April 24th, 2023, Minutes



El Paso County Retirement Plan

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Meeting of the Board of Directors of the El Paso County Retirement Plan April 24, 2023 – 8:00am RDC Hearing Room 2880 International Circle Colorado Springs, CO 80910

Attendees

Board Members: Chris Long (Chairman) Nikki Simmons (Vice Chairman) Chuck Broerman (Treasurer) Andrew Prehm

Andrew Prehm William Jennings

Other attendees:

Greg Kuppenheimer, EPCRP, Executive Director Linda Fowler, EPCRP, Senior Retirement Counselor Christopher Del Valle, EPCRP, Retirement Counselor Tom Toth, Managing Director, Wilshire Advisors Paul Wood, Consulting Actuary, GRS & Co

Absent Members

Board Members:

Associate Members:

Associate Members:

Victoria Bennett

Heather Laslie

Taylor Gross

Meeting

- 1. Chairman Long called the meeting to order at 8:09 am, notes quorum, Vice Chairman Simmons, Treasurer Broerman, Board Member Prehm, Board Member Jennings, and Chairman Long.
- 2. Public Comment from Ron Ramsey, a current retired member of the Plan.
 - Mr. Ramsey inquired about the usage of ESG funds by the Plan and on the research done into Wilshire Advisors before they were selected as the OCIO.
 - Chairman Long explained the Plan does not make use of ESG specific funds or ESG factors when selecting funds. He also explained the general RFP process that resulted in Wilshire Advisors being selected as OCIO.
 - Mr. Toth stated Wilshire Advisors acts in a fiduciary capacity to the Plan and does not take ESG factors into account when advising the Plan.
- 3. Executive Director Kuppenheimer presents Executive Director's Report (see attached).
 - The unofficial funding ratio with 2021 liabilities is 64% and with 2022 liabilities is 61%.
 - There was an error found in the service purchase formula that could result in "zero-cost" purchase pricing, however we have worked with GRS to derive a simple algorithmic solution which is being implemented in our Data Management System with Conduent.
 - We last reviewed our custodian in 2020 but since that time, service has declined with US Bank and there was a recent valuation reporting error. We plan to consider alternative custodians this summer.
 - We are essentially on budget, within +/- 5% considering the timing/lumpiness of certain expenses.
- 4. Tom Toth, Managing Director, Wilshire Advisors presents Portfolio Expected Return and Risk Update (see attached)

- Mr. Toth presents the Portfolio Expected Return and Risk Update. Asset allocation is typically updated every 3 to 5 years, but Wilshire is bringing a suggested moderate adjustment to that allocation only a year since the last update due to shifts in capital market assumptions. They recommend increasing the allocation to defensive assets by 5% and decreasing growth assets by 5%.
- The Board discussed the impacts of this change and reviewed the projections provided by Wilshire Advisors.
- Vice Chairman Simmons moved to approve the new target policy based upon Wilshire Advisor's recommendations. Treasurer Broerman seconded the motion. The motion carried unanimously.
- Wilshire Advisors will bring a formal policy adjustment to the board next meeting.
- Board Member Jennings departed the meeting at this time.

5. Paul Wood, Consulting Actuary, Gabriel, Roeder, Smith, & Company Presents January 1, 2023 Actuarial Valuation of the Plan (see attached)

- Mr. Wood presets the January 1, 2023 Actuarial Valuation of the Plan. Poor market returns resulted in a decline in the funding ratio. Employee pay increased more than expected, resulting in higher liabilities and contributions than expected. Contribution rate increases give an upward trajectory for the projected funding ratio.
- Board Member Prehm moved to approve the January 1, 2023 Actuarial Valuation Report. Vice Chairman Simmons seconded the motion. The motion carried unanimously.

6. Chairman Long presents the Chairman's Report

• Chairman Long noted that former Board Member Ray Bernier, who served 2 terms, will be missed but the Board welcomes Andrew Prehm from the Sheriff's Department and Professor William Jennings to the board.

7. Election of the 2023 Board of Retirement Officers

- Chairman Long stated he is happy to serve as Chairman for the remainder of his term on the Board. Vice Chairman Simmons moved to have Chairman Long remain as Chairman. Treasurer Broerman seconded the motion. The motion carried unanimously.
- Chairman Long moved to have Vice Chairman Simmons remain as Vice Chairman. Treasurer Broerman seconded the motion. The motion carried unanimously.
- Chairman Long noted Board Member Jennings informed him he is open to serve in an officer position. Vice Chairman Simmons moved to appoint Board Member Jennings as Secretary. Chairman Long seconded the motion. The motion carried unanimously.

8. Appointment of Associate Members

Chairman Long stated the intention today was to look at appointing Mike Varnet as an associate member to
represent retirees and Dr. Ryan Chacon, who previously served as a regular Board Member and provided an
independent academic investment perspective to the board. However, the by-laws allow for only 4 Associate
Board members and there are currently 3 Associate Board Members. The Board discusses changing the ByLaws to allow 5 Associate Board Members.

9. Chairman Long presents the Board packet for ratification by consent.

Approval of the February 27, 2023, Board Meeting Minutes.
 Chairman Long moved to approve the Meeting Minutes. Board Member Prehm seconded the motion. The motion carried unanimously.

10. Adjournment

• There being no further business, Chairman Long noted the next board meeting is May 22, 2023, at 8:00 a.m., in person at the Regional Development Center and adjourned the meeting.

The meeting adjourned at 9:39 am.

