



# Kentucky Judicial Form Retirement System

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Pension Plan Experience Study –  
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# Overview

- Economic and Demographic Assumptions are key drivers in measuring plan liabilities and allocating funding costs
- Actuarial standards and GASB rules require that each assumption be reasonable taking into account estimates of future experience
- Best practices require continual review of the assumptions combined with periodic in-depth analysis
- HB 238 requires formal experience study every 5 years
- While assumptions impact measurements and allocation of costs, actual plan experience is what determines the actual payments from the plan
- Assumptions should reflect examination of experience but also consider future expectations
- The plans are not big enough to have credible experience for all assumptions, so standard tables are typically recommended



# Assumptions to Be Reviewed

- Demographic
  - Retirement
    - Timing of employee retirements
  - Withdrawal (Turnover)
    - When will employees terminate employment (prior to retirement age)
  - Commencement age for deferred participants
    - When do terminated or disabled employees commence benefits
  - Marital Status
    - What portion of participants are married and what is assumed spousal age difference
  - Mortality
    - At what rate are participants dying
- Economic
  - Salary Scale
    - Assumed pay increases
  - Non-Legislative Compensation Load
    - How much does the liability increase if final benefits end up based on pay from other state employment
- Experience study performed based on plan experience from 2013 through 2019



# Retirement

## *General Considerations*

- Factors influencing retirement behavior
  - Retirement eligibility
  - Unreduced Early Retirement eligibility
  - Availability of Social Security (Age 62 for reduced benefits)
  - Benefit levels (i.e. adequacy of the benefit)
- Other recent trends to consider
  - More employees have been working beyond age 65



# Retirement – Judicial & Legislators

## *Current Assumptions*

Age	Rate of Retirement
NRA-5	16.67%
NRA-4	20.00%
NRA-3	25.00%
NRA-2	33.33%
NRA-1	50.00%
NRA	100.00%

In addition to these rates, an extra 20% rate is assumed at the age a member reaches 27 years of service credit. Does not apply to Hybrid plan.

NRA – 65 with at least 8 years of service. Age 65 requirement reduced 1 year for each 5 years of service, and one year for each year beyond the years of service needed to accrue a benefit of 100% of final average compensation. Total reduction not to reduce the age requirement below 60. The full accrued benefit will also be payable upon completion of 27 years of service.



# Retirement - Judicial

## Summary

Age	Exposures	Retirements	Experience	Current Rates	Proposed Rates
NRA-5+	407	10	2.5%	0.0%	0.0%
NRA-5	38	6	15.8%	16.7%	15.0%
NRA-4	45	4	8.9%	20.0%	7.5%
NRA-3	30	1	3.3%	25.0%	7.5%
NRA-2	42	6	14.3%	33.3%	15.0%
NRA-1	38	7	18.4%	50.0%	20.0%
NRA	34	6	17.7%	100.0%	20.0%
Above NRA	103	32	31.1%	100.0%	33.3%*

\*100% retirement starting at age 70

### Observations:

- Retirement has been lower than assumed with people working later than expected



# Retirement - Legislators

## Summary

Age	Exposures	Retirements	Experience	Current Rates	Proposed Rates
NRA-5+	148	5	3.4%	0.0%	0.0%
NRA-5	18	0	0.0%	16.7%	15.0%
NRA-4	15	3	20.0%	20.0%	7.5%
NRA-3	19	3	15.8%	25.0%	7.5%
NRA-2	10	1	10.0%	33.3%	15.0%
NRA-1	13	2	15.4%	50.0%	20.0%
NRA	14	1	7.1%	100.0%	20.0%
Above NRA	68	19	27.9%	100.0%	33.3%*

\*100% retirement starting at age 70

### Observations:

- Retirement has been lower than assumed with people working later than expected
- Same proposed rates for Judicial and Legislators



