



Michigan Department of Treasury Bureau of Investments



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Today's Topics:

- **The Bureau of Investments**
- **MPSERS High Level Plan Overview**
- **MPSERS Asset Allocation**
- **Stock and Bond Markets 2011 Review**
- **MPSERS Returns**



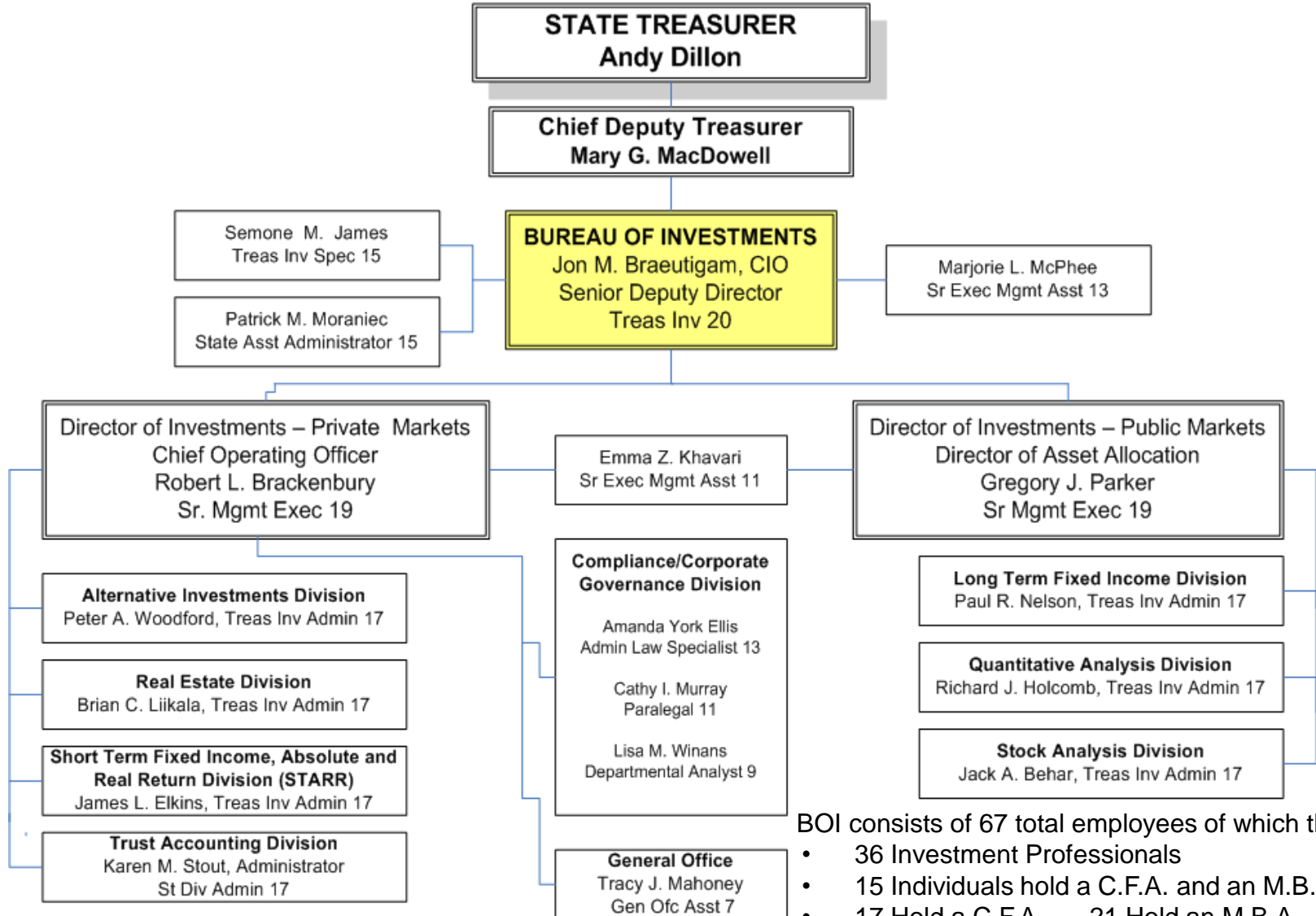
BOI ~ Mission Statement

- 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 November 28, 2011



- BOI consists of 67 total employees of which there are:
- 36 Investment Professionals
 - 15 Individuals hold a C.F.A. and an M.B.A.⁴
 - 17 Hold a C.F.A. - 21 Hold an M.B.A.
 - In total over 50% hold an M.B.A. or C.F.A. or both.