William W. Jennings
william W. Jennings (May 23, 2023 13:14 MDT)
William Jennings, Secretary

Christopher Del Valla
Christopher Del Valle, Recording Secretary



Executive Director Report 24 April 2023

Executive Director Report

Plan Funding Summary	Month-End Month-End (2022 Liability) (2021 Liability)		Year-End 2021
Actuarial Liability Value	\$725 mil	\$687 mil	\$687 mil
Asset Value (Estimate as of Month End)	\$439 mil	\$439 mil	\$491 mil
Unfunded Liability	\$286 mil	\$248 mil	\$196 mil
Funded Ratio	61%	64%	71%

Highlights for Board:

<u>Service Purchase Calculators:</u> we found an error in "zero-cost" service purchases, and worked with GRS to derive a simple algorithmic solution that will be implemented in our Data Management System (Conduent).

<u>Custodian:</u> we last reviewed our custodian in 2020, but since that time, service has declined with US Bank and there was a recent valuation reporting error (Standout Capital). We plan to consider alternative custodians this summer.

Expenses: we are essentially on-budget (+/- 5%) considering the timing/lumpiness of certain expenses.

Executive Director Report

Financial Review vs. 2023 Budget:

Annual expenses have been moving steadily downward, from a 2016-2020 average of \$785k to a 2022 actual of \$505k and a 2023 budget of \$551k.

		2023 Budget Full Year	2023 Budget YTD	2023 Actual YTD	Difference
Salaries & B	enefits	273,996	68,499	64,069	-4,430
Vendor	Legal	25,000	6,250	12,392	6,142
Contracts	Actuary	45,200	11,300	0	-11,300
	Audit	30,000	7,500	0	-7,500
	Accounting	24,000	6,000	8,000	2,000
	Data Provider*	66,500	16,625	16,200	-425
	Life Force	3,750	938	3,400	2,463
	Insurance	60,000	15,000	25,508	10,508
	Total	244,200	61,050	67,108	6,058
Administrat	ive Expenses	22,600	5,650	2,086	-3,564
Total Expens	ses	550,796	137,699	133,263	-4,436

Wilshire

El Paso County Retirement System

Asset Allocation Target Update

Thomas Toth, CFA –Managing Director

Background

The asset allocation decision is the most important decision an investor can make

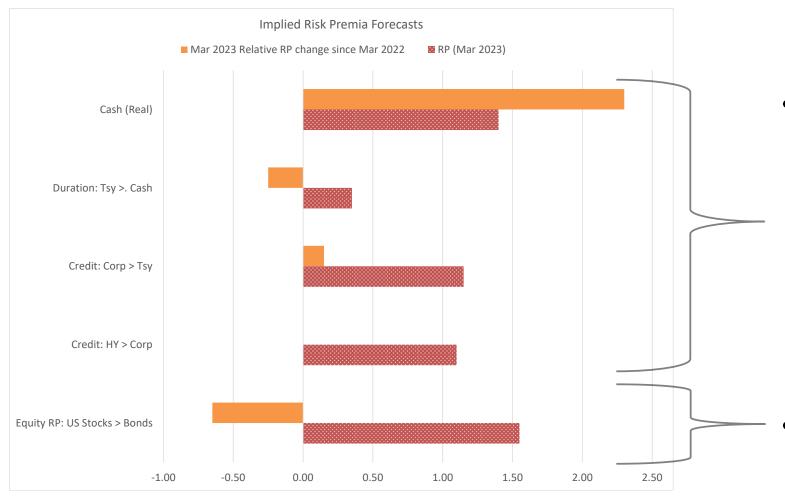
• The asset allocation decision drives 90% of return variability among portfolios

Wilshire recommends revisiting the asset allocation decision every three to five years, or sooner, as market conditions warrant

- El Paso County adopted new asset allocation targets in May 2022
 - Increased target allocation to private asset classes to 45%
 - Diversifying asset target allocation increased by 2.5%
 - Defensive allocation to core fixed income/cash remained at 5.5%

Given a shift in Wilshire's capital market assumptions, Wilshire recommends moderately adjusting the asset allocation targets

Capital Market Risk Premium Changes



- Shift in interest rates increases fixed income risk premiums (returns)
 - Cash +
 - Duration +
 - Investment Grade Corporate Credit
 - Equity Risk Premium has compressed since the last asset allocation discussion

Source: Wilshire.

