



Michigan Department of
TREASURY

Engagement. Service. Improvement.

State of Michigan Investment Board Meeting

June 23, 2022

Executive Summary & Performance Review

Robert Brackenbury
Deputy Chief Investment Officer
Bureau of Investments

Performance

MPSERS Plan 3/31/2022	1-Year	3-Year	5-Year	7-Year	10-Year
Annualized Returns	14.3%	13.5%	12.0%	10.3%	10.7%
Policy Returns	11.7%	13.4%	11.4%	10.0%	10.6%
Peer Median Returns*	10.0%	11.8%	10.1%	8.7%	9.2%
Percentile Rank Vs. Peers*	14	15	10	9	8

*State Street Universe greater than \$10 billion.

Market Review & Outlook

Gregory J. Parker, CFA
Director of Investments – Public Markets
Director of Asset Allocation
Bureau of Investments

Capital Markets

Return and Risk Assumptions

MPSERS Plan	Assumed Return* (Arithmetic)	Standard Deviation*	Trailing 10-year (Benchmark**)
Private Equity	12.0%	25.0%	20.0%
International Equity	9.5%	20.5%	5.7%
Real Ret/Opportunistic	9.1%	14.8%	7.3%
Domestic Equity	7.8%	17.5%	14.4%
Real Estate (Core)	9.5%	20.0%	9.9%
Absolute Return	5.5%	9.0%	3.8%
Long-Term Fixed Income	3.0%	4.0%	2.2%
Short-Term	2.3%	1.0%	0.6%

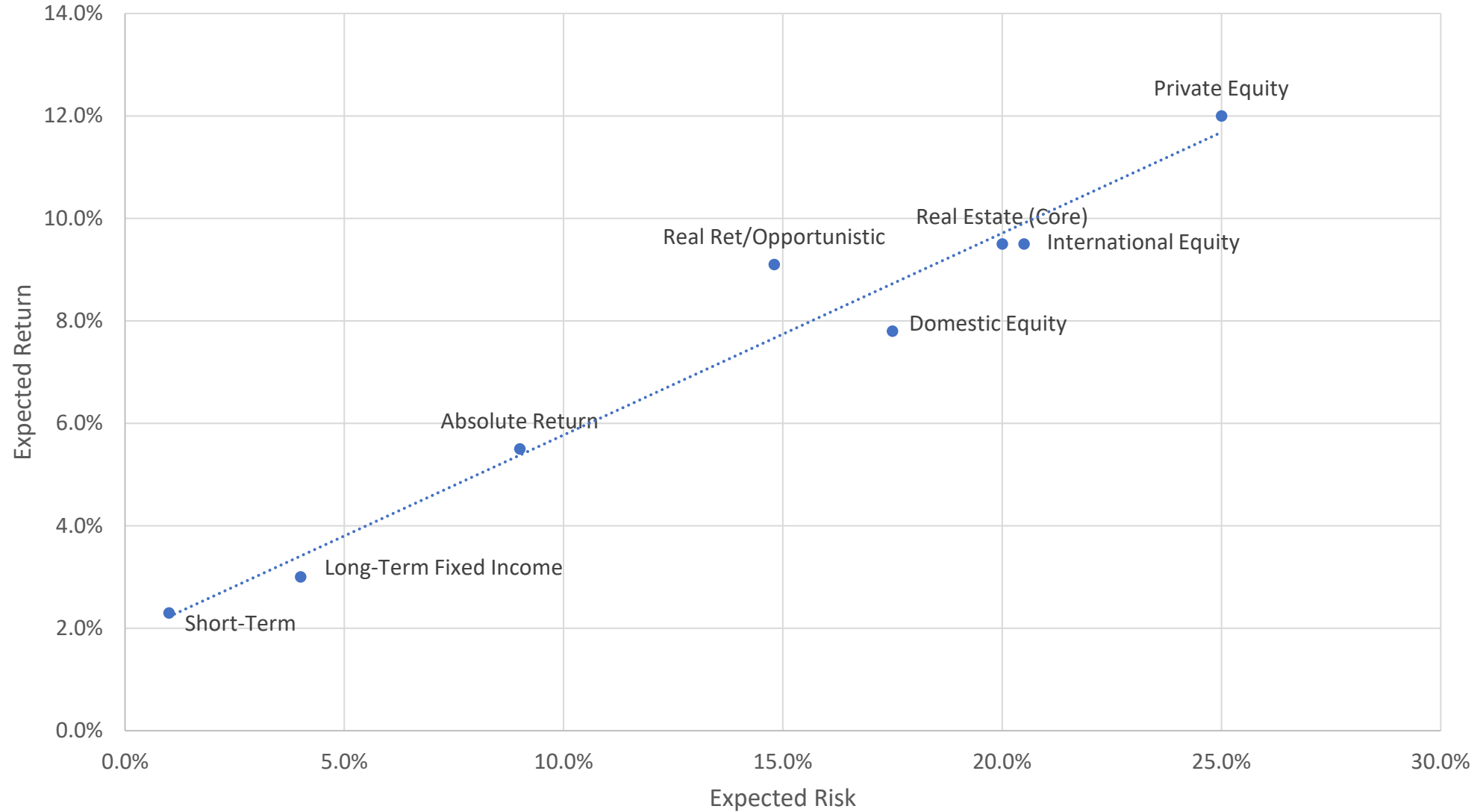
* Aon Investment Consultants 2022 Long-Term Return/Risk Assumptions

