



Kentucky Retirement Systems

# PPOB

**David Harris, Board of Trustees Chair**  
**David Eager, Executive Director**

June 25, 2018

# AGENDA

- **Background on asset allocation**
- **History leading up to today**
- **Details of our new asset allocations**

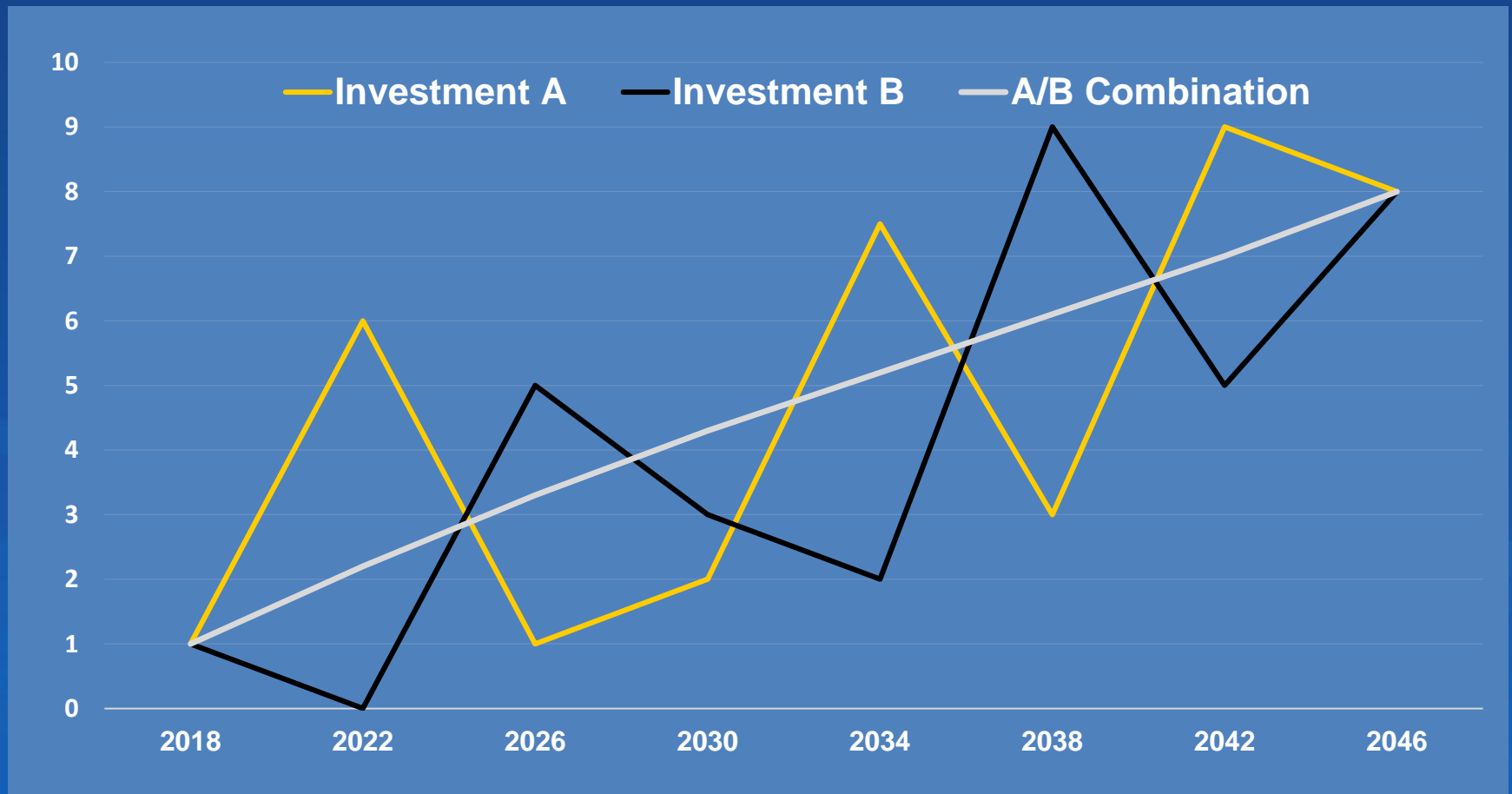
# 1. Identify the universe of investible securities

- Which asset classes?
- Securities within asset classes

## **2. Determine the characteristic of each asset class**

- **Volatility**
- **Income**
- **Liquidity**
- **Growth potential**
- **Drivers**
- **Collation to other asset classes**

# The Value of INTELLIGENT DIVERSIFICATION



# Asset Class CORRELATIONS

	US EQUITY	NON-US EQUITY	CORE FIXED INCOME	HIGH YIELD/CREDIT	REAL ESTATE	HEDGE FUNDS	REAL RETURN	PRIVATE EQUITY	CASH
EXPECTED RETURN (%)	6.25	6.45	3.55	4.95	6.90	4.75	5.75	8.75	1.75
EXPECTED RISK (%)	17.00	18.75	5.15	10.00	14.00	4.60	7.75	28.00	1.25
<b>CORRELATIONS</b>									
US EQUITY	1.00								
NON-US EQUITY	0.83	1.00							
CORE FIXED INCOME	0.28	0.09	1.00						
HIGH YIELD/ CREDIT FIXED INCOME	0.54	0.45	0.25	1.00					
REAL ESTATE	0.54	0.47	0.19	0.57	1.00				
HEDGE FUNDS	0.43	0.55	0.08	0.58	0.32	1.00			
REAL RETURN	0.44	0.51	0.30	0.55	0.64	0.50	1.00		
PRIVATE EQUITY	0.74	0.67	0.31	0.34	0.51	0.42	0.46	1.00	
CASH	(0.05)	(0.08)	0.19	(0.10)	(0.05)	0.07	0.04	0.00	1.00

