Non-U.S. Stocks and Equity Mutual Funds 141,726,984 120,866,664 Bonds and Notes: Corporate Certificates of Deposit 2,591,803 3,194,843 U.S. Government and Related Agency Debt 28,483,569 21,843,589 Fanile Mae and Freddie Mac Debt 13,335,730 9,912,244 Fixed Income Mutual Funds 204,069,310 137,450,881 U.S. Corporate Debt Instruments 27,797,978 63,506,049 Non-U.S. Government and Corporate Debt 10,928,890 17,945,500 Other Investments: Hedge Funds 798,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds 798,011 1,265,826 Real Estate Investment Trusts 209,925,495 187,068,404 Receivables: Amounts Due from Brokers for Sold Investments 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employee Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Cher Assets 59,061 2,569 Total Assets 59,061 2,569 7,793 7,793,793 7,794,793 7,797,830 7,794,793 7,797,830 7,797,830 7,794,793 7,797,830 7,794,793 7,797,830 7,794,793 7,797,830 7,794,793 7,797,830 7,797		<u> 2019</u>	2018		
Investments (at fair value): Equity: U.S. Common and Preferred Stock 112,604,383 113,362,368 American Depositary Receipts 1,316,876 2,250,658 S&P 500 Index Fund 93,250,540 76,574,960 Non-U.S. Stocks and Equity Mutual Funds 141,726,984 120,866,664 Bonds and Notes:	Cash and Cash Equivalents	\$ 15.093.687	\$ 19.982.905		
Equity: U.S. Common and Preferred Stock 112,604,383 113,362,368 American Depositary Receipts 1,316,876 2,250,658 S&P 500 Index Fund 93,250,540 76,574,960 Non-U.S. Stocks and Equity Mutual Funds 141,726,984 120,866,664 Bonds and Notes:	•	, , ,	, , ,		
U.S. Common and Preferred Stock 112,604,383 113,362,368 American Depositary Receipts 1,316,876 2,250,658 S&P 500 Index Fund 93,250,540 76,574,960 Non-U.S. Stocks and Equity Mutual Funds 141,726,984 120,866,664 Bonds and Notes: 2,591,803 3,194,843 U.S. Government and Related Agency Debt 28,483,569 21,843,589 Fannie Mae and Freddie Mac Debt 13,335,730 9,912,244 Fixed Income Mutual Funds 204,069,310 137,450,881 U.S. Corporate Debt Instruments 27,797,978 63,506,049 Non-U.S. Government and Corporate Debt 10,928,890 17,945,500 Other Investments: 78,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds 209,925,495 187,068,404 Receivables: 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$970,849,677 \$879,082,821 Liabiliti	· · · · · · · · · · · · · · · · · · ·				
S&P 500 Index Fund 93,250,540 76,574,960 Non-U.S. Stocks and Equity Mutual Funds 141,726,984 120,866,664 Bonds and Notes: 2,591,803 3,194,843 U.S. Government and Related Agency Debt 28,483,569 21,843,589 Fannie Mae and Freddie Mac Debt 13,335,730 9,912,244 Fixed Income Mutual Funds 204,069,310 137,450,881 U.S. Corporate Debt Instruments 27,797,978 63,506,049 Non-U.S. Government and Corporate Debt 10,928,890 17,945,500 Other Investments: 798,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds 7 78,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds 2,9925,495 187,068,404 Receivables: 3,463,546 2,443,512 Accrued Emptoyer Contributions 3,463,546 2,443,512 Accrued Employer Contributions 1,313,634 967,933 Actrued Employee Contributions 1,313,634 967,933	• •	112,604,383	113,362,368		
S&P 500 Index Fund 93,250,540 76,574,960 Non-U.S. Stocks and Equity Mutual Funds 141,726,984 120,866,664 Bonds and Notes: 2,591,803 3,194,843 U.S. Government and Related Agency Debt 28,483,569 21,843,589 Fannie Mae and Freddie Mac Debt 13,335,730 9,912,244 Fixed Income Mutual Funds 204,069,310 137,450,881 U.S. Corporate Debt Instruments 27,797,978 63,506,049 Non-U.S. Government and Corporate Debt 10,928,890 17,945,500 Other Investments: 798,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds 7 78,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds 2,9925,495 187,068,404 Receivables: 3,463,546 2,443,512 Accrued Emptoyer Contributions 3,463,546 2,443,512 Accrued Employer Contributions 1,313,634 967,933 Actrued Employee Contributions 1,313,634 967,933	American Depositary Receipts	1,316,876	2,250,658		