** Investment Policy Statement; Annualized Returns

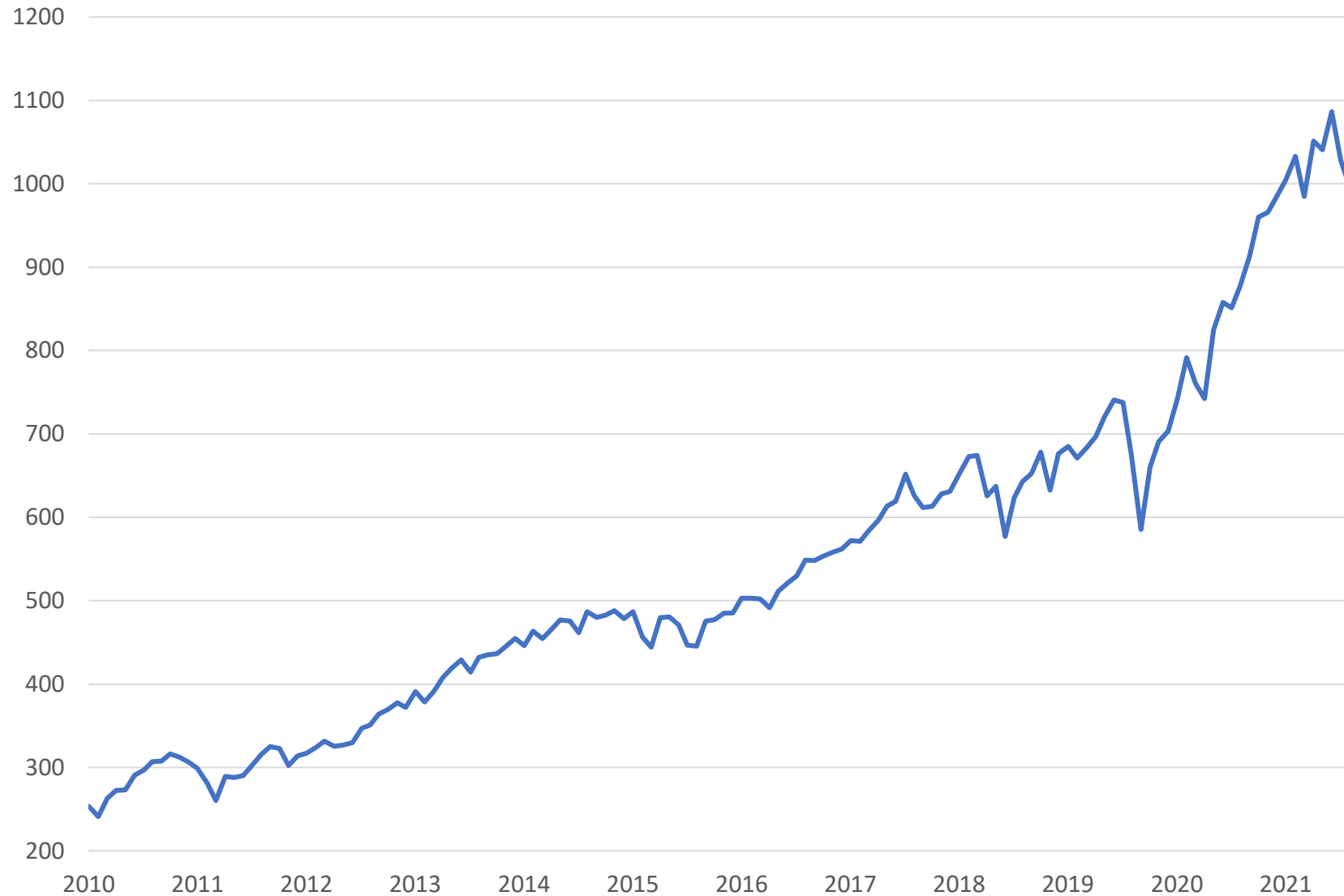
*** Actual investments may differ due to changing conditions and the availability of new information

