

AMERICAN ACADEMY OF ACTUARIES FORUM

Retirement for the AGES: Measuring for Success

Ronald Reagan International Trade Center

Washington

April 28, 2014



AMERICAN ACADEMY *of* ACTUARIES

Objective. Independent. Effective.™

American Academy of Actuaries

The American Academy of Actuaries is an 18,000-member professional association whose mission is to serve the public and the U.S. actuarial profession. The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.



Overview of the AGES

- What is Retirement for the AGES?
 - Follow-on to “Retirement 20/20”
 - American Academy of Actuaries initiative
 - A framework for retirement system design
- What are the AGES principles?
- What is our assessment process?



The Spirit of “Retirement 20/20”

- Society of Actuaries initiative launched in 2006
- Design a retirement system from the ground up
 - Questioned whether either DB or DC systems really work
 - Focused on best ideas from around the world
 - *What could be; principles - rather than solutions*
 - *What we need to achieve - not how to achieve it*
- Over 4 years and 3 conferences
 - Identified key drivers of successful retirement systems
 - 2010 conference presented models:
 - Retirement systems that embodied these ideas
 - Demonstrated how principles could work



Retirement for the AGES

- American Academy of Actuaries (Academy) initiative
 - In 2010, the Academy's Pension Practice Council decided to:
 - Create a “Forward-Thinking Task Force”
 - Build on ideas from Retirement 20/20
 - Identify guiding principles for a robust retirement system
 - Introduce these principles into policy discussions
 - Focuses on retirement plan design principles
 - Does not address universal coverage or adequacy
 - Presumes Social Security system remains in place
- “Retirement for the AGES” synthesizes Retirement 20/20 ideas into 4 key categories



The AGES Principles

- **A**lignment
 - Are stakeholder roles, choices and skills aligned with their competencies?
- **G**overnance
 - Does structure support sound decisions and actions?
- **E**fficiency
 - Is retirement income maximized, with controlled risk?
- **S**ustainability
 - How are costs allocated? Are shocks survivable?



Alignment

- Key stakeholders
 - Employers
 - Individuals
 - Society (current and future taxpayers)
- Proper alignment of roles and skills
 - Redefine employer role
 - Improve individual decisions
 - Protect society from suboptimal outcomes



Governance

- Key building blocks
 - Clearly define roles and responsibilities
 - Reduce real and potential conflicts of interest
 - Recognize and manage competing needs
 - Staff appropriately



Efficiency

Efficiency promotes maximizing income at sustainable levels

- Lower plan costs
- Broaden participation
- Minimize leakage
- Pool risk
- Narrow variability



Sustainability

Sustainable systems must address multiple issues:

- Intergenerational equity
- Proper cost allocation
- Market shocks
- Balancing sustainability and adequacy



Assessment

- Task force members read available material and record observations relating to principles and sort observations into categories: meeting principles, falling short and where more information is needed
- Information goes through two sets of review within task force and again with Pension Practice Council
- Comparisons made among assessments
- Final grades for each principle will be assigned as will overall grade



Recent New Brunswick Pension Reform (the “Shared Risk Pension Plan”)

Presented by W. Paul McCrossan (retired FCIA) at
The American Academy of Actuaries April 28, 2014 in Washington D.C.

The New Brunswick “Players”

- Task force Chair, senior lawyer with extensive pension regulatory and “troubled plan” experience
- Prominent provincial economics professor specialist in public policy
- Supernumerary actuary (me)
- Government actuary and his associates
- Senior New Brunswick public servants
- Cabinet subcommittee chaired by the provincial Premier

The 2011 Prior Pension Problems

- Almost all provincial pensions underfunded (many seriously)
- Public sector pension financial reporting standards made it difficult to measure problem in a market consistent manner
- Out of date (or largely unknown) Canadian pensioner mortality data on rapid mortality improvements especially by education / income
- Lack of rigorous risk management by pension funds and regulators
- Rapid aging of Canada's Maritime provinces leading to higher spending and lower tax revenues
- Demographics might “eat the province alive” within a decade