# 3. Assess the needs of the plans

- **Risk tolerance**
- **Growth**
- **Volatility**
- **Cash flow**
- **Income**

## 4. Conduct optimization model simulations

- **Any constraints/limits?**  
*Maximums and minimums*
- **Project returns**
- **Historical correlations**



## 5. Evaluate the output

- **Best of the trade-offs**
- **Consider probabilities**

# KRS Asset Allocation Background

## 2016

- **Newly constituted Investment Committee** (August, 2016)  
David Harris, Chair  
All five members have investment experience
- **Announced plan to reduce hedge funds**
- **Formed Pension Asset Allocation Committees**  
Neil Ramsey, Bill Cook  
Met regularly with staff
- **Entire Investment Committee met regularly**

# KRS Asset Allocation Background

## 2017

- **Recommended new economic assumptions**
  - **KERS NONHAZ and SPRS - 5.25% interest rate**
  - **Other eight plans - 6.25% interest rate**
  - **KERS NONHAZ and SPRS - 0.0% payroll growth**
  - **Other three pensions – 2.0% payroll growth**
  - **Inflation – 2.3%**
- **Formalized new asset allocations**
- **More plan specific**
- **More conservative**
- **More liquid**
- **Recategorized asset class groupings**

# KRS Asset Allocation Background

## 2018

- **Wilshire concludes an asset/liability study**
  - **Recommends new asset allocations**
  - **Modestly different from existing policy**
  - **Adopted by the Board in June, 2018**

# Asset Allocation

ASSET CLASS	Long-Term Benchmark	Pensions: KERS NONHAZ & SPRS			Pensions: CERS NONHAZ, CERS HAZ, KERS HAZ, and all 5 Insurance		
		RATE	MIN	MAX	RATE	MIN	MAX
Assumed Rate of Return		5.25%			6.25%		
<b>GROWTH</b>		<b>53.50%</b>	<b>50%</b>	<b>65%</b>	<b>62.50%</b>	<b>60%</b>	<b>66%</b>
US EQUITY	Russell 3000	15.75%	10%	25%	18.75%	10%	25%
NON-US EQUITY	MSCI ACWI Ex-US IMI	15.75%	10%	25%	18.75%	10%	25%
PRIVATE EQUITY	Russell 3000 + 300 bps (lagged)	7.00%	5%	15%	10.00%	7%	13%
HIGH YIELD/ SPECIALTY CREDIT	Bloomberg Barclays US High Yield	15.00%	10%	25%	15.00%	5%	20%
<b>FIXED INCOME/LIQUIDITY</b>		<b>23.50%</b>	<b>15%</b>	<b>26%</b>	<b>14.50%</b>	<b>10%</b>	<b>18%</b>
CORE FIXED INCOME	Bloomberg Barclays US Aggregate	20.50%	15%	36%	13.50%	7%	18%
CASH	Citi Grp 3-mos Treasury Bill	3.00%	0%	5%	1.00%	0%	5%
<b>DIVERSIFYING STRATEGIES</b>		<b>23.00%</b>	<b>15%</b>	<b>26%</b>	<b>23.00%</b>	<b>15%</b>	<b>26%</b>
REAL ESTATE	NCREIF ODCE	5.00%	0%	10%	5.00%	0%	10%
OPPORTUNISTIC/ ABSOLUTE RETURN	HFRI Diversified	3.00%	0%	10%	3.00%	0%	10%
REAL RETURN	US CPI + 3%	15.00%	5%	20%	15.00%	5%	20%

# KRS vs. Other State Pension Plans

	U.S. State Pensions	KERS NONHAZ SPRS	All other KRS Plans
<b>Equities</b>	<b>48%</b>	<b>32%</b>	<b>38%</b>
<b>Fixed Income</b>	<b>23%</b>	<b>39%</b>	<b>30%</b>
<b>Real Estate</b>	<b>14%</b>	<b>5%</b>	<b>5%</b>
<b>Private Equities</b>	<b>9%</b>	<b>7%</b>	<b>10%</b>
<b>All other</b>	<b>6%</b>	<b>17%</b>	<b>17%</b>
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

# KRS Performance Update

*(net of fees)*

	3/31/18 YTD	5/31/18 YTD <sup>2</sup>
<b>Pension Blend</b>	<b>7.7%</b>	<b>8.6%</b>
Wilshire TUCS Rank <sup>1</sup>	22nd	
<b>Insurance Blend</b>	<b>8.0%</b>	<b>8.9%</b>
Wilshire TUCS Rank <sup>1</sup>	15th	

1. *TUCS Comparisons are gross of fees*
2. *Preliminary unaudited*