



The Select Committee on Pension Policy

## **Work Session, Managing Future Health Of Retirement Systems**

*Matt Smith, FCA, EA, MAAA  
State Actuary*

*Darren Painter, Policy Analyst*



Office of the State Actuary

*"Securing tomorrow's pensions today."*

### **Why A Work Session On This Topic?**

- OSA reported on financial health of retirement systems at September SCPP meeting
- Health of systems gradually declining for years
  - Recent investment losses accelerated decline
- Systems face significant health risks in the future
- Business as usual is unlikely to sustain them



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## Purpose Of Today's Work Session

- Provide better understanding of proposed risk study
- Lay out a suggested plan for study
- Address any outstanding questions or concerns

## Three Parts To Today's Work Session

- Part 1: Procedural context
- Part 2: General overview of a risk study
- Part 3: Suggested plan for proposed study
- Extra time built in for questions and discussion



## Part One: Procedural Context

- Tell the story behind the issue
- Highlight recommendations leading to study

## Issue Put Into Motion By Recent Events

- Two activities converged over the summer
  - Strategic planning effort
  - Actuarial assessment of system health
- In June, Executive Committee started looking into strategic planning
  - Formed subgroup to define strategic planning proposal
- At the same time, OSA was preparing a report on financial condition of retirement systems
  - Declining financial health of systems became apparent
  - State actuary recommended a risk study to several bodies - including subgroup

## Subgroup Selected A Top Strategic Issue

- Subgroup considered challenges and risks facing systems
- Selected *managing future health* of systems as top strategic issue
- Recommended state actuary's proposed risk study
- Report from subgroup included in today's meeting material

future?

## Executive Committee Agreed

- Subgroup report and OSA's report presented at September SCPP meeting
  - Full committee briefed on financial condition
  - Executive Committee received subgroup report
- Executive Committee adopted subgroup proposal
- Scheduled work session for today

## Recap Of Part One

- Reminder on financial health of retirement systems
- Told story behind proposed risk study
  - Convergence of strategic planning and actuarial assessment
- Provided update on where SCPP is in the process
  - Executive Committee recommends *managing future health* of retirement systems
  - A *new strategic focus* that includes a risk study



## Questions?



## Part Two: Overview Of Risk Study

- Describe focus of proposed study
- Provide overview of study
- Describe recent advances that provide new opportunities to do the study at this time



## Focus Is On Health Risks

- Retirement systems face many risks
  - Not all risks affect financial health of the systems
- Recommended strategy is to focus on *managing future health* of systems
- To align with the strategy, proposed study would focus on health risks

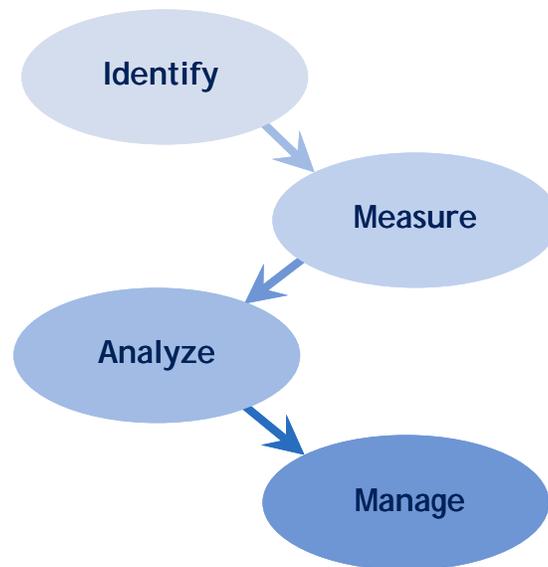


## What Do We Mean By Financial Health?

- Refers to overall financial well-being of the systems
  - Solvency
  - Affordability
  - Sustainability
- Study provides opportunity to further clarify and define what a healthy retirement system looks like



## General Process For A Risk Study



## Step 1: Identify

- What health risks do the systems face?
- Identification involves looking for
  - Bad outcomes you want to avoid
  - Factors that hinder the good outcomes you want to achieve



## What Does A Healthy System Look Like?

- Well funded
- Sustainable contribution levels



## What Causes System Health To Decline?

- Examples from Report on Financial Condition
  - Funding shortfalls
  - Certain benefit improvements
  - Investment losses
- Other causes?
  - Dig a little deeper
- What causes funding shortfalls?
  - Declining revenue?
  - Pension costs outpacing available revenue growth?
  - Other factors?