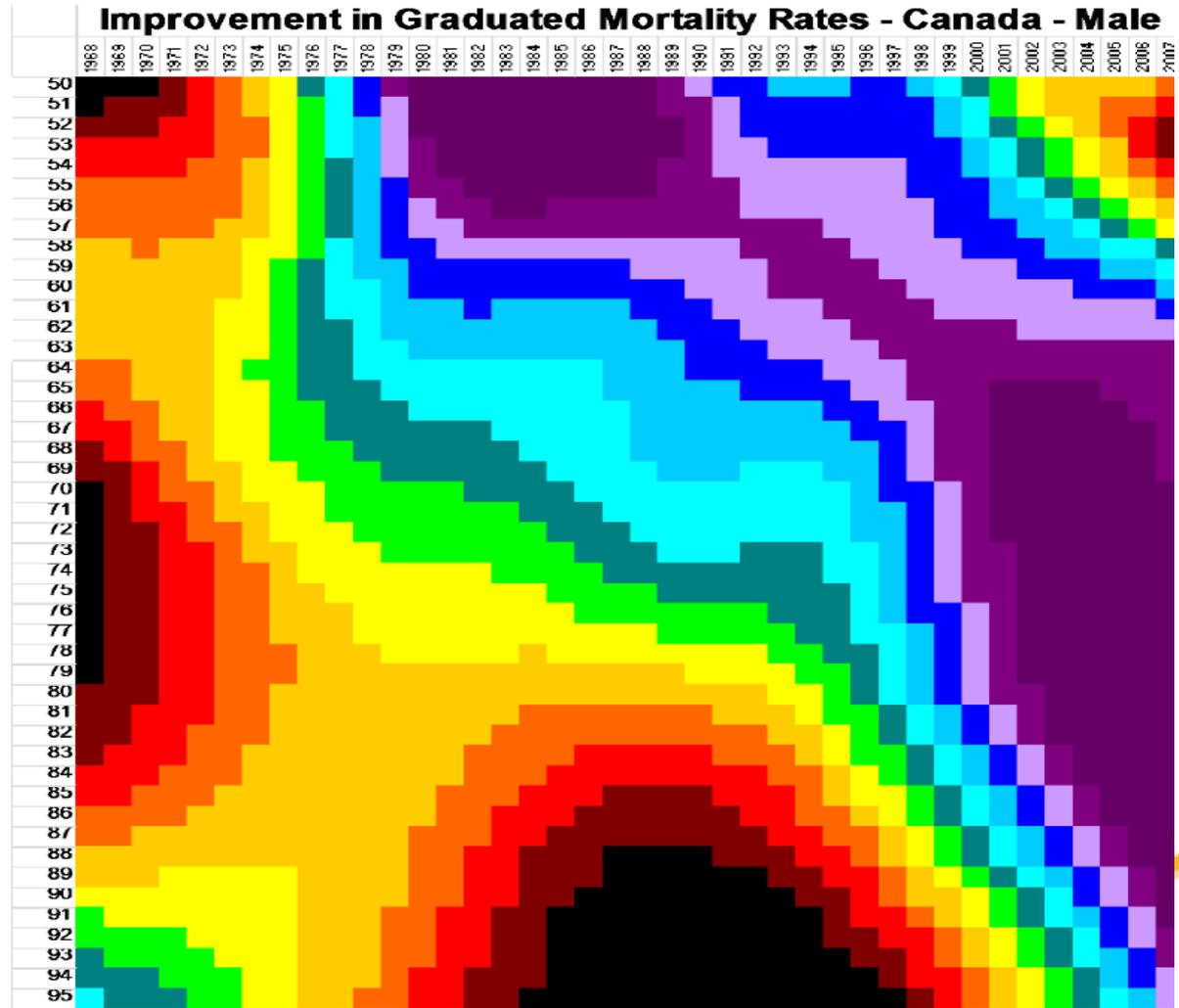
2007 IMF Warning to Canada on the Need for Pension Risk Management

- “OSFI and the provinces should ensure that the regulatory framework for pension funds focuses increasingly on the adequacy of risk management practices and resources, in addition to the traditional solvency approach. “
- “These developments require continued reinforcement of risk management skills in pension funds and their supervisors. Poor risk management and large losses by pension funds could lead to political pressure for bailouts. The large number of medium and small defined benefit pension funds may find it costly to operate in this environment ... The regulatory framework for pension funds will need to focus increasingly on the adequacy of risk management practices and resources, in addition to the traditional solvency approach.”

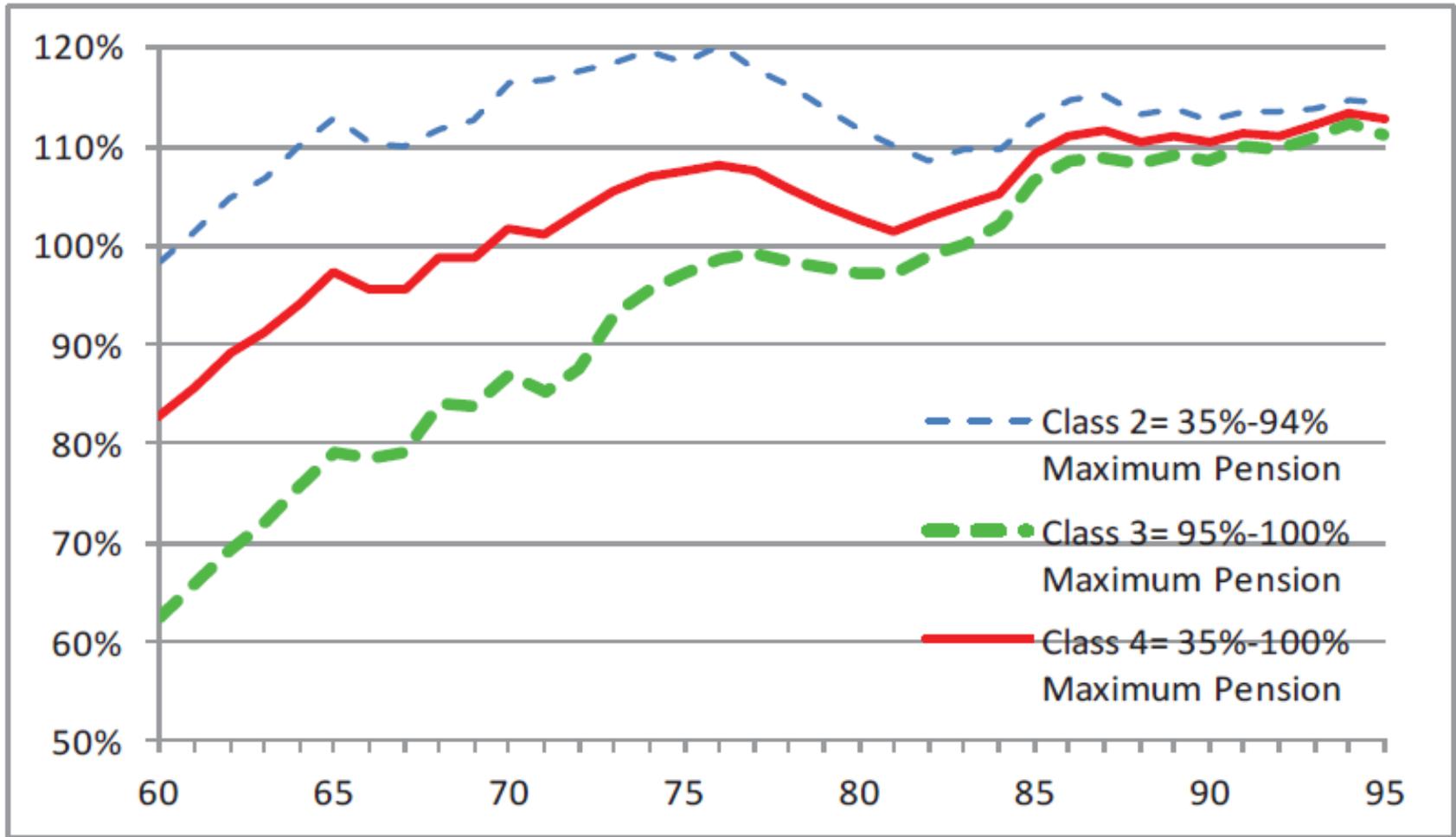
Canada-wide Rates of Mortality Improvement (all working males)

