



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: JANUARY 31, 2018**

Participant Plan Performance Review for

**West Virginia Investment Management Board**

# Participant Plans Allocation & Performance Net of Fees

Period Ending: January 31, 2018

|  | 6/30/2017         |              | 1/31/2018         |              | Performance % |         |      |        |        |        |         |
|--|-------------------|--------------|-------------------|--------------|---------------|---------|------|--------|--------|--------|---------|
|  | Asset (\$000)     | %            | Asset (\$000)     | %            | 1 Month       | 3 Month | FYTD | 1 Year | 3 Year | 5 Year | 10 Year |
| <b>WVIMB Fund Assets</b>                         | <b>18,283,189</b> | <b>100.0</b> | <b>19,927,937</b> | <b>100.0</b> |               |         |      |        |        |        |         |
| <b>Pension Assets</b>                            | <b>14,791,142</b> | <b>80.9</b>  | <b>16,125,054</b> | <b>80.9</b>  |               |         |      |        |        |        |         |
| Public Employees' Retirement System              | 6,288,320         | 34.4         | 6,908,556         | 34.8         | 3.3           | 5.7     | 11.2 | 19.5   | 10.4   | 10.0   | 7.6     |
| Teachers' Retirement System                      | 7,232,585         | 39.6         | 7,821,067         | 39.3         | 3.3           | 5.7     | 11.2 | 19.4   | 10.3   | 9.9    | 7.3     |
| EMS Retirement System                            | 70,196            | 0.4          | 79,393            | 0.4          | 3.3           | 5.7     | 11.2 | 19.5   | 10.4   | 10.0   |         |
| Public Safety Retirement System                  | 639,380           | 3.5          | 686,062           | 3.4          | 3.3           | 5.7     | 11.2 | 19.5   | 10.4   | 10.0   | 7.6     |
| Judges' Retirement System                        | 189,254           | 1.0          | 209,044           | 1.0          | 3.3           | 5.7     | 11.3 | 19.6   | 10.4   | 10.0   | 7.6     |
| State Police Retirement System                   | 165,873           | 0.9          | 189,073           | 0.9          | 3.3           | 5.7     | 11.2 | 19.5   | 10.4   | 10.0   | 7.6     |
| Deputy Sheriffs' Retirement System               | 198,732           | 1.1          | 222,124           | 1.1          | 3.3           | 5.7     | 11.2 | 19.5   | 10.4   | 10.0   | 7.6     |
| Municipal Police & Firefighter Retirement System | 5,356             | 0.0          | 7,038             | 0.0          | 3.2           | 5.6     | 11.0 | 19.0   | 10.1   | 9.6    |         |
| Municipal Model A                                | 1,446             | 0.0          | 1,545             | 0.0          | 3.3           | 5.7     | 11.2 | 19.5   | 10.3   |        |         |
| Municipal Model C                                |                   |              | 1,152             | 0.0          | 3.0           |         |      |        |        |        |         |
| <b>Insurance Assets</b>                          | <b>2,641,811</b>  | <b>14.4</b>  | <b>2,861,243</b>  | <b>14.4</b>  |               |         |      |        |        |        |         |
| Workers' Compensation Old Fund                   | 1,260,911         | 6.8          | 1,270,162         | 6.4          | 1.8           | 3.4     | 7.3  | 11.9   | 6.1    | 5.2    | 4.7     |
| Workers' Comp. Self-Insured Guaranty Risk Pool   | 33,211            | 0.2          | 35,324            | 0.2          | 1.9           | 3.5     | 7.4  | 11.8   | 6.0    | 5.6    | 4.6     |
| Workers' Comp. Self-Insured Security Risk Pool   | 53,908            | 0.3          | 56,300            | 0.3          | 1.9           | 3.5     | 7.4  | 11.9   | 6.0    |        |         |
| Workers' Comp. Uninsured Employers' Fund         | 11,797            | 0.1          | 12,663            | 0.1          | 1.9           | 3.5     | 7.3  | 11.5   | 5.7    | 5.4    | 4.3     |
| Pneumoconiosis                                   | 250,631           | 1.4          | 261,056           | 1.3          | 1.9           | 3.5     | 7.4  | 11.8   | 5.9    | 5.5    | 5.1     |
| Board of Risk & Insurance Management             | 144,341           | 0.8          | 155,059           | 0.8          | 1.9           | 3.5     | 7.4  | 11.8   | 5.8    | 5.5    | 5.6     |
| Public Employees' Insurance Agency               | 153,908           | 0.8          | 164,186           | 0.8          | 1.6           | 3.1     | 6.7  | 10.9   | 5.6    | 5.4    | 5.2     |
| WV Retiree Health Benefit Trust Fund             | 733,104           | 4.0          | 906,493           | 4.5          | 3.3           | 5.7     | 11.2 | 19.5   | 10.4   | 10.0   |         |
| <b>Endowment Assets</b>                          | <b>850,236</b>    | <b>4.7</b>   | <b>941,640</b>    | <b>4.7</b>   |               |         |      |        |        |        |         |
| Berkeley County Development Authority            | 7,031             | 0.0          | 7,852             | 0.0          | 3.3           | 5.7     | 11.3 | 19.6   |        |        |         |
| Wildlife Fund                                    | 63,648            | 0.4          | 66,087            | 0.3          | 3.2           | 5.7     | 11.2 | 19.5   | 10.4   | 10.0   | 7.6     |
| Prepaid Tuition Trust                            | 49,025            | 0.3          | 44,582            | 0.2          | 1.9           | 3.7     | 8.0  | 14.4   | 7.8    | 7.9    | 6.7     |
| Revenue Shortfall Reserve Fund                   | 145,150           | 0.8          | 168,544           | 0.8          | (0.6)         | 0.4     | 1.7  | 3.2    | 1.8    | 1.5    | 2.0     |
| Revenue Shortfall Reserve Fund - Part B          | 425,111           | 2.4          | 448,444           | 2.3          | 0.9           | 2.4     | 5.5  | 10.4   | 5.6    | 4.9    | 4.0     |
| WV DEP Trust                                     | 9,044             | 0.0          | 10,090            | 0.1          | 4.0           | 6.5     | 13.3 | 20.8   | 9.8    | 9.4    |         |
| WV DEP Agency                                    | 151,227           | 0.8          | 196,041           | 1.0          | 2.3           | 4.1     | 8.9  | 14.5   | 7.2    |        |         |