Capital Markets

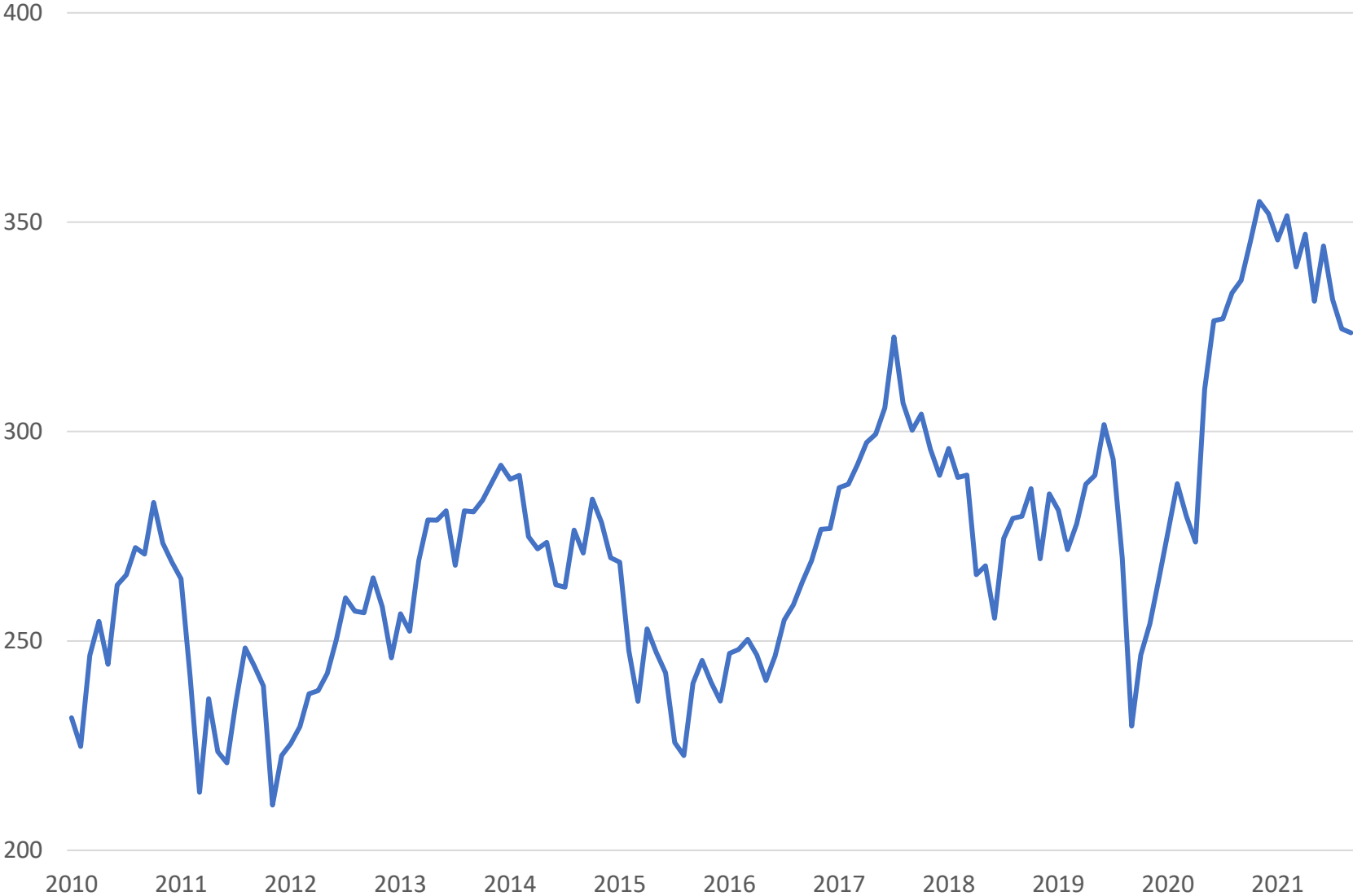
March 31, 2022



S&P Composite 1500 Index

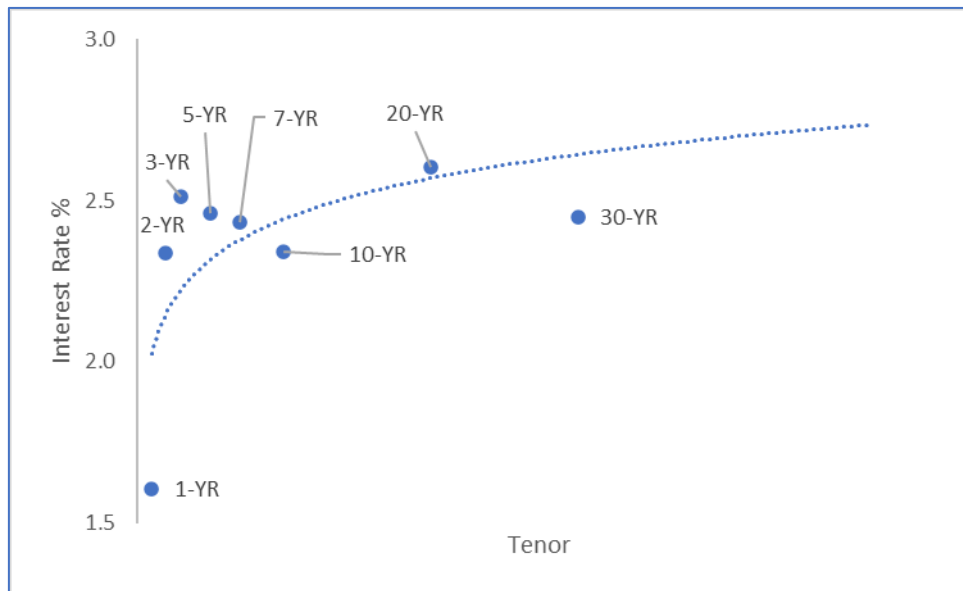