Note both purple diagonal centered at YOB 1935 and post 60's

| Band | Colour |
|-------|------------------|
| 0.00% | Black |
| 0.25% | Dark Red |
| 0.50% | Red |
| 0.75% | Orange-Red |
| 1.00% | Orange |
| 1.25% | Yellow-Orange |
| 1.50% | Yellow |
| 1.75% | Light Green |
| 2.00% | Green |
| 2.25% | Light Blue |
| 2.50% | Blue |
| 2.75% | Light Purple |
| 3.00% | Dark Purple |
| More | Very Dark Purple |



Canada-wide Male Mortality Rates (above and below median income)



The “Key” Political Question

- In a democratically elected government, can steps be taken to head off a problem while there is still time when the voting population is largely unaware of the emerging problem and solutions are “painful”
- The Premier’s approach “What is the *right thing* to do?”

The Mandate of the New Brunswick Pension Task Force

- Three Objectives:
 - Stability (Efficiency)
 - Sustainability (Sustainability)
 - Affordability (Efficiency)
- Two Principles:
 - Transparency (Alignment & Governance)
 - Inter-generational equity (Sustainability)

The Process

- Review regulatory filing of large New Brunswick pension plans adjusting for current mortality and market consistent asset / liability measurement
- Use large mature municipal pension plan's request for substantial funding relief as a test case
- Consider how to modify the “Dutch pension (defined ambition) model” as a foundation from which to deal with severely underfunded pension plans when strengthened by rigorous risk management including security objectives for both base benefits” and “target benefits”
- Reflect unpublished / largely unknown mortality rate and mortality improvement data
- Seek up to date risk management information from retired Dutch ABP personnel
- Find an appropriate “market consistent” liability measure and a proxy to risk based capital (“the 15 year open group funded ratio”)

The First Test Case

(Province-wide professional hospital workers)

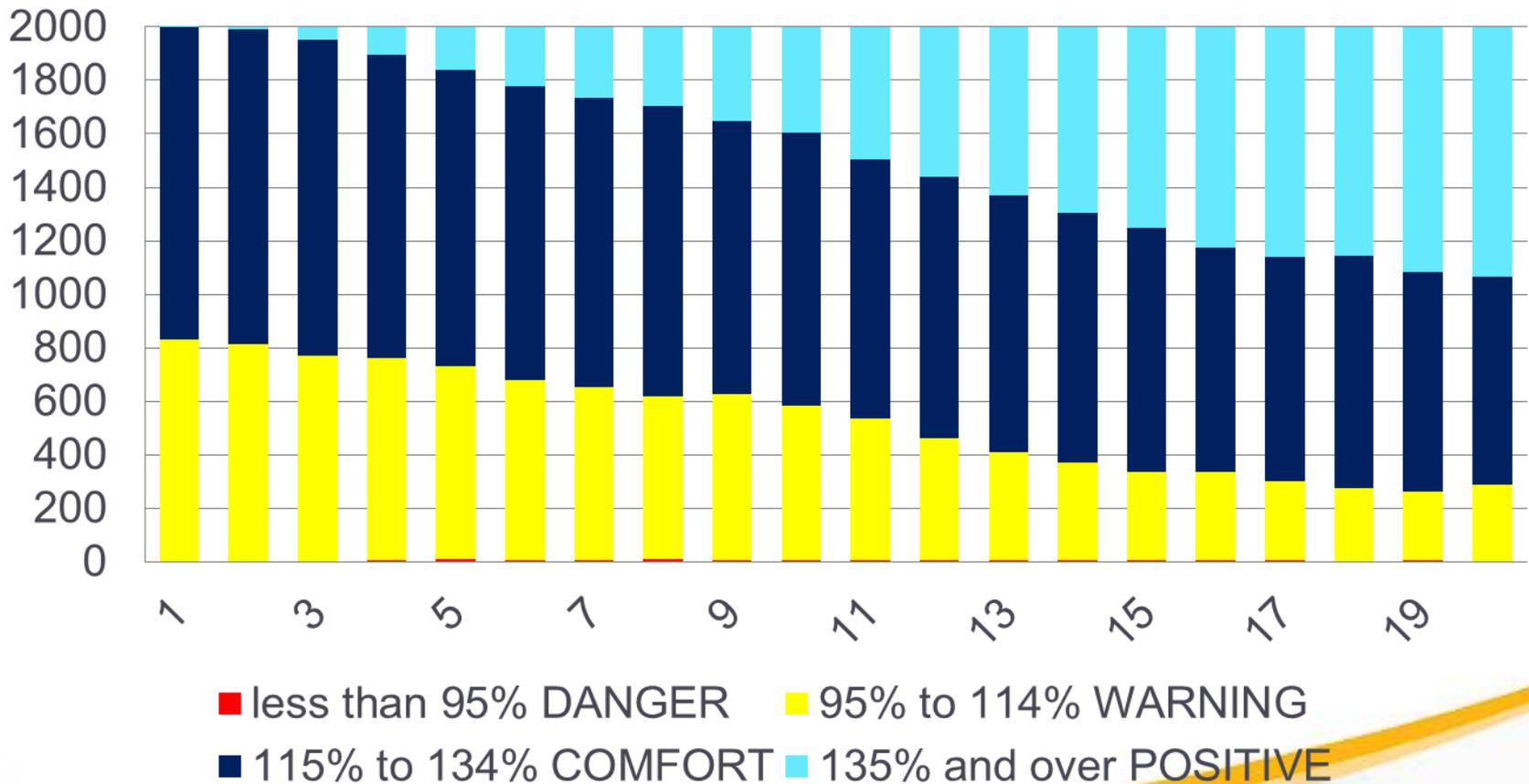
- Trustees had sought court direction as to their fiduciary duties
- Court judgment mandated large increase in contributions or large reduction in benefits, or both
- Using up to date mortality and market consistent measures, the situation was much worse than the trustees had imagined
- Unions trusted task force Chair with whom it had a long relationship
- Over 5 months of “transparent” meetings, a solution acceptable to the major professional hospital employees and the government was found.
- Complete sharing of communications between government and unions with unions having the primary role in member communications

