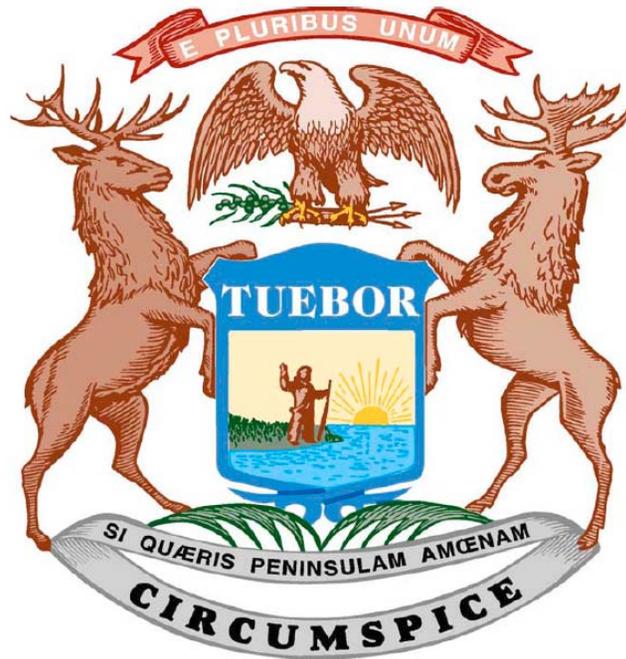




# Michigan Department of Treasury Bureau of Investments



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Chief Investment Officer

Bureau of Investments

April 22, 2010



# ***Today's Topics:***

- **The Bureau of Investments**
- **MSPRS High Level Plan Overview**
- **MSPRS Asset Allocation**
- **Stock and Bond Markets 2009 Review**
- **MSPRS Returns**