MSCI ACWI ex USA Index



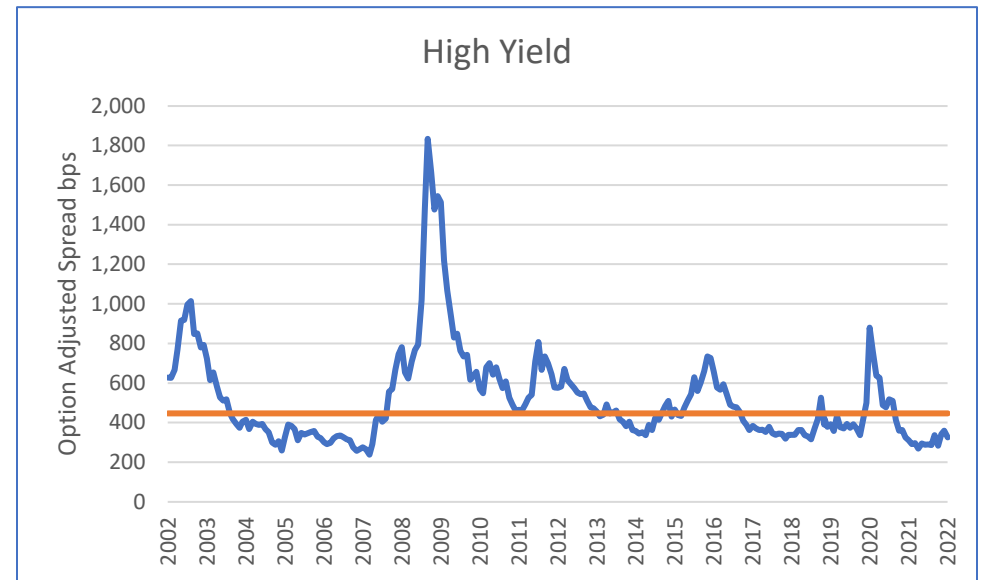
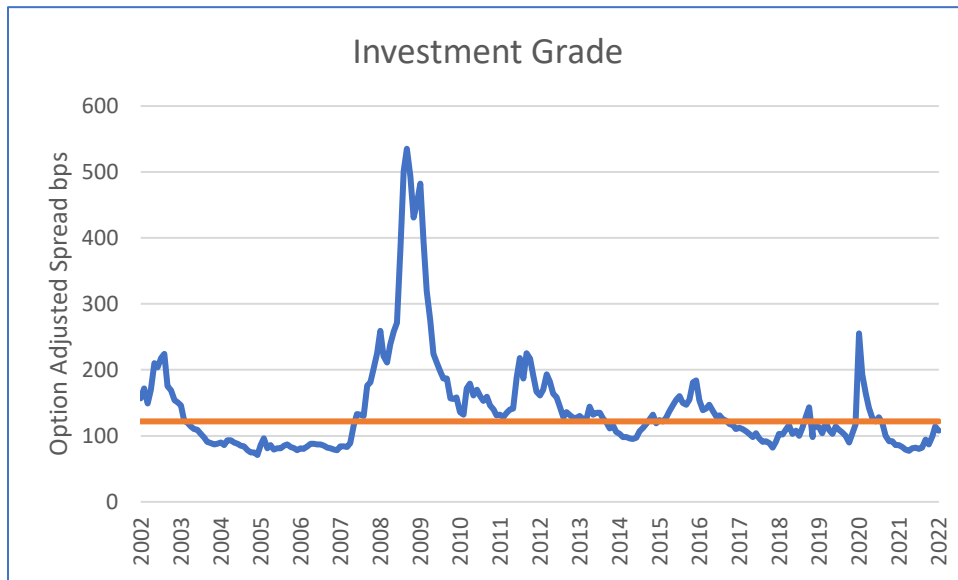
March 2022 Treasury Yield Curve

