

Asset Liability Management Mid-Cycle Review

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Investment Committee
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Introduction

The Strategic Asset Allocation process is used to build a diversified portfolio for a long-term investment horizon that balances expected risk and return.

CalPERS' Board adopted the strategic asset allocation for the PERF & Affiliate Funds between December 2017 – June 2018. The next full Asset Liability Management study will begin in 2021.

This mid-cycle review reflects current economic conditions, market valuation, and capital market assumptions as compared to the 2017/18 estimates.

Strategic Asset Allocation is the primary determinant of portfolio risk and return
– CalPERS' Investment Belief #6

Economic Overview

Unprecedented economic impact and global response

U.S. Unemployment

- 14.7% - April 2020
- 16.8% - Q2 2020 forecast

U.S. GDP

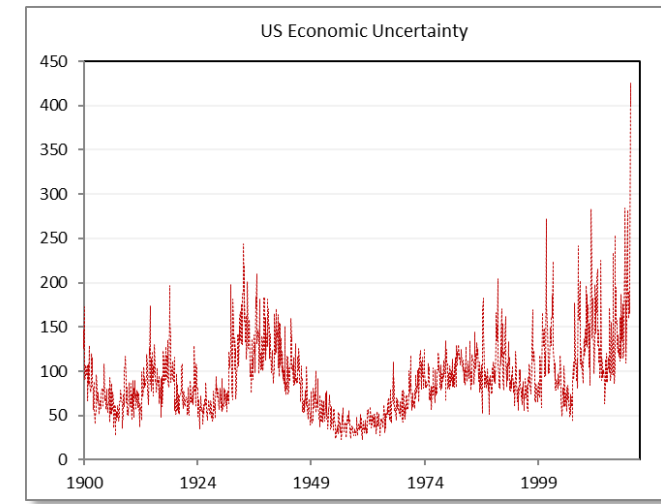
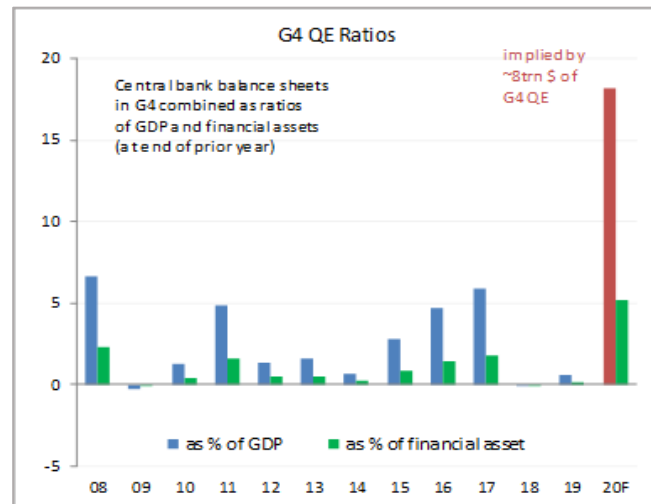
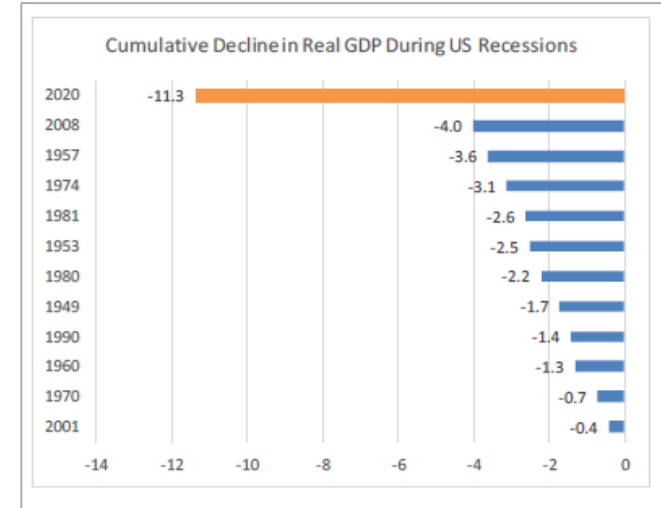
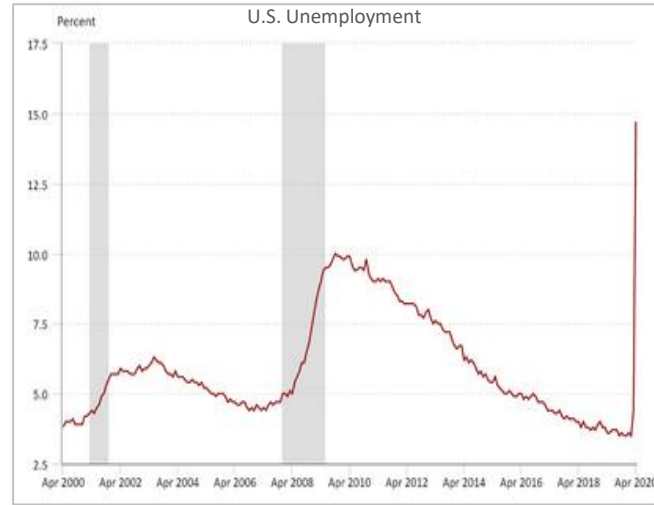
- -4.8% Q1 2020
- -35% Q2 2020 forecast

