



Michigan Department of Treasury Bureau of Investments



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Director of Investments – Public Markets
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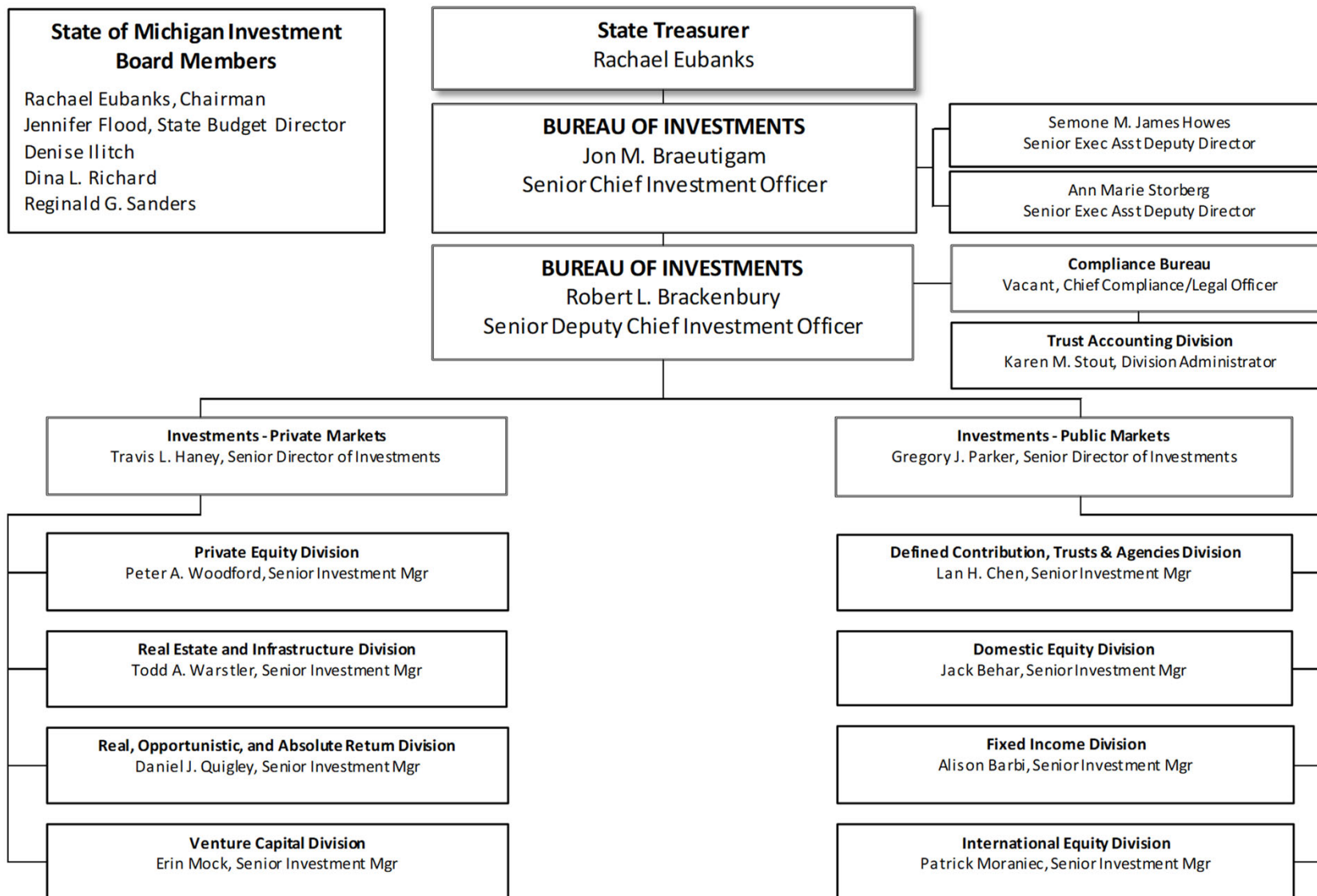
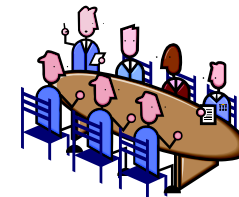
Executive Summary

- Long term market returns have been robust but in the next ten years many industry experts anticipate lower returns.
- Therefore, most plans are lowering (or have lowered already) their actuarial assumed rate of return.
- MPSERS returns substantially beat peer returns over longer time periods.