Bonds and Notes: Corporate Certificates of Deposit 2,591,803 3,194,843 U.S. Government and Related Agency Debt 28,483,569 21,843,589 Fannie Mae and Freddie Mac Debt 13,335,730 9,912,244 Fixed Income Mutual Funds 204,069,310 137,450,881 U.S. Corporate Debt Instruments 27,797,978 63,506,049 Non-U.S. Government and Corporate Debt 10,928,890 17,945,500 Other Investments 798,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds 798,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds 209,925,495 187,068,404 Receivables: 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets 59,061 2,569 Total Assets 59,061 2,569 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916					
Corporate Certificates of Deposit 2,591,803 3,194,843 U.S. Government and Related Agency Debt 28,483,569 21,843,589 Fannie Mae and Freddie Mac Debt 13,335,730 9,912,244 Fixed Income Mutual Funds 204,069,310 137,450,881 U.S. Corporate Debt Instruments 27,797,798 63,506,049 Non-U.S. Government and Corporate Debt 10,928,890 17,945,500 Other Investments: 101,781,586 97,819,299 Commodities Funds 798,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds 209,925,495 187,068,404 Receivables: 209,925,495 187,068,404 Receivables: 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$970,849,677 \$879,082,821 Liabilities: \$1,7244	Non-U.S. Stocks and Equity Mutual Funds	141,726,984	120,866,664		
U.S. Government and Related Agency Debt 28,483,569 21,843,589 Fannie Mae and Freddie Mac Debt 13,335,730 9,912,244 Fixed Income Mutual Funds 204,069,310 137,450,881 U.S. Corporate Debt Instruments 27,797,778 63,506,049 Non-U.S. Government and Corporate Debt 10,928,890 17,945,500 Other Investments: 101,781,586 97,819,299 Commodities Funds 798,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds 209,925,495 187,068,404 Receivables: 209,925,495 187,068,404 Receivables: 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$970,849,677 \$879,082,821 LIABILITIES Liabilities: \$970,849,677 \$879,082,821 Vouchers Payable \$1,7244 \$63,452 <t< td=""><td>Bonds and Notes:</td><td></td><td></td></t<>	Bonds and Notes:				
Fannie Mae and Freddie Mac Debt 13,335,730 9,912,244 Fixed Income Mutual Funds 204,069,310 137,450,881 U.S. Corporate Debt Instruments 27,797,978 63,506,049 Non-U.S. Government and Corporate Debt 10,928,890 17,945,500 Other Investments: 101,781,586 97,819,299 Ledge Funds 798,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds 209,925,495 187,068,404 Receivables: 4 2,443,512 Amounts Due from Brokers for Sold Investments 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$70,849,677 \$879,082,821 Liabilities: \$1,7244 \$63,452 Vouchers Payable 5,177 5,179 Accrued Payroll 5,177 5,179	Corporate Certificates of Deposit	2,591,803	3,194,843		
Fixed Income Mutual Funds 204,069,310 137,450,881 U.S. Corporate Debt Instruments 27,797,978 63,506,049 Non-U.S. Government and Corporate Debt 10,928,890 17,945,500 Other Investments: Hedge Funds 798,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds - - Venture Capital / Private Equity 209,925,495 187,068,404 Receivables: 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$79,084,677 \$879,082,821 Liabilities: \$1,7244 \$63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072	U.S. Government and Related Agency Debt	28,483,569	21,843,589		
U.S. Corporate Debt Instruments 27,797,978 63,506,049 Non-U.S. Government and Corporate Debt 10,928,890 17,945,500 Other Investments: 3798,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds - - Venture Capital / Private Equity 209,925,495 187,068,404 Receivables: 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$790,849,677 \$879,082,821 LIABILITIES Liabilities: \$17,244 \$63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Fannie Mae and Freddie Mac Debt	13,335,730	9,912,244		
Non-U.S. Government and Corporate Debt 10,928,890 17,945,500 Other Investments:	Fixed Income Mutual Funds	204,069,310	137,450,881		
Other Investments: Hedge Funds 798,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds - - Venture Capital / Private Equity 209,925,495 187,068,404 Receivables: - - Amounts Due from Brokers for Sold Investments 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$970,849,677 \$879,082,821 Liabilities: \$970,849,677 \$879,082,821 Vouchers Payable \$17,244 \$63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	U.S. Corporate Debt Instruments	27,797,978	63,506,049		
