



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: DECEMBER 31, 2016

Participant Plan Performance Review for

West Virginia Investment Management Board

Participant Plans Allocation & Performance Net of Fees

Period Ending: December 31, 2016

	6/30/2016		12/31/2016		Performance %						
	Asset (\$000)	%	Asset (\$000)	%	1 Month	3 Month	FYTD	1 Year	3 Year	5 Year	10 Year
WVIMB Fund Assets	16,747,244	100.0	17,050,160	100.0							
Pension Assets	13,230,134	79.0	13,659,787	80.2							
Public Employees' Retirement System	5,597,558	33.4	5,831,874	34.2	1.4	1.8	5.6	8.8	5.5	9.0	5.7
Teachers' Retirement System	6,513,312	38.9	6,664,610	39.1	1.4	1.8	5.6	8.7	5.4	9.0	5.4
EMS Retirement System	58,844	0.4	62,932	0.4	1.4	1.8	5.6	8.8	5.5	9.0	
Public Safety Retirement System	578,762	3.5	589,728	3.5	1.4	1.8	5.6	8.7	5.4	9.0	5.7
Judges' Retirement System	167,178	1.0	174,936	1.0	1.4	1.8	5.7	8.8	5.5	9.0	5.7
State Police Retirement System	138,127	0.8	148,516	0.9	1.4	1.8	5.6	8.8	5.5	9.0	5.7
Deputy Sheriffs' Retirement System	171,949	1.0	181,832	1.1	1.4	1.8	5.6	8.8	5.5	9.0	5.7
Municipal Police & Firefighter Retirement System	3,080	0.0	3,976	0.0	1.3	1.8	5.5	8.4	5.3	8.4	
Municipal Model A	1,324	0.0	1,383	0.0	1.4	1.8	5.6	8.6	5.4		
Insurance Assets	2,545,860	15.2	2,547,048	14.9							
Workers' Compensation Old Fund	1,284,843	7.7	1,262,996	7.4	0.9	(0.3)	2.6	6.3	3.3	4.6	3.8
Workers' Comp. Self-Insured Guaranty Risk Pool	33,418	0.2	33,236	0.2	0.9	0.4	3.4	5.9	3.3	5.1	3.8
Workers' Comp. Self-Insured Security Risk Pool	53,881	0.3	53,586	0.3	0.9	0.3	3.4	5.9			
Workers' Comp. Uninsured Employers' Fund	10,841	0.1	11,201	0.1	0.9	0.5	3.3	5.5	3.1	4.9	3.6
Pneumoconiosis	246,635	1.5	246,902	1.4	0.9	0.4	3.4	5.8	3.2	5.0	4.3
Board of Risk & Insurance Management	132,322	0.8	136,757	0.8	0.9	0.4	3.4	5.8	3.2	5.0	4.8
Public Employees' Insurance Agency	176,829	1.0	145,969	0.9	0.9	0.4	3.2	5.8	3.3	4.9	4.5
WV Retiree Health Benefit Trust Fund	607,091	3.6	656,401	3.8	1.4	1.8	5.6	8.8	5.5	8.6	
Endowment Assets	971,250	5.8	843,325	4.9							
Berkeley County Development Authority	6,089	0.0	6,432	0.0	1.4	1.8	5.6	8.8			
Wildlife Fund	54,571	0.3	57,898	0.3	1.4	1.8	5.6	8.8	5.5	9.0	5.7
Prepaid Tuition Trust	54,948	0.3	46,388	0.3	1.2	0.4	3.9	7.2	4.7	7.3	5.3
Revenue Shortfall Reserve Fund	336,013	2.0	191,108	1.1	0.2	(1.6)	(0.3)	4.2	2.6	2.1	1.9
Revenue Shortfall Reserve Fund - Part B	390,670	2.4	400,517	2.4	0.9	(0.4)	2.5	6.5	3.3	4.7	3.1
WV DEP Trust	7,808	0.1	8,290	0.0	1.5	1.5	6.2	7.7	4.1	8.4	
WV DEP Agency	121,151	0.7	132,692	0.8	1.1	0.7	4.3	6.6	3.5		