U.S. & Global Response

- Monetary & fiscal support
- Timely and unprecedented size
- Several trillion in aid granted

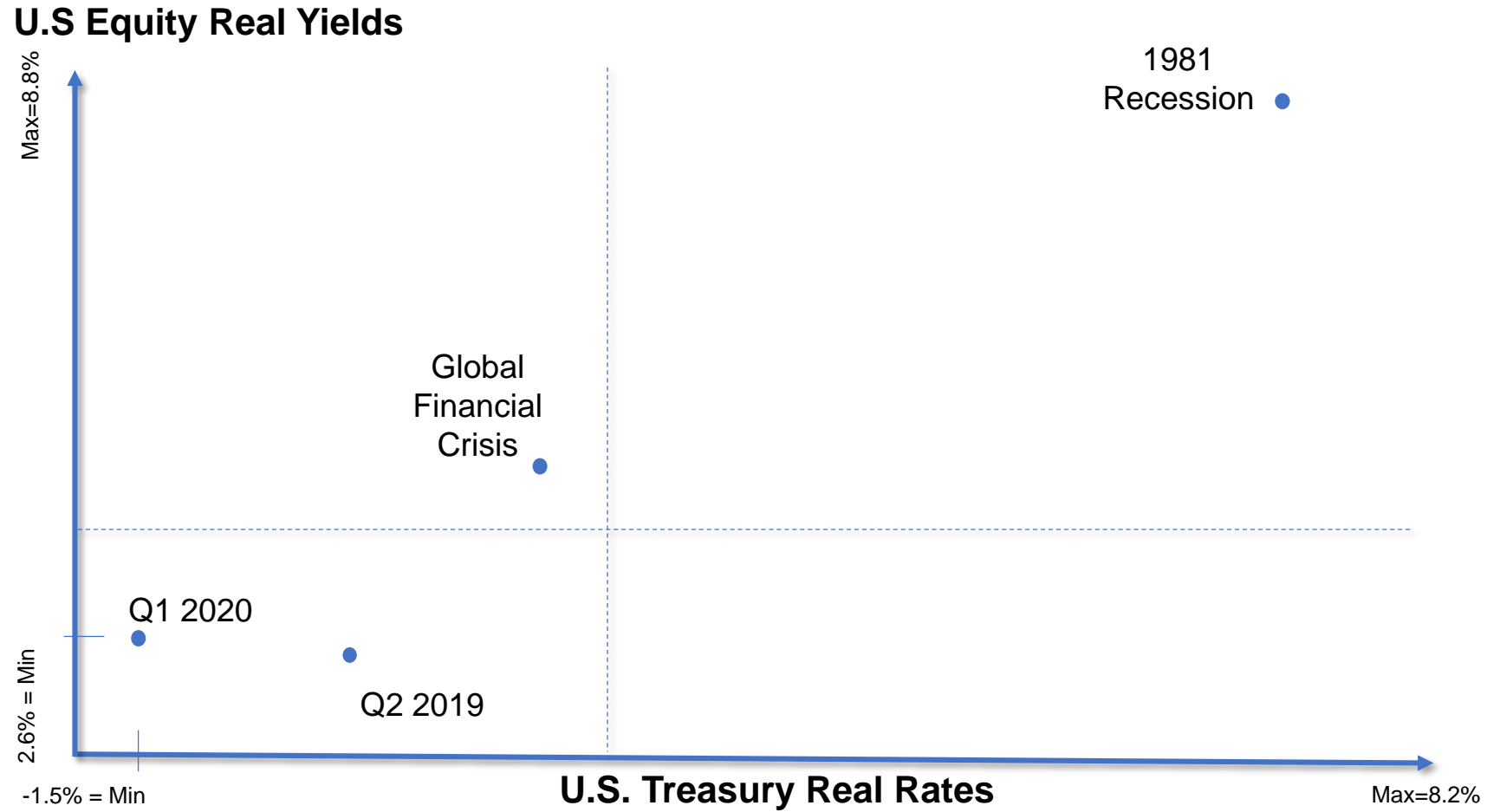
Economic Uncertainty

- Remains extremely elevated
- No close historic parallel