Adjusted Target Portfolio

Current Policy as of March 2022 Fixed Income				
Total Defensive / Rate Sensitive Assets 5.50% 5.50% 10.50% Total Defensive Growth Assets 10.00% 10.00% 10.00% Total RA / Inflation Sensitive Assets 20.00% 20.00% 20.00% Total Non-Directional / Diversifier Assets 14.25% 14.25% 14.25% Total Assets 100.0% 100.0% 100.0% 100.0% Expected Return - 10 Years (%) 7.04 7.81 7.73 Expected Return - 30 Years (%) 8.09 8.40 8.29 Standard Deviation of Return (%) 12.99 13.08 12.40 Sharpe Ratio 0.26 0.32 0.33 Contribution to Asset Volatility (%): 70.4 69.8 67.3 0.5 1.2 0.5 0.5 1.2 0.5 0.5 1.2 0.5 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5 1.2 0.5	Asset Class	Policy as of	Policy as of	
Total Defensive Growth Assets 10.00% 10.00% 10.00% Total RA / Inflation Sensitive Assets 20.00% 20.00% 20.00% Total Non-Directional / Diversifier Assets 14.25% 14.25% 14.25% Total Assets 100.0% 100.0% 100.0% Expected Return - 10 Years (%) 7.04 7.81 7.73 Expected Return - 30 Years (%) 8.09 8.40 8.29 Standard Deviation of Return (%) 12.99 13.08 12.40 Sharpe Ratio 0.26 0.32 0.33 Contribution to Asset Volatility (%): 70.4 69.8 67.3 Defensive/Rate Sensitive 0.5 0.5 1.2 Defensive Growth 5.1 5.4 5.7 RA/Inflation Sensitve 16.4 16.3 17.2 Nondirectionar/Diversifier 7.6 8.0 8.5 Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	Total Growth Assets	50.25%	50.25%	45.25%
Total RA / Inflation Sensitive Assets 20.00% 20.00% Total Non-Directional / Diversifier Assets 14.25% 14.25% Total Assets 100.0% 100.0% 100.0% Expected Return - 10 Years (%) 7.04 7.81 7.73 Expected Return - 30 Years (%) 8.09 8.40 8.29 Standard Deviation of Return (%) 12.99 13.08 12.40 Sharpe Ratio 0.26 0.32 0.33 Contribution to Asset Volatility (%): Growth Forwith 70.4 69.8 67.3 Defensive/Rate Sensitive 0.5 0.5 1.2 Defensive Growth 5.1 5.4 5.7 RA/Inflation Sensitve 16.4 16.3 17.2 Nondirectionar/Diversifier 7.6 8.0 8.5 Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	Total Defensive / Rate Sensitive Assets	5.50%	5.50%	10.50%
Total Non-Directional / Diversifier Assets 14.25% 14.25% 14.25% Total Assets 100.0% 100.0% 100.0% Expected Return - 10 Years (%) 7.04 7.81 7.73 Expected Return - 30 Years (%) 8.09 8.40 8.29 Standard Deviation of Return (%) 12.99 13.08 12.40 Sharpe Ratio 0.26 0.32 0.33 Contribution to Asset Volatility (%): Growth 70.4 69.8 67.3 Defensive/Rate Sensitive 0.5 0.5 1.2 Defensive Growth 5.1 5.4 5.7 RA/Inflation Sensitve 16.4 16.3 17.2 Nondirectionar/Diversifier 7.6 8.0 8.5 Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	Total Defensive Growth Assets	10.00%	10.00%	10.00%
Total Assets 100.0% 100.0% 100.0% Expected Return - 10 Years (%) 7.04 7.81 7.73 Expected Return - 30 Years (%) 8.09 8.40 8.29 Standard Deviation of Return (%) 12.99 13.08 12.40 Sharpe Ratio 0.26 0.32 0.33 Contribution to Asset Volatility (%): Growth 70.4 69.8 67.3 Defensive/Rate Sensitive 0.5 0.5 1.2 Defensive Growth 5.1 5.4 5.7 RA/Inflation Sensitve 16.4 16.3 17.2 Nondirectionar/Diversifier 7.6 8.0 8.5 Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	Total RA / Inflation Sensitive Assets	20.00%	20.00%	20.00%
Expected Return - 10 Years (%) 7.04 7.81 7.73 Expected Return - 30 Years (%) 8.09 8.40 8.29 Standard Deviation of Return (%) 12.99 13.08 12.40 Sharpe Ratio 0.26 0.32 0.33 Contribution to Asset Volatility (%): Growth 70.4 69.8 67.3 Defensive/Rate Sensitive 0.5 0.5 1.2 Defensive Growth 5.1 5.4 5.7 RA/Inflation Sensitve 16.4 16.3 17.2 Nondirectionar/Diversifier 7.6 8.0 8.5 Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	Total Non-Directional / Diversifier Assets	14.25%	14.25%	14.25%
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Standard Deviation of Return (%) 12.99 13.08 12.40 Sharpe Ratio 0.26 0.32 0.33 Contribution to Asset Volatility (%):	Expected Return - 10 Years (%)	7.04	7.81	7.73
Sharpe Ratio 0.26 0.32 0.33 Contribution to Asset Volatility (%): Growth 70.4 69.8 67.3 Defensive/Rate Sensitive 0.5 0.5 1.2 Defensive Growth 5.1 5.4 5.7 RA/Inflation Sensitve 16.4 16.3 17.2 Nondirectionar/Diversifier 7.6 8.0 8.5 Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	Expected Return - 30 Years (%)	8.09	8.40	8.29
Contribution to Asset Volatility (%): 70.4 69.8 67.3 Defensive/Rate Sensitive 0.5 0.5 1.2 Defensive Growth 5.1 5.4 5.7 RA/Inflation Sensitve 16.4 16.3 17.2 Nondirectionar/Diversifier 7.6 8.0 8.5 Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	Standard Deviation of Return (%)	12.99	13.08	12.40
Growth 70.4 69.8 67.3 Defensive/Rate Sensitive 0.5 0.5 1.2 Defensive Growth 5.1 5.4 5.7 RA/Inflation Sensitive 16.4 16.3 17.2 Nondirectionar/Diversifier 7.6 8.0 8.5 Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	Sharpe Ratio	0.26	0.32	0.33
Defensive/Rate Sensitive 0.5 0.5 1.2 Defensive Growth 5.1 5.4 5.7 RA/Inflation Sensitve 16.4 16.3 17.2 Nondirectionar/Diversifier 7.6 8.0 8.5 Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	Contribution to Asset Volatility (%):			
Defensive Growth 5.1 5.4 5.7 RA/Inflation Sensitve 16.4 16.3 17.2 Nondirectionar/Diversifier 7.6 8.0 8.5 Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	Growth	70.4	69.8	67.3
RA/Inflation Sensitve 16.4 16.3 17.2 Nondirectionar/Diversifier 7.6 8.0 8.5 Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	Defensive/Rate Sensitive	0.5	0.5	1.2
Nondirectionar/Diversifier 7.6 8.0 8.5 Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	Defensive Growth	5.1	5.4	5.7
Cash Yield 1.9 2.3 2.4 Growth Factor 6.2 6.2 5.8	RA/Inflation Sensitve	16.4	16.3	17.2
Growth Factor 6.2 6.2 5.8	Nondirectionar/Diversifier	7.6	8.0	8.5
	Cash Yield	1.9	2.3	2.4
	Growth Factor	6.2	6.2	5.8
		_	_	

- Wilshire recommends that the Board adjust policy target weights
 - Increases target allocation to Defensive assets by 5%
 - Decreases expected risk and improves risk-adjusted return of the Policy modestly
 - Moderately improves current yield and overall liquidity profile

Decision Factors Revisited

Recommended

Policy

Does the portfolio meet the long term required rate of return?