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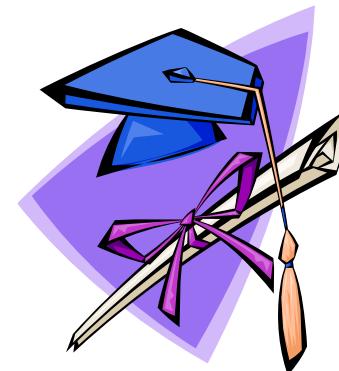
As of December 31, 2023





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As of December 31, 2023

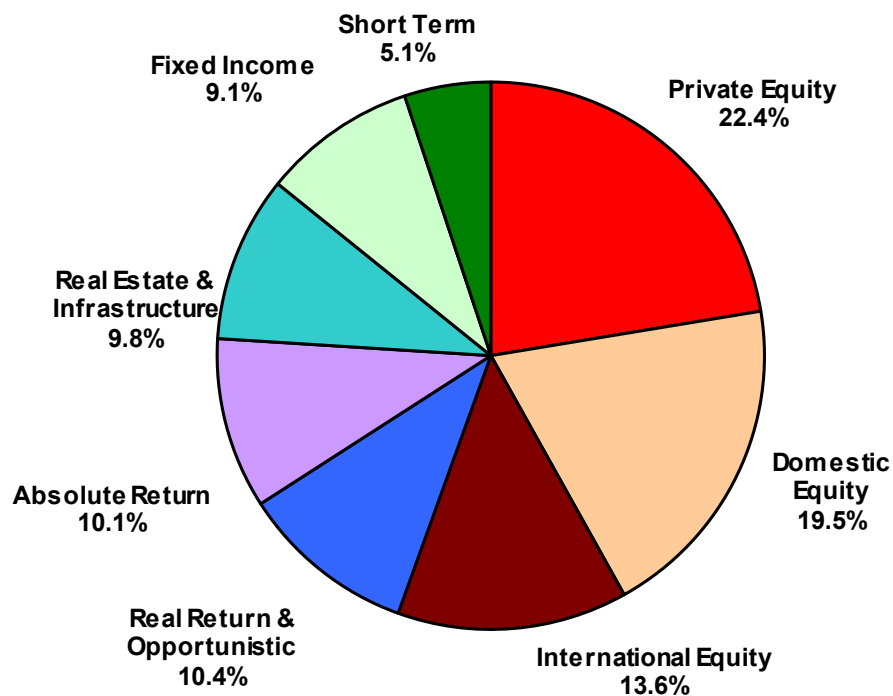


- 75 BOI Employees.
- 50 Investment Professionals.
- 31 Individuals with a Masters Degree or higher.
- 19 C.F.A. Charter holders.
- 15 Other professional designations.
- \$155.6 billion total assets under management.
- The large investment pool is an advantage for the plans.