The Shared Risk Pension Plan Template Emerges

- Unions played a major role in shared risk template design reflecting membership concerns for a secure pension
- “Defined ambition” template acceptable only with strong base benefit (97.5%) and target benefit (75%) security constraints as stated under investment management policy and funding policy
- All prior earned benefits preserved in base benefits except for adopting conditional indexing in place of final averaging and COLA
- **Base benefits could be reduced in the future but only if their restoration became the plan’s top priority**
- Very small pre-determined changes in future contributions allowed with no contribution holidays unless mandated by Income Tax Act
- Future service unreduced retirement age and future service early retirement discounts increased (but not quite to actuarial neutrality)
- All part time and casual workers covered by new plan
- Future indexing shared by actives, deferred vesteds and retirees (with priority to reversing past reductions)

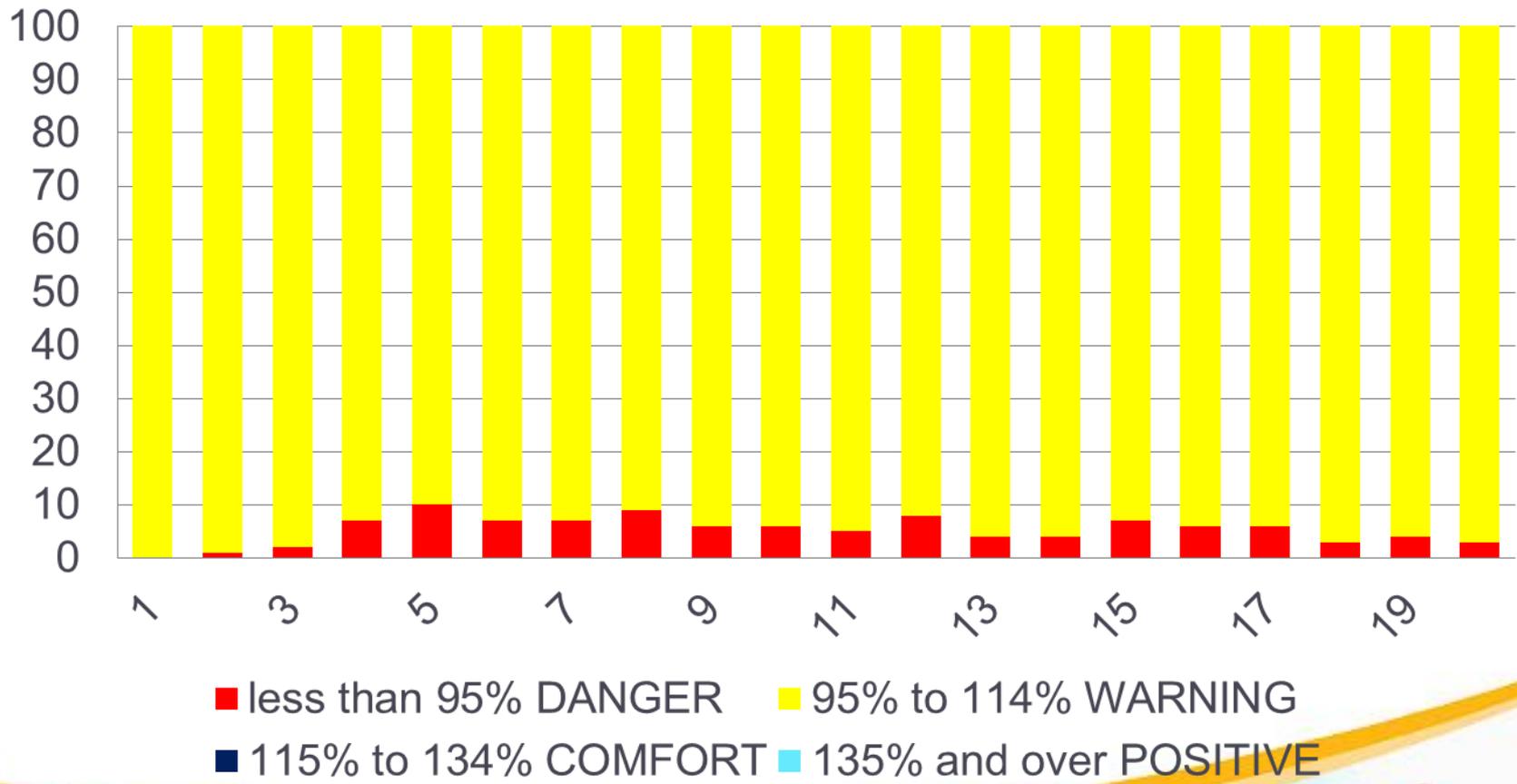
Sample Expected 15 Year Open Group Funded Status