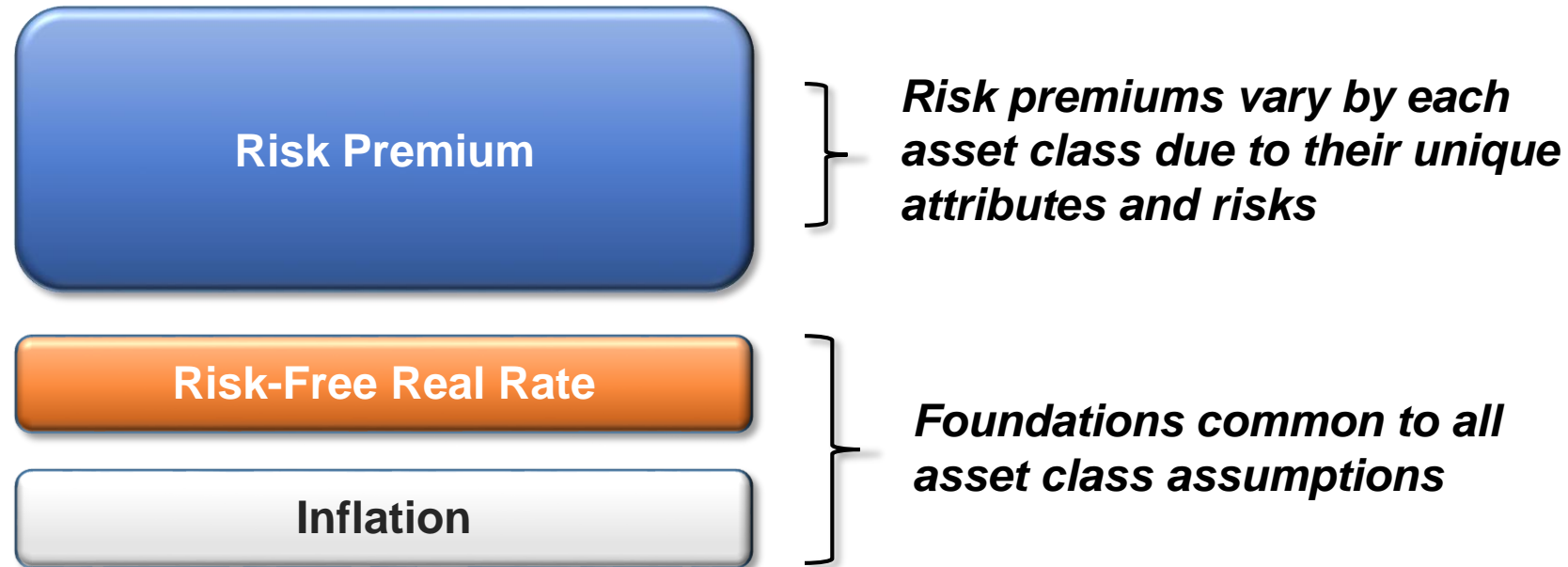
Data as of April - May 2020

Market Valuation



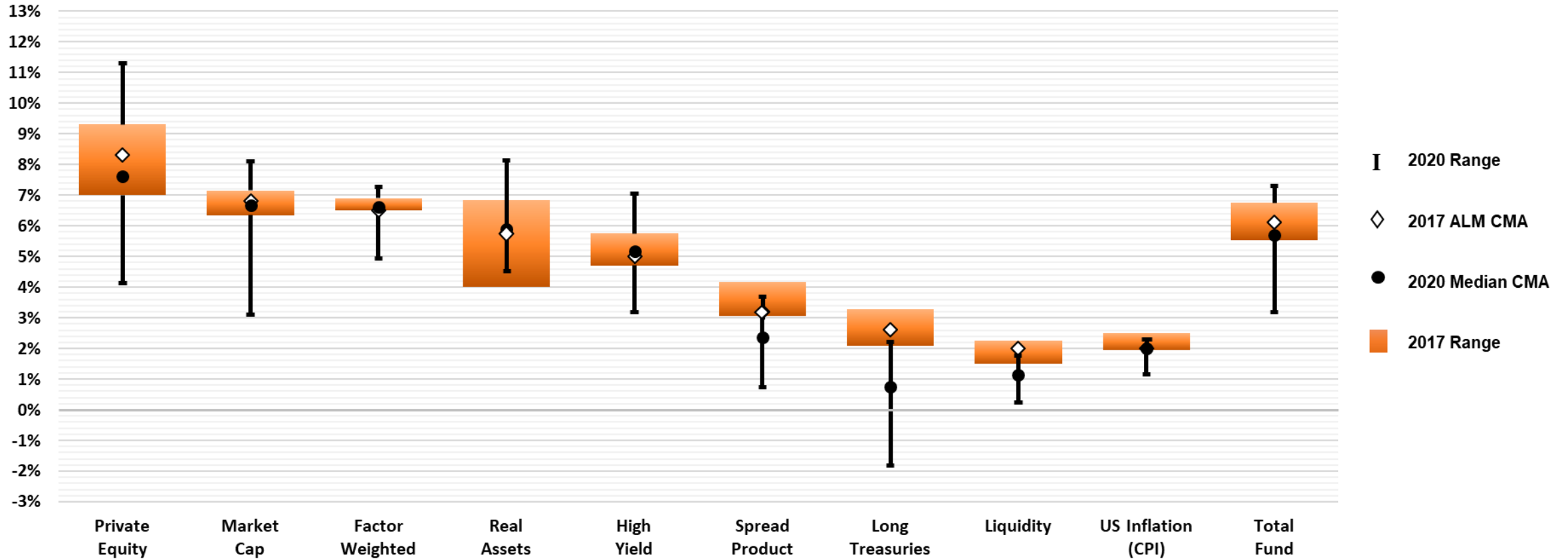
Data as of April 30, 2020

Capital Market Assumptions Building Blocks



Capital Market Assumptions