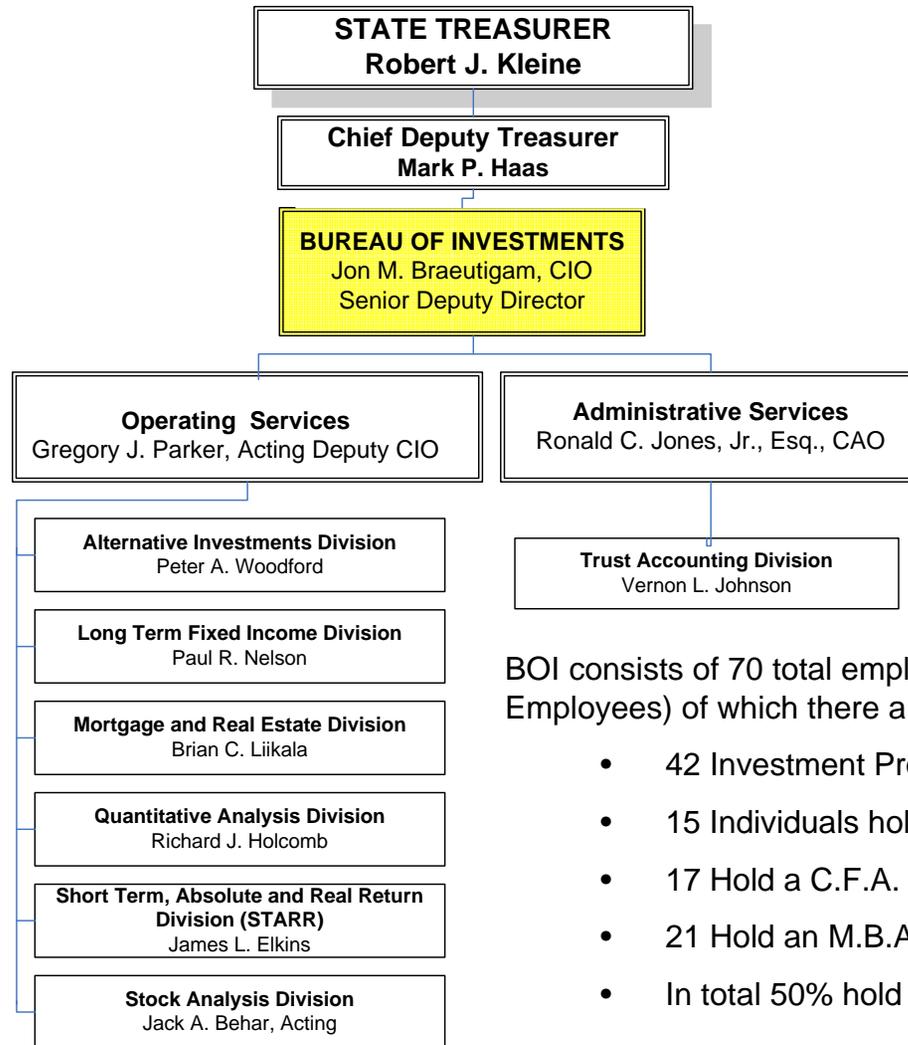
# ***BOI ~ Mission Statement***

- ***The Bureau of Investments provides quality investment management services, professional expertise, and advice to the State Treasurer as fiduciary of the State of Michigan Retirement Systems and Michigan boards and agencies. The Bureau strives to provide consistent and cost-effective management of funds to achieve competitive investment returns that meet objectives within an acceptable level of risk for the benefit of employees, retirees, and citizens of the State of Michigan.***



# ***Bureau of Investments (BOI)***

## ***As of January 31, 2010***



BOI consists of 70 total employees (0.13% of total State Employees) of which there are:

- 42 Investment Professionals
- 15 Individuals hold a C.F.A. and an M.B.A.
- 17 Hold a C.F.A.
- 21 Hold an M.B.A.
- In total 50% hold an M.B.A. or C.F.A. or both.



# ***BOI Investment and Cash Position***

## ***As of December 31, 2009***

|  |                         |
|--|-------------------------|
| <b>SMRS</b>  | <b>\$47,097,038,312</b> |
| <i>OTHER MAJOR FUNDS</i>                           |                         |
| <u>Hurman Services</u>                             |                         |
| <b>Children's Trust</b>                            | <b>\$22,063,712</b>     |
| <u>Lottery</u>                                     |                         |
| <b>State Lottery</b>                               | <b>340,773,352</b>      |
| <u>Management and Budget</u>                       |                         |
| <b>401K and 457 Combined Plans</b>                 | <b>4,642,681,277</b>    |
| <u>Military &amp; Veterans Affairs</u>             |                         |
| <b>Veterans' Trust</b>                             | <b>48,830,438</b>       |
| <u>Natural Resources</u>                           |                         |
| <b>Game and Fish Lifetime License Trust</b>        | <b>15,186,053</b>       |
| <b>Game and Fish Protection Trust</b>              | <b>123,275,222</b>      |
| <b>Natural Resources Trust</b>                     | <b>545,377,374</b>      |
| <b>Nongame Fish and Wildlife Trust</b>             | <b>6,521,348</b>        |
| <b>State Park Endowment</b>                        | <b>146,200,518</b>      |
| <u>Multiple Agencies</u>                           |                         |
| <b>Gifts, Bequests, and Deposits Fund</b>          | <b>15,529,741</b>       |
| <b>Children With Special Needs</b>                 | <b>19,549,447</b>       |
| <u>Transportation</u>                              |                         |
| <b>Mackinac Bridge Authority</b>                   | <b>41,919,459</b>       |
| <u>Treasury</u>                                    |                         |
| <b>MESP (TIAA-CREF - 529 Plan)</b>                 | <b>2,125,503,664</b>    |
| <b>Michigan Higher Education Assist. Authority</b> | <b>1,562,593</b>        |
| <b>MET I</b>                                       | <b>232,684,984</b>      |
| <b>MET II</b>                                      | <b>522,189,585</b>      |
| <b>SUBTOTAL FOR TRUST AND AGENCY FUNDS</b>         | <b>\$8,849,848,770</b>  |
| <i>COMMON CASH</i>                                 |                         |
| <b>State Treasurer's Common Cash</b>               | <b>\$2,602,990,379</b>  |
| <b>TOTAL UNDER MANAGEMENT</b>                      | <b>\$58,549,877,461</b> |