Distribution of Funding Levels by Year

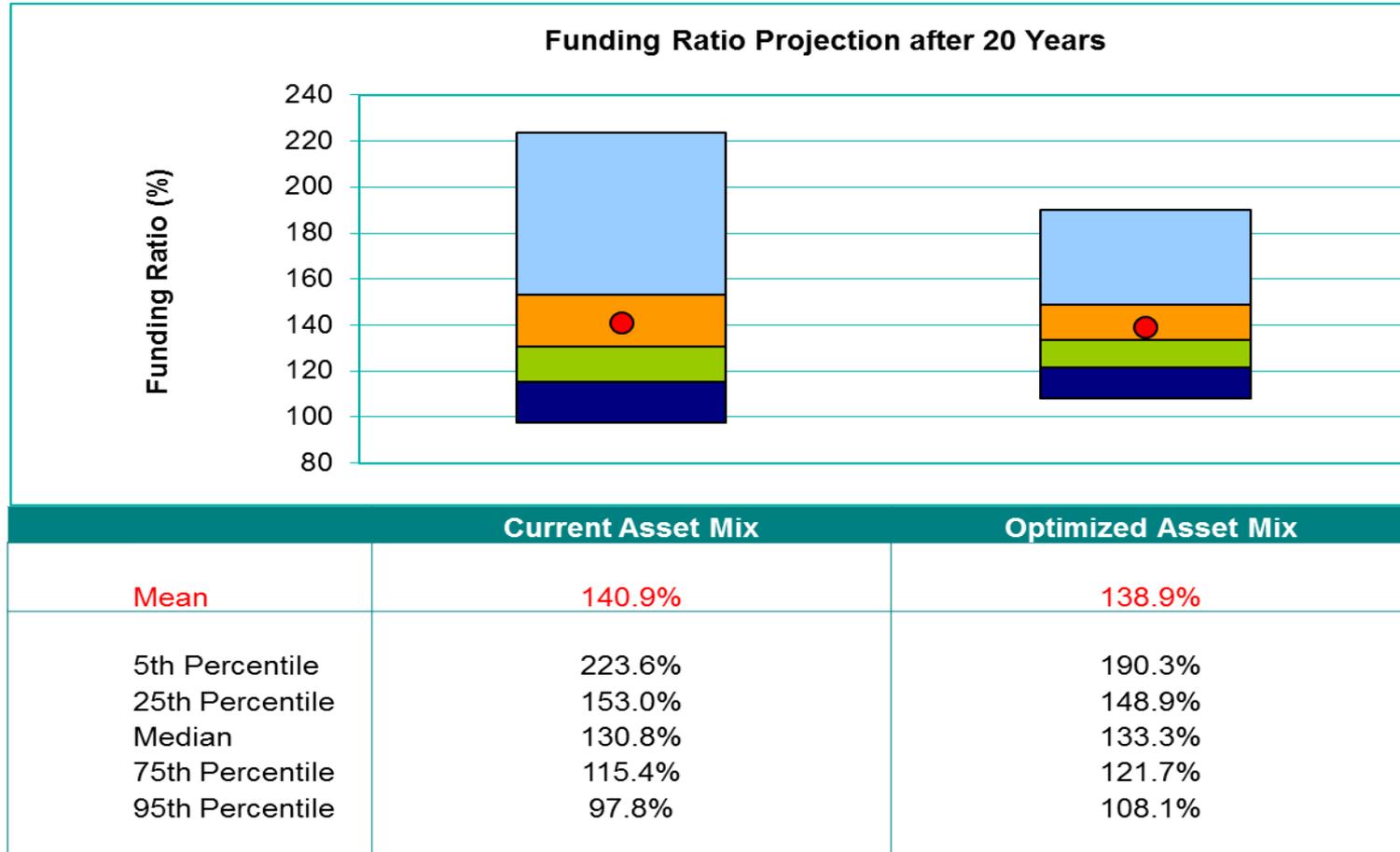


Worst 5% Sample Distribution of Future Benefit Reduction Possibility

Distribution of Funding Levels by Year



Funding Ratio Projections



Subsequent Conversions to Shared Risk Plans

- Province-wide non-professional hospital workers (CUPE)
- Two large troubled municipal employees' pension plans (CUPE, fire, police)
- Province wide Pipefitters (plumbers) plan
- Members of the Legislative Assembly (MLA's) plan
- Public Sector Superannuation Act employees (public service and key crown corporations)
- Provincial teachers' pension plan conversion to new hybrid plan agreed but not yet law
- Start of conversion by several private sector DB plans

Emergence of Opposition to Shared Risk Conversion

- Led by union representing highest paid professional employees (PIPSC) and some of most senior retired public service employees
- “A past deal is a past deal” and no contingent benefits could be contemplated to replace previously guaranteed benefits earned
- Government legislated PSSA changes with significant but not unanimous union support

Back to “The Key” Political Question

- Can a government take action to avert a serious financial problem about which voters are largely unaware?
- Conventional wisdom is that the “political solution” is to “kick the can down the road” until the problem becomes critical rather than inflict any “pain”.
- New Brunswick has a fixed election date in September, 2014
- Other Canadian governments (both provincial and federal) have identified the cost of “entitlements” as critical to them. They are now taking some action and watching New Brunswick closely



South Dakota Retirement System

Review of SDRS Administrative Practices and Plan Governance in Conjunction with *Retirement for the AGES: Measuring for Success*

For Presentation to the American Academy of Actuaries
Retirement for the AGES Forum - April 28, 2014

Robert A. Wylie, Executive Director/Administrator
South Dakota Retirement System



SDRS Mission Statement

To plan, implement and administer income replacement programs, and to encourage additional savings for retirement, all of which offer SDRS members and their families the resources and the opportunity to achieve financial security at retirement, death or disability by providing an outstanding, appropriate and equitable level of benefits.

The Board of Trustees believes this mission is achievable with the resources available in a progressive working environment, by sound and efficient management, through superior investment performance and by exercising the fiduciary responsibility associated with the proper stewardship of member assets.