10-year Expected Returns 2020 vs. 2017 - PERF

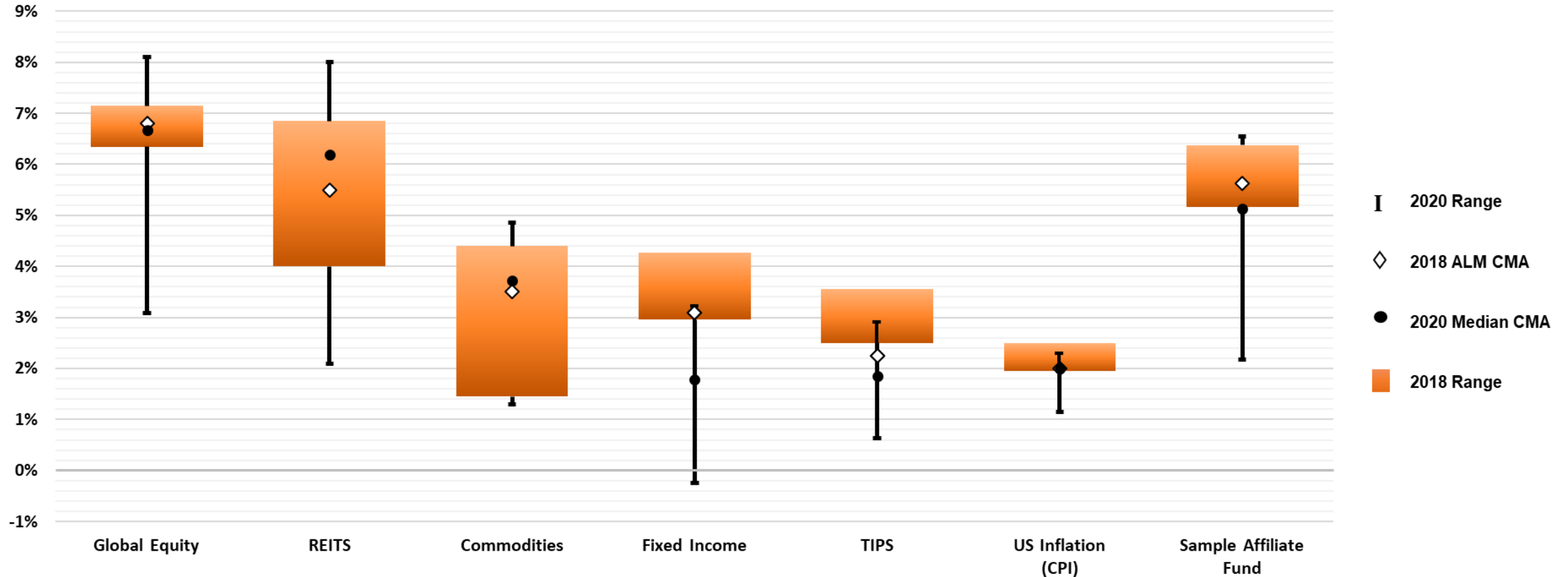


Data Sources:

- 2020 – March 31, 2020 CMA Survey Results from 10+ providers; CalPERS' CMA models
- 2017 - CalPERS 2017 Asset Liability Management Capital Market Assumptions.