# Withdrawal (Turnover)

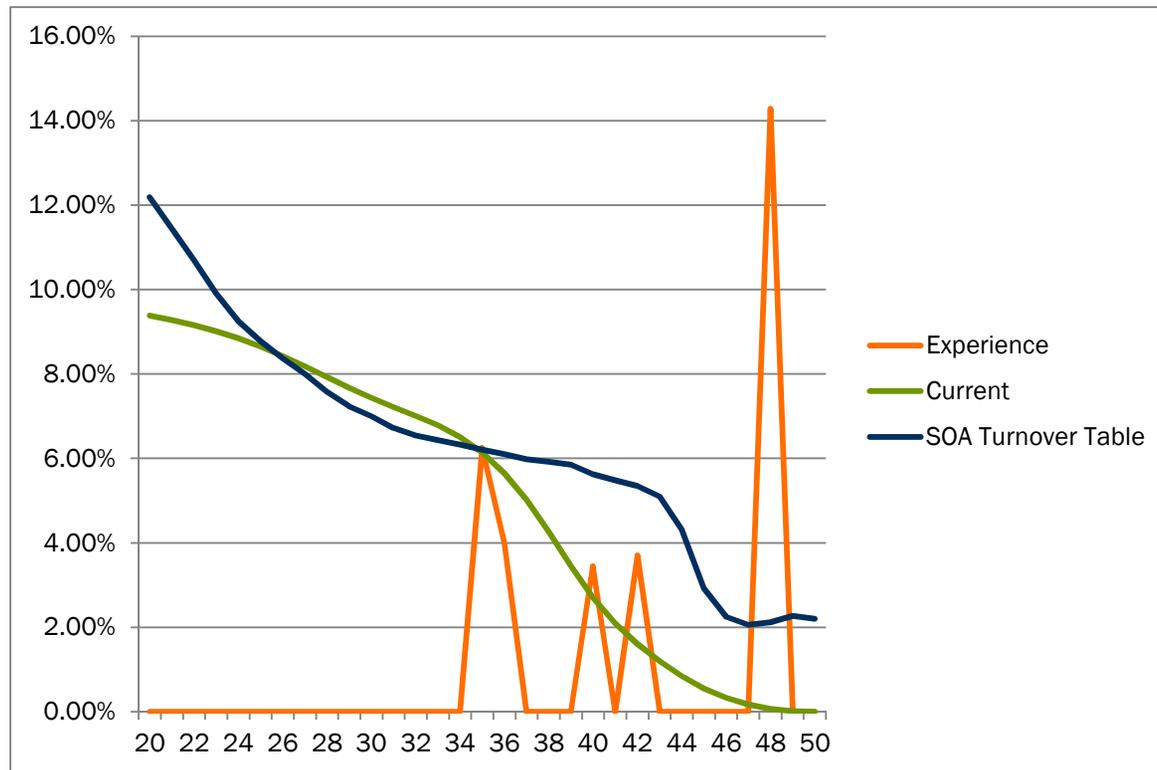
## *Plan-specific Considerations*

- The traditional plans were closed to new entrants in 2014
- Due to the plan limiting new entrants, average service of the plan is 15 years
- The current assumption is fairly different from experience
- Experience is based on 5 terminations in Judges plan and 21 in Legislators
- The current assumption has been based on older SOA studies