Composite Asset Allocation & Performance Net of Fees

Period Ending: January 31, 2018

|  | Asset (\$000) | %      | Performance % |         |        |        |        |        |         |  |
|--|---------------|--------|---------------|---------|--------|--------|--------|--------|---------|--|
|  |               |        | 1 Month       | 3 Month | FYTD   | 1 Year | 3 Year | 5 Year | 10 Year |  |
| Investment Pools Composite                   | 19,939,441    | 100.00 |               |         |        |        |        |        |         |  |
| Total Equity Composite                       | 10,062,075    | 50.46  | 5.50          | 9.10    | 18.33  | 29.36  | 13.54  | 12.73  | 8.43    |  |
| +/- Total Equity Base Index (b)              |               |        | 0.12          | (0.18)  | 0.73   | 1.41   | 0.99   | 1.01   | 1.50    |  |
| Domestic Equity Composite                    | 4,777,054     | 23.96  | 5.48          | 8.97    | 17.36  | 26.09  | 13.57  | 15.47  | 10.03   |  |
| +/- Russell 3000 Index                       |               |        | 0.21          | (0.58)  | 0.30   | 0.93   | (0.54) | (0.06) | 0.18    |  |
| International Equity Composite               | 5,285,021     | 26.50  | 5.52          | 9.21    | 19.17  | 32.27  | 13.27  | 9.84   | 6.76    |  |
| +/- MSCI AC World ex US IMI Index (c)        |               |        | 0.04          | 0.21    | 1.05   | 1.55   | 2.39   | 1.96   | 2.70    |  |
| Fixed Income Composite                       | 3,577,345     | 17.94  | (0.24)        | 0.60    | 2.22   | 5.55   | 3.46   | 3.30   | 4.43    |  |
| +/- Bloomberg Barclays Capital Universal (d) |               |        | 0.72          | 1.28    | 1.77   | 2.82   | 1.64   | 0.89   | 0.32    |  |
| Core Fixed Income Composite                  | 1,067,613     | 5.35   | (1.09)        | (0.72)  | 0.15   | 2.39   | 1.65   | 2.41   |         |  |
| +/- Bloomberg Barclays Capital Aggregate     |               |        | 0.06          | 0.11    | 0.08   | 0.24   | 0.51   | 0.40   |         |  |
| Total Return Fixed Income Composite (k)      | 2,509,732     | 12.59  | 0.13          | 1.18    | 3.13   | 6.94   | 4.25   | 3.69   | 4.88    |  |
| +/- Bloomberg Barclays Capital Universal     |               |        | 1.09          | 1.86    | 2.68   | 4.21   | 2.43   | 1.28   | 0.80    |  |
| TIPS Composite                               | 382,592       | 1.92   | (0.85)        | 0.19    | 1.28   | 1.30   | 0.72   | 0.09   |         |  |
| +/- Bloomberg Barclays Capital U.S. TIPS     |               |        | 0.01          | 0.01    | 0.02   | 0.03   | 0.01   | (0.01) |         |  |
| Cash Composite                               | 163,431       | 0.82   | 0.12          | 0.30    | 0.66   | 0.94   | 0.47   | 0.34   | 0.44    |  |
| +/- Citigroup 90 Day T-Bill (e)              |               |        | 0.01          | 0.00    | 0.01   | 0.03   | 0.05   | 0.05   | 0.01    |  |
| Private Equity Composite                     | 1,672,519     | 8.39   | 1.33          | 3.67    | 5.16   | 18.19  | 14.51  | 13.80  |         |  |
| +/- Russell 3000 + 3% (f, g)                 |               |        |               |         |        |        |        | (4.96) |         |  |
| Real Estate Composite                        | 1,682,964     | 8.44   | 0.93          | 2.06    | 3.31   | 9.36   | 9.15   | 9.93   |         |  |
| +/- NCREIF + 1% (f)                          |               |        |               |         |        |        |        | (1.36) |         |  |
| Hedge Fund Composite                         | 1,947,126     | 9.77   | 2.16          | 2.49    | 5.51   | 6.16   | 2.89   | 4.81   |         |  |
| +/- HFRI FOF + 1% (h)                        |               |        | (0.15)        | (0.82)  | (1.74) | (3.82) | (1.40) | 0.55   |         |  |
| Opportunistic Income Composite               | 451,389       | 2.26   | 0.01          | 0.89    | 0.94   | 4.54   |        |        |         |  |
| +/- CS Leveraged Loan + 2.5%                 |               |        | (1.27)        | (1.32)  | (3.85) | (2.77) |        |        |         |  |