South Dakota and SDRS Background

- Comparatively small population in State – 835,000 citizens
- Fiscally conservative and essentially debt free
- SDRS created in 1974, a consolidation of 11 separate plans
- Total membership: 77,000 (nearly all public employees in the state)
- Annuitants – 23,000 (over \$400M annual benefits)
- Trust fund assets of \$10B
- *Statutorily fixed and matching contribution rates*
- *Statutorily defined funding thresholds that require the Board to initiate corrective action if not met*



Board Alignment, Governance, Efficiency and Sustainability

- Primarily elected Board of Trustees with balanced employer and employee representation and Governor appointees – Nonpartisan
- Board of Trustees initiates necessary or desirable legislation and takes full responsibility for:
 - Maintaining the actuarial soundness of SDRS
 - Minimizing risk of benefit reductions to members
 - Avoiding risk to the employers and members of higher contributions
- Separation of retirement administrative and investment activities
 - Individual boards (SDRS Board of Trustees and South Dakota Investment Council)
 - Different reporting relationships, and representation of SDRS and SDIC on each board
 - Majority of the Investment Council are independent trustees with a financial background and appointed by the legislature - Nonpartisan
 - Cost efficiency of administrative and investment functions is regularly measured and compared to benchmarks and to peers



Legislative and Executive Oversight – Alignment and Governance

- Standing Senate and House Retirement Laws Committees (RLC)
 - Source of knowledge and expertise about SDRS within Legislature
 - All retirement related legislation normally referred by the Legislature to RLC for recommendation to the entire body
 - Any other proposed retirement legislation is normally referred by the RLC back to the SDRS Board of Trustees to consider, assess, and recommend before consideration by RLC
 - Positive working relationship and partnership with SDRS Board of Trustees resulting in:
 - joint educational and information meetings
 - timely reporting, disclosure, and full transparency
 - shared ownership and responsibility with Board of Trustees for the success of SDRS
 - regular communication with SDRS staff
- Supportive Executive Branch with two appointees on the SDRS Board
- SDRS is independent of the Executive Branch and Legislature



Funding and Funding Policy – Efficiency and Sustainability

- Fixed statutory and matching member and employer contribution rates that have never been increased (or decreased) because of System experience
- The SDRS comprehensive Funding Policy reflects the fixed funding rates and includes:
 - Target funding standards
 - Establishment of a Cushion and Reserve to protect the System during unfavorable economic periods and to fund future benefit improvements
 - Funding standards defining the conditions for consideration of benefit improvements
 - Funding standards defining the conditions for consideration of corrective actions and benefit reductions
- Fiscally conservative designs and practices with outstanding investment performance have produced historically high funded ratios – Market Value funded ratio above 100% in 24 of the last 28 years



Funding Policy – Governance and Sustainability

Elements

| Funding Objectives (Discussed at the Quadrennial Funding Study presentations in 1999 and 2002, and formally adopted April 2006 and revised September 2013) | Establishment of Cushion and Reserve (The Reserve for Funding of Long-Term Benefit Goals, adopted in 1995 and later revised in 1998, 2001 and 2013) | Policy Regarding Consideration of Benefit Improvements (Adopted in 2004 and revised in 2013) | Statutory Conditions That Would Require Corrective Action (SDCL 3-12-122, refined during 2004 Legislative Session) |
|--|--|--|---|
| <ul style="list-style-type: none"> • Funded Ratios (Assets ÷ Actuarial Accrued Liabilities) <ul style="list-style-type: none"> ○ Based on Market Value of Assets – 100% or greater ○ Based on Actuarial Value of Assets – 100% • Ratio of Market Value of Assets to Actuarial Value of Assets <ul style="list-style-type: none"> ○ Exceeds 100%, which results in a Cushion • Maintain a fully funded system <ul style="list-style-type: none"> ○ No Unfunded Liabilities under Entry Age Normal Cost method ○ If future Unfunded Liabilities created because of unfavorable experience, fully fund over a period not to exceed 20 years (amortization over a shorter period at Board discretion) • Statutory fixed contributions meet or exceed the actuarially required contribution each year <ul style="list-style-type: none"> ○ Normal Cost plus expenses when System is fully funded ○ Includes payment of Unfunded Liabilities over a period not to exceed 20 years if System not fully funded (amortization over a shorter period at Board discretion) | <ul style="list-style-type: none"> • Cushion <ul style="list-style-type: none"> ○ Excess of Market Value of Assets over Actuarial Value ○ Captures all net favorable experience • Actuarial Value of Assets <ul style="list-style-type: none"> ○ asset value if all assumptions met ○ minimizes volatility in actuarial measures ○ limited to 80-120% of market value of assets ○ set to market value if no Cushion for five consecutive years • Reserve <ul style="list-style-type: none"> ○ Delays recognition of asset gains (and liability experience gains/losses) over five years, but recognizes asset losses immediately • Both Cushion and Reserve provide resources to: <ul style="list-style-type: none"> ○ Protect SDRS during times of unfavorable experience, and ○ Pre-fund benefit improvements | <ul style="list-style-type: none"> • After consideration of the expense of the benefit improvement the Market Value Funded Ratio must be at least 120% • In addition, the following guidelines must be satisfied: <ul style="list-style-type: none"> ○ Reserve is sufficient to fully fund the present value of the benefit improvement ○ After consideration of the recommended benefit improvement all funding objectives must still be met • Proposed benefit improvement must be consistent with both the Board's long-term benefit goals and public policy with regard to retirement practices | <ul style="list-style-type: none"> • Funded status report to Governor and Retirement Laws Committee (RLC) if any of the following exists: <ul style="list-style-type: none"> ○ Contributions not sufficient to fund current benefit structure ○ Funded Ratio (based on Market or Actuarial Value) less than 80% ○ Market Value of Assets less than 90% of the Actuarial Value of Assets <p>The report shall include an analysis of the conditions required for an improvement of the funded status of the system and recommendations for the circumstances and timing for any future benefit changes, contribution changes, or changes in actuarial assumptions</p> <ul style="list-style-type: none"> • If any of the above conditions exist for three consecutive actuarial valuations, the following recommendations shall be made by the Board to the Governor and RLC, effective as soon as possible to improve the SDRS funded status <ul style="list-style-type: none"> ○ Benefit reductions ○ Contribution changes ○ Combination of the two |