# *Plan Membership Summary*

As of September 30, 2009

| MEMBER TYPE   | MSPRS        |
|---|--------------|
| <b>Retirees &amp; Benef. Receiving Benefits</b>                       | <b>2,721</b> |
| <b>Current Employees Vested</b>                                       | <b>1,339</b> |
| <b>Current Employees Non-Vested</b>                                   | <b>316</b>   |
| <b>Inactive Employees Entitled To, But Not Yet Receiving Benefits</b> | <b>175*</b>  |
| <b>Total MSPRS Members</b>  | <b>4,551</b> |

Source: Pension Plans Component Unit Financial Reports Fiscal Year Ended September 30, 2009

\*Includes 149 DROP Participants



# *Plan Membership Ratio*

As of September 30, 2009

| Ratio of Active/Retiree | MSPRS        |
|-------------------------|--------------|
| <b>Year 2009</b>        | <b>.61:1</b> |
| <b>Year 2008</b>        | <b>.61:1</b> |
| <b>Year 2007</b>        | <b>.59:1</b> |
| <b>Year 2006</b>        | <b>.62:1</b> |
| <b>Year 2005</b>        | <b>.63:1</b> |

Source: Pension Plans Component Unit Financial Reports Fiscal Year Ended September 30, 2009



# ***MSPRS Funded Ratio***

**Years Ending September**

| <b>Year</b>   | <b>Market Value of Assets</b> | <b>Actuarial Value of Assets</b> | <b>Actuarial Accrued Liability</b> | <b>Funded Ratio Based on Actuarial Value</b> |
|---|-------------------------------|----------------------------------|------------------------------------|--|
| <b>2009</b>   | <b>\$958</b>                  | <b>\$1,238</b>                   | <b>\$1,534</b>                     | <b>80.7%</b>                                 |
| <b>2008</b>   | <b>\$1,089</b>                | <b>\$1,266</b>                   | <b>\$1,496</b>                     | <b>84.6%</b>                                 |
| <b>2007</b>   | <b>\$1,345</b>                | <b>\$1,259</b>                   | <b>\$1,452</b>                     | <b>86.7%</b>                                 |
| <b>2006</b>   | <b>\$1,204</b>                | <b>\$1,114</b>                   | <b>\$1,386</b>                     | <b>80.4%</b>                                 |
| <b>2005</b>   | <b>\$1,120</b>                | <b>\$1,090</b>                   | <b>\$1,300</b>                     | <b>83.8%</b>                                 |
| <b>2004</b>   | <b>\$1,043</b>                | <b>\$1,118</b>                   | <b>\$1,256</b>                     | <b>89.0%</b>                                 |
| <b>1983</b>   | <b>\$178</b>                  | <b>\$178</b>                     | <b>\$272</b>                       | <b>65.4%</b>                                 |
| <b><i>MSPRS Estimated Market Value Funded Ratio</i></b> |                               |                                  |                                    |  |
| <b>12/31/2009</b>                                       | <b>\$1,014</b>                | <b>- - -</b>                     | <b>\$1,534</b>                     | <b>66.1%</b>                                 |

(Figures in millions)