# Participant Plans Allocation vs. Strategy

Period Ending: January 31, 2018

|  | Domestic Equity |            | Int'l 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 % | Actual % | Strategy % |

## Pension Assets

|  |      |      |      |      |      |      |     |      |     |      |     |      |     |     |     |     |
|--|------|------|------|------|------|------|-----|------|-----|------|-----|------|-----|-----|-----|-----|
| Public Employees' Retirement System              | 25.7 | 27.5 | 28.4 | 27.5 | 14.2 | 15.0 | 9.8 | 10.0 | 9.8 | 10.0 | 9.2 | 10.0 | 2.6 | 0.0 | 0.3 | 0.0 |
| Teachers' Retirement System                      | 25.6 | 27.5 | 28.4 | 27.5 | 14.0 | 15.0 | 9.8 | 10.0 | 9.9 | 10.0 | 9.3 | 10.0 | 2.6 | 0.0 | 0.4 | 0.0 |
| EMS Retirement System                            | 25.7 | 27.5 | 28.2 | 27.5 | 14.3 | 15.0 | 9.7 | 10.0 | 9.8 | 10.0 | 9.1 | 10.0 | 2.6 | 0.0 | 0.6 | 0.0 |
| Public Safety Retirement System                  | 25.7 | 27.5 | 28.7 | 27.5 | 13.9 | 15.0 | 9.8 | 10.0 | 9.9 | 10.0 | 9.3 | 10.0 | 2.7 | 0.0 | 0.0 | 0.0 |
| Judges' Retirement System                        | 25.8 | 27.5 | 28.4 | 27.5 | 14.1 | 15.0 | 9.8 | 10.0 | 9.8 | 10.0 | 9.3 | 10.0 | 2.6 | 0.0 | 0.2 | 0.0 |
| State Police Retirement System                   | 26.0 | 27.5 | 28.1 | 27.5 | 14.2 | 15.0 | 9.7 | 10.0 | 9.8 | 10.0 | 9.1 | 10.0 | 2.6 | 0.0 | 0.5 | 0.0 |
| Deputy Sheriffs' Retirement System               | 25.7 | 27.5 | 28.3 | 27.5 | 14.3 | 15.0 | 9.7 | 10.0 | 9.8 | 10.0 | 9.2 | 10.0 | 2.6 | 0.0 | 0.4 | 0.0 |
| Municipal Police & Firefighter Retirement System | 24.5 | 27.5 | 27.0 | 27.5 | 13.9 | 15.0 | 9.2 | 10.0 | 9.3 | 10.0 | 8.7 | 10.0 | 2.5 | 0.0 | 4.9 | 0.0 |
| Municipal Model A                                | 25.6 | 27.5 | 28.4 | 27.5 | 13.5 | 15.0 | 9.8 | 10.0 | 9.9 | 10.0 | 9.7 | 10.0 | 2.6 | 0.0 | 0.5 | 0.0 |
| Municipal Model C                                | 24.5 | 25.0 | 26.6 | 25.0 | 27.3 | 30.0 | 4.3 | 5.0  | 4.3 | 5.0  | 9.9 | 10.0 | 1.2 | 0.0 | 1.9 | 0.0 |

