Legislative Commission on Pensions and Retirement

Actuarial Review Presentation

February 16, 2021
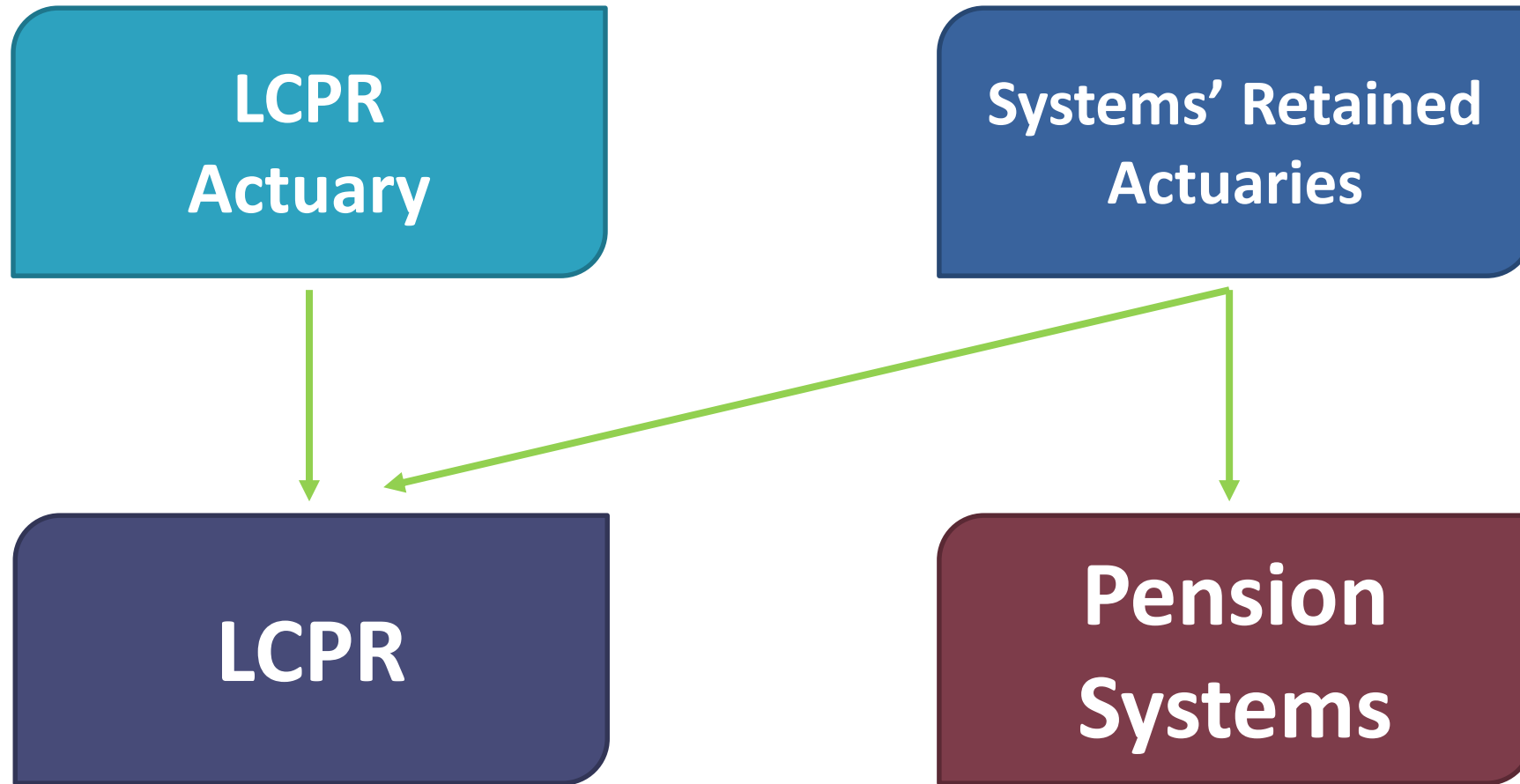
Emily E. Knutson, FSA, EA, MAAA

Mark W. Schulte, FSA, EA, MAAA

VAN IWAARDEN

What we're going to cover

1	Actuarial Overview
2	2020 Completed Projects
3	2021 Work Plan
4	Questions

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Actuarial Overview

Actuarial Overview

Systems' Retained Actuaries

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

TRA
TEACHERS
RETIREMENT
ASSOCIATION
of MINNESOTA

Teachers Retirement Association of Minnesota

Actuarial Valuation Report
For Funding Purposes
As of July 1, 2020

www.CavMacConsulting.com

St. Paul Teachers'
Retirement Fund Association
5-Year Experience Study
July 1, 2011 Through June 30, 2016