BOI Investment and Cash Position

As of December 31, 2011

| | |
|--|-------------------------|
| TOTAL RETIREMENT RELATED - DB and DC Plans | \$52,973,178,652 |
| <u>OTHER MAJOR FUNDS</u> | |
| <u>Health Care Account</u> | |
| MPSERS Health Care Account | \$342,749,841 |
| MSERS Health Care Account | \$0 |
| <u>Family Independence Agency</u> | |
| Children's Trust | \$23,425,570 |
| <u>Lottery</u> | |
| State Lottery | 444,676,969 |
| <u>Military & Veterans Affairs</u> | |
| Veterans' Trust | 52,104,884 |
| <u>Natural Resources and Environment</u> | |
| Game and Fish Lifetime License Trust | 24,493,861 |
| Game and Fish Protection Trust | 201,458,990 |
| Natural Resources Trust | 703,208,325 |
| Nongame Fish and Wildlife Trust | 6,916,361 |
| State Park Endowment | 182,981,550 |
| <u>Multiple Agencies</u> | |
| Gifts, Bequests, and Deposits Fund | 17,418,123 |
| Children With Special Needs | 21,207,866 |
| <u>Transportation</u> | |
| Mackinac Bridge Authority | 58,137,964 |
| <u>Treasury</u> | |
| MESP (TIAA-CREF - 529 Plan) | 2,686,656,849 |
| MI 529 Advisor Plan | 96,963,008 |
| Michigan Higher Education Assist. Authority | 1,502,034 |
| MET I | 143,878,196 |
| MET II | 603,416,829 |
| SUBTOTAL FOR TRUST AND AGENCY FUNDS | \$5,611,197,218 |
| <u>COMMON CASH</u> | |
| State Treasurer's Common Cash | \$1,664,050,205 |
| TOTAL UNDER MANAGEMENT | \$60,248,426,076 |



Plan Membership Summary

As of September 30, 2011

| MEMBER TYPE | MPSERS |
|---|----------------|
| Retirees & Benef. Receiving Benefits | 192,435 |
| Current Employees Vested | 114,680 |
| Current Employees Non-Vested | 121,980 |
| Inactive Employees Entitled To, But Not Yet Receiving Benefits | 15,090 |
| TOTAL MPSERS MEMBERS | 444,185 |



Plan Membership Ratio

As of September 30, 2010

| Ratio of Active/Retiree | MPSERS |
|------------------------------------|---------------|
| Year 2010 | 1.29:1 |
| Year 2009 | 1.56:1 |
| Year 2008 | 1.67:1 |
| Year 2007 | 1.82:1 |
| Year 2006 | 1.94:1 |



MPERS Funded Ratio

Years Ending September

| Year | Market Value of Assets | Actuarial Value of Assets | Actuarial Accrued Liability | Funded Ratio Based on Actuarial Value |
|--|------------------------|---------------------------|-----------------------------|---------------------------------------|
| 2010 | \$35,855 | \$43,294 | \$60,927 | 71.1% |
| 2009 | \$34,498 | \$44,703 | \$56,685 | 78.9% |
| 2008 | \$39,066 | \$45,667 | \$54,608 | 83.6% |
| 2007 | \$48,363 | \$45,335 | \$51,107 | 88.7% |
| 2006 | \$42,995 | \$39,893 | \$49,136 | 81.2% |
| 2005 | \$39,216 | \$38,211 | \$48,206 | 79.3% |
| 2004 | \$36,289 | \$38,784 | \$46,317 | 83.7% |
| 1983 | \$6,285 | \$6,035 | \$8,434 | 71.6% |
| MPERS Estimated Market Value Funded Ratio | | | | |
| 12/31/2011 | \$37,665 | - - - | \$60,927 | 61.8% |