# Withdrawal (Turnover) - Judges

## Summary



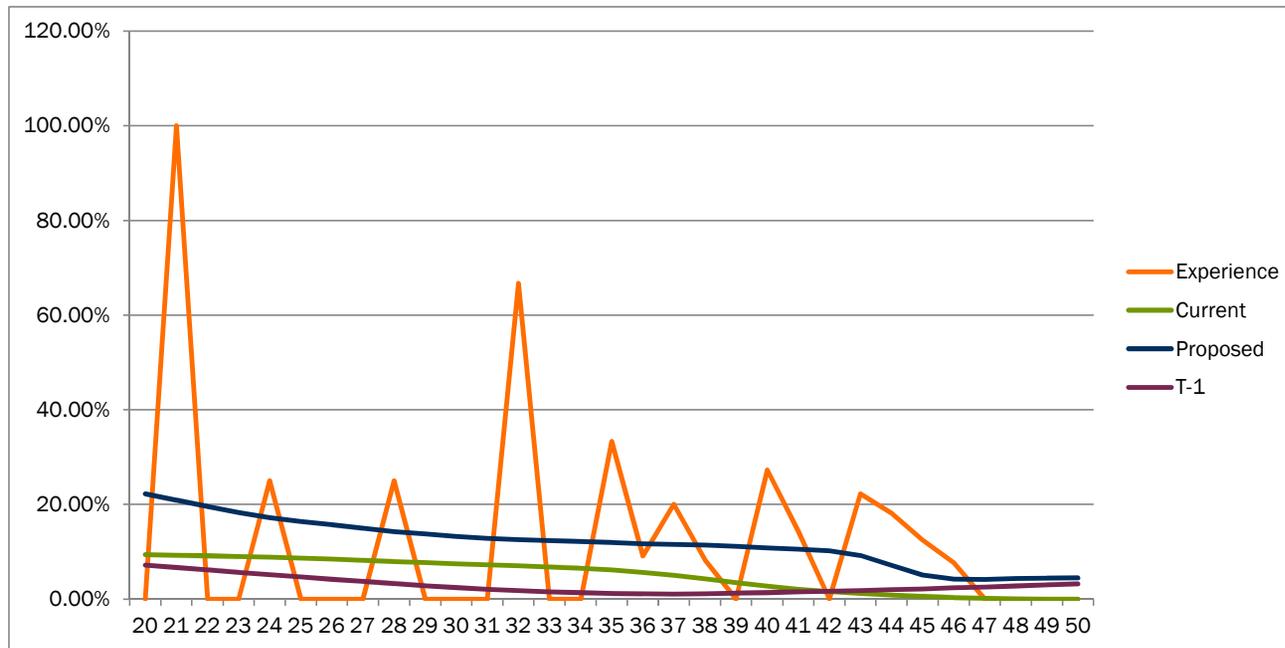
### Observations:

- Observed experience has been lower than assumed
- Current assumption is Table T-3 for District Judges, none otherwise
- Very few terminations. We recommend assuming no termination for Judges.



# Withdrawal (Turnover) - Legislators

## Summary



### Observations:

- Observed experience is limited but has been higher than assumed
- Current assumptions is Table T-4
- 2003 SOA Turnover Basic Age Table is most recent standard table available, and it fits better than current assumption based on termination counts



# Commencement Age for Deferred Participants

- Current assumption is that benefits commence at NRD
- There is limited experience
- Average observed DV retirement age
  - Judges = 63
  - Legislators = 64
- We propose keeping the assumption at NRD



## Marital Assumptions

- Used to value death benefits (pre- and post-retirement)
- The current assumptions is 80% of plan participants are married with husbands being 3 years older than wives
- Experience shows an average of 70% of plan participants are married with an average age difference of 3 years.
- Recommend decreasing percent married to 70%, no change in age difference