- Yield curve inverted from 3-year to 10-year and 20-year to 30-year
- Curve very steep from 1-year to 3-year

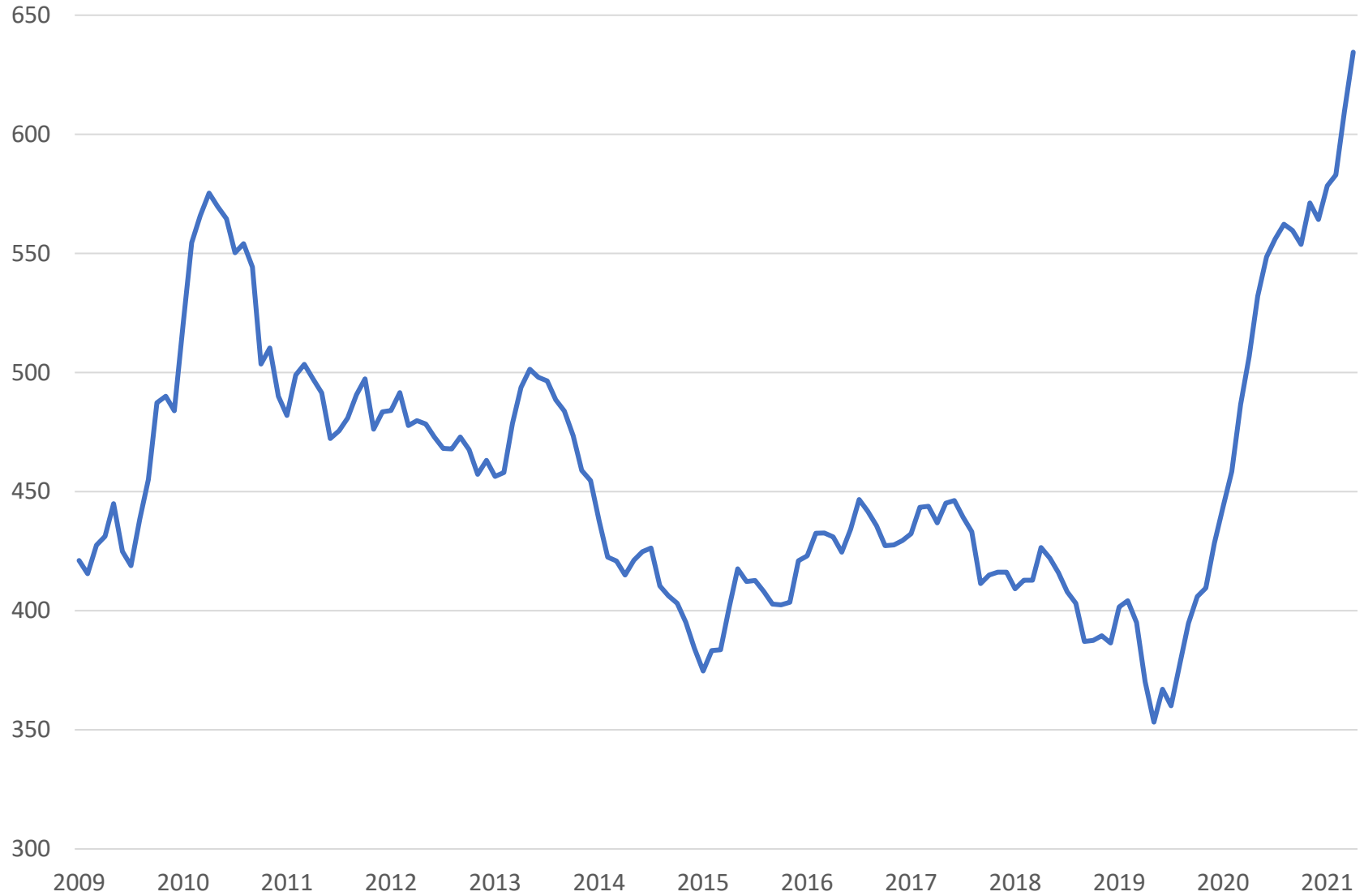


March 2022 Credit Spreads

- Credit spreads do not reflect the same concerns as the rates markets
- High Yield spreads are below average



