



Michigan Department of Treasury Bureau of Investments



Jon M. Braeutigam

Chief Investment Officer

Bureau of Investments

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Bureau of Investments (BOI)

As of December 2014



BUREAU OF INVESTMENTS
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Director of Investments—Private Markets
Chief Operating Officer
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Senior Director of Investments 20

Director of Investments—Public Markets
Director of Asset Allocation
Gregory J. Parker
Senior Director of Investments 20

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Real Estate & Infrastructure Division
Brian C. Liikala, Sr Investment Mgr 18

Short Term, Absolute & Real Return Division
James L. Elkins, Sr Investment Mgr 18

Compliance & Corporate Governance Division
Amanda Y.E. Jenkins, St Div Admin 17

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Defined Contribution, Trusts & Agencies Division
Woodrow S. Tyler, Sr Investment Mgr 18

Long Term Fixed Income Division
Daniel J. Quigley, Sr Investment Mgr 18

Quantitative Analysis Division
Richard J. Holcomb, Sr Investment Mgr 18

Stock Analysis Division
Jack A. Behar, Sr Investment Mgr 18



Executive Summary

- The market value of the MPERS plan is up and the funding ratios are improving.
- Over the past year the plan substantially beat peers and most asset classes ranked and earned returns in excess of their performance benchmark.
- The market value of the MPERS plan is different than the actuarial value. If the market value of plan assets does not decline, then the actuarial value will trend up in future years.



Bureau of Investments (BOI)

March 2015



- 77 BOI Employees
- 44 Investment Professionals
- 35 Individuals with a Masters Degree or higher
- 18 C.F.A.
- 9 other professional designations
- Total of \$77.4 billion assets under management
- The large investment pool is an advantage for the MPSERS



MPERS Funded Ratio

\$46.9 Billion as of 12/31/14

Year	Market Value of Assets	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio Based on Actuarial Value
2013	\$40,016	\$38,044	\$63,840	59.6%
2012	\$37,700	\$38,450	\$62,716	61.3%
2011	\$34,675	\$41,038	\$63,427	64.7%
2010	\$35,855	\$43,294	\$60,927	71.1%
2009	\$34,498	\$44,703	\$56,685	78.9%
2008	\$39,188	\$45,667	\$54,608	83.6%
2007	\$48,363	\$45,335	\$51,107	88.7%
1983	\$6,285	\$6,035	\$8,434	71.6%
<i>MPERS Estimated Market Value Funded Ratio</i>				
12/31/2014	\$46,944	- - -	\$63,840	73.5%

(\$ in Millions)

Source: Pension Plans Component Unit Financial Reports and Actuarial Valuations, years ending in September