Composite Asset Allocation & Performance Net of Fees

Period Ending: December 31, 2016

	Asset (\$000)	%	Performance %							
			1 Month	3 Month	FYTD	1 Year	3 Year	5 Year	10 Year	
Investment Pools Composite	17,058,431	100.00								
Total Equity Composite	8,626,077	50.57	2.11	2.00	8.07	9.93	4.25	10.97	5.27	
+/- Total Equity Policy Index (b)			(0.13)	0.64	0.86	1.08	0.57	0.79	1.23	
US Equity Composite	4,180,220	24.51	1.98	3.65	7.52	10.27	7.85	14.36	7.06	
+/- Russell 3000 Index			0.03	(0.56)	(1.27)	(2.46)	(0.58)	(0.31)	(0.01)	
Large Cap Composite	3,412,632	20.01	1.82	2.99	6.05	9.79	8.63	14.45	6.94	
+/- S&P 500 Index			(0.16)	(0.83)	(1.77)	(2.17)	(0.24)	(0.21)	(0.01)	
Non-Large Cap Composite	767,588	4.50	2.71	6.78	14.08	12.18	4.92	13.59	7.60	
+/- Russell 2500 Index			0.77	0.66	0.99	(5.41)	(2.01)	(0.95)	(0.09)	
International Equity Composite	4,445,857	26.06	2.23	0.52	8.57	9.59	0.56	7.52	3.54	
+/- MSCI AC World ex US IMI Index (c)			(0.30)	2.04	3.06	4.68	1.56	1.83	2.02	
Fixed Income Composite	3,242,351	19.00	0.54	(1.04)	0.69	4.94	3.35	3.61	4.45	
+/- Bloomberg Barclays Capital Universal (d)			0.24	1.57	2.37	1.03	0.07	0.83	(0.22)	
Core Fixed Income	974,719	5.71	0.05	(2.83)	(2.35)	2.96	3.42	2.90		
+/- Bloomberg Barclays Capital Aggregate			(0.09)	0.15	0.18	0.31	0.39	0.67		
Total Return Fixed Income	2,267,632	13.29	0.76	(0.25)	2.06	5.81	3.30	3.98	4.71	
+/- Bloomberg Barclays Capital Universal			0.46	2.36	3.74	1.90	0.02	1.20	0.14	
TIPS Composite	332,733	1.95	(0.10)	(2.43)	(1.47)	4.67	2.23	0.87		
+/- Bloomberg Barclays Capital U.S. TIPS			0.00	(0.02)	0.00	(0.01)	(0.03)	(0.02)		
Cash Composite	127,618	0.75	0.04	0.09	0.17	0.33	0.18	0.17	0.90	
+/- Citigroup 90 Day T-Bill (e)			0.00	(0.01)	0.00	0.03	0.06	0.01	0.01	
Private Equity Composite	1,475,789	8.65	0.90	5.04	5.86	15.17	13.77	12.77		
+/- Russell 3000 + 3% (f, g)								(5.41)		
Real Estate Composite	1,555,223	9.12	0.27	1.44	1.42	8.62	10.54	10.25		
+/- NCREIF + 1% (f)								(1.93)		
Hedge Fund Composite	1,698,640	9.96	0.56	2.13	4.40	2.79	2.79	5.31		
+/- HFRI FOF + 1% (h)			(0.60)	0.82	0.52	1.08	0.53	2.23		

Participant Plans Allocation vs. Strategy

Period Ending: December 31, 2016

	Domestic Equity		Int'l Equity		Fixed Income		Private Equity		Real Estate		Hedge Funds		Cash	
	Actual %	Strategy %	Actual %	Strategy %	Actual %	Strategy %	Actual %	Strategy %	Actual %	Strategy %	Actual %	Strategy %	Actual %	Strategy %