# Mortality

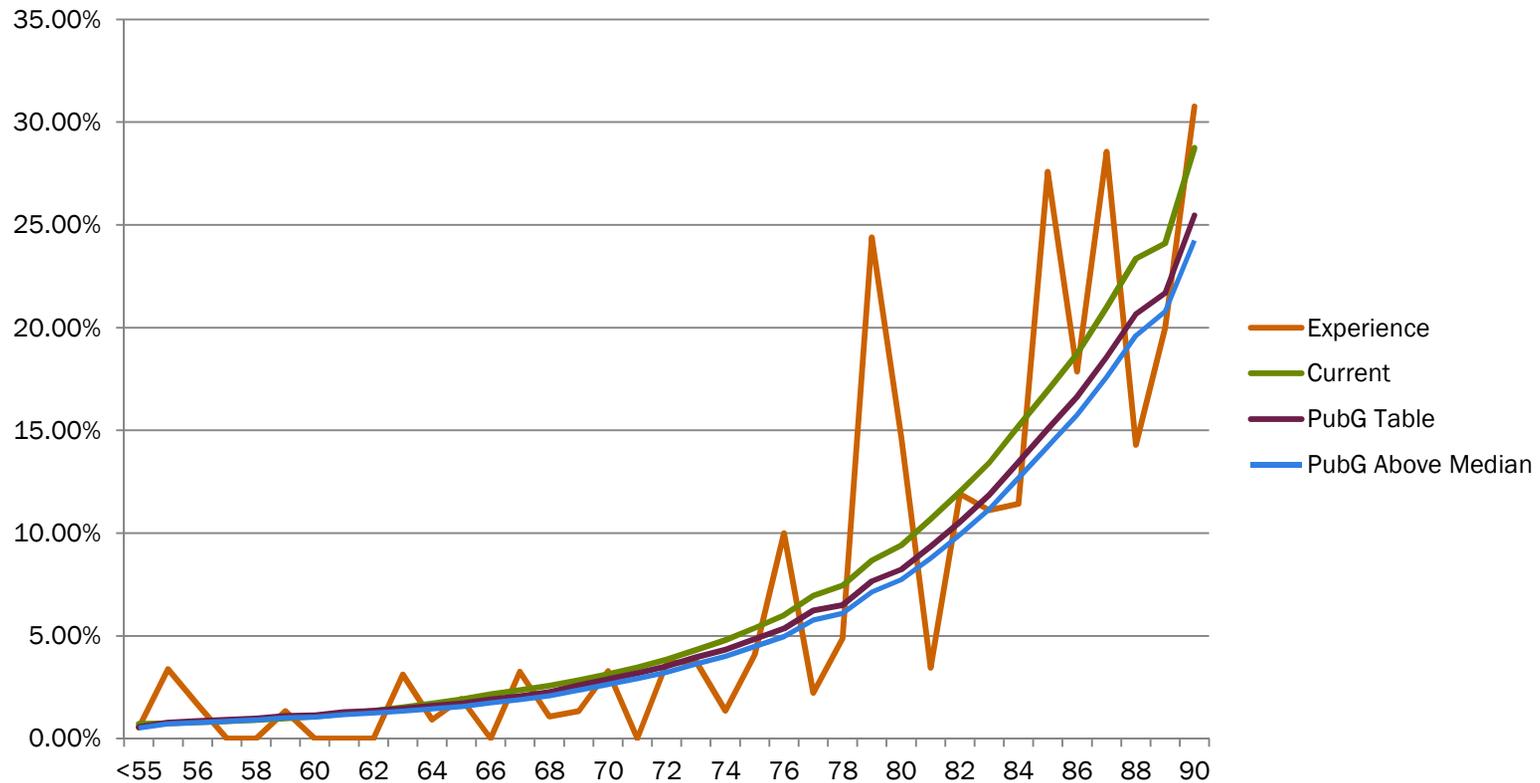
## *Recommendation*

- There is very little mortality experience across the plans, so we only reviewed the combined plans
- People are generally living longer now
- Mortality can vary greatly by region and socioeconomic status
- Public plan mortality tables were recently released by the SOA
- Current assumption is RP-2000 White Collar with Scale AA
  - Table that was previously required for private sector funding rules by IRS but added white collar conservatism – IRS has recently updated required tables
- We recommend an update to PubG Above Median with the most recent improvement scale (currently MP-2020, with option of applying new scale each year based on future analysis)



# Mortality

## Summary



### Observation:

- Experience is not credible because of the small population size
- Based on the demographics of the plan, PubG Above Median is recommended



# Salary Scale

- The current assumptions is 1% for the next five years and 3.5% thereafter
- Experience shows less than a 1% increase in average pay from 2013 to 2019
- Assumption should be set based on future expectations and payroll planning
- No change recommended unless the Board has more information on future salary expectations



# Non-Legislative Compensation Load

- Plan Specifics
  - A member will receive a retirement income at normal retirement date payable monthly for life equal to a percentage of final average compensation multiplied by years of service.
  - Beginning January 1, 2003, the final average compensation means the average monthly compensation of the member for his or her highest 36 months of State salary. Compensation includes earnings from non-legislative positions, which is generally higher.
  - We are only provided legislative salary with annual census.
  - The final benefit is not calculated until retirement.
- Issue
  - The liability should reflect what is expected to be paid from the plan, so we include a load on the active and terminated vested liability to account for the increase in benefits from non-legislative salary
- Assumption
  - Two components – Percent eligible and impact on benefit
  - Currently, we assume a 40% load
  - Recommend leaving this assumption as is
  - Liability increase for all new legislative retirees from 2015-2019 = 36%



