

Legislative Finance Committee Senator John Arthur Smith, Chairman Representative Jimmie C. Hall, Vice-Chairman April 13, 2016

> Patty French, Board Chair Wayne Propst, Executive Director Jon Grabel, Chief Investment Officer

PERA 2016 Strategic Asset Allocation Process

Board education session

February 2016

Policy portfolio review

March 2016

Schedule update to Strategic Asset Allocation

April 2016

Implementation

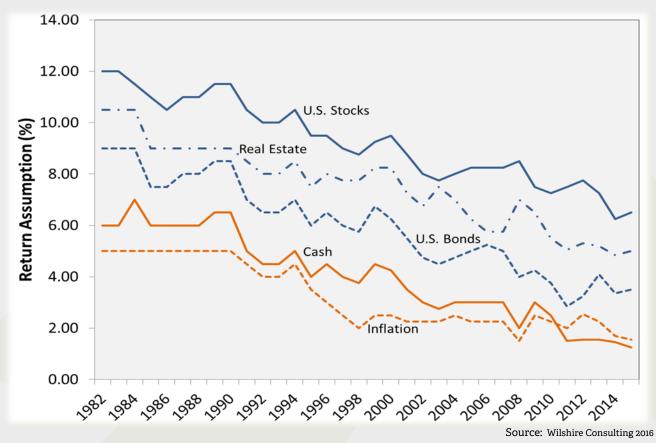
Begins May 2016

Recommendations for updated actuarial assumptions

June 2016



Forecasted Returns Over Time



- Expected returns over the 10 year time horizon have moved lower across major asset classes
- With lower risk premiums, total portfolio expected returns are likely to be more muted than 20+ years ago

Simplifying Asset Categories

- Identify asset groupings based on the role each asset plays in a broader portfolio
- True diversification is achieved when combining asset classes that respond differently to various economic environments
- Avoid "diversification in name only" pitfall
- PERA is working to counteract manager and investment strategy proliferation, and effect better implementation of its strategic asset allocation



Asset Class Buckets

Current % of PERA Portfolio

Global Equity

- Economic Growth
- •Global Public Equity
- •Global Low Volatility Equity
- Hedged Equity
- Private Equity

54.3%

Risk Reduction/ Mitigation

- Safety and Liquidity
- •Core Fixed Income
- •Global Core Fixed Income
- Long Duration Core Fixed Income
- •Cash

Credit Oriented

- Hybrid Exposure to Growth and Income
- •Liquid Credit Strategies
- •Emerging Market Debt
- •Illiquid Credit Strategies

6.3%

26.1%

Real Assets

- Inflation Protection
- •Liquid Real Estate
- •Illiquid Real Estate
- •Liquid Real Assets
- •Illiquid Real Assets
- •Market Neutral Hedge Funds

13.3%





PERA Fund Performance

PERA Fund Performance

- The PERA Fund balance was \$13.9 billion on December 31, 2015
- During 2015, the Fund returned -1.10% (net of fees) and was down ≈\$90 million (net of fees)
- PERA Fund paid out benefits of \$1.01 billion during 2015
- PERA Smart Save (457b) balance was \$500 million on December 31, 2015 with 18,847 participants

As of 12/31/2015	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception 6/30/1985
PERA Total Fund Returns (Net of Fees)*	-2.78%	-1.10%	6.77%	6.43%	4.69%	8.72%
Policy Benchmark*	-2.74%	-0.17%	6.34%	5.88%	5.42%	8.89%
Value Add	-0.04%	-0.93%	0.43%	0.55%	-0.73%	-0.17%

^{*}Annualized returns



PERA Risk Statistics

As of 12/31/2015*	1 Year	3 Year	5 Year	10 Year
Beta**	1.04	1.08	1.06	1.13
Realized Risk	6.80	5.99	8.27	12.27
Policy Risk	6.56	5.50	7.78	10.81
Active Risk***	0.24	0.49	0.49	1.46

^{*} Risk Statistics are annualized

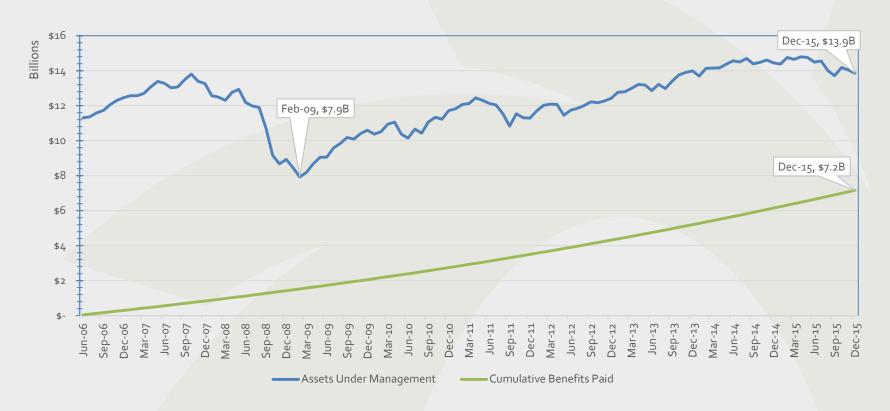


^{**}Market Sensitivity

^{***}Active Risk is defined as Realized Risk minus Policy Risk

PERA Assets Under Management

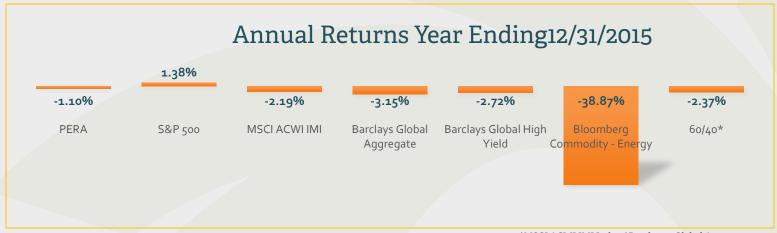
Assets Under Management & Cumulative Benefits Paid





2015 Macro Themes

- Overall a challenging year:
 - Slowing global growth
 - Divergence in central bank policies
 - Commodity deflation



2015 Winners and Losers

*MSCI ACWI IMI Index / Barclays – Global Aggregate Bond Index

- Winners: Private Equity +15.6%, Real Estate +8.9%
- Losers: Real Assets -24%, Emerging Market Equity -14.3%
- Prudent diversification is the best long term strategy



Conclusions

- Since FY 2014 PERA has
 - Reduced the PERA Fund's sensitivity to the direction of the market
 - Better balanced reduced risks across asset categories
 - Reduced fees paid to money managers
- In FY 2017 PERA anticipates
 - Implementing an updated strategic asset allocation
 - Decreasing its actuarial rate of return assumption from 7.75%
- A lower actuarial return assumption would
 - Result in a one-time increase in the Plan's liabilities
 - Better reflect market realities
 - Facilitate a less risky portfolio
- An updated strategic asset allocation and lower actuarial return assumption provides greater assurance for PERA to meet its obligations to current and future retirees