10 Year horizon

Yes

30 Year horizon

Yes

Does the portfolio return help amortize the underfunded status?

Yes

Does the portfolio adequately support the liquidity requirements of the Plan?

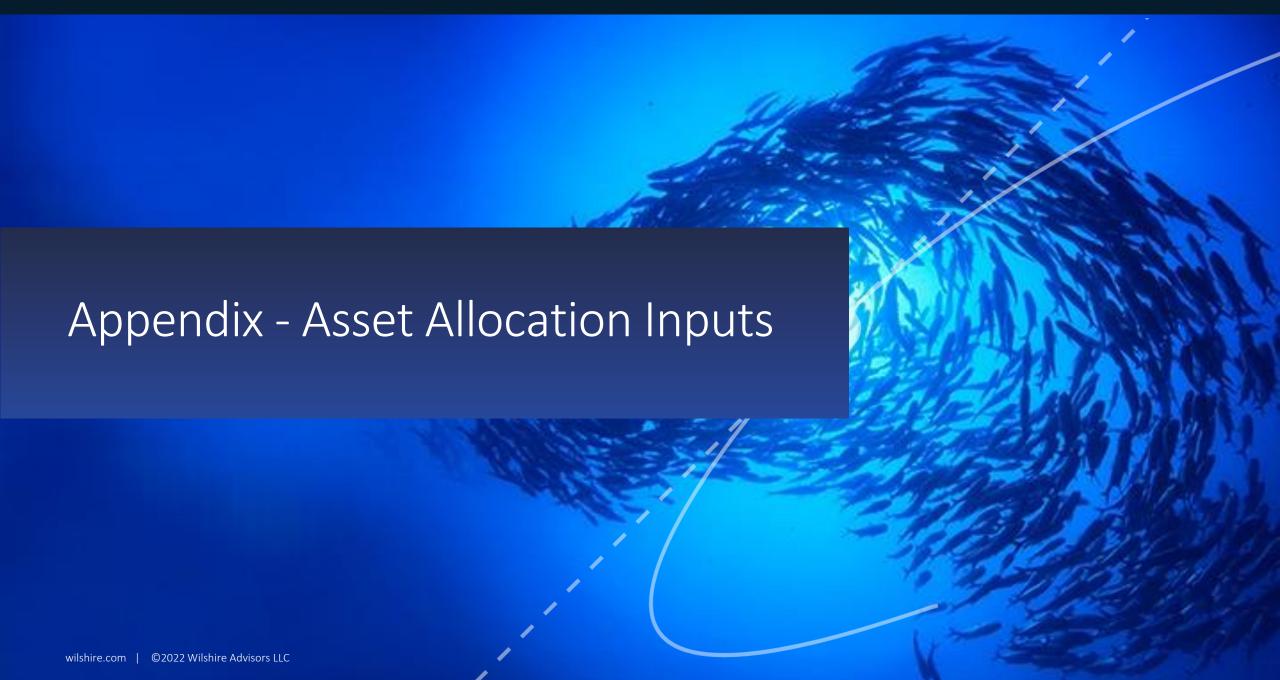
Yes

Wilshire's Fiduciary Responsibility

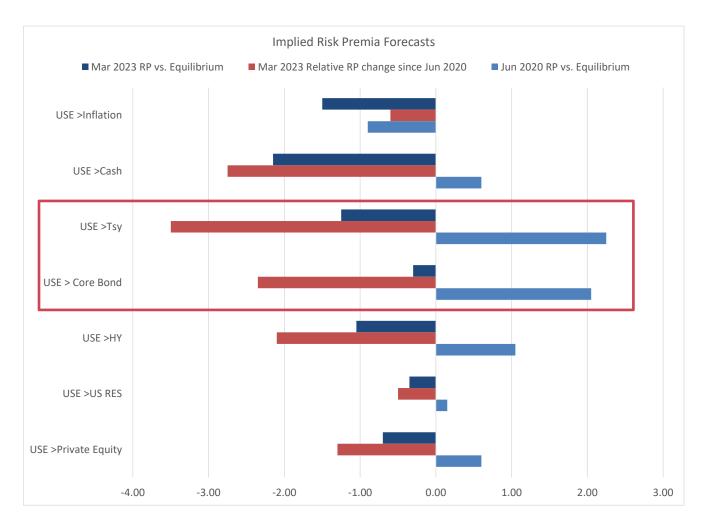
As an investment adviser, Wilshire is a fiduciary when we provide investment advice or management.

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- It is Wilshire's policy to make evaluations, recommendations and decisions based solely upon the best interests of the client and without regard to any benefit (economic or otherwise) that Wilshire receives or might receive. Wilshire is committed to ensuring that it does not consider an investment manager's or financial service provider's business relationship with Wilshire, or lack thereof, in performing evaluations for or making recommendations to its advisory clients. Wilshire has implemented policies and procedures that seek to mitigate conflicts of interest through appropriate oversight, transparency and controls.
- Client acknowledges that any change in the allocation to Private Markets Investments as stated in the Asset Allocation
 Program and determined by Client will result in a change in the Private Markets Investment Services Fee charged by
 Wilshire.

Wilshire



Stocks Don't Look Cheap vs. Anything



Source: Wilshire.