## Step 2: Measure

- After you've identified health risks, *how often* will they occur in the future?
- Probability can be measured using actuarial assumptions and models
- Knowing *when* health risks occur and *how likely* it is that they occur in the future can be a powerful tool for decision-making



## Preview Of Risk Measures

- Chance of particular outcomes
  - Plans 1 run out of money
  - Plans 2/3 drop below certain funded status
  - Contributions increase above sustainable levels
  - Revenue declines when contributions increase

## Quotation

**"You can't manage what you  
don't measure."  
Old management adage**

### Step 3: Analyze

- The “how” and “why” step
- Analysis informs
  - Gives you a better handle on health risks
  - Helps you target options for managing risks
- Answers questions such as
  - How do the risks show up?
  - Are there *underlying factors* causing the risk?
  - Are risks interacting to compound the effect?
  - Are the risks or the underlying factors controllable? To what extent?
- Uncovering *root causes* and knowing the *level of control* brings to light possible options for managing risks

### Step 4: Manage

- Once risks are identified, measured, and analyzed, they can be managed
- Managing risk involves
  - Deciding how much controllable risk to live with
  - Planning for risk beyond your control
  - Avoiding risks you can't survive
- Some risk management already in place
  - WSIB manages investment risk
  - Are there other risks to manage?
- Who looks out for the retirement system as a whole?

## Choose Your Side

**“Either you manage your risks, or  
your risks will manage you.”  
Unknown**

- What side of risk management do you want to be on?

## Recent Advances Create New Opportunities

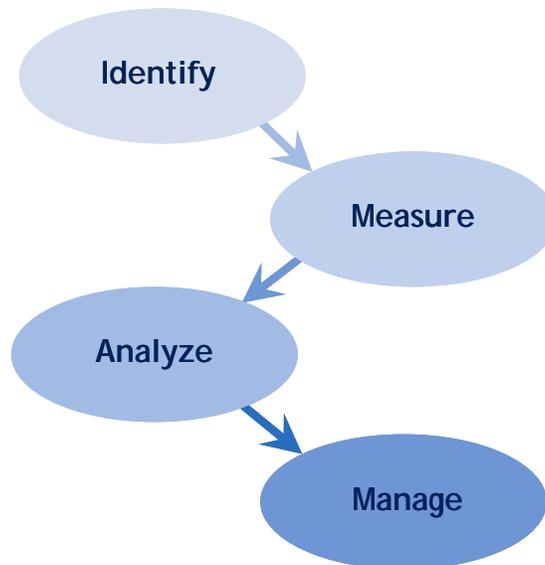
- Most plan sponsors now taking on more risk to keep expected pension costs down
- Actuarial practice is changing to keep pace
  - Moving away from snap-shot measures
  - Providing more information about potential volatility, i.e. risk
- Advances in computing power and software create new opportunities to better measure and analyze risk
- Better information gives plan sponsors new opportunities to more effectively manage risk

## Recap Of Parts One And Two

- Told the story behind proposed risk study
- Walked through the general process for the study
- Informed on recent advances that provide new opportunities to manage risks



## Recap: General Process For A Risk Study



## Questions?



## Part Three: Suggested Plan For Study

- Lay out a suggested plan for proposed study
- Clarify key elements
- Start digging into the details



## Suggested Plan For Risk Study

- Goals
- Deliverables
- Roles
- Timelines
- Outcomes

## Suggested Goals For Risk Study

- Educate stakeholders and improve understanding of health risks faced by retirement systems
- Develop new tools
  - Measure and manage health risks
  - Evaluate future changes to the systems
- Identify root sources of risk
- Identify options to manage future health
- Inform future budget discussions



## Study Won't Solve Current Funding Challenges

- Focus is on managing future health
- Too late to manage once a risk materializes
  - Focus shifts from management to reaction
  - Damage control mode
- Effects of health risks already showing up in budgets
  - Study may inform future budget discussions
  - Won't create new money for current budgets
- May uncover longer-term solutions to manage future health risks and avoid/lessen future funding and budgetary challenges