GRS

Public Employees Retirement Association of Minnesota
General Employees Retirement Plan
GASB Statements No. 67 and No. 68 Accounting and
Financial Reporting for Pensions
June 30, 2019

GRS

GRS Retirement Consulting   P: 800.521.0498 | F: 763.432.5842 | www.grsconsulting.com

January 31, 2019

CONFIDENTIAL

Ms. Erin Leonard
Executive Director
Minnesota State Retirement System
60 Empire Drive, Suite 300
St. Paul, MN 55103

Re: Projection of Contributions and Funding Status – State Employees Plan

Dear Erin:

Attached are 30-year projections of estimated funded status, required contributions, and statutory contributions under three asset return scenarios for the State Employees Retirement Plan. These projections, including the underlying investment return assumptions, are required by the Minnesota Standards for Actuarial Work. Unless noted otherwise, the estimates are based on participant data, assets, and plan provisions as outlined in the State Employees Retirement Plan actuarial funding valuation as of July 1, 2018.

Basis for Projections
For all enclosed projections, liabilities are determined using the statutory investment return assumption of 7.5%. As required by the Minnesota Standards for Actuarial Work, the projections reflect three asset return scenarios (7.5%, 6.0% and 9.0%). Note that we believe the 9.0% rate of return assumption is outside of the range of reasonable expected returns for this plan.

The estimates are based on the market value of assets with no smoothing of investment gains or losses. Payroll is assumed to increase approximately 3.25% per year over the long-term, consistent with the valuation assumption for total payroll growth.

The projection is an open group projection; meaning, active members projected to retire or otherwise terminate in the future are replaced with new active members so that the total active membership of the fund remains at 51,223 members. The profile of these new members is the same as new members hired between July 1, 2012 and July 1, 2017:

- Average age at hire is 37.4
- Average salary at hire is $45,500
- Approximately 56% female, 44% male

277 Coon Rapids Boulevard | Suite 212 | Coon Rapids, Minnesota 55433-2629

Actuarial Overview

LCPR Actuary

Valuation Replication

Minnesota
Legislative Commission on Pensions and Retirement

Replication of July 1, 2019
TRA Actuarial Valuation Report

Prepared by:

VAN IWAARDEN

Experience. Knowledge. Practical Advice.

May 27, 2020

Experience Study Review

State of Minnesota

Legislative Commission on Pensions and Retirement

Review of Statewide Retirement Systems
2014-2018 Experience Studies and
Proposed Actuarial Assumptions

Prepared by:

VAN IWAARDEN

Experience. Knowledge. Practical Advice.

April 17, 2020

Valuation Review

Minnesota
Legislative Commission on Pensions and Retirement

Review of July 1, 2019 Actuarial Valuation Reports
MSRS – SERF
PERA – GERP
TRA
SPTRFA

Prepared by:

VAN IWAARDEN

Experience. Knowledge. Practical Advice.

