



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: FEBRUARY 28, 2019**

Participant Plan Performance Review for

**West Virginia Investment Management Board**

# Participant Plans Allocation & Performance Net of Fees

Period Ending: February 28, 2019

	6/30/2018		2/28/2019		Performance %							
	Asset (\$000)	%	Asset (\$000)	%	1 Month	3 Month	FYTD	1 Year	3 Year	5 Year	10 Year	20 Year
<b>WVIMB Fund Assets</b>	<b>19,506,228</b>	<b>100.0</b>	<b>19,285,983</b>	<b>100.0</b>								
<b>Pension Assets</b>	<b>15,795,451</b>	<b>81.0</b>	<b>15,552,332</b>	<b>80.6</b>								
Public Employees' Retirement System	6,718,698	34.5	6,663,967	34.6	1.4	2.7	1.3	2.0	11.3	7.1	11.7	6.8
Teachers' Retirement System	7,691,788	39.5	7,511,755	38.8	1.4	2.7	1.3	2.0	11.2	7.0	11.5	6.6
EMS Retirement System	78,921	0.4	80,525	0.4	1.4	2.7	1.3	2.0	11.2	7.1	11.6	
Public Safety Retirement System	682,799	3.5	660,010	3.4	1.4	2.6	1.2	2.0	11.2	7.1	11.7	6.8
Judges' Retirement System	204,484	1.0	204,359	1.1	1.4	2.7	1.3	2.0	11.3	7.1	11.7	6.7
State Police Retirement System	188,912	1.0	195,879	1.0	1.4	2.7	1.3	2.0	11.3	7.1	11.7	6.7
Deputy Sheriffs' Retirement System	219,368	1.1	222,195	1.2	1.4	2.7	1.3	2.0	11.3	7.1	11.7	6.7
Municipal Police & Firefighter Retirement System	7,843	0.0	9,703	0.1	1.4	2.9	1.4	2.1	11.0	6.9		
Municipal Model A	1,514	0.0	2,804	0.0	1.4	2.7	1.7	2.4	11.4	7.1		
Municipal Model C	1,124	0.0	1,135	0.0	1.3	2.9	1.2	0.8				
<b>Insurance Assets</b>	<b>2,785,522</b>	<b>14.3</b>	<b>2,788,340</b>	<b>14.5</b>								
Workers' Compensation Old Fund	1,185,505	6.0	1,111,005	5.7	0.9	2.8	1.2	0.4	6.7	4.0	7.3	
Workers' Comp. Self-Insured Guaranty Risk Pool	33,908	0.2	33,715	0.2	1.0	2.7	1.0	0.4	6.7	4.0	4.2	
Workers' Comp. Self-Insured Security Risk Pool	53,204	0.3	51,594	0.3	1.0	2.7	1.0	0.4	6.7	4.0		
Workers' Comp. Uninsured Employers' Fund	12,881	0.1	13,071	0.1	0.9	2.6	0.9	0.3	6.5	3.8	4.0	
Pneumoconiosis	245,797	1.3	236,714	1.2	1.0	2.7	1.0	0.4	6.6	3.9	7.4	5.6
Board of Risk & Insurance Management	151,588	0.8	153,215	0.8	1.0	2.7	1.1	0.4	6.6	3.9	7.5	
Public Employees' Insurance Agency	198,826	1.0	231,817	1.2	0.8	2.9	1.2	0.8	6.5	3.9	7.3	
WV Retiree Health Benefit Trust Fund	903,813	4.6	957,209	5.0	1.4	2.7	1.4	2.1	11.3	7.1	9.9	
<b>Endowment Assets</b>	<b>925,255</b>	<b>4.7</b>	<b>945,311</b>	<b>4.9</b>								
Berkeley County Development Authority	7,742	0.0	7,841	0.0	1.4	2.7	1.3	2.0	11.3			
Wildlife Fund	63,823	0.3	62,951	0.3	1.4	2.7	1.4	2.1	11.3	7.1	11.7	7.2
Prepaid Tuition Trust	42,256	0.2	33,224	0.2	0.1	2.7	2.7	1.6	8.7	5.6	10.8	
Revenue Shortfall Reserve Fund	167,666	0.9	188,674	1.0	0.1	2.6	1.6	2.1	2.7	2.1	6.3	
Revenue Shortfall Reserve Fund - Part B	438,711	2.3	446,139	2.4	0.6	3.1	1.7	1.1	6.5	3.9	8.2	
WV DEP Trust	9,658	0.0	8,952	0.0	1.7	3.0	0.2	(1.6)	10.2	5.7		
WV DEP Agency	195,399	1.0	197,530	1.0	1.2	3.0	1.1	(0.1)	7.9	4.6		