Capital Market Assumptions

Using Wilshire's March 31, 2023 Capital Market Assumptions

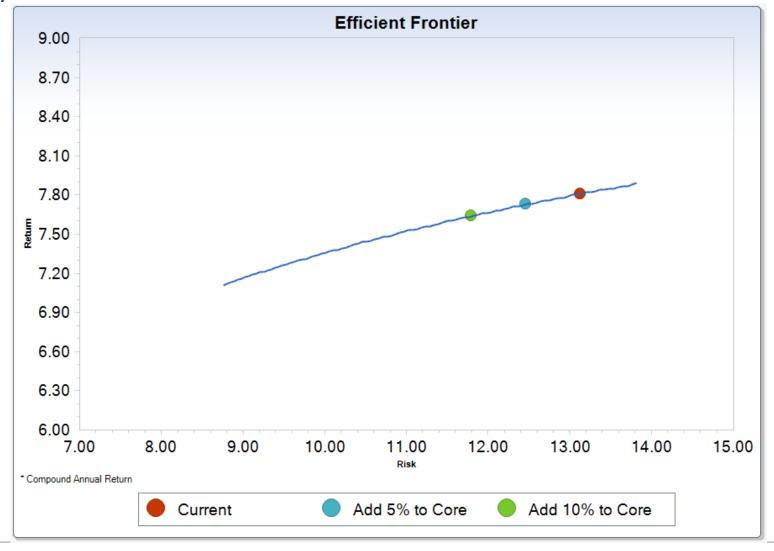
- Wilshire's asset class return, risk and correlation assumptions are developed on multi-year forward looking expected rates of return and historical risk and correlation, adjusted to incorporate recent trends
- Public market return expectations represent a passive investment in the asset class (beta). They do not reflect value added from active management (alpha).

Asset Classes	Expected Return 10 Years	Expected Return 30 Years	Risk	Cash Yield	Factor Exposure Growth	Factor Exposure Inflation	Liquidity Market Level	Liquidity Stressed Metric
Global Equity	6.70	7.40	17.10	2.20	8.00	-1.30	0.90	0.00
Global Low Volatility Equity	6.75	7.44	13.78	2.55	6.40	-0.53	0.90	0.00
Private Equity	9.62	10.14	29.64	0.00	14.00	-3.75	0.00	0.00
Core Fixed Income	4.60	4.68	4.70	4.90	-0.95	-2.50	1.00	0.86
Cash	3.65	3.45	0.75	3.65	0.00	0.00	1.00	1.00
Public Credit	6.31	6.17	8.45	8.30	3.21	0.85	0.80	0.00
Private Credit	7.98	8.00	10.57	3.28	5.00	0.00	0.00	0.00
Public Real Assets	6.10	6.73	11.35	3.75	0.50	7.05	0.90	0.69
Private Real Estate	6.45	7.28	14.16	2.18	3.60	1.00	0.00	0.00
Private Real Assets	7.59	8.49	16.15	2.40	5.00	5.72	0.00	0.00
Marketable Alternatives	6.91	7.11	7.58	0.00	3.01	2.62	0.30	0.00
Risk Parity (10% Volatility)	7.36	8.23	10.00	4.27	0.34	1.36	0.00	0.00

Adjusted Target Portfolio Detail

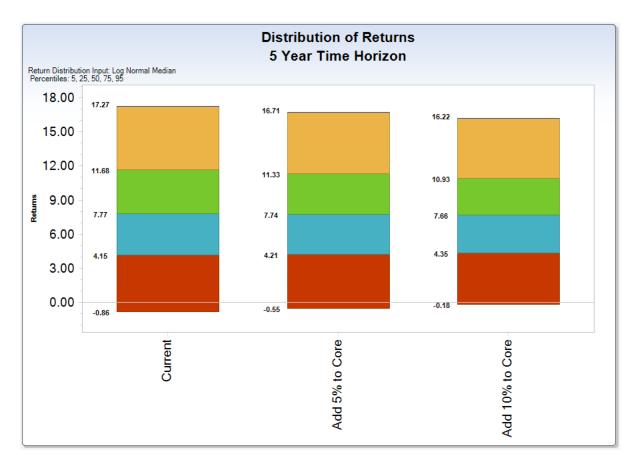
Asset Class	Current Policy Targets	Add 5% to Core Fixed Income	Add 10% to Core Fixed Income
Global Equity	24.75%	21.25%	17.75%
Global Low Volatility Equity	10.50%	9.00%	7.50%
Private Equity	<u>15.00%</u>	<u>15.00%</u>	<u>15.00%</u>
Total Growth Assets	50.25%	45.25%	40.25%
Core Fixed Income	5.00%	10.00%	15.00%
Cash	<u>0.50%</u>	<u>0.50%</u>	<u>0.50%</u>
Total Defensive / Rate Sensitive Assets	5.50%	10.50%	15.50%
Public Credit	0.00%	0.00%	0.00%
Private Credit	10.00%	<u>10.00%</u>	10.00%
Total Defensive Growth Assets	10.00%	10.00%	10.00%
Public Real Assets	0.00%	0.00%	0.00%
Private Real Estate	10.00%	10.00%	10.00%
Private Real Assets	10.00%	10.00%	10.00%
Total RA / Inflation Sensitive Assets	20.00%	20.00%	20.00%
Marketable Alternatives	4.25%	4.25%	4.25%
Risk Parity (10% Volatility)	10.00%	10.00%	10.00%
Total Non-Directional / Diversifier Assets	14.25%	14.25%	14.25%
Total Assets	100.0%	100.0%	100.0%

Asset Only Efficient Frontier



Distribution of Returns





Capital Market Assumptions – Correlation Matrix

Using Wilshire's March 31, 2023 Capital Market Assumptions

- Wilshire's asset class return, risk and correlation assumptions are developed on multi-year forward looking expected rates of return and historical risk and correlation, adjusted to incorporate recent trends
- Public market return expectations represent a passive investment in the asset class (beta). They do not reflect value added from active management (alpha).

