



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: SEPTEMBER 30, 2020

Participant Plan Performance Review for

West Virginia Investment Management Board

Participant Plans Allocation & Performance Net of Fees

Period Ending: September 30, 2020

	6/30/2020		9/30/2020		Performance %							
	Asset (\$000)	%	Asset (\$000)	%	1 Month	3 Month	FYTD	1 Year	3 Year	5 Year	10 Year	20 Year
WVIMB Fund Assets	20,136,091	100.0	20,839,891	100.0								
Pension Assets	16,181,269	80.4	16,720,746	80.2								
Public Employees' Retirement System	6,899,129	34.3	7,159,988	34.4	(1.6)	4.6	4.6	7.8	6.6	9.0	8.5	6.8
Teachers' Retirement System	7,820,075	38.8	8,042,383	38.6	(1.6)	4.6	4.6	7.8	6.5	8.9	8.4	6.6
EMS Retirement System	88,627	0.4	92,805	0.4	(1.6)	4.6	4.6	8.0	6.6	9.0	8.5	
Public Safety Retirement System	675,608	3.4	694,025	3.3	(1.6)	4.6	4.6	7.9	6.6	8.9	8.5	6.8
Judges' Retirement System	215,698	1.1	224,696	1.1	(1.6)	4.6	4.6	7.9	6.6	9.0	8.5	6.8
State Police Retirement System	220,921	1.1	233,255	1.1	(1.6)	4.6	4.6	8.0	6.6	9.0	8.5	6.8
Deputy Sheriffs' Retirement System	239,121	1.2	249,634	1.2	(1.6)	4.6	4.6	7.9	6.6	9.0	8.5	6.8
Municipal Police & Firefighter Retirement System	14,669	0.1	16,127	0.1	(1.6)	4.6	4.6	8.1	6.6	8.8	7.4	
Municipal Model A (m)	5,851	0.0	6,067	0.0	(1.6)	5.0	5.0	8.2	6.8	9.1		
Municipal Model B (m)	1,570	0.0	1,766	0.0	(1.7)	5.1	5.1	8.3				
Insurance Assets	2,910,807	14.5	3,031,219	14.6								
Workers' Compensation Old Fund	1,013,189	5.0	1,026,160	4.9	(1.1)	4.1	4.1	7.6	5.0	6.3	5.2	
Workers' Comp. Self-Insured Guaranty Risk Pool	34,115	0.2	35,559	0.2	(1.1)	4.1	4.1	7.2	4.9	6.0	5.4	
Workers' Comp. Self-Insured Security Risk Pool	50,505	0.3	51,816	0.3	(1.1)	4.1	4.1	7.2	4.9	6.1		
Workers' Comp. Uninsured Employers' Fund	14,005	0.1	14,728	0.1	(1.1)	4.0	4.0	7.0	4.8	5.8	5.1	
Pneumoconiosis	223,717	1.1	230,811	1.1	(1.1)	4.1	4.1	7.2	4.9	6.0	5.4	5.6
Board of Risk & Insurance Management	164,662	0.8	171,431	0.8	(1.1)	4.1	4.1	7.3	4.9	6.0	5.4	
Public Employees' Insurance Agency	260,386	1.3	268,835	1.3	(1.0)	3.2	3.2	6.7	4.9	5.9	5.3	
WV Retiree Health Benefit Trust Fund	1,150,228	5.7	1,231,879	5.9	(1.7)	4.4	4.4	7.8	6.6	9.0	8.2	
Endowment Assets	1,044,015	5.1	1,087,926	5.2								
Berkeley County Development Authority	6,378	0.0	6,673	0.0	(1.6)	4.6	4.6	7.9	6.6			
Wildlife Fund	62,699	0.3	63,377	0.3	(1.6)	4.6	4.6	7.8	6.6	9.0	8.5	7.4
Revenue Shortfall Reserve Fund	272,021	1.4	287,153	1.4	0.0	0.0	0.0	4.1	3.9	3.8	3.3	
Revenue Shortfall Reserve Fund - Part B	492,955	2.4	510,710	2.5	(0.9)	3.6	3.6	8.4	5.5	6.6	5.5	
WV DEP Trust	9,053	0.0	9,622	0.0	(2.1)	6.3	6.3	7.9	5.0	7.9		
WV DEP Agency	200,909	1.0	210,391	1.0	(1.4)	4.7	4.7	7.2	4.9	6.7		