CRB Index



Private Equity Review

Peter Woodford
Senior Investment Manager

Private Equity - At a Glance

Goals

- Construct a portfolio that generates attractive risk adjusted returns
- Portfolio returns that match or exceed the S&P 500 index plus 300 basis points
- Portfolio returns that exceed peer median returns

Private Equity - At a Glance

Portfolio Strategy

- Invest in high conviction managers with experience over multiple cycles
- Sector Focus
- Large Cap, middle market, and growth equity funds
- Co-investment to lower fees and generate higher net returns
- Maintain overweight to technology and health care sectors
- Consolidate manager lineup

Private Equity Performance

MPSERS Plan 3/31/2022	1-Year	3-Year	5-Year	7-Year	10-Year
Annualized Returns	44.9%	26.4%	21.9%	18.4%	17.7%
PE Benchmark Returns	32.5%	29.8%	22.0%	18.3%	20.0%
Peer Median Returns*	25.7%	13.8%	11.9%	10.4%	11.2%
Percentile Rank vs. Peers*	17	11	13	9	8

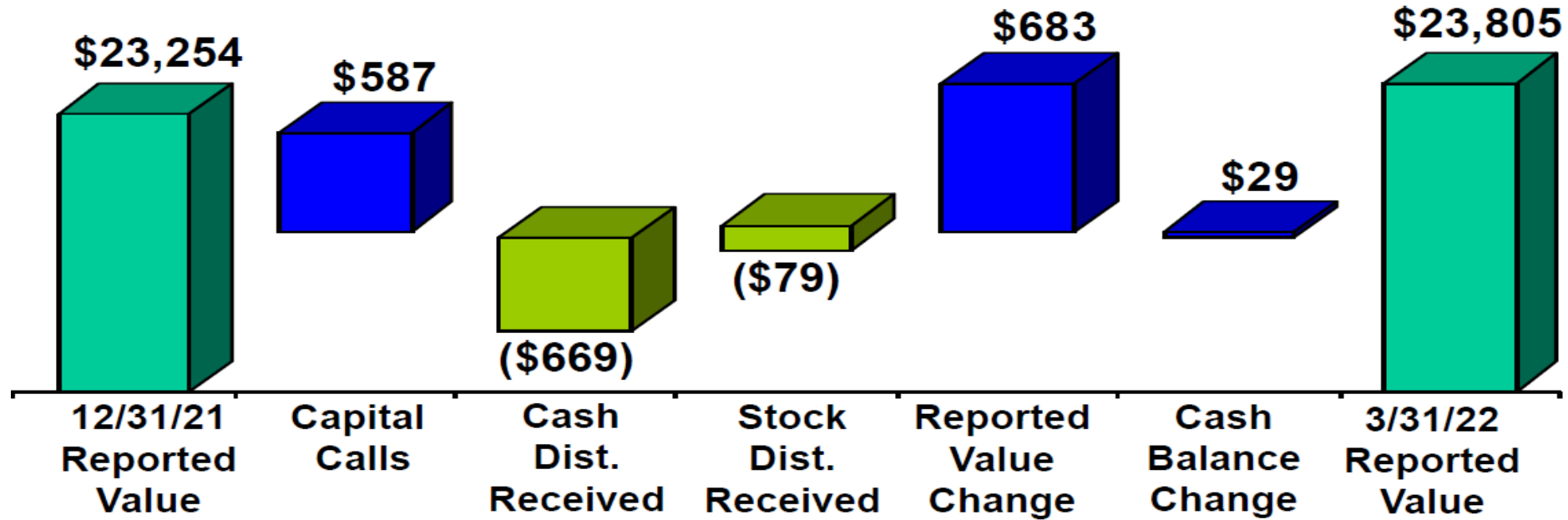
*State Street Universe greater than \$1 billion.

Private Equity Highlights

- Private Equity returns have been superior to peer median returns over all measurement periods, which is attributable to strategy as well as fund and co-investment decisions.
- It is not unusual for private equity returns to lag the public benchmark returns during periods of expansion and lead the public benchmark during periods of contraction. Over the last 10 years, the Private Equity Division outperformed the S&P by 3.1% (ten-year S&P 500 return 14.6%) and underperformed the benchmark by 2.3%.