(\$ in Millions)

Source: Pension Plans Component Unit Financial Reports and Actuarial Valuations



SMRS Market Value by Plan

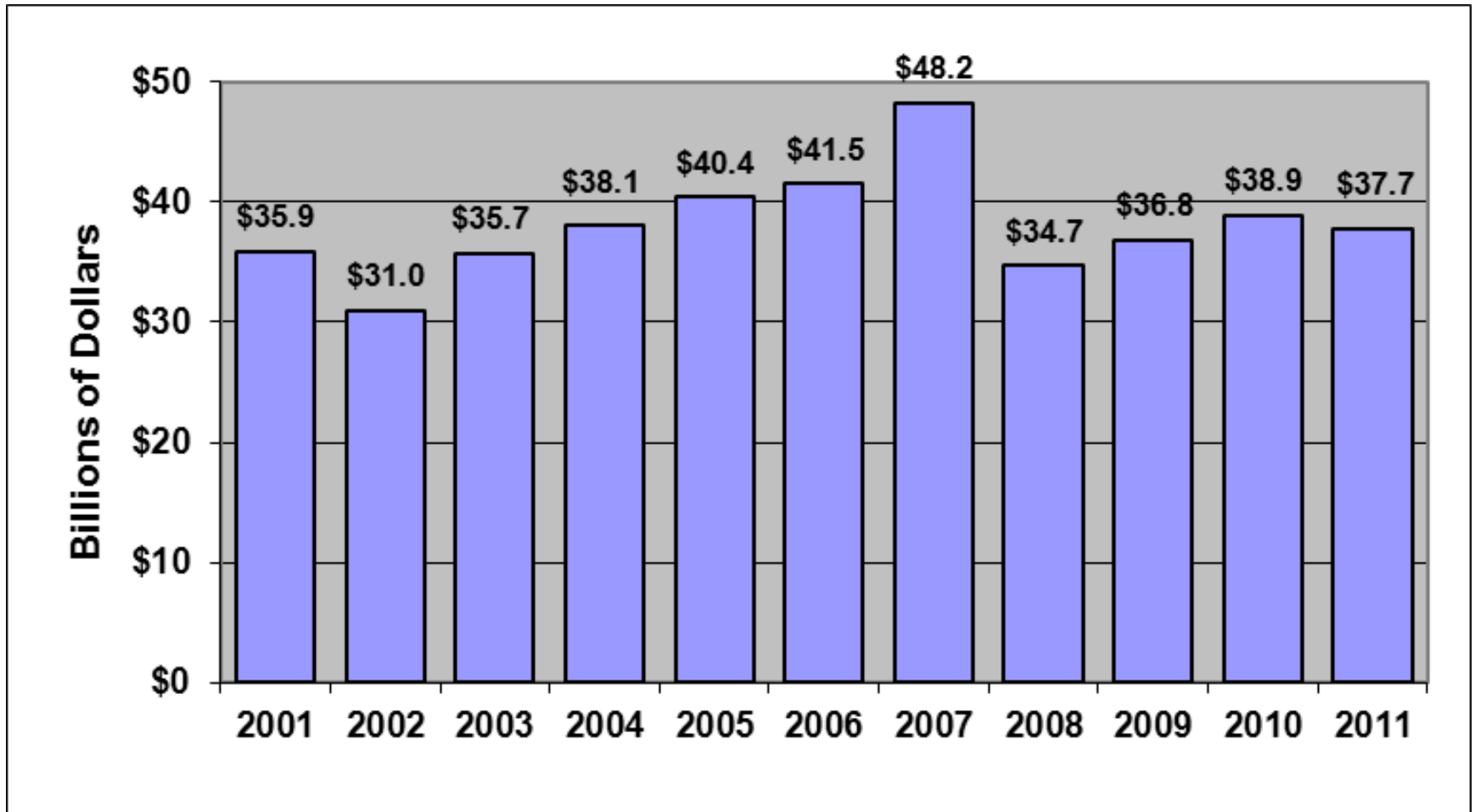
As of December 31, 2011

| | Market Value | |
|--------------------------------|-------------------------------|-----------------------------|
| | <u>(In Millions)</u> | <u>%</u> |
| Public School Employees | \$37,665 | 78.3% |
| State Employees | 9,192 | 19.1% |
| State Police | 1,030 | 2.1% |
| Judges | 236 | 0.5% |
| TOTAL | <u><u>\$48,123</u></u> | <u><u>100.0%</u></u> |



MPERS Market Value

\$37.7 Billion



Years Ending December 31



MPERS

Contributions and Distributions

FY 2011

Contributions

| | |
|----------|----------------|
| Members | \$332.0 |
| Employer | <u>1,156.0</u> |

Total Contributions \$1,488.0

Pension Benefit Distributions 3,942.0

Net **(\$2,454.0)**

- Equal to (per quarter on average) (\$613.5)
- Or about 7.0% of total market value of fund



MPERS Asset Allocation

As of December 31, 2011

Asset Allocation By Market Value

(In Millions)

| Investment Strategies | 12/31/2011 | | Target Allocation | |
|----------------------------------|-------------------|---------------|--------------------------|------------------|
| | | | Target | Range |
| Domestic Equity | \$11,464 | 30.4% | 33% | 20% - 50% |
| Alternative Investments | 8,268 | 22.0% | 14% | 10% - 20% |
| Fixed Income | 5,055 | 13.4% | 16% | 10% - 25% |
| International Equity | 4,798 | 12.7% | 16% | 10% - 20% |
| Real Estate | 3,922 | 10.4% | 9% | 5% - 15% |