Composite Asset Allocation & Performance Net of Fees

Period Ending: September 30, 2020

	Asset (\$000)	%	Performance %								
			1 Month	3 Month	FYTD	1 Year	3 Year	5 Year	10 Year	20 Year	
Investment Pools Composite	20,848,011	100.00									
Portable Alpha Composite +/- S&P 500 Index	1,728,626	8.29	(4.18) (0.38)	8.55 (0.38)	8.55 (0.38)						
Large Cap Domestic Equity Composite +/- S&P 500 Index	2,539,334	12.18	(3.81) (0.01)	8.95 0.02	8.95 0.02	15.28 0.13	11.74 (0.54)	13.58 (0.57)	13.75 0.01	6.38 (0.04)	
Non-Large Cap Domestic Equity Composite +/- Russell 2500 Index	798,975	3.83	(1.83) 0.76	6.80 0.92	6.80 0.92	3.19 0.97	4.97 0.52	8.40 (0.57)	11.18 0.37	8.78 0.86	
International Equity Composite +/- MSCI AC World ex US IMI Index (c)	4,802,652	23.04	(2.26) 0.00	7.96 1.06	7.96 1.06	4.94 0.99	0.38 (1.22)	7.32 0.52	5.61 1.01	5.98 1.30	
Fixed Income Composite +/- Bloomberg Barclays Capital Universal (d)	3,444,795	16.52	(0.19) (0.01)	1.88 0.89	1.88 0.89	6.73 0.05	5.10 (0.05)	5.13 0.64	4.37 0.45	5.64 0.45	
Core Fixed Income Composite +/- Bloomberg Barclays Capital Aggregate	1,036,888	4.97	0.13 0.18	1.10 0.48	1.10 0.48	7.50 0.52	5.74 0.50	4.54 0.36	4.19 0.56		
Total Return Fixed Income Composite (k) +/- Bloomberg Barclays Capital Universal	2,407,907	11.55	(0.33) (0.15)	2.21 1.22	2.21 1.22	6.31 (0.37)	4.79 (0.36)	5.36 0.87	4.45 0.53	6.02 0.78	
TIPS Composite +/- Bloomberg Barclays Capital U.S.TIPS	307,520	1.48	(0.34) 0.03	3.10 0.07	3.10 0.07	10.33 0.25	5.90 0.11	4.68 0.07			
Cash Composite +/- FTSE 3 Month US T-Bill (e)	382,904	1.84	0.01 0.00	0.02 (0.01)	0.02 (0.01)	0.80 (0.22)	1.54 (0.11)	1.11 (0.05)	0.62 (0.04)	1.64 (0.03)	
Private Equity Composite +/- Russell 3000 + 3% (f, g)	2,147,118	10.30	(0.02)	(0.02)	(0.02)	17.15	19.44	17.61 0.92	15.10 (1.92)		
Real Estate Composite +/- NCREIF + 1% (f)	1,988,946	9.54	(0.23)	0.26	0.26	0.37	5.67	6.95 (0.82)	8.66 (2.04)		
Hedge Fund Composite +/- HFRI FOF + 1% (h)	2,053,791	9.85	(0.34) (0.08)	3.07 (1.31)	3.07 (1.31)	2.91 (3.68)	3.48 (0.36)	3.04 (1.02)	4.25 0.42		
Private Credit & Income Composite +/- CS Leveraged Loan + 2% (l)	653,350	3.13	0.00 (0.85)	(0.18) (4.80)	(0.18) (4.80)	1.58 (1.25)	4.66 (0.50)	4.00 (2.18)			