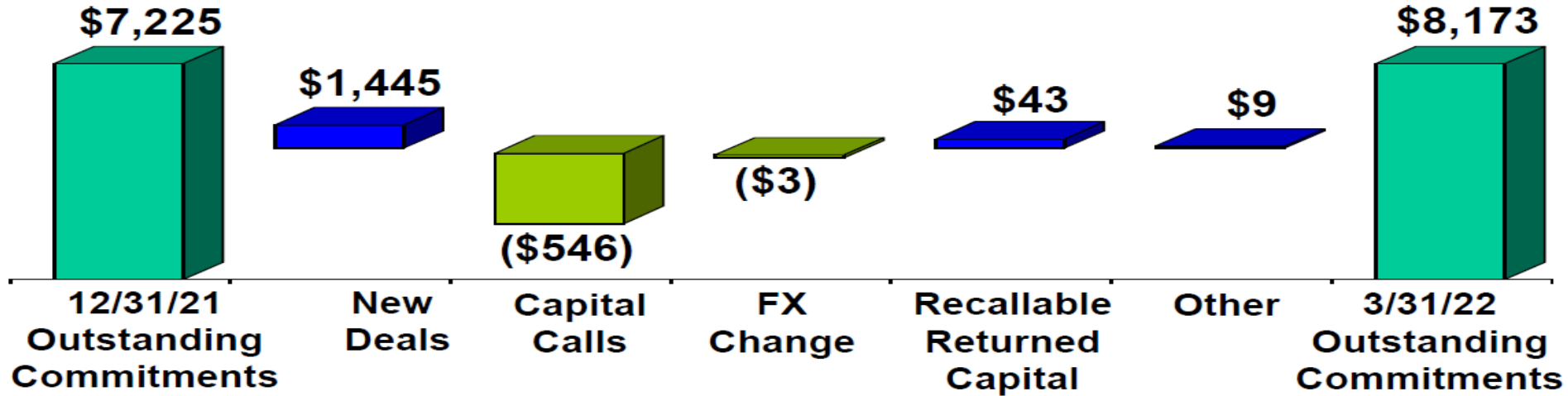
Portfolio Value

\$ Millions



Outstanding Commitments

\$ Millions



New Commitments Closed:

\$350 million to Advent International GPE X, L.P.

\$250 million to The Veritas Capital Fund VIII, L.P.

\$175 million to TSG9, L.P.

\$100 million to Harvest Partners IX, L.P.

\$100 million to Hg Saturn 3 A, L.P.

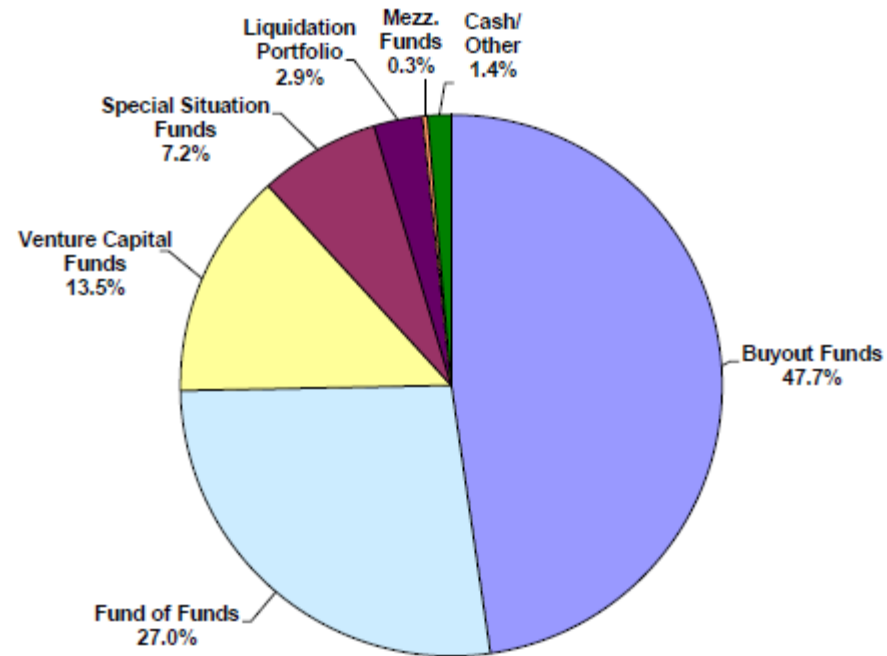
\$100 million to Thoma Bravo Discover Fund IV, L.P.

\$100 million to Thoma Bravo Explore II, L.P.

\$83.4 million to Permira VIII – 2 SCSp, L.P.