Composite Asset Allocation & Performance Net of Fees

Period Ending: February 28, 2019

	Asset (\$000)	%	Performance %							
			1 Month	3 Month	FYTD	1 Year	3 Year	5 Year	10 Year	20 Year
Investment Pools Composite	19,291,990	100.00								
Total Equity Composite	9,370,654	48.57	2.22	3.52	(0.42)	(3.40)	13.54	6.91	14.43	7.12
+/- Total Equity Base Index (b)			(0.50)	0.38	(0.48)	(2.38)	0.21	0.32	0.89	0.98
Domestic Equity Composite	4,598,505	23.83	3.75	2.53	2.00	3.51	14.83	9.70	16.71	7.63
+/- Russell 3000 Index			0.23	0.59	(1.19)	(1.54)	(0.70)	(0.45)	(0.10)	1.03
International Equity Composite	4,772,149	24.74	0.78	4.43	(2.78)	(9.68)	12.18	4.02	11.92	7.28
+/- MSCI AC World ex US IMI Index (c)			(1.21)	(0.25)	(0.02)	(3.08)	1.05	0.96	1.70	1.99
Fixed Income Composite	3,094,919	16.04	0.13	3.39	3.12	2.49	4.29	3.18	6.12	5.30
+/- Bloomberg Barclays Capital Universal (d)			0.02	0.31	0.17	(0.70)	1.84	0.57	1.79	0.44
Core Fixed Income Composite	927,612	4.81	0.06	2.80	2.88	3.45	2.03	2.68	4.24	
+/- Bloomberg Barclays Capital Aggregate			0.12	(0.06)	0.20	0.28	0.34	0.36	0.53	
Total Return Fixed Income Composite (k)	2,167,307	11.23	0.16	3.65	3.22	2.08	5.28	3.38	6.62	5.79
+/- Bloomberg Barclays Capital Universal			0.05	0.57	0.27	(1.11)	2.83	0.77	2.29	0.85
TIPS Composite	385,085	2.00	(0.01)	1.90	0.13	2.00	1.72	1.47		
+/- Bloomberg Barclays Capital U.S. TIPS			0.00	0.01	0.05	0.09	0.04	0.00		
Cash Composite	125,456	0.65	0.18	0.57	1.42	1.99	1.12	0.72	0.44	1.97
+/- Citigroup 90 Day T-Bill (e)			(0.01)	(0.02)	(0.04)	(0.05)	0.01	0.04	(0.03)	(0.02)
Private Equity Composite	1,713,214	8.88	0.64	0.82	5.85	22.58	18.56	15.73	14.59	
+/- Russell 3000 + 3% (f, g)								2.58	(5.82)	
Real Estate Composite	1,849,885	9.59	0.47	1.81	3.42	9.21	9.22	9.76	9.18	
+/- NCREIF + 1% (f)								(0.65)	1.05	
Hedge Fund Composite	2,201,930	11.41	0.96	1.40	(0.02)	1.15	4.38	2.89	5.63	
+/- HFRI FOF + 1% (h)			(0.24)	(0.83)	0.51	1.38	(0.50)	0.00	1.94	
Opportunistic Income Composite	550,847	2.86	0.13	0.30	2.73	6.36	4.43			
+/- CS Leveraged Loan + 2.5%			(1.64)	(1.84)	(1.58)	0.08	(4.90)			

# Participant Plans Allocation vs. Strategy

Period Ending: February 28, 2019

	Equity		Fixed Income		Private Equity		Real Estate		Hedge Funds		Opportunistic Income		Cash	
	Actual %	Strategy %	Actual %	Strategy %	Actual %	Strategy %	Actual %	Strategy %	Actual %	Strategy %	Actual %	Strategy %	Actual %	Strategy %

## Pension Assets

Public Employees' Retirement System	52.0	55.0	12.0	15.0	10.3	10.0	11.2	10.0	11.0	10.0	3.3	0.0	0.2	0.0
Teachers' Retirement System	52.1	55.0	11.8	15.0	10.4	10.0	11.2	10.0	11.0	10.0	3.3	0.0	0.2	0.0
EMS Retirement System	51.8	55.0	12.9	15.0	10.2	10.0	11.0	10.0	10.6	10.0	3.3	0.0	0.2	0.0
Public Safety Retirement System	52.3	55.0	11.7	15.0	10.4	10.0	11.3	10.0	10.8	10.0	3.4	0.0	0.1	0.0
Judges' Retirement System	52.0	55.0	12.3	15.0	10.3	10.0	11.1	10.0	10.9	10.0	3.3	0.0	0.1	0.0
State Police Retirement System	51.7	55.0	13.2	15.0	10.1	10.0	10.9	10.0	10.4	10.0	3.2	0.0	0.5	0.0
Deputy Sheriffs' Retirement System	51.9	55.0	12.7	15.0	10.2	10.0	11.0	10.0	10.7	10.0	3.3	0.0	0.2	0.0
Municipal Police & Firefighter Retirement System	51.4	55.0	14.0	15.0	9.4	10.0	10.1	10.0	9.4	10.0	3.0	0.0	2.7	0.0
Municipal Model A	52.7	55.0	12.5	15.0	10.1	10.0	10.9	10.0	10.1	10.0	3.3	0.0	0.4	0.0
Municipal Model C	49.1	50.0	27.0	30.0	5.0	5.0	5.4	5.0	10.0	10.0	1.6	0.0	1.9	0.0