Hedge Funds 798,011 1,265,826 Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds - - Venture Capital / Private Equity 209,925,495 187,068,404 Receivables: - - Amounts Due from Brokers for Sold Investments 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$970,849,677 \$879,082,821 Liabilities: \$970,849,677 \$879,082,821 Liabilities: \$970,849,677 \$879,082,821 Vouchers Payable \$17,244 \$63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities	Non-U.S. Government and Corporate Debt	10,928,890	17,945,500		
Real Estate Investment Trusts 101,781,586 97,819,299 Commodities Funds - - Venture Capital / Private Equity 209,925,495 187,068,404 Receivables: - - Amounts Due from Brokers for Sold Investments 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$970,849,677 \$879,082,821 LIABILITIES Liabilities: \$17,244 \$63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Other Investments:				
Commodities Funds -	Hedge Funds	798,011	1,265,826		
Venture Capital / Private Equity 209,925,495 187,068,404 Receivables: 3,463,546 2,443,512 Amounts Due from Brokers for Sold Investments 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$970,849,677 \$879,082,821 LIABILITIES Liabilities: Vouchers Payable \$17,244 \$63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Real Estate Investment Trusts	101,781,586	97,819,299		
Receivables: Amounts Due from Brokers for Sold Investments 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$ 970,849,677 \$ 879,082,821 Liabilities: Vouchers Payable \$ 17,244 \$ 63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Commodities Funds	-	-		
Amounts Due from Brokers for Sold Investments 3,463,546 2,443,512 Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$ 970,849,677 \$ 879,082,821 LIABILITIES Liabilities: Vouchers Payable \$ 17,244 \$ 63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Venture Capital / Private Equity	209,925,495	187,068,404		
Accrued Interest and Dividends 994,960 1,656,684 Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets LIABILITIES Liabilities: Vouchers Payable \$ 17,244 \$ 63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Receivables:				
Accrued Employer Contributions 1,313,634 967,933 Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$ 970,849,677 \$ 879,082,821 LIABILITIES Liabilities: Vouchers Payable \$ 17,244 \$ 63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Amounts Due from Brokers for Sold Investments	3,463,546	2,443,512		
Accrued Employee Contributions 1,313,634 967,933 Other Assets 59,061 2,569 Total Assets \$ 970,849,677 \$ 879,082,821 Liabilities: Vouchers Payable \$ 17,244 \$ 63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Accrued Interest and Dividends	994,960	1,656,684		
Other Assets 59,061 2,569 Total Assets \$ 970,849,677 \$ 879,082,821 LIABILITIES Liabilities: Vouchers Payable \$ 17,244 \$ 63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Accrued Employer Contributions	1,313,634	967,933		
Standard	Accrued Employee Contributions	1,313,634	967,933		
LIABILITIES Liabilities: Vouchers Payable \$ 17,244 \$ 63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Other Assets	59,061	2,569		
LIABILITIES Liabilities: Vouchers Payable \$ 17,244 \$ 63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Total Assets	\$ 970.849.677	\$ 879.082.821		
Vouchers Payable \$ 17,244 \$ 63,452 Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916					
Accrued Payroll 5,177 5,179 Payroll Withholdings 1,358 2,697 Accrued Liabilities 1,692,417 1,977,830 Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Liabilities:				
Payroll Withholdings1,3582,697Accrued Liabilities1,692,4171,977,830Amounts Due to Brokers for Purchased Investments503,0721,493,885Other Liabilities21,61525,916	Vouchers Payable	\$ 17,244	\$ 63,452		
Accrued Liabilities1,692,4171,977,830Amounts Due to Brokers for Purchased Investments503,0721,493,885Other Liabilities21,61525,916	Accrued Payroll	5,177	5,179		
Amounts Due to Brokers for Purchased Investments 503,072 1,493,885 Other Liabilities 21,615 25,916	Payroll Withholdings	1,358	2,697		
Other Liabilities 21,615 25,916	Accrued Liabilities	1,692,417	1,977,830		
	Amounts Due to Brokers for Purchased Investments	503,072	1,493,885		
Total Liabilities <u>\$ 2,240,883</u> <u>\$ 3,568,959</u>	Other Liabilities	21,615	25,916		
	Total Liabilities	\$ 2,240,883	\$ 3,568,959		