Benefit Plan Design – Alignment and Sustainability

- Hybrid plan design that includes the features of both defined benefit and defined contribution plans and focuses on building reserves to limit risk and fund benefit improvements
- Benefits designed to meet income replacement needs for career employees, but balanced by affordability, and based on an extensive analysis that considers Social Security, personal savings, and SDRS benefits
- Unusual portability features that provide a choice to terminated members of:
 - Most of the employer contributions and all of the member contributions accumulated with interest in a lump sum, or
 - A lifetime benefit at retirement indexed with the SDRS COLA before and after retirement (indexing the deferred vested benefit prior to retirement)



Actuarial Methodologies and Risk Mitigation – Sustainability

- Due to fixed statutory contribution rates and the requirement to maintain these stable rates, SDRS has used the frozen unfunded actuarial accrued liability method since 1996 and an actuarial asset valuation method with corridor designed to match assumptions
- The frozen unfunded liability is re-initialized based on the entry age accrued liability method with each experience study – Most recently in 2012
- In FY 2013, the frozen unfunded liability was paid off from the Cushion. As such, the actuarial accrued liability as of June 30, 2013 is equal to the entry age accrued liability
- The portion of the statutory contributions which had been allocated to pay the frozen unfunded liability is now available to build the Cushion and mitigate risk
- This reallocation is estimated to raise the likelihood of maintaining the SDRS funded status by 3% to 4% and, if necessary, provide a resource to amortize an unfunded liability of approximately 5-6% of accrued liabilities



Actuarial Methodologies and Risk Mitigation - Sustainability

- Future benefit improvement methodology provides for fully funding of any benefit improvement when funding policy objectives are met and a focus on flexible benefits that track with plan experience
- The Board of Trustees recent established an objective to allocate 20% of annual contributions to mitigate risk
- SDRS Cushion reflects favorable investment results and equals excess of market value of assets over actuarial value and improves sustainability
- Cushion has existed in all but three of the last 28 years
- A COLA based on both the CPI and the SDRS funded status, with minimum and maximum benefits was enacted in 2010
- Key operational decisions are based on market value of assets
- Identification and proposed corrections of inequities, benefits that have higher than expected costs, inefficiencies, and to meet best practices and enhance sustainability



Board Policies, Practices, and Initiatives – Alignment and Efficiency

- Creation of a member savings goal to meet total income replacement needs at retirement considering benefits from SDRS, Social Security, and savings
- The Special Pay Plan that permits transfer of termination pay to a tax-efficient retirement savings account
- Administration of a tax and cost efficient voluntary 457 savings plan- Supplemental Retirement Plan (SRP)
- Implemented an automatic enrollment provision for new employees under the SRP in 2010
- Provide a unique opportunity to convert other retirement savings to additional lifetime benefits from SDRS at retirement through the Supplemental Annuity Benefit



State of the SDRS and Pending Issues

- Fully funded status is a significant accomplishment
- System is sound, in balance, and meets Funding Goals
- Conservative actuarial assumptions overall but mortality improvement must be addressed as well as improving probability of sustainability
- Strong overall benefit practices, with a number of above average practices but a lower than average benefit formula multiplier
- Early retirement subsidies are very significant
- Below average employer and member costs
- Fixed statutory employer and member contributions that meet actuarial requirements with a margin that will increase the Cushion each year
- Precedent of corrective actions when required

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The Secure Choice Pension Plan

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Vice President and Actuary
Atlanta, GA

 Segal Consulting

AGES Principles

- **Alignment** – a retirement system should align stakeholder roles with their skills
- **Governance** – good governance provides a balance framework for making and implementing good decisions
- **Efficiency** – systems should maximize retirement income while avoiding excessive risk
- **Sustainability** – the system should be designed to support retirement income over all generations of participants while being able to withstand financial shocks such as recession or prolonged inflation.

The Secure Choice Pension (SCP)

What is SCP?

- It is a supplemental DB pension plan
- It was developed by NCPERS and Segal under Hank Kim's leadership
- It is intended to take advantage of the efficiencies in administration and investment that public sector plans have developed
- Its purpose is to develop sustainable lifetime retirement income for private sector employees who have seen most of their retirement security disappear; particularly for employees of small businesses

Guiding Principles of Plan Design

Overriding Principle: A partnership among private sector workers and employers, with the plan sponsor, to address the crisis in retirement savings

- Lifetime retirement security
- Flexibility, portability, predictability, simplicity and sustainability
- Carefully manage and share risk
- Effectively use the investment power of public plans
- Augment (and not replace) existing pension programs

Plan Design

“Multiple-Employer” Plan

- DB “Career Accumulation Plan” (Hybrid): each participant will have an individual account providing for a minimum guaranteed benefit and an opportunity for participation in additional earnings
- Flexibility, portability, predictability, simplicity and sustainability
- Conservative Funding
- Flexibility in Sharing Risk of Underfunding:
 - Improvements in life expectancy
 - Poor investment experience
 - Employer withdrawals

Principles of Retirement Security

Stable Contributions

Equalize Risk

Committed Funding

Universal Retirement Plan Coverage

Replace Adequate Income

Efficient and Transparent Governance

Qualities of Sustainable Pension Plan

Summary of Proposed Secure Choice Pension Provisions (the basic plan)

- Normal Retirement at 65
- Early Retirement at 55
 - Benefit design automatically incorporates early and late retirement adjustments in annuity conversion factors
- 6% Allocation Rate (Contribution Rate)
- 5% Interest Crediting Rate
- Immediate Vesting in accrued benefits
- Individual Accounts
- The Cash Balance is converted to a guaranteed life annuity, or other optional forms, to be actuarially equivalent using 5% interest and the RP-2000 Combined Healthy Mortality Table
- Death Benefit



Additional plan features such as a long-term disability benefit can be added. Also, these parameters can be adjusted to fine-tune the balance between benefits delivered and plan cost.