Pension Assets

Public Employees' Retirement System	26.7	27.5	28.1	27.5	13.6	15.0	10.3	10.0	10.7	10.0	10.6	10.0	0.0	0.0
Teachers' Retirement System	26.2	27.5	28.1	27.5	13.5	15.0	10.3	10.0	11.0	10.0	10.7	10.0	0.2	0.0
EMS Retirement System	26.6	27.5	28.1	27.5	14.2	15.0	10.2	10.0	9.9	10.0	10.7	10.0	0.3	0.0
Public Safety Retirement System	26.4	27.5	28.2	27.5	13.4	15.0	10.3	10.0	11.0	10.0	10.7	10.0	0.0	0.0
Judges' Retirement System	26.2	27.5	28.2	27.5	13.8	15.0	10.2	10.0	10.1	10.0	11.3	10.0	0.2	0.0
State Police Retirement System	26.4	27.5	28.1	27.5	14.2	15.0	10.2	10.0	9.9	10.0	10.8	10.0	0.4	0.0
Deputy Sheriffs' Retirement System	26.5	27.5	28.1	27.5	13.8	15.0	10.2	10.0	10.2	10.0	11.1	10.0	0.1	0.0
Municipal Police & Firefighter Retirement System	26.1	27.5	27.1	27.5	14.9	15.0	10.1	10.0	9.8	10.0	9.8	10.0	2.2	0.0
Municipal Model A	26.9	27.5	28.1	27.5	13.7	15.0	10.3	10.0	9.9	10.0	10.0	10.0	1.1	0.0

Insurance Assets

Workers' Compensation Old Fund	15.1	15.0	16.0	15.0	64.1	70.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0
Workers' Comp. Self-Insured Guaranty Risk Pool	14.7	15.0	14.8	15.0	43.0	45.0	0.0	0.0	0.0	0.0	23.3	20.0	4.2	5.0
Workers' Comp. Self-Insured Security Risk Pool	15.0	15.0	14.7	15.0	43.7	45.0	0.0	0.0	0.0	0.0	22.3	20.0	4.3	5.0
Workers' Comp. Uninsured Employers Fund	14.5	15.0	14.7	15.0	37.9	40.0	0.0	0.0	0.0	0.0	23.0	20.0	9.9	10.0
Pneumoconiosis	14.8	15.0	15.2	15.0	43.8	45.0	0.0	0.0	0.0	0.0	22.0	20.0	4.2	5.0
Board of Risk & Insurance Mgmt.	14.5	15.0	15.3	15.0	42.5	45.0	0.0	0.0	0.0	0.0	22.7	20.0	5.0	5.0
Public Employees' Insurance Agency	15.0	15.0	15.6	15.0	48.6	50.0	0.0	0.0	0.0	0.0	20.8	20.0	0.0	0.0
WV Retiree Health Benefit Trust Fund	25.9	27.5	27.7	27.5	14.3	15.0	10.1	10.0	10.0	10.0	10.5	10.0	1.5	0.0

Endowment Assets

Berkeley County Development Authority	26.9	27.5	28.3	27.5	14.0	15.0	10.2	10.0	10.4	10.0	10.2	10.0	0.0	0.0
Wildlife Fund	26.4	27.5	28.0	27.5	14.0	15.0	10.2	10.0	10.2	10.0	11.0	10.0	0.2	0.0
Prepaid Tuition Trust	28.3	27.5	22.5	22.5	46.9	50.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0
Revenue Shortfall Reserve Fund	0.0	0.0	0.0	0.0	92.1	100.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	0.0
Revenue Shortfall Reserve Fund - Part B	15.0	15.0	15.7	15.0	69.3	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WV DEP Trust	31.9	32.5	32.5	32.5	13.8	15.0	0.0	0.0	0.0	0.0	21.8	20.0	0.0	0.0
WV DEP Agency	19.3	20.0	20.0	20.0	38.4	40.0	0.0	0.0	0.0	0.0	20.7	20.0	1.6	0.0

- (a) As of January 2014, the PERS Policy is 30% Russell 3000, 30% MSCI ACW ex USA (IMI), and 40% Bloomberg Barclays Capital Universal. From April 2008 to December 2013, the PERS Policy was 30% Russell 3000, 30% MSCI ACW ex USA (Standard), and 40% Bloomberg Barclays Capital Universal. Prior periods were 42% Russell 3000, 18% MSCI ACW ex USA, and 40% Bloomberg Barclays Capital Aggregate.
- (b) As of January 2014, the Total Equity Policy Index is 50% Russell 3000 and 50% MSCI ACW ex USA (IMI). From April 2008 to December 2013, the Total Equity Policy Index was 50% Russell 3000 and 50% MSCI ACW ex USA (Standard). Prior periods were 40% S&P 500, 30% Russell 2500, and 30% MSCI ACW 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.

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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