	Global Equity	Low Volatility	Private Equity	Core Fixed Income		Public Credit	Private Credit	Real Assets	Private Real Estate	Private Real Assets	Marketable Alternatives	Risk Parity (10% Volatility)
	Global	Global Equity	Private	Core P	Cash	Public	Private	Public	Private	Private	Marke	Risk P Volatil
Return - 10-Year (%) Return - 30-Year (%) Risk (%)	6.70 6.70 17.10	6.75 6.70 13.78	9.62 9.45 29.64	4.60 3.65 4.70	3.65 2.50 0.75	6.31 5.55 8.45	7.98 7.30 10.57	6.10 5.85 11.35	6.45 7.05 14.16	7.59 8.40 16.15	6.91 5.30 7.58	7.36 7.05 10.00
Correlations												
Global Equity	1.00											
Global Low Volatility Equity	0.97	1.00										
Private Equity	0.73	0.75	1.00									
Core Fixed Income	0.20	0.19	0.30	1.00								
Cash	-0.06	-0.04	0.00	0.18	1.00							
Public Credit	0.67	0.68	0.41	0.31	-0.07	1.00						
Private Credit	0.61	0.60	0.37	0.14	-0.02	0.81	1.00					
Public Real Assets	0.55	0.58	0.46	0.24	-0.01	0.64	0.52	1.00				
Private Real Estate	0.54	0.64	0.49	0.18	-0.05	0.63	0.59	0.58	1.00			
Private Real Assets	0.60	0.60	0.49	0.13	-0.02	0.62	0.60	0.75	0.53	1.00		
Marketable Alternatives	0.61	0.63	0.52	-0.01	0.04	0.61	0.65	0.36	0.32	0.50	1.00	
Risk Parity (10% Volatility)	0.72	0.71	0.59	0.61	0.04	0.70	0.55	0.83	0.52	0.65	0.42	1.00

Allowable Asset Allocation Ranges

Wilshire's Asset Allocation Committee (WAAC) maintains standard asset allocation parameters which reflect generally observed market practices for institutional asset owners. While Wilshire expects most client portfolios will fall within these asset allocation ranges. Wilshire recognizes and occasionally recommends portfolio allocations that may diverge from these general ranges based on a client's particular circumstances, goals or needs.

Asset Segment	Corporate DB	Public DB	E&F			
Total Equity (Public+Private)	0% - 80%					
Private Equity (Aggregate)	0% - 15%	0% - 20%	0% - 30%			
Fixed Income (Core/High-quality - Liquid IG)	10% - 100%	10%	- 50%			
Other Fixed Income/Credit (Aggregate)		0% - 25%				
Private/Illiquid Credit (Aggregate)		0% - 15%				
High Yield	0% - 10%					
Other: EMD, Loans, Convertibles	0% - 7.5%					
Total Real Assets (Public + Private)	0% - 25%					
Total Real Estate (Public + Private)		0% - 25%				
RA Other: Commodities, Gold, Infra, GLI, MLPs, O&G, Timber		0% - 5%				
Marketable Alternatives (Aggregate)	0% - 12.5% 0%					
Cash	0% - 5%					
Leverage	0% - 20%					
Total Private/Illiquid	0% - 25%	0% - 35%	0% - 50%			

These thresholds were informed by allocation information from Greenwich Associates, and Wilshire Advisors, LLC, universe data and will be reviewed for reasonableness from time to time.

*Last Updated 12/2021

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El Paso County Retirement Plan

Results of the January 1, 2023 Actuarial Valuation

April, 24 2023

Paul Wood, ASA, FCA, MAAA



January 1, 2023 Valuation Results *Highlights*

- Poor returns on a market value basis resulted in a slight decline in today's funded position
 - \$32 million in deferred asset losses still to be recognized
- Total pay increased more than expected
 - Liability growth higher as a result but so are contributions coming into the Plan
- Planned employer contribution increases lead to an upward trajectory in funded status
 - Reaching 100% funding in 30 years when projecting from the market value of assets and in 25 years when projecting from the actuarial value of assets



Summary of Results

		January 1, 2023		January 1, 2022	
Summary of Census Data					
a. Actives					
i. Counts ¹		2,987		2,922	
ii. Total Annual Projected Compensation ²	\$	195,194,383	\$	177,344,819	
iii. Average Projected Compensation ³	•	66,280	·	61,771	
iv. Average Age ³		42.5		42.7	
v. Average Service ³		6.7		7.0	
Ğ					
b. Members with Refunds Due Counts		523		403	
c. Deferred Vested Member Counts ⁴		345		332	
d. Retired and Disabled Member Counts		1,898		1,814	
e. Beneficiary Counts		148		136	
g. Total Members Included in Valuation		5,901		5,607	
Funded Status					
a. Actuarial Accrued Liability	\$	724,780,703	\$	687,487,828	
b. Actuarial Value of Assets (AVA)	Ÿ	463,543,092	Y	448,487,993	
c. Unfunded Liability (AVA-basis)		261,237,611		238,999,835	
d. Funded Ratio (AVA-basis)		64.0%		65.2%	
e. Market Value of Assets (MVA)	\$	431,543,815	\$	491,482,250	
f. Unfunded Liability (MVA-basis)		293,236,888		196,005,578	
g. Funded Ratio (MVA-basis)		59.5%		71.5%	

¹ Includes 51 members on leave of absence in 2022 and 42 members on leave of absence in 2023.

³ Includes 9 deferred disableds and 2 deferred beneficiaries in 2022, and 6 deferred disableds and 2 deferred beneficiaries in 2023.



² Excludes members on leave of absence.