MPERS Asset Allocation

As of December 31, 2023

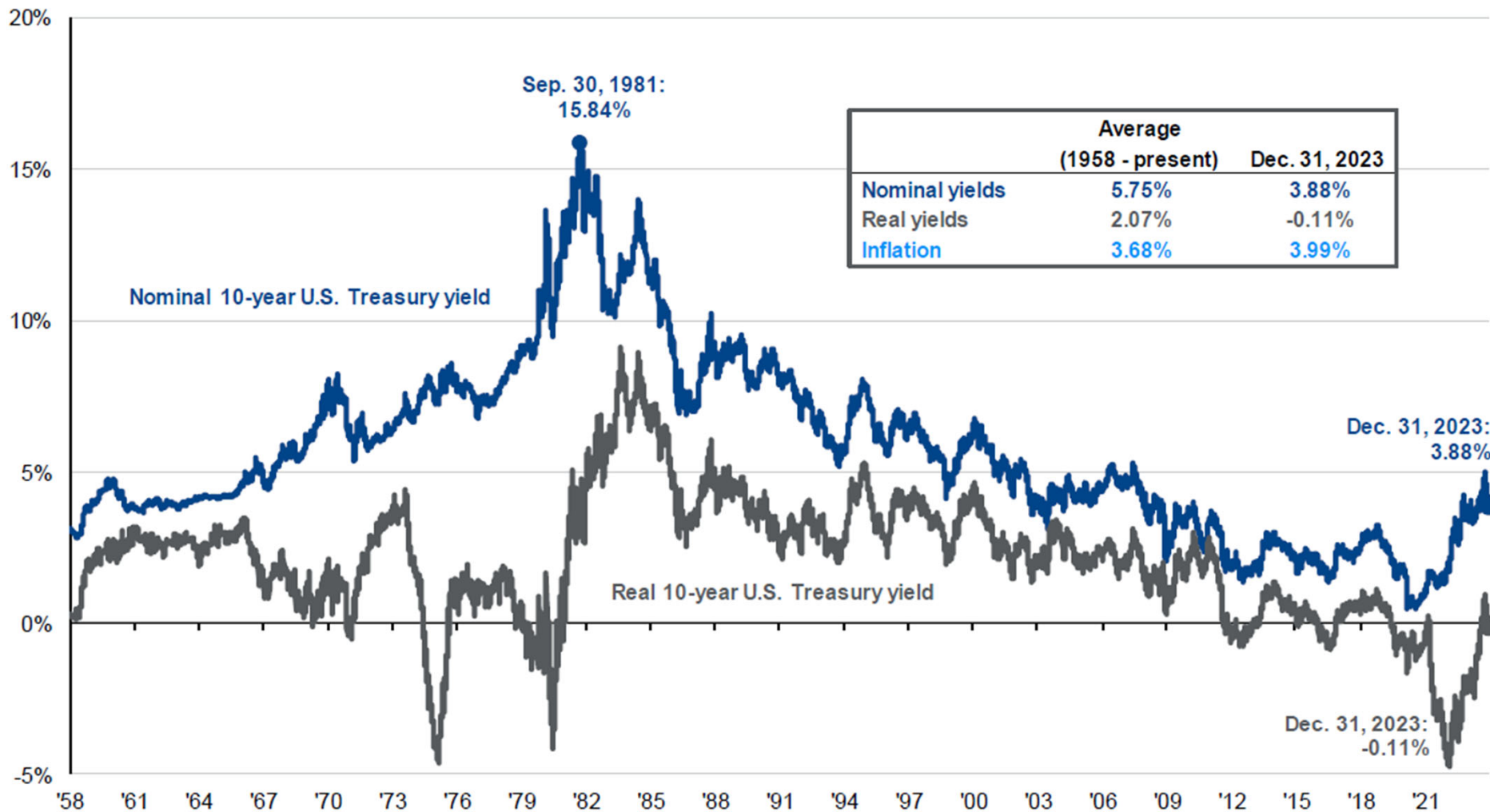


Diversification is essential to protect the funds. However, still reliant on equity markets to generate the actuarial assumed rate of return.



Interest Rates and Inflation

Nominal and real U.S. 10-year Treasury yields



Source: BLS, FactSet, Federal Reserve, 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. For the current month, we use the prior month's core CPI figures until the latest data are available.
 Guide to the Markets – U.S. Data are as of December 31, 2023.



Interest Rates and Inflation

S&P 500 Price Index



Source: Compustat, FactSet, Federal Reserve, Refinitiv Datastream, Standard & Poor's, J.P. Morgan Asset Management. Dividend yield is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by Compustat. Forward price-to-earnings ratio is a bottom-up calculation based on IBES estimates and FactSet estimates since January 2022. Returns are cumulative and based on S&P 500 Index price movement only, and do not include the reinvestment of dividends. Past performance is not indicative of future returns. Guide to the Markets – U.S. Data are as of December 31, 2023.



MPSERS FUND

Time-Weighted Rate of Return

As of December 31, 2023

Asset Class w/Benchmark	One Year* Rate	Three Years* Rate	Five Years* Rate	Seven Years* Rate	Ten Years* Rate
Total Plan	9.8%	7.9%	10.0%	9.8%	9.0%
Median - Greater than \$10 Billion**	11.8%	6.0%	9.3%	8.5%	7.4%

* Annualized Returns

** Comparison universe is the State Street Universe comprised of Public Funds greater than \$10 Billion on the total plan level

- Historically the investment results have compared very favorably to other large public pension plans (Larger than \$10 billion). Over the past ten years, our investment returns added approximately \$18 billion in value compared to what a peer median-performing pension fund would have earned.



MPSERS FUND

Time-Weighted Rates of Return

As of December 31, 2023

Asset Class w/Benchmark	One Year*		Three Years*		Five Years*		Seven Years*		Ten Years*	
	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank
Total Plan	9.8%	69	7.9%	16	10.0%	22	9.8%	11	9.0%	12
Median - Greater than \$10 Billion**	11.8%		6.0%		9.3%		8.5%		7.4%	
Domestic Equities	29.1%		7.9%		14.1%		12.5%		11.2%	
S&P Composite 1500	25.5%		9.8%		15.4%		13.0%		11.8%	
International Equities	17.5%		1.3%		7.7%		6.9%		4.8%	
International Equities Median**	17.5%		2.9%		8.5%		7.3%		4.7%	
Fixed Income	7.4%		-0.8%		2.4%		2.7%		3.2%	
Bloomberg US Agg Index	5.5%		-3.3%		1.1%		1.3%		1.8%	
Private Equity	2.3%		14.9%		14.0%		15.1%		14.3%	
Private Equity and Venture Capital BM***	25.2%		13.4%		13.2%		15.6%		15.2%	
Real Estate & Infrastructure	1.0%		13.6%		7.9%		8.6%		9.9%	
NCREIF Open Fund Index Net	-12.7%		4.0%		3.3%		4.4%		6.3%	
Absolute and Real Return	9.9%		9.5%		7.3%		7.2%		5.6%	
HFRI FOF Cons 1 month lagged	4.7%		4.8%		4.7%		4.0%		3.4%	
Real Return / Opportunistic	-0.6%		9.5%		10.7%		12.1%		12.1%	
50% CPI +4% and 50% actuarial rate 6%	6.7%		8.0%		7.4%		7.4%		7.3%	
Cash Equivalents	5.2%		2.3%		2.1%		2.0%		1.6%	
30-Day T-Bill	5.1%		2.2%		1.8%		1.7%		1.2%	

* Annualized Returns.

** 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.

*** Inception to present: S&P500 + 300 BP with a 3 month lag



U.S. Economy

- Unprecedented fiscal & monetary stimulus continues to make its way through the US economy.
- 2024 GDP growth estimates is around 1.6%, and with higher-than-normal inflation.
- U.S. Federal Reserve appears ready to manage inflation.



Conclusion

- 2023 began with inflation rates higher than policy targets.
- However, by the summer of 2023 the Federal Reserve began to pause additional rate increases.
- We will continue to maintain a long-term focus with sufficient liquidity to manage through short-term market changes.