## Questions?



## Suggested Deliverables

- Baseline health measures
- Actuarial risk model
- Decision tool
- Analysis and options



## Some Deliverables Already Covered Today

- Health measures and analysis covered earlier in today's briefing
- Options for managing future risks will be developed as the study progresses
- More details and previews coming up
  - Actuarial risk model
  - Decision tool

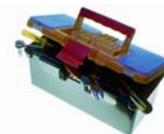
## What's An Actuarial Risk Model

- Helps measure and analyze health risks
- Does more than just model future risks
- Models how system responds to multiple risks
  - Thousands of random "economic events" simulated on computer
  - Economic events include annual changes in investment income and available revenue, and level of correlation
  - Model projects resulting contribution requirements and actual contributions made based on past practices
- Model stores key results for health measurement and evaluation



## Decision Tool Helps Evaluate Changes

- After you've measured and analyzed health risks, how do you evaluate potential changes?
- Does a potential change improve the systems' health?
- A decision tool helps evaluate potential changes to the status quo



## Developing A Decision Tool

- Rely on earlier work in study
  - At that point, we'll know what a healthy system looks like, how to measure it, and how it can decline
  - Also known as health measures and risk measures
- Select and prioritize measures
- How much "weight" should we give to a particular measure?
  - A higher priority measure receives a higher weight in scoring
- Assign a score for each measure based on the value that results from a particular scenario/option
- Determine the overall score based on weighting
- Compare to score from status quo

## Sample Decision Tool

| Risk Measure                        | Value    | Score       | Weight |
|-------------------------------------|----------|-------------|--------|
| <b>Plan 1 Insolvency</b>            |          |             |        |
| Chance                              | 15%      | 35          | 20%    |
| Amount (\$ in millions)             | \$20,000 | 30          | 20%    |
| <b>Plan 2/3 Funded Status</b>       |          |             |        |
| Average Funded Status               | 93%      | 90          | 15%    |
| Chance Below 80%                    | 70%      | 30          | 15%    |
| <b>Employer Contributions</b>       |          |             |        |
| Average Biennial Change             | 15%      | 40          | 10%    |
| Years Above Sustainable Levels      | 10       | 35          | 10%    |
| Percentage Above Sustainable Levels | 20%      | 30          | 10%    |
| <b>Overall Score (Scenario)</b>     |          | <b>41.5</b> |        |
| <b>Overall Score (Status Quo)</b>   |          | <b>55.1</b> |        |

## Questions?



## Suggested Role Of SCPP

- Receive reports on study
- Provide input and guidance to OSA
- Make policy decisions
  - Health measures and risk measures
  - Options for managing risks
- Communicate results of analysis and make recommendations to Legislature



### Suggested Role Of OSA

- Report to SCPP on study
- Build risk model and perform analysis
- Create preliminary decision tool
- Identify possible options for managing risk

### Suggested Risk Study Timeline



## Questions?



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## Desired Outcomes Of Study

- Improve the financial health of the state's retirement systems
- Ensure long-term sustainability
- Develop new tools to increase understanding of how policy changes impact system health
- Institutionalize lessons learned
- Create shared ownership in maintaining system health in the future



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## Why Not Start With Solutions?

- We don't fully understand the risks we're facing
- We have not yet designed all the necessary tools to measure them
- Further study will generate more information about the possible outcomes we face
- Better information leads to more effective risk management

## Recap Of All Parts

- Told the story behind the proposed study
  - Convergence of strategic planning and an actuarial assessment
- Walked through the general process for the study
  - Identify
  - Measure
  - Analyze
  - Manage
- Looked at key elements of a suggested plan
  - Goals
  - Deliverables
  - Roles
  - Timelines
  - Outcomes

## Conclusion

- Retirement systems face significant health risks in the future
- Studying these risks can help policy makers effectively manage them by
  - Providing more information
  - Improving understanding
  - Providing new tools
- Managing future health of the systems
  - Takes management of the systems to the next level
  - Strategic priority of the Executive Committee
- If you don't manage risks, risks will manage you
- What side of risk management do you want to be on?

## Suggested Next Steps

- OSA to begin construction of actuarial risk model
  - Significant time commitment
  - Significant use of actuarial resources
- Work session on health measures at November SCPP meeting



## Questions?