# Summary of Results – Judges Trad. Pension

*For July 1, 2019 Valuation*

(In millions)

Assumption Basis	Change to Total Pension Liability	Change to Service Cost	Change to Contribution
Current Assumptions	\$368.00	\$1.81	\$6.17
Change Retirement Rates	(7.43)	0.81	0.02
Change Withdrawal	(1.20)	0.34	0.03
Change Marital Assumption	(0.59)	(0.02)	(0.01)
Change Mortality	19.74	0.15	1.63
Sub-Total – All Changes	\$10.52	\$1.28	\$2.07
Sub-Total – All Changes	2.9%	71.3%	33.7%
Proposed Assumptions	\$378.52	\$3.09	\$8.24



# Summary of Results – Legislators Trad. Pension

*For July 1, 2019 Valuation*

(In millions)

Assumption Basis	Change to Total Pension Liability	Change to Service Cost	Change to Contribution
Current Assumptions	\$71.62	\$0.19	\$0.28
Change Retirement Rates	(1.23)	0.14	0.05
Change Withdrawal	(0.01)	(0.06)	(0.06)
Change Marital Assumption	(0.12)	(0.00)	(0.01)
Change Mortality	4.09	0.01	0.32
Sub-Total – All Changes	\$2.74	\$0.09	0.30
Sub-Total – All Changes	3.8%	49.8%	109.4%
Proposed Assumptions	\$74.36	\$0.28	\$0.57



# Hybrid Plans

- These plans are so new that there is insufficient data to analyze
- Recommend using the same assumptions as the traditional plans and continuing to monitor the gains and losses



# Summary of Results – Hybrid Judges Pension

*For July 1, 2019 Valuation*

(In millions)

Assumption Basis	Change to Total Pension Liability	Change to Service Cost	Change to Contribution
Current Assumptions	\$1.25	\$0.16	\$0.17
Change Retirement Rates	(0.01)	0.01	0.01
Change Withdrawal	(0.02)	0.01	0.00
Change Marital Assumption	0.00	0.00	0.00
Change Mortality	0.00	0.00	0.00
Sub-Total – All Changes	\$(0.03)	\$0.02	0.01
Sub-Total – All Changes	(2.6%)	11.0%	9.1%
Proposed Assumptions	\$1.22	\$0.18	\$0.18



# Summary of Results – Hybrid Legislators Pension

*For July 1, 2019 Valuation*

(In millions)

Assumption Basis	Change to Total Pension Liability	Change to Service Cost	Change to Contribution
Current Assumptions	\$0.32	\$0.06	\$0.07
Change Retirement Rates	(0.00)	0.00	0.00
Change Withdrawal	0.01	0.00	(0.00)
Change Marital Assumption	0.00	0.00	0.00
Change Mortality	0.00	0.00	0.00
Sub-Total – All Changes	\$0.00	\$(0.00)	0.00
Sub-Total – All Changes	0.8%	(4.2%)	(3.7%)
Proposed Assumptions	\$0.32	\$0.06	\$0.06



# OPEB Considerations

- The OPEB investment strategies and plan populations are the same
- We recommend adopting the same assumptions as recommended for the pension plans
- All OPEB plans, aside from Hybrid Legislators plan, are significantly overfunded and these assumption changes will not materially alter that position



# Appendix

## *Certification*

October 23, 2020

This report presentation has been prepared exclusively for Kentucky Judicial Form Retirement System to summarize current actuarial valuation assumptions and provide an experience study analyzing plan experience over the period 2013-2019. A complete description of the plan provisions, assumptions and methods, including a risk assessment associated with the assumptions, participant data, and trust asset information used in preparation of these determinations is contained in the July 1, 2019 actuarial valuation reports.

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