Gain/Loss Analysis

Calculation of Total (Gain)/Loss Actual Unfunded Accrued Liability at 1/1/2022	\$ 239.00
Expected Growth (Interest + NC - BP)	 1.35
Expected Unfunded Accrued Liability at 1/1/2023	\$ 240.35
Actual Unfunded Accrued Liability at 1/1/2023	\$ 261.24
Total (Gain)/Loss on Unfunded Accrued Liability at 1/1/2023	\$ 20.89
Sources of Total (Gain)/Loss	
Salary Increase Greater than Expected	\$ 8.54
Other Liability Changes	6.54
	5.81
Assets Less than Expected	

- Salary loss offsets the salary gain we saw last year
- Other liability losses a result of the following:
 - More retirements than expected (95 vs 64)
 - Fewer retiree deaths than expected
 - New hire and re-hires

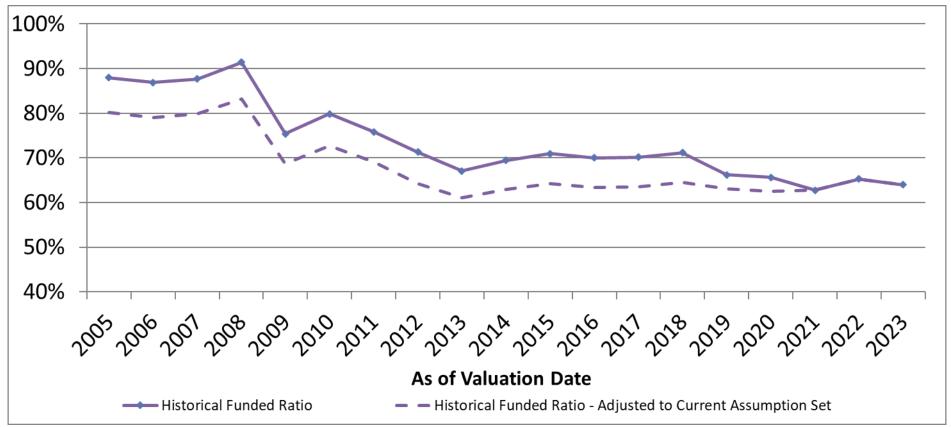


Reconciliation of the Funded Ratio

Actual Funded Ratio at 1/1/2022	65.24%
Other Expected Growth	0.90%
Salary Increase Greater than Expected	-0.79%
Other Liability Changes	-0.60%
Assets Less than Expected	<u>-0.81%</u>
Total Change	-1.30%
Actual Funded Ratio at 1/1/2023	63.94%



Historical Trend in Funded Status



 Historical funded ratio that is adjusted to current assumption set demonstrates the impact of changing the discount rate from 8.0% to 7.50% in 2019 and from 7.50% to 7.00% in 2021



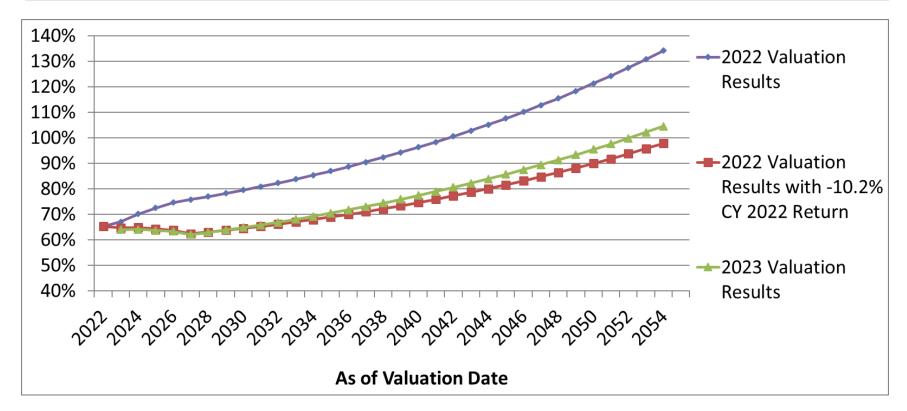
Thoughts on Historical Funded Status

- It's not the point in time that matters, it's the trend/trajectory that matter
 - The increased Employer contribution rates have drastically changed the trajectory of the funded ratio
 - Benefit security and sustainability is much improved as a result of these additional contributions



Long Term Projections

Year over Year Changes in Projected Funded Status



 Difference between Red and Green line reflects the gains and losses from demographic and salary experience



Long Term Projections

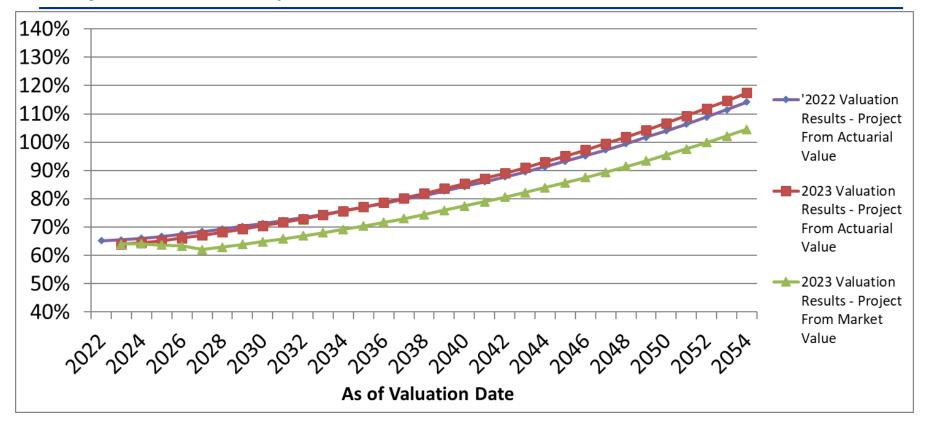
Projection Stability

- Projections on previous slide assume a 7.0% return on the Market Value of Assets (MVA)
 - Essentially assumes all of the \$32 million in deferred losses will be recognized over the next four years as part of the asset smoothing process
 - With a fixed rate contribution plan such as the EPCRP, year to year returns can dramatically change the projected funded status
- It is helpful to look at the projections assuming the Actuarial Value of Assets (AVA) returns 7.0%
- Reviewing the projections from the AVA annually provides year to year stability and filters out a fair amount of the year to year volatility