## Insurance Assets

Workers' Compensation Old Fund	31.2	30.0	48.1	50.0	0.0	0.0	0.0	0.0	17.2	15.0	0.0	0.0	3.5	5.0
Workers' Comp. Self-Insured Guaranty Risk Pool	31.0	30.0	42.5	45.0	0.0	0.0	0.0	0.0	22.2	20.0	0.0	0.0	4.3	5.0
Workers' Comp. Self-Insured Security Risk Pool	31.2	30.0	42.1	45.0	0.0	0.0	0.0	0.0	22.8	20.0	0.0	0.0	3.9	5.0
Workers' Comp. Uninsured Employers Fund	30.7	30.0	37.8	40.0	0.0	0.0	0.0	0.0	21.6	20.0	0.0	0.0	9.9	10.0
Pneumoconiosis	31.2	30.0	41.9	45.0	0.0	0.0	0.0	0.0	22.9	20.0	0.0	0.0	4.0	5.0
Board of Risk & Insurance Mgmt.	30.9	30.0	42.6	45.0	0.0	0.0	0.0	0.0	21.7	20.0	0.0	0.0	4.8	5.0
Public Employees' Insurance Agency	24.2	25.0	50.3	55.0	0.0	0.0	0.0	0.0	18.9	20.0	0.0	0.0	6.6	0.0
WV Retiree Health Benefit Trust Fund	51.5	55.0	13.0	15.0	9.9	10.0	10.7	10.0	10.2	10.0	3.2	0.0	1.5	0.0

## Endowment Assets

Berkeley County Development Authority	52.0	55.0	12.8	15.0	10.2	10.0	11.0	10.0	10.7	10.0	3.3	0.0	0.0	0.0
Wildlife Fund	52.1	55.0	13.1	15.0	10.0	10.0	10.8	10.0	10.6	10.0	3.2	0.0	0.2	0.0
Prepaid Tuition Trust	0.0	0.0	80.2	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.8	20.0
Revenue Shortfall Reserve Fund	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Revenue Shortfall Reserve Fund - Part B	23.2	22.5	76.8	77.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WV DEP Trust	65.6	65.0	12.4	15.0	0.0	0.0	0.0	0.0	22.0	20.0	0.0	0.0	0.0	0.0
WV DEP Agency	40.9	40.0	37.4	40.0	0.0	0.0	0.0	0.0	21.7	20.0	0.0	0.0	0.0	0.0

- (a) As of January 2019, the PERS Base is 60% MSCI ACWI Gross and 40% Bloomberg Barclays Capital Universal. From January 2014 to December 2018, the PERS Base was 30% Russell 3000, 30% MSCI ACWI ex USA (IMI), and 40% Bloomberg Barclays Capital Universal. From April 2008 to December 2013, the PERS Base was 30% Russell 3000, 30% MSCI ACWI ex USA (Standard), and 40% Bloomberg Barclays Capital Universal. Prior periods were 42% Russell 3000, 18% MSCI ACWI ex USA, and 40% Bloomberg Barclays Capital Aggregate.
- (b) As of January 2019, the Total Equity Base Index is 100% MSCI ACWI Gross. From January 2014 to December 2018, the Total Equity Base Index was 50% Russell 3000 and 50% MSCI ACWI ex USA (IMI). From April 2008 to December 2013, the Total Equity Base Index was 50% Russell 3000 and 50% MSCI ACWI ex USA (Standard). Prior periods were 40% S&P 500, 30% Russell 2500, and 30% MSCI ACWI ex USA.
- (c) Prior to January 2014, the index was the MSCI ACW ex USA (Standard).
- (d) Prior to April 2008, the index was Bloomberg Barclays Capital Aggregate.
- (e) Prior to January 2014, the index was Citigroup 90 Day T-Bill plus 15 basis points.
- (f) The Private Equity Composite and Real Estate Composite are long-term programs whose benchmarks are only reported for 5 years and beyond.
- (g) Prior to January 2014, the index was S&P 500 plus 500 basis points.
- (h) Prior to January 2014, the index was Libor plus 400 basis points.
- (i) Franklin Benchmark is 50% JPM EMBI Global Diversified and 50% JPM GBI EM Diversified.
- (j) Prior to April 2008, the index was a custom index.
- (k) From October 2015 to March 2017, performance returns from the Opportunistic Income Pool were included in the Total Return Fixed Income Composite.

Note: Participant returns are net of fees. Portfolio returns are net of management fees. Returns shorter than one year are unannualized.

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