FIDUCIARY NET POSITION

Net Position Restricted for Pensions: \$968,608,794 \$875,513,862

Audited Financial Results

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION DECEMBER 31,

	<u> 2019</u>	<u>2018</u>
Additions:		
Contributions:		
Employee	\$ 40,95	50,512 \$ 38,344,289
Employer	40,75	55,809 38,142,513
Total Contributions	81,70	06,321 76,486,802
Investment Income:		
Net Appreciation (Depreciation) in Fair Value of Investments	108,86	68,087 (43,343,857)
Interest	5,3	5,367,873
Dividends	14,7	15,253 7,120,811
Partnership Income	4,96	59,058 3,333,354
Stock Loan Income	3	<u> 49,179</u>
	133,90	03,850 (27,472,640)
Less: Investment Management Fees	6,05	55,589 5,580,439
Total Investment Income - net	127,84	48,261 (33,053,079)
Miscellaneous Income		58,244 36,890
Total Additions - Net	209,6	12.826 43,470,613
Deductions:		
Benefit Payments	109,37	70,751 101,701,023
Refunds of Employee Contributions	5,57	74,141 5,305,324
Salaries, Wages and Related Expenses	27	77,553 298,845
Administrative & Miscellaneous Expenses	1,29	95,449 1,306,400
Total Deductions	116,5	17,894108,611,592
Net Increase (Decrease) in Net Position	93,09	94,932 (65,140,979)
Net Position Restricted for Pensions at Beginning of Year	875,5	940,654,841
Net Position Restricted for Pensions at End of Year	\$ 968,60	<u>\$ 875,513,862</u>

Source: Allegheny County Employees' Retirement System December 31, 2019 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, 2019 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.