July 31, 2020

Revised to reflect MSRS census data clarifications

Other Consulting Projects

LCPR Legislative Commission on Pensions and Retirement
STATE OF MINNESOTA

STANDARDS FOR ACTUARIAL WORK
AND ASSUMPTIONS

APPROVED BY THE
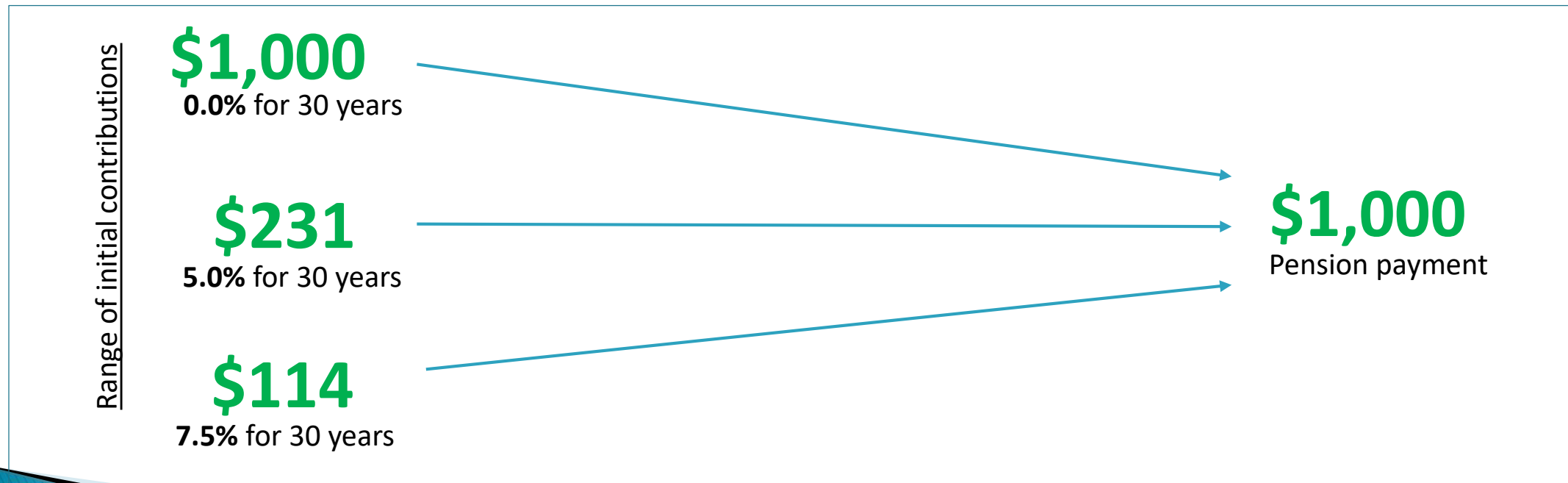LEGISLATIVE COMMISSION
ON PENSIONS AND RETIREMENT

APPROVAL DATE: _____

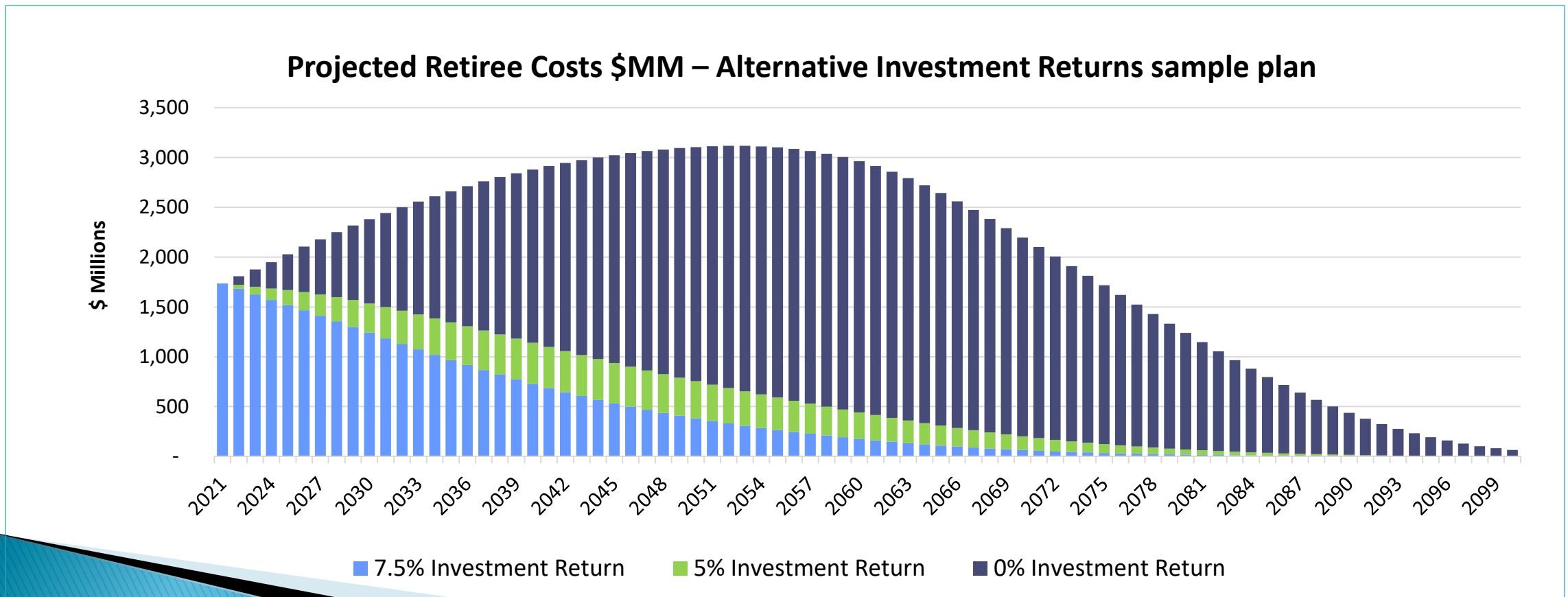EFFECTIVE DATE: JANUARY 1, 2020

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Actuarial Overview

- **Pension financing**: how much money do we need today to pay a benefit promised in the future?