Participant Plans Allocation vs. Strategy

Period Ending: September 30, 2020

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

Pension Assets

Public Employees' Retirement System	50.3	50.0	13.2	15.0	12.0	10.0	11.1	10.0	3.7	5.0	9.5	10.0	0.2	0.0
Teachers' Retirement System	50.4	50.0	13.1	15.0	12.0	10.0	11.2	10.0	3.7	5.0	9.5	10.0	0.1	0.0
EMS Retirement System	50.7	50.0	13.6	15.0	11.7	10.0	10.8	10.0	3.5	5.0	9.5	10.0	0.2	0.0
Public Safety Retirement System	50.4	50.0	12.7	15.0	12.1	10.0	11.3	10.0	3.7	5.0	9.7	10.0	0.1	0.0
Judges' Retirement System	50.4	50.0	13.1	15.0	11.9	10.0	11.0	10.0	3.6	5.0	9.7	10.0	0.3	0.0
State Police Retirement System	50.6	50.0	13.9	15.0	11.5	10.0	10.6	10.0	3.5	5.0	9.4	10.0	0.5	0.0
Deputy Sheriffs' Retirement System	50.6	50.0	13.3	15.0	11.8	10.0	10.9	10.0	3.6	5.0	9.6	10.0	0.2	0.0
Municipal Police & Firefighter Retirement System	49.8	50.0	14.4	15.0	10.8	10.0	10.0	10.0	3.3	5.0	9.4	10.0	2.3	0.0
Municipal Model A	51.2	50.0	12.9	15.0	11.1	10.0	10.3	10.0	3.4	5.0	9.7	10.0	1.4	0.0
Municipal Model B	56.0	55.0	43.1	45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0

Insurance Assets

Workers' Compensation Old Fund	31.3	30.0	49.6	50.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1	15.0	4.0	5.0
Workers' Comp. Self-Insured Guaranty Risk Pool	31.4	30.0	44.6	45.0	0.0	0.0	0.0	0.0	0.0	0.0	19.4	20.0	4.6	5.0
Workers' Comp. Self-Insured Security Risk Pool	31.4	30.0	44.4	45.0	0.0	0.0	0.0	0.0	0.0	0.0	19.9	20.0	4.3	5.0
Workers' Comp. Uninsured Employers Fund	31.1	30.0	39.4	40.0	0.0	0.0	0.0	0.0	0.0	0.0	19.3	20.0	10.2	10.0
Pneumoconiosis	31.5	30.0	44.4	45.0	0.0	0.0	0.0	0.0	0.0	0.0	19.7	20.0	4.4	5.0
Board of Risk & Insurance Mgmt.	31.3	30.0	44.3	45.0	0.0	0.0	0.0	0.0	0.0	0.0	19.5	20.0	4.9	5.0
Public Employees' Insurance Agency	26.6	25.0	55.2	55.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	20.0	0.0	0.0
WV Retiree Health Benefit Trust Fund	52.1	50.0	15.5	15.0	10.5	10.0	9.7	10.0	3.2	5.0	9.0	10.0	0.0	0.0

Endowment Assets

Berkeley County Development Authority	50.5	50.0	13.6	15.0	11.8	10.0	10.9	10.0	3.6	5.0	9.6	10.0	0.0	0.0
Wildlife Fund	49.9	50.0	13.1	15.0	12.2	10.0	11.4	10.0	3.7	5.0	9.7	10.0	0.0	0.0
Revenue Shortfall Reserve Fund	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Revenue Shortfall Reserve Fund - Part B	23.6	22.5	76.4	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	66.9	65.0	14.3	15.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8	20.0	0.0	0.0
WV DEP Agency	41.4	40.0	39.3	40.0	0.0	0.0	0.0	0.0	0.0	0.0	19.3	20.0	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 FTSE 3 Month US 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) As of July 2019, the Franklin Benchmark is 50% JPM EMBI Global Diversified ex GCC and 50% JPM GBI EM Diversified. Prior periods were 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.
- (l) Prior to April 2017, the index was CS Leveraged Loan plus 250 basis points.
- (m) In July 2020 the municipal plan potential investment models were condensed to Model A and Model B. The June 30, 2020 asset values for Model C and Model D are included in Model A. Model B was formerly Model F.

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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