Bradford V. Rigby, ASA, EA, MAAA

Frank Canonico, EA, MAAA

Fuh Con

Paul D. Halliwell, Project Coordinator

11/12/2019

Date

11-12-2019

Date

Summary of Principal Actuarial Results

	January 1, 2019	January I, 2018
Demographics		
Active Participants		
Number	7,181	7,200
Average Age	46.8	47 .1
Average Age at Hire	34.5	34.6
Average Past Service	12.3	12.5
Total Payroll (prior year)	\$389,569	\$378,782
Covered Payroll*	403,588	392,350
Average Pay	54,250	52,609
Median Pay	49,030	47,412
Inactive Participants		
Number in Pay Status	4,955	4,830
Average Age in Pay Status	73.7	73.6
Average Monthly Benefit	\$1,761	\$1,693
Median Monthly Benefit	1,459	1,402
Police/Fire	3,548	3,168
Sheriffs/Guards/POs	2,992	2,830
Non-uniformed	1,298	1,259
Number of Terminated Vested	237	268
Average Age of Terminated Vested	50.0	
Average Monthly Benefit	\$1,226	
Median Monthly Benefit	952	908
Police/Fire	2,875	
Sheriffs/Guards/POs	957	1,276
Non-uniformed	948	
Total Participants	12,373	12,298
Total Active Manches and Free level Contain the		
Total Active Member and Employer Contributions		#7/ A07
Dollars (actual)	¢00.710	\$76,487
Dollars (expected)	\$80,718	
Percentage of Payroll	20%	19%

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

Summary of Principal Actuarial Results

	January 1, 2019	January I, 2018
	(\$ Amounts in 000s)	(\$ Amounts in 000s)
Interest Rate	<u>7.75%</u>	<u>7.75%</u>
Accrued Benefit Funded Status		
Accrued Benefit Liability	\$1,476,736	\$1,412,062
Market Value of Assets	875,514	940,655
Accrued Benefit Funded Ratio	<u>59.3%</u>	<u>66.6%</u>
Accrued Liability Funded Status		
Actuarial Liability	\$1,689,190	\$1,618,336
Actuarial Value of Assets	875,514	940,655
Funded Ratio	<u>51.8%</u>	<u>58.1%</u>
Total Funded Status		
Value of Total Liabilities	\$1,944,823	\$1,866,690
Value of Total Assets		
(Market Value of Existing Assets and Present		
Value of Future Contributions)	1,423,788	<u>1,443,587</u>
Total Ratio	<u>73.2%</u>	<u>77.3%</u>
Total Normal Cost		
Dollar	<u>\$34,890</u>	<u>\$34,313</u>
% of Payroll	8.64%	<u>8.75%</u>

Source: Allegheny County Employees' Retirement System Actuarial Report January 1, 2019 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 2019, with Real GDP growth of 2.3% but slowed from the 2018 rate of 2.9%. Most components of GDP were additive to growth for the year, while the slowdown from the year prior was due to lower growth of personal consumption expenditure and nonresidential fixed investment. Similar to GDP growth, job growth continued at a healthy albeit slowing rate in 2019, with total nonfarm employment increasing at an average of 178,000 jobs per month, while the unemployment rate further declined to multi-decade lows and ended the year at 3.5%.

Bouncing back from negative returns in 2018, the U.S. stock market (Wilshire 5000 Index) was up 31.0% in 2019. This marked the strongest year for U.S. equities since 2013. Stocks started strongly, as the market bounced back from the late-2018 selloff, with a 14.1% gain for the first quarter of 2019, marking the strongest quarter for U.S. equities since 2009. Concerns about global growth were dwarfed by the Fed's updated forecast for no rate increases in 2019 and a looser stance on unwinding quantitative easing enacted during the recovery. U.S. equities also ended the year strongly, up 9.1% in Q4 as the U.S. and China agreed to terms on a "Phase One" trade deal that is reported to reduce U.S. tariffs and increase Chinese purchases of some U.S. products. Growth continued to outperform value, just as large-cap continued to outpace small-cap stocks.

Equity markets outside of the U.S. produced very strong results in 2019, although they generally underperformed the U.S. equity market. News out of Britain was mixed with notable economic weakness in the manufacturing and services sectors, but consumer sentiment surveys improved after a fourth-quarter election resulted in strong support for a pro-Brexit government. Conditions in Germany were quite similar with signs of economic weakness but improving sentiment. Japan experienced four consecutive quarters of expansion during 2019, while also beating forecasts, due mostly to capital expenditures and private consumption. Emerging Markets were up, but generally trailed developed markets for the year. China benefitted from good news on the trade front although the country's economic growth had cooled to near 30-year lows.