Source: Pension Plans Component Unit Financial Reports and Actuarial Valuations



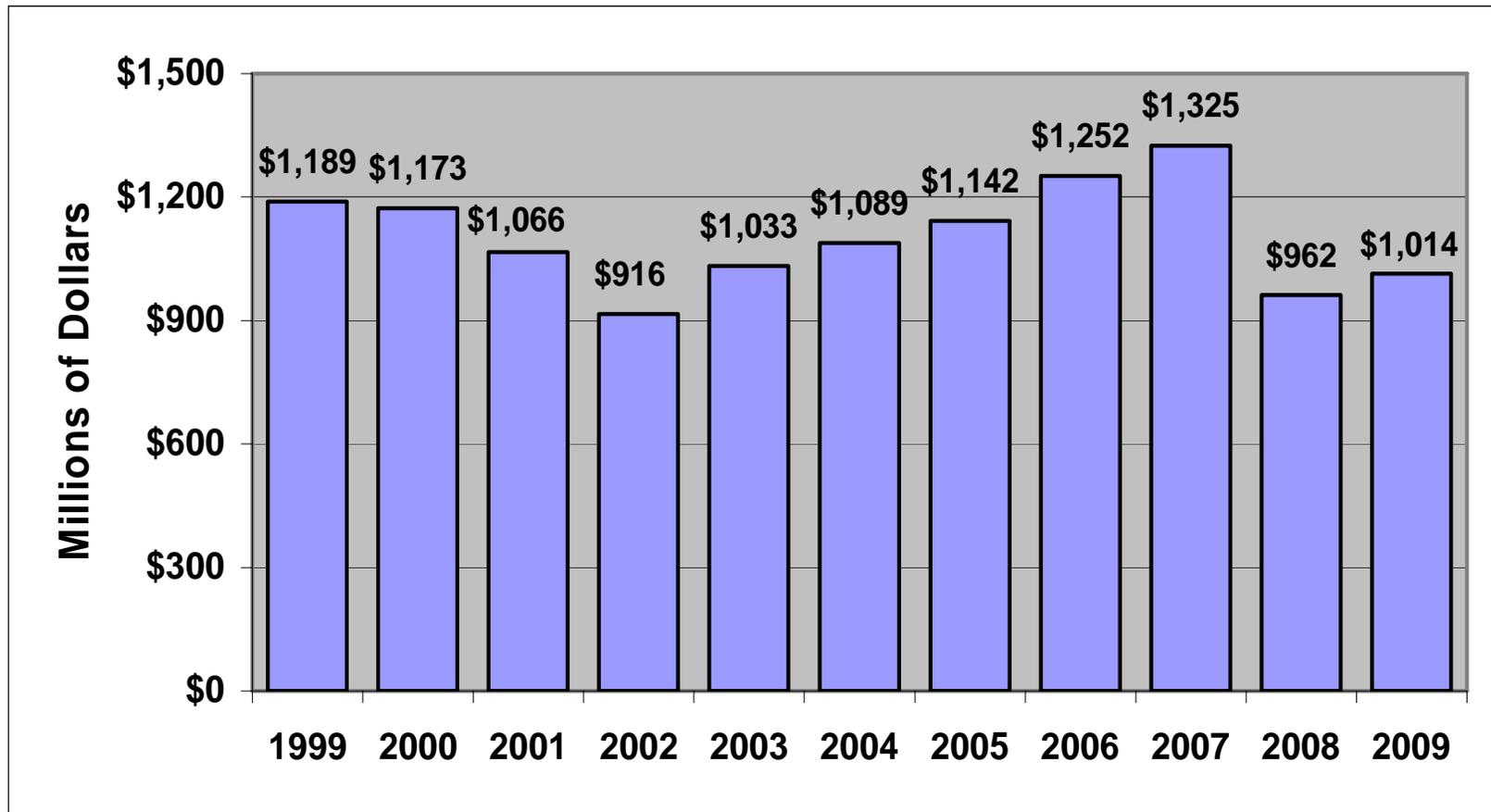
# ***SMRS Market Value by Plan***

## ***As of December 31, 2009***

|                                | <b>Market Value</b>  |               |
|--------------------------------|----------------------|---------------|
|                                | <i>(In Millions)</i> | <b>%</b>      |
| <b>Public School Employees</b> | <b>\$36,789</b>      | <b>78.1%</b>  |
| <b>State Employees</b>         | <b>9,054</b>         | <b>19.2%</b>  |
| <b>State Police</b>            | <b>1,014</b>         | <b>2.2%</b>   |
| <b>Judges</b>                  | <b>240</b>           | <b>0.5%</b>   |
| <b>TOTAL</b>                   | <b>\$47,097</b>      | <b>100.0%</b> |