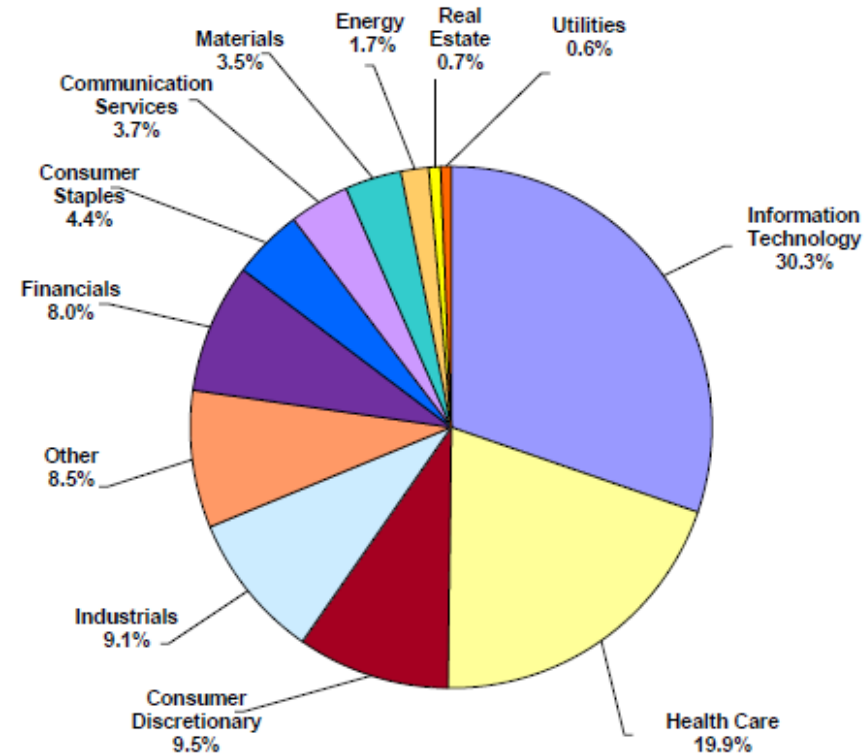
Asset Mix

- Portfolio largely allocated to buyout funds
 - Risk/return attributes
 - Size of the market
- Outlook
 - Increased focus on buyout
 - Large cap, middle market, growth equity funds
 - Decreased focus on fund of funds and low end of the buyout market



Investments by Sector

- Over 50% of sector allocation is in Information Technology and Health Care
 - Risk/return attributes
 - Growth
- Outlook
 - Increased focus on sector focused funds
 - Monitor overweight to Information Technology and Health Care



Private Equity Outlook

Headwinds across the investment landscape

- Inflation
- Central Bank Tightening
- Tight Labor Market
- Russian/Ukraine War

Guest Speaker

Orlando Bravo is a Founder and Managing Partner of Thoma Bravo. He led Thoma Bravo's early entry into software buyouts and built the firm into one of the top private equity firms in the world. Today, Orlando directs the firm's strategy and investment decisions in accordance with its principles of partnership, innovation, and performance. Orlando has overseen over 375 software acquisitions conducted by the firm, representing more than \$190 billion in transaction value. Forbes named him "Wall Street's best dealmaker" in 2019, and he was part of Thomson Reuters "Eight Buyout Pros to Watch" in 2009.

Orlando was born in Mayaguez, Puerto Rico. He graduated Phi Beta Kappa with a bachelor's degree in economics and political science from Brown University in 1992 and earned a JD from Stanford Law School and an MBA from the Stanford Graduate School of Business in 1998.

He is the Founder and Chairman of the Bravo Family Foundation, the mission of which is to provide access and opportunities to young adults in Puerto Rico. Orlando directs the organization's various programs and initiatives to promote entrepreneurship, community-based leadership and economic development in Puerto Rico. After Hurricane Maria hit Puerto Rico in 2017, he spearheaded a humanitarian mission to remote communities on the island. In 2019, Orlando committed \$100 million to the Foundation's Rising Entrepreneurs Program (REP) with the goal of fostering entrepreneurship in Puerto Rico.

The Orlando Bravo Center for Economics Research at Brown University supports innovative research, training and collaborative projects for faculty and students in the Department of Economics. At Stanford Law School, Orlando created the Bravo Family Public Interest Post-Graduate Fellowship Fund to support students seeking full-time employment in public interest.

Orlando's philanthropic interests also include causes in healthcare. He endowed faculty scholar and fellow positions at Stanford University's Sean N. Parker Center for Allergy Research. He supports a wide range of medical research conducted at Stanford University, at the University of California San Francisco (UCSF) and at the College of Physicians and Surgeons at Columbia University. He is also a member of the Board of Trustees at Memorial Sloan Kettering Cancer Center.