MPERS

Contributions and Distributions

FY 2014

Contributions

Members	\$405.4
Employer	<u>1,600.4</u>

Total Contributions \$2,005.8

Pension Benefit Distributions 4,388.3

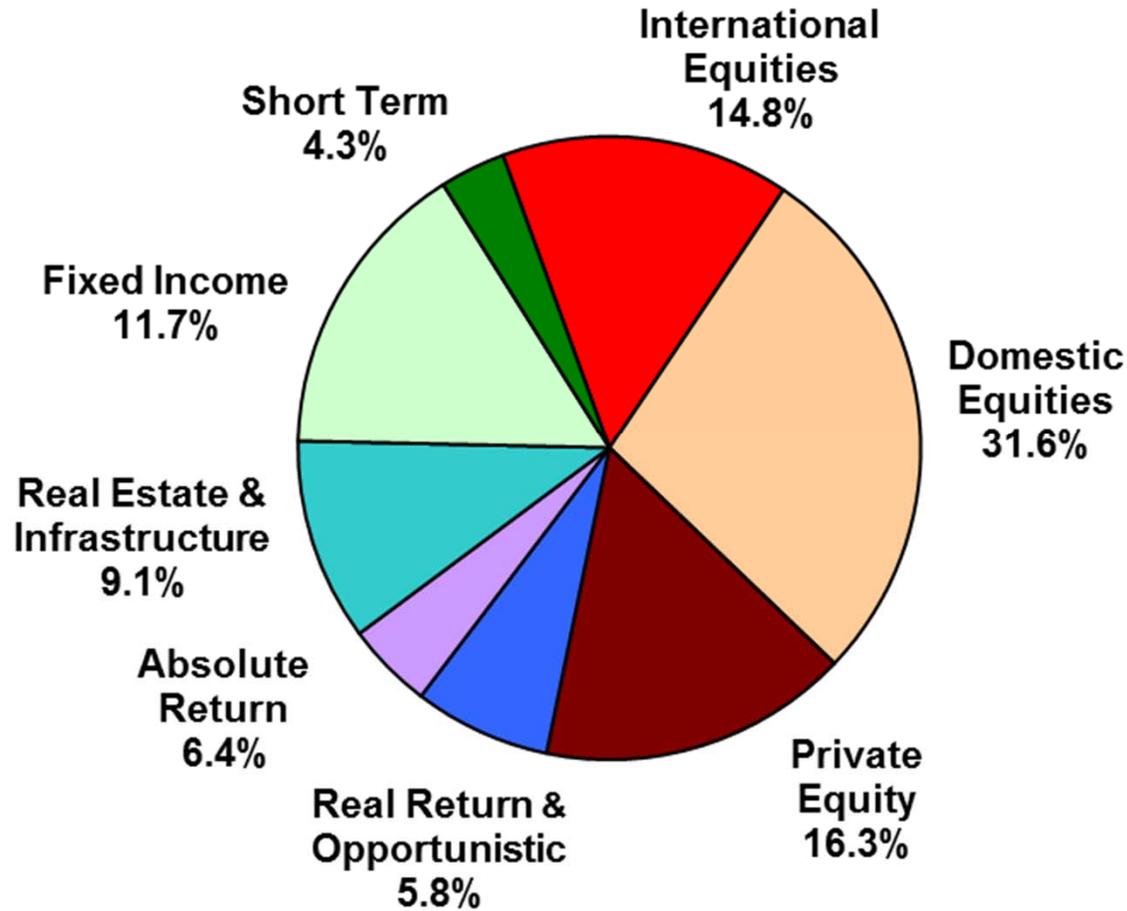
Net **(\$2,382.5)**

- Equal to (per quarter on average) (\$595.6)
- Or about 5.1% of total market value of fund



MPERS Asset Allocation

As of December 31, 2014



Diversification is essential to protect the funds. However, still reliant on equity markets.



MARKET INSIGHTS

Interest Rates and Inflation

Fixed Income

Nominal and Real 10-year Treasury Yields



Source: Federal Reserve, BLS, J.P. Morgan Asset Management.
 Real 10-year Treasury yields are calculated as the daily Treasury yield less year-over-year core CPI inflation for that month except for December 2014, where real yields are calculated by subtracting out November 2014 year-over-year core inflation. All returns above reflect annualized total returns, which include reinvestment of dividends. Corporate bond returns are based on a composite index of investment grade bond performance.
 Guide to the Markets - U.S.
 Data are as of 12/31/14.





S&P 500 – Last 10 Years





MPERS FUND

Time-Weighted Rate of Return

Public Funds (DB) > \$10 Billion

As of December 31, 2014

	<u>1-Year Return</u>	<u>3-Year Return</u>	<u>5-Year Return</u>	<u>7-Year Return</u>	<u>10-Year Return</u>
TOTAL PLAN	11.3	13.4	11.2	5.4	7.3
Median - Greater than \$10 Billion	6.9	12.1	10.2	5.0	6.6



Time-Weighted Rates of Return

Individual asset classes doing well on a relative basis

Asset Class w/Benchmark	12/31/2014	
	Three Years	One Year
	Rate	Rate
Total Plan*	13.4%	11.3%
Median*	12.1%	6.9%
Domestic Equities	21.3%	14.1%
S&P 1500 Index	20.4%	13.1%
International Equities	10.5%	-1.7%
MSCI ACWI Ex USA	9.4%	-3.6%
Bonds	3.6%	5.7%
Barclays Aggregate	2.7%	6.0%

*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	12/31/2014	
	Three Year Rate	One Year Rate
Private Equity	16.4%	18.1%
Alternative Blended Benchmark	26.0%	22.9%
Real Estate & Infrastructure	13.2%	19.7%
NCREIF - Property Blended Index	9.7%	10.4%
Absolute Return	8.5%	5.5%
HFRI FOF Cons 1 month lagged	4.8%	3.6%
Real Return & Opportunistic	12.4%	25.4%
Benchmark	7.2%	6.9%
Cash Equivalents	0.3%	0.3%
30-Day T-Bill	0.0%	0.0%

*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.



U.S. Economy

- Forecasted for modest higher growth.
- Housing continues to turn upwards.
- Auto sales are doing well.
- Energy – less dependence on foreign sources.
- Yearly deficit projections are falling.
- Consumer debt service is low.
- Stock market hitting all time high (as of 3/14).
- Labor market is improving.



Concerns

- Need to address U.S., states, and municipalities long-term liabilities.
- World is uncertain (Iran, North Korea, Ukraine, Syria, etc.).
- Europe is out of the recession, but still has high levels of debt.
- Larger emerging market economies are experiencing growing pains.



Conclusion

- We have experienced a 'Bull Market' since 2009.
- The MPERS fund is growing nicely and beating peers.
- The economy is doing well. Unless there is a major unexpected disruption in the economy, it is anticipated that the market will continue to grow over the longer term.