# *MSPRS Market Value* \$1,014 Million



Years Ending December 31



# ***MSPRS***

## ***Contributions and Distributions***

### ***FY 2009***

#### **Contributions**

|          |             |
|----------|-------------|
| Members  | \$0.1       |
| Employer | <u>35.4</u> |

**Total Contributions** \$35.5

Pension Benefit Distributions 88.5

**Net** (\$53.0)

- Equal to (per quarter on average) (\$13.3)
- Or about 5.2% of total market value of fund

(Figures are in millions)



# ***MSPRS Asset Allocation***

## ***As of December 31, 2009***

| <b>Investment Strategies</b>      | <b>(In Millions)</b> |               | <b>Target Allocation</b> |                  |
|-----------------------------------|----------------------|---------------|--------------------------|------------------|
|                                   |                      |               | <b>Target</b>            | <b>Range</b>     |
| <b>Domestic Equity</b>            | <b>\$374</b>         | <b>36.9%</b>  | <b>34%</b>               | <b>24% - 48%</b> |
| <b>Alternative Investments</b>    | <b>190</b>           | <b>18.8%</b>  | <b>16%</b>               | <b>10% - 17%</b> |
| <b>Fixed Income</b>               | <b>177</b>           | <b>17.4%</b>  | <b>17%</b>               | <b>12% - 25%</b> |
| <b>International Equity</b>       | <b>133</b>           | <b>13.1%</b>  | <b>17%</b>               | <b>12% - 20%</b> |
| <b>Real Estate</b>                | <b>90</b>            | <b>8.9%</b>   | <b>11%</b>               | <b>8% - 14%</b>  |
| <b>Short Term</b>                 | <b>32</b>            | <b>3.1%</b>   | <b>2%</b>                | <b>1% - 7%</b>   |
| <b>Absolute &amp; Real Return</b> | <b>18</b>            | <b>1.8%</b>   | <b>3%</b>                | <b>0% - 5%</b>   |
| <b>TOTAL</b>                      | <b>\$1,014</b>       | <b>100.0%</b> | <b>100.0%</b>            |                  |



# ***MSPRS Total Plan Universe***

## ***Peer Asset Allocation Comparison***

***(for major asset categories)***

|                           | <u>Equities<br/>Domestic</u> | <u>Equities<br/>Foreign</u> | <u>Fixed<br/>Income</u> | <u>Real<br/>Estate</u> | <u>Private<br/>Equity</u> | <u>Cash<br/>Equivalent</u> |             |          |              |          |             |           |
|---------------------------|------------------------------|-----------------------------|-------------------------|------------------------|---------------------------|----------------------------|-------------|----------|--------------|----------|-------------|-----------|
| 5th Percentile            | 66.18                        | 26.24                       | 38.07                   | 10.22                  | 19.61                     | 11.80                      |             |          |              |          |             |           |
| 25th Percentile           | 42.66                        | 20.64                       | 29.80                   | 5.70                   | 11.61                     | 7.61                       |             |          |              |          |             |           |
| <b>50th Percentile</b>    | <b>37.17</b>                 | <b>17.75</b>                | <b>25.71</b>            | <b>3.51</b>            | <b>4.39</b>               | <b>3.28</b>                |             |          |              |          |             |           |
| 75th Percentile           | 27.78                        | 12.65                       | 20.68                   | 1.44                   | 0.02                      | 1.45                       |             |          |              |          |             |           |
| 95th Percentile           | 10.95                        | 0.00                        | 4.27                    | 0.00                   | 0.00                      | 0.23                       |             |          |              |          |             |           |
| <b>Total State Police</b> | <b>37.29</b>                 | <b>48</b>                   | <b>13.07</b>            | <b>75</b>              | <b>17.41</b>              | <b>89</b>                  | <b>8.88</b> | <b>8</b> | <b>18.76</b> | <b>7</b> | <b>3.14</b> | <b>55</b> |