Long Term Projections

Projection Stability



• If the entire \$32 million in deferred losses in the AVA are realized, then the funded status is still expected to be over 100% in 30 years



- Losses on assets due to -10.2% return during 2022 and losses on liabilities, mainly attributable to salary increases more than expected
- Funded ratio has been at or below 70% for some time, but projected to trend upward over time with increased Employer contributions
- Next steps
 - Stress testing
 - Stochastic projections



ACTUARIAL STANDARDS OF PRACTICE # 4 – LOW-DEFAULT RISK OBLIGATION MEASURE (LDROM)



Actuarial Standards of Practice # 4 - LDROM

- ASOPs = Actuarial Standard of Practices
 - Provide guidance to actuaries on appropriate practices
- New additions for ASOP 4 (Pensions) coming in 2023 (first effective for your January 1, 2024 valuation)
 - Actuaries now must calculate and disclose a reasonable Actuarially Determined Contribution (ADC)
 - Phase-in of assumptions only allowed if each assumption used is reasonable when it is used
 - Actuaries must disclose a Low-Default-Risk
 Obligation Measure in funding valuations

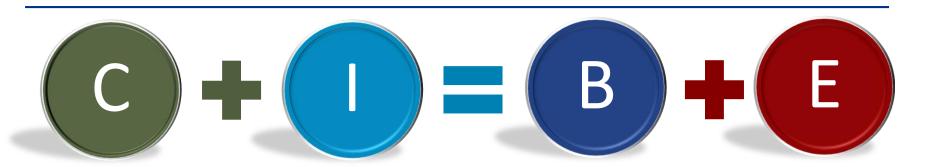


Actuarial Standards of Practice # 4 - LDROM

- LDROM = Low-Default-Risk Obligation Measure
 - By far most controversial
 - Actuaries must calculate and disclose a liability using a discount rate tied to a lowdefault-risk index
 - treasury yields, municipal bonds yields, or investment grade corporate bonds
 - Intended to show the liabilities for a plan without being exposed to investment risk



Basic Retirement Funding Equation



Contributions

• Funding Policy



Investment Income

Investment Strategy



Benefits

• Plan Design



Expenses

Administrative Policy



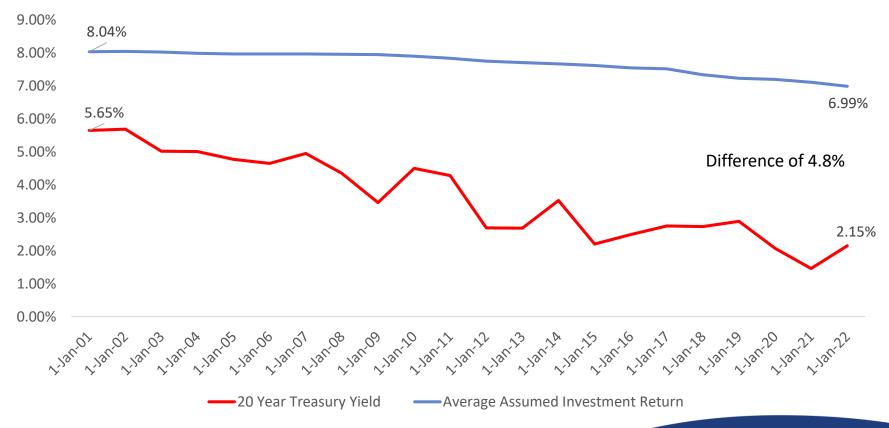
"Net Money In = Money Out"



Actuarial Standards of Practice # 4 - LDROM

Assumed Investment Returns vs Risk-Free Yields

NASRA Fund Survey
Average Assumed Investment Return vs Treasury Yields Over Time





Actuarial Standards of Practice # 4 - LDROM Arguments for LDROM

- Provides a more complete picture of the financial position of the plan
 - Difference between LDROM and the valuation AAL can be seen as the potential savings generated by taking a reasonable amount of investment risk
 - Help reinforce the decision to be in higher seeking assets
 - Help revise the investment return assumption if the difference appears too large



Actuarial Standards of Practice # 4 - LDROM

Arguments Against LDROM

- Does not provide universally useful information regarding the funded status of the pension plan or the security of member benefits
 - Serves a limited purpose, trustees won't use for decision making
 - No evidence that similarly disclosed information in past was used for decision making
 - Potential to be a distraction
- Could be misleading
- Does not add material information already required to disclose discount rate sensitivity



Actuarial Standards of Practice # 4 - LDROM LDROM Quantified

- Actuarial accrued liability (AAL)
 on January 1, 2023 = \$725 million
- LDROM on January 1, 2023 using 20-year municipal bond rate = \$987 million
- Difference of \$262 million can be viewed as
 - the projected savings generated from a reasonable investment strategy, or
 - the amount of risk being put on taxpayers

Discount Rate	AAL (millions)
4.05%	\$987
7.00%	<u>\$725</u>
	\$262



Actuarial Standards of Practice # 4 - LDROM LDROM Summary

- There is a new disclosure requirement in valuation reports for retirement systems
 - Will first report the LDROM in next year's valuation
- Will NOT impact contributions, UAAL, funded ratio, or funding period
- Will only be an additional item added to the Risk Assessment section
- This should not be a meaningful event