| Short Term | 1,640 | 4.4% | 2% | 1% - 7% |
| Real Return & Opport. | 1,412 | 3.7% | 4% | 0% - 8% |
| Absolute Return | 1,106 | 3.0% | 6% | 0% - 12% |
| TOTAL | \$37,665 | 100.0% | 100% | |



MPERS Total Plan Universe

Peer Asset Allocation Comparison

*Public Funds (DB) > \$1 Billion
(for major asset categories)*

| | <u>Equities Domestic</u> | <u>Equities Foreign</u> | <u>Fixed Income</u> | <u>Real Estate</u> | <u>Private Equity</u> | <u>Cash Equivalent</u> |
|----------------------------|------------------------------|-----------------------------|-------------------------|------------------------|---------------------------|----------------------------|
| 5th Percentile | 61.90 | 27.94 | 42.37 | 15.91 | 22.39 | 31.24 |
| 25th Percentile | 42.60 | 18.85 | 30.19 | 6.02 | 13.34 | 6.76 |
| 50th Percentile | 35.79 | 15.50 | 25.49 | 3.21 | 5.32 | 3.21 |
| 75th Percentile | 25.68 | 10.05 | 19.86 | 0.04 | 0.23 | 1.74 |
| 95th Percentile | 5.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| Total Public School | 30.09 | 12.64 | 13.42 | 10.19 | 21.95 | 4.35 |



SMRS by Asset Class

As of December 31, 2011

Domestic Equity

\$14.5 Billion in managed funds

32 Strategies

Represents over 1,400 Stocks

Real Estate & Infrastructure

\$5.0 Billion in managed funds

37 Advisors

58 Real Estate Accounts

Over 2,000 properties

Alternative Investments

\$10.5 Billion in managed funds

82 Sponsors

262 Partnerships

3,475 Companies

Absolute and Real Return

(and Opportunistic)