# ***SMRS by Asset Class***

***As of January 31, 2010***

## **Domestic Equity**

\$16,858 Million in managed funds

31 Strategies

Approximately 1,467 Stocks

## **Real Estate**

\$3,935 Million in managed funds

30 Sponsors

53 Partnerships

Over 2,000 properties

## **Alternative Investments**

\$8,851 Million in managed funds

83 Sponsors

251 Partnerships

3,442 Companies

## **Short Term Investments**

\$869 Million in managed Funds



# ***SMRS by Asset Class***

## ***As of January 31, 2010***

### **Fixed Income**

\$8,684 Million in managed funds  
9 Strategies  
Representing 2,849 Positions

### **Absolute and Real Return (and Opportunistic)**

\$1,042 Million in managed funds  
20 Strategies

### **International Equity**

\$5,928 Million in managed funds  
8 Strategies  
Representing 6,300 Stocks

### **Trust Accounting**

Accurately accounted for \$46 billion  
in Investments - Comprehensive  
Annual Financial Report (CAFR)



## *2008 and 2009 Stock Market Update*

| Market                | Thru 12/31/08  |              | Thru 12/31/09 |               |
|-----------------------|----------------|--------------|---------------|---------------|
|                       | Price Change   | 12/31/08     | Price Change  | 12/31/09      |
| <b>DJIA</b>           | <b>-33.84%</b> | <b>8,776</b> | <b>18.82%</b> | <b>10,428</b> |
| <b>S&amp;P 500</b>    | <b>-38.49%</b> | <b>903</b>   | <b>23.45%</b> | <b>1,115</b>  |
| <b>NASDAQ</b>         | <b>-40.54%</b> | <b>1,577</b> | <b>43.89%</b> | <b>2,269</b>  |
| <b>BMI-EPAC (USD)</b> | <b>-45.81%</b> | <b>172.2</b> | <b>30.84%</b> | <b>225.3</b>  |



## *Bond Market Environment*

| Market                  | 2009 Yield    |              | 2008 Yield     |              |
|-------------------------|---------------|--------------|----------------|--------------|
|                         | Change        | 12/31/09     | Change         | 12/31/08     |
| <b>30-Year Treasury</b> | <b>196 bp</b> | <b>4.64%</b> | <b>-177 bp</b> | <b>2.68%</b> |
| <b>10-Year Treasury</b> | <b>162 bp</b> | <b>3.84%</b> | <b>-181 bp</b> | <b>2.22%</b> |
| <b>5-Year Treasury</b>  | <b>113 bp</b> | <b>2.68%</b> | <b>-191 bp</b> | <b>1.55%</b> |
| <b>2-Year Treasury</b>  | <b>37 bp</b>  | <b>1.14%</b> | <b>-230 bp</b> | <b>0.77%</b> |
| <b>Fed Funds</b>        | <b>0 bp</b>   | <b>0.25%</b> | <b>-400 bp</b> | <b>0.25%</b> |



# S&P 500 – Last 10 Years





***MSPRS FUND***  
***Time-Weighted Rate of Return***  
***Public Funds (DB) > \$1 Billion***

**As of December 31, 2009**

|                                   | <b><u>One<br/>1 Year<br/>Rate</u></b> | <b><u>Five<br/>5 Years<br/>Rate</u></b> | <b><u>Ten<br/>10 Years<br/>Rate</u></b> |
|-----------------------------------|---------------------------------------|---|---|
| <b>TOTAL PLAN</b>                 | 11.5                                  | 3.5                                     | 3.1                                     |
| Median - Greater than \$1 Billion | 18.2                                  | 3.3                                     | 3.3                                     |