## Insurance Assets

|  |      |      |      |      |      |      |     |      |     |      |      |      |     |     |     |      |
|--|------|------|------|------|------|------|-----|------|-----|------|------|------|-----|-----|-----|------|
| Workers' Compensation Old Fund                 | 15.0 | 15.0 | 16.6 | 15.0 | 49.3 | 50.0 | 0.0 | 0.0  | 0.0 | 0.0  | 15.2 | 15.0 | 0.0 | 0.0 | 3.9 | 5.0  |
| Workers' Comp. Self-Insured Guaranty Risk Pool | 15.0 | 15.0 | 16.5 | 15.0 | 44.1 | 45.0 | 0.0 | 0.0  | 0.0 | 0.0  | 19.8 | 20.0 | 0.0 | 0.0 | 4.6 | 5.0  |
| Workers' Comp. Self-Insured Security Risk Pool | 15.0 | 15.0 | 16.5 | 15.0 | 44.1 | 45.0 | 0.0 | 0.0  | 0.0 | 0.0  | 19.9 | 20.0 | 0.0 | 0.0 | 4.5 | 5.0  |
| Workers' Comp. Uninsured Employers Fund        | 15.1 | 15.0 | 16.7 | 15.0 | 39.2 | 40.0 | 0.0 | 0.0  | 0.0 | 0.0  | 19.3 | 20.0 | 0.0 | 0.0 | 9.7 | 10.0 |
| Pneumoconiosis                                 | 14.9 | 15.0 | 16.5 | 15.0 | 44.1 | 45.0 | 0.0 | 0.0  | 0.0 | 0.0  | 20.0 | 20.0 | 0.0 | 0.0 | 4.5 | 5.0  |
| Board of Risk & Insurance Mgmt.                | 15.1 | 15.0 | 16.6 | 15.0 | 44.2 | 45.0 | 0.0 | 0.0  | 0.0 | 0.0  | 19.3 | 20.0 | 0.0 | 0.0 | 4.8 | 5.0  |
| Public Employees' Insurance Agency             | 12.6 | 12.5 | 14.0 | 12.5 | 54.0 | 55.0 | 0.0 | 0.0  | 0.0 | 0.0  | 19.4 | 20.0 | 0.0 | 0.0 | 0.0 | 0.0  |
| WV Retiree Health Benefit Trust Fund           | 25.6 | 27.5 | 28.2 | 27.5 | 14.5 | 15.0 | 9.7 | 10.0 | 9.7 | 10.0 | 9.2  | 10.0 | 2.6 | 0.0 | 0.5 | 0.0  |

## Endowment Assets

|   |      |      |      |      |       |       |     |      |     |      |      |      |     |     |      |     |
|---|------|------|------|------|-------|-------|-----|------|-----|------|------|------|-----|-----|------|-----|
| Berkeley County Development Authority   | 25.8 | 27.5 | 28.3 | 27.5 | 14.5  | 15.0  | 9.8 | 10.0 | 9.8 | 10.0 | 9.2  | 10.0 | 2.6 | 0.0 | 0.0  | 0.0 |
| Wildlife Fund                           | 25.4 | 27.5 | 28.3 | 27.5 | 14.4  | 15.0  | 9.8 | 10.0 | 9.8 | 10.0 | 9.5  | 10.0 | 2.6 | 0.0 | 0.2  | 0.0 |
| Prepaid Tuition Trust                   | 22.7 | 22.0 | 18.9 | 18.0 | 56.1  | 60.0  | 0.0 | 0.0  | 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  | 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 | 11.4 | 11.3 | 12.4 | 11.3 | 76.2  | 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                            | 31.8 | 32.5 | 34.9 | 32.5 | 14.5  | 15.0  | 0.0 | 0.0  | 0.0 | 0.0  | 18.8 | 20.0 | 0.0 | 0.0 | 0.0  | 0.0 |
| WV DEP Agency                           | 17.1 | 20.0 | 18.7 | 20.0 | 33.3  | 40.0  | 0.0 | 0.0  | 0.0 | 0.0  | 16.4 | 20.0 | 0.0 | 0.0 | 14.5 | 0.0 |

- (a) As of January 2014, the PERS Base is 30% Russell 3000, 30% MSCI ACW ex USA (IMI), and 40% Bloomberg Barclays Capital Universal. From April 2008 to December 2013, the PERS Base 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 Base Index is 50% Russell 3000 and 50% MSCI ACW ex USA (IMI). From April 2008 to December 2013, the Total Equity Base 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 GBIEM 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 are 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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