Within fixed income, yields fell across the board but slightly more at the short end resulting in a minor steepening of the curve. The 10-year Treasury finished 2019 at 1.92% after starting the year at 2.69%. The Fed pivoted its rhetoric with a rather abrupt about-face in early 2019, as Fed Chairman Jerome Powell very clearly retreated from messaging around methodical tightening towards an undisclosed "neutral" rate back to a more benign, data-dependent approach. Contrary to the Fed's late-2018 projections for 50 basis points of tightening in 2019, the FOMC followed through on Powell's renewed accommodative tone by instead cutting rates three times in 2019 to a 1.50% - 1.75% target range.

RBAC Total Fund

The Retirement Board of Allegheny County (RBAC) Pension Fund ended 2019 with a total asset value of \$968.6 million, up \$93.1 million for the year. Additionally, RBAC paid out nearly \$110 million in benefit payments during 2019.

The RBAC Total Fund outperformed its benchmark in 2019, returning 15.2% vs. the benchmark which returned 14.2%. Relative to an institutional fund peer universe, however, RBAC underperformed the median plan in the Investment Metrics All Public Plans Total Fund Universe for the year. The Fund's underperformance was primarily driven by its relatively low allocation to public equities (40% compared to 55% peer median). The plan ranks in the top half of the peer group over the past five years despite this underweight position in equities. Public equities were the largest driver of performance in 2019, on an absolute and relative basis.

The U.S. Equity Composite was in line with the Wilshire 5000 Index during 2019, returning 31.0%. Active management in the U.S. Equity composite was mixed and largely netted out for the year. Over the trailing one-, three-, five-year periods, the composite ranked in the top half of a peer group universe of U.S. equity portfolios.

Consultant Reports (Cont.)

Wilshire Associates Incorporated (Cont.)

The Non-U.S. Equity Composite outperformed in 2019, returning 26.2% while the index gained 21.6%. Baillie Gifford was the largest contributor to relative performance, outperforming its benchmark by 10.7% for the year after lagging in 2018. Since being added to the portfolio in August 2009, Baillie Gifford has outperformed by 3.5% annualized.

Within Fixed Income, the Core Fixed Income Composite outperformed its benchmark in 2019, returning 8.9% while the Bloomberg Barclays U.S. Aggregate Index gained 8.7%. Outperformance from CS McKee and Federated, which represent nearly 70% of the composite, offset the components of the portfolio with lower duration than the benchmark, which lagged as interest rates fell. The High Yield Composite underperformed its benchmark in 2019 but provided solid returns gaining 12.8% for the year.

Real Assets generated positive returns in 2019 despite persistently low inflation. TIPS gained 8.4% thanks to falling interest rates, while Real Estate returned 5.2% coming off a very strong 2018. The MLP composite returned 14.5% compared to an index return of only 6.6%, as Harvest and Salient each produced double-digit returns.

Asset Strategy Consultants

The Retirement Board of Allegheny County (RBAC) portfolio continues to monitor 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 have paused 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 a few new allocations to General Partners in 2019. If distributions pick up, we will add new funds opportunistically to get to our target allocation. We expect to make few allocations to new partnerships as we move into late 2020 and we receive distributions or as some partnerships wind down or close.

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 2020 will build on the success of 2019.

PFM Asset Management

EMERGING PROGRAM

As of December 31, 2019, local, emerging and minority manager assets totaled \$54.8 million, or 5.7% of total plan assets. The County has approximately \$17.5 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 a hedge fund manager to the program. Maplewood Global was funded in May 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 2019, 18.15% of the total commission dollars were directed to approved brokers, representing \$14,793 paid to local or minority-owned firms.

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

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Solicitor

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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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