# MSPRS FUND

## Time-Weighted Rate of Return

Public Funds (DB) > \$5 Billion

Close to peer in 3, 5, and 10 year time periods

As of December 31, 2009

|                           | <u>1 Year</u> | <u>3 Years</u> | <u>5 Years</u> | <u>10 Years</u> |
|---------------------------|---------------|----------------|----------------|-----------------|
| 5th Percentile            | 24.61         | 3.19           | 5.43           | 5.12            |
| 25th Percentile           | 20.65         | -0.67          | 3.85           | 3.84            |
| 50th Percentile           | 16.27         | -1.85          | 3.21           | 3.28            |
| 75th Percentile           | 10.57         | -3.42          | 2.59           | 2.86            |
| 95th Percentile           | 5.60          | -4.73          | 1.02           | 1.88            |
| <b>Total State Police</b> | 11.50         | -2.04          | 3.54           | 3.08            |



# **MSPRS FUND**

## **One Year Returns**

**Public Funds (DB) > \$1 Billion**  
**Beat peers 4 out of 5 years**

Year Ending

|                           | <u>12/31/09</u> | <u>12/31/08</u> | <u>13/31/07</u> | <u>12/31/06</u> | <u>12/31/05</u> |   |       |    |      |    |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|-------|----|------|----|
| 5th Percentile            | 27.04           | -21.54          | 11.23           | 15.96           | 10.57           |   |       |    |      |    |
| 25th Percentile           | 21.35           | -24.23          | 10.25           | 15.05           | 8.78            |   |       |    |      |    |
| 50th Percentile           | 18.19           | -25.95          | 9.21            | 14.40           | 7.87            |   |       |    |      |    |
| 75th Percentile           | 14.63           | -27.66          | 7.80            | 13.40           | 6.99            |   |       |    |      |    |
| 95th Percentile           | 7.22            | -30.13          | 6.31            | 11.09           | 5.64            |   |       |    |      |    |
| <b>Total State Police</b> | 11.50           | 85              | -24.20          | 25              | 11.22           | 6 | 15.10 | 25 | 9.98 | 10 |



# *Time-Weighted Rates of Return*

*Individual asset classes doing very well on a relative basis*

| Asset Class<br>w/Benchmark       | CY 2009      |           |              |           |
|----------------------------------|--------------|-----------|--------------|-----------|
|                                  | Five Year    |           | One Year     |           |
|                                  | Rate         | Rank      | Rate         | Rank      |
| <b>Total Plan</b>                | <b>3.5%</b>  | <b>39</b> | <b>11.5%</b> | <b>85</b> |
| Median*                          | 3.3%         |           | 18.2%        |           |
| <b>Domestic Equities</b>         | <b>1.1%</b>  |           | <b>30.9%</b> |           |
| S&P 1500 Index                   | 0.7%         |           | 27.3%        |           |
| <b>International Equities</b>    | <b>4.0%</b>  |           | <b>39.8%</b> |           |
| S&P Developed BMI-EPAC net 50/50 | 4.0%         |           | 31.4%        |           |
| <b>Private Equity</b>            | <b>12.0%</b> |           | <b>-2.1%</b> |           |
| S&P 500 +300 bp                  | 4.3%         |           | 29.2%        |           |

\*State Street Universe of Public Funds > \$1 Billion



## *Time-Weighted Rates of Return*

| Asset Class<br>w/Benchmark | CY 2009     |      |               |      |
|----------------------------|-------------|------|---------------|------|
|                            | Five Year   |      | One Year      |      |
|                            | Rate        | Rank | Rate          | Rank |
| <b>Real Estate</b>         | <b>1.9%</b> |      | <b>-30.9%</b> |      |
| NCREIF Open Fund Index Net | -0.2%       |      | -30.3%        |      |
| <b>Bonds</b>               | <b>5.7%</b> |      | <b>12.0%</b>  |      |
| Barclays Govt/Credit       | 4.7%        |      | 4.5%          |      |
| <b>Cash Equivalents</b>    | <b>2.3%</b> |      | <b>1.9%</b>   |      |
| 30-Day T-Bill              | 2.7%        |      | 0.1%          |      |

\*State Street Universe of Public Funds > \$1 Billion



## Disclaimer



**This presentation was given solely for the purpose of explaining the structure and investment process for the State of Michigan Retirement Systems. It should not be interpreted in any way as financial advice.**