Capital Market Assumptions

10-year Expected Returns 2020 vs. 2018 - Affiliate Funds



Asset Class Segments Factor Weighted & High Yield

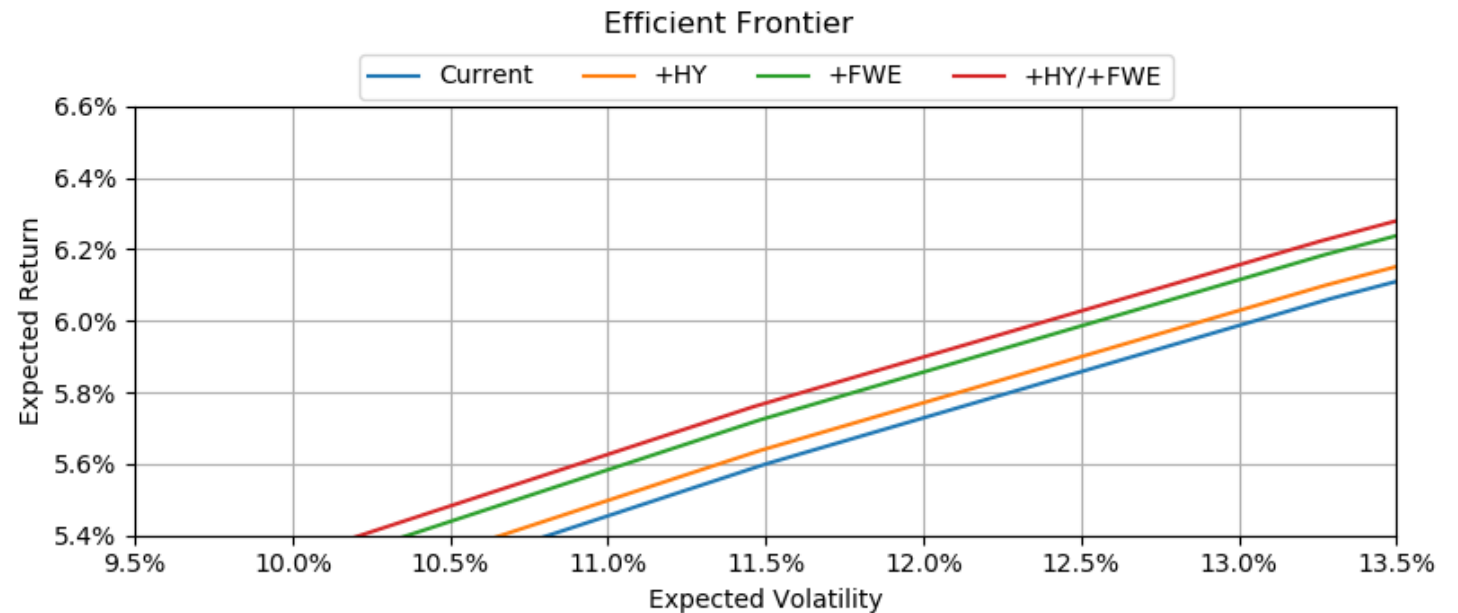
PERF Implementation - Constraints

- Assessed costs, capacity, market
- Reaffirmed constraints set in 2017
- Review again in full ALM study

Affiliate Funds Analysis

- Adding High Yield (HY) and/or Factor Weighted Equity (FWE) improves the efficient frontier for sample fund
- Product availability and costs to be reviewed

Sample Affiliate Fund with Asset Segments Added
10-Year Expected Returns and Volatility – March 2020



Next Steps

Asset Liability Management Study

- Begin planning and preparation for launch in 2021

Asset Class Research

- PERF
 - Review role of US Treasuries and potential alternatives
 - Revisit segment constraints in ALM study
- Affiliate Funds
 - Review role of US Treasuries and potential alternatives
 - Review role of inflation asset classes and potential alternatives
 - Assess cost/benefit for Factor Weighted Equity & High Yield segments