- **Key assumption:** What will be your annual investment return, and for how long?

Range of initial contributions

$1,000
0.0% for 30 years

$231
5.0% for 30 years

$114
7.5% for 30 years

$1,000
Pension payment

Actuarial Overview

▸ To calculate pension liabilities, the actuary estimates future benefit payments and then calculates their "discounted value" on a plan-wide basis

Projected Retiree Costs $MM – Alternative Investment Returns sample plan

Legend: 7.5% Investment Return · 5% Investment Return · 0% Investment Return

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Actuarial Overview

Actuarial Terminology	Acronym	Description
Actuarial Accrued Liability	AAL	Discount value (in today's dollars) of future pension promises accrued to-date
Actuarial Value of Assets	AVA	Asset measurement that smooths investment returns over a 5-year period; used for pension funding purposes
Market Value of Assets	MVA	Current value of assets at measurement date; used for GASB accounting purposes
Unfunded Actuarial Accrued Liability	UAAL	AAL – AVA
Normal Cost	NC	Value of pension benefits being earned this year by active employees
Cost of Living Adjustment	COLA	Inflationary adjustment usually intended to protect the purchasing power of pension benefits
Actuarially Determined Contribution	ADC	Method for pre-funding pension promises; generally equal to the Normal Cost plus an amortization of the UAAL over a period of time
Actuarial Standards of Practice	ASOPs	Series of pronouncements which provide a basic framework for guiding actuarial processes and calculations

Actuarial Overview

▶ **Funded Status = $\dfrac{\text{AVA}}{\text{AAL}}$**

- Example: PERA General 7/1/2020 funded status = 79.6% = $\dfrac{\$22.792\text{B assets}}{\$28.627\text{B liabilities}}$

- Funded status can be a good indicator of current fund health, but need to consider historical AAL assumptions when comparing to past measurements

▶ **Contribution sufficiency/deficiency**

- Comparison of <u>statutory contribution rates</u> vs. <u>"required" contribution rates</u>
- Example:
  - PERA General statutory/fixed rate is 14.53% of payroll (6.50% for employees, plus 8.03% for employer/State)
  - Required/actuarial contribution rate is 13.13%
  - Contribution sufficiency is 1.40%

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2020 Completed Projects

Projects	Comments
Experience/assumption study reviews: ▪ MSRS - General ▪ PERA - General ▪ TRA	– Studies reflected systems' 2014-18 experience and informed assumptions for July 1, 2020 actuarial valuations – VIA recommended approval of the proposed demographic and economic assumptions; we believe that they are reasonable and appropriate – Our report summarizes additional considerations in the Executive Summary, such as monitoring the investment return assumption and a "layered" amortization funding policy
Valuation replication ▪ TRA	– We determined that liability calculations were reasonable and accurate, and that data from the system was used appropriately – All liability and contribution calculations were replicated to high degree of accuracy
Valuation review: ▪ MSRS - General ▪ PERA - General ▪ TRA ▪ SPTRFA	– We determined that results appeared reasonable; data matched systems' information; and the reports complied with MN Statutes, LCPR Actuarial Standards, and relevant ASOPs – Executive summary suggests potential improvements to report presentation and exhibits – Primary recommendation was related to how contribution rates and certain assumptions are structured in MN Statutes and LCPR Actuarial Standards
Review of LCPR Standards for Actuarial Work	– Support system actuaries' recommendation that the Standards be more principle-based and less prescriptive – Recommend that many assumptions be consolidated in Standards instead of in Statutes

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2021 Workplan

Projects	Comments
Review of LCPR draft COLA study	– Completed review of draft study and addendum in January 2021 – Draft study is a comprehensive review of COLA topics – Excellent summary of historical COLA issues for Minnesota statewide pension plans
Valuation replication ▪ PERA - General	– Data from retained actuary received and processed; initial programming begun – Work is in progress; April completion target
Valuation review: ▪ MSRS – State Correctional ▪ MSRS – State Patrol ▪ PERA – Local Correctional ▪ PERA – Police & Fire	– All system actuary reports have been provided to LCPR and Van Iwaarden – Work is in progress; April completion target

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Questions

L/D/C/R: 4/emk/mws

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