\$3.2 Billion in managed funds

4 Strategies

47 Managers



SMRS by Asset Class

As of December 31, 2011

Fixed Income

\$6.5 Billion in managed funds

8 Strategies

Represents Over 2,000 Positions

Short Term Investments

\$2.2 Billion in Managed Funds

International Equity

\$6.1 Billion in managed funds

12 Strategies

Representing 6,300 Stocks

Trust Accounting

Approximately 100,000

transactions annually



Bond Market Environment

| Market | 2011 Yield Change | 12/31/11 | Q4 2011 Yield Change | 9/30/11 |
|------------------|----------------------------------|-----------------|-------------------------------------|----------------|
| 30-Year Treasury | -144 bp | 2.90% | -2 bp | 2.92% |
| 10-Year Treasury | -142 bp | 1.88% | -4 bp | 1.92% |
| 5-Year Treasury | -118 bp | 0.83% | -12 bp | 0.95% |
| 2-Year Treasury | -36 bp | 0.24% | -1bp | 0.25% |
| Fed Funds | 0 bp | 0.25% | 0 bp | 0.25% |



Stock Market Update

| Market | Thru 12/31/11 Price Change | 12/31/11 | Thru 9/30/11 Price Change | 9/30/11 |
|-----------------------|---------------------------------------|-----------------|--------------------------------------|----------------|
| DJIA | 5.53% | 12,218 | -5.74% | 10,913 |
| S&P 500 | 0.00% | 1,258 | -10.04% | 1,131 |
| NASDAQ | -1.80% | 2,605 | -8.95% | 2,415 |
| BMI-EPAC (USD) | -14.91% | 206.2 | -17.10% | 200.9 |



S&P 500 - Last 10 Years





MPERS FUND

Time-Weighted Rate of Return

Public Funds (DB) > \$10 Billion

As of December 31, 2011

| | <u>1 Year</u> Rate | <u>5 Years</u> Rate | <u>10 Years</u> Rate |
|------------------------------------|-----------------------|------------------------|-------------------------|
| TOTAL PLAN | 3.3 | 1.9 | 5.0 |
| Median - Greater than \$10 Billion | 1.9 | 1.9 | 5.3 |



MPSERS FUND

Time-Weighted Rate of Return

Funds (DB) > \$10 Billion

As of December 31, 2011

| | <u>1 Year</u> | <u>5 Years</u> | <u>10 Years</u> |
|----------------------------|---------------|----------------|-----------------|
| 5th Percentile | 8.15 | 6.15 | 6.99 |
| 25th Percentile | 2.47 | 2.33 | 6.45 |
| 50th Percentile | 1.86 | 1.92 | 5.27 |
| 75th Percentile | 0.69 | 1.08 | 4.86 |
| 95th Percentile | -0.15 | 0.32 | 4.43 |
| Total Public School | 3.34 | 1.89 | 4.98 |



Time-Weighted Rates of Return

Individual asset classes doing very well on a relative basis

| Asset Class w/Benchmark | CY 2011 | |
|------------------------------------|----------------------------|--------------------------|
| | Five Years Rate | One Year Rate |
| Total Plan | 1.9% | 3.3% |
| Median* | 1.9% | 1.9% |
| Domestic Equities | -0.1% | -0.4% |
| S&P 1500 Index | 0.1% | 1.8% |
| International Equities | -4.2% | -12.3% |
| S&P Developed BMI-EPAC net 75/25 | -4.8% | -12.5% |
| Private Equity | 9.1% | 15.9% |
| Alternative Blended Benchmark | 3.0% | 4.3% |

*Comparison universe is the State Street Universe comprised of Public Funds greater than \$10 Billion on the Total Plan level and greater than \$1 Billion for asset classes.



Time-Weighted Rates of Return

| Asset Class w/Benchmark | CY 2011 | |
|----------------------------|--------------|--------------|
| | Five Years | One Year |
| | Rate | Rate |
| Real Estate | -1.1% | 12.9% |
| NCREIF Open Fund Index Net | -1.1% | 15.0% |
| Bonds | 7.3% | 7.0% |
| Barclays Govt/Credit | 6.6% | 8.7% |
| Cash Equivalents | 1.1% | 0.2% |
| 30-Day T-Bill | 1.2% | 0.1% |

*Comparison universe is the State Street Universe comprised of Public Funds greater than \$10 Billion on the Total Plan level and greater than \$1 Billion for asset classes.



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.