SCP Estimated Income Replacement

ESTIMATED REPLACEMENT RATIOS WITH A 5% INTEREST CREDITING RATE

| Entry Age | Expected Social Security Replacement Ratio ¹ | Replacement Ratio from Expected Personal Savings Including 401(k) ² | Total Replacement Ratio with Social Security and Personal Savings Only | Expected SCP Replacement Ratio ³ | Total Replacement Ratio with SCP |
|-----------|---|--|--|---|----------------------------------|
| 25 | 30% | 25% | 55% | 29% | 84% |
| 35 | 26% | 18% | 44% | 21% | 65% |
| 45 | 17% | 11% | 28% | 13% | 41% |

¹ Calculated using 2011 Social Security bend points and assuming career earnings consistent with national average. For ages 35 and 45, the replacement ratio is prorated to reflect the fraction of a participant's 35 years of covered earnings used in Social Security Primary Insurance Amount calculation which would be earned under their tenure with their current employer if they worked until age 65.

² Calculated using assumed salary increases based on age, an average return of 5% per year, a contribution rate of 6% per year, retirement of age 65, and annuity conversion based on PBGC annuity valuation assumptions.

³ Calculated using assumed salary increases based on age, and an expected credited interest rate of 5% per year.

**Retirement Income Replacement Gap:
Surveys report individuals estimate 60% as
adequate—when 80% to 90% is needed.**

SCP Funding: How It Works

SCP funding takes a “belt and suspenders” approach for protection from adverse experience and flexibility in sharing the risk of underfunding. Four layers of protection are built in.

- **Layer 1:** Benefit Design as Shown Earlier
- **Layer 2:** The Annual Contribution
- **Layer 3:** The Retiree Dividend Reserve Fund (RDRF)
- **Layer 4:** Termination or Withdrawal of An Employer



SCP Funding: How it Works

Layer 1: Benefit Design as Shown Earlier

- Normal retirement at age 65, with no subsidized early
- Basic return credits
- No prior service awarded
- Conservative annuity conversion factors at retirement
- Limited post-retirement increases based on Plan funding results
- Possibility of benefit reduction if experience is negative



SCP Funding: How it Works

Layer 2: The Annual Contribution

➤ **Standard Funding Contribution:**

Normal Cost plus 15-year level dollar closed amortization of any unfunded liability as determined annually but not less than the Normal Cost

➤ **Conservative Funding Calculation:**

Normal Cost plus 20-year level dollar amortization of any unfunded liability as of the valuation date using market value of assets (if less than the actuarial value), the year's crediting rate as the investment return assumption and a 20-year projection of mortality rates



Effective Funding Calculation: 70% of the greater of the above two calculations plus 35% of the lesser but not less than the contribution determined using ERISA multiemployer funding rules.

SCP Funding: How it Works

Layer 3: The Retiree Dividend Reserve Fund (RDRF)

- Nothing is allocated to the RDRF until the market value of assets exceeds the Conservative Funding Calculation accrued liability by 10%.
- 70% of assets in excess of 110% of the Conservative Funding Calculation accrued liability is held in the RDRF.
- This reserve is available, at the discretion of the Plan sponsor, either to grant a retiree dividend or, in the event of negative experience, to provide funding relief.
- Dividends granted from the RDRF may be reduced if future experience does not support their continued payment.



SCP Funding: How it Works

Layer 4: Termination or Withdrawal of an Employer

- The SCP provides flexibility for sharing the risk of underfunding as follows
- Should a participating employer terminate for any reason, and that employer's total liability is not fully funded, then the Plan sponsor may implement one or more of the following options:
 - Assess the terminating employer a withdrawal amount similar to ERISA multiemployer plans
 - Establish an insurance pool using premiums which provides termination coverage
 - Cover the liability from a dedicated Plan Sponsor reserve account for this purpose
 - Determine the amount of employee benefits supported by the assets at termination



Issues to Be Addressed and Resolved

- What will the relationship be between the SCP, the sponsor, the employers and the participants?
- ERISA single employer funding rules currently apply to multiple employer plans. Can this be changed to allow SCPs to fall under multiemployer plan rules?
- How will initial development and start-up costs for an SCP plan be paid? How will ongoing administrative expenses of the SCP plan be paid?
- How will contributions to a SCP plan be made? By employers, employees, or both? Can employee contributions be pre-tax?
- Should eligible employers be restricted? (With less than 100 employees ERISA reporting requirements are less onerous.)

Preferred Federal Legislation

- Define each SCP as a single, multiple-employer plan (MEP)
 - Current DOL rulings indicate MEP with unrelated employers may not be treated as single “employee benefits plan” under ERISA. Options:
 - Amend ERISA to allow SCP as MEP; or
 - Amend ERISA and IRC to treat SCP as multiemployer plan

- Allow SCP to use multiemployer minimum funding requirements
 - Multiemployer rules provide less volatile funding requirements and increase administrative efficiency of SCP
 - Need to amend ERISA and IRC to accomplish this

- PBGC applicability options, both will need ERISA and IRC amendments
 - Exempt SCP from PBGC coverage
 - Offer alternative benefits safety net (e.g., State reinsurance by statute)
 - Or subject SCP to multiemployer PBGC requirements
 - Provides for lower premiums and lower benefit guarantees

Current SCP State Initiatives

- Several states have begun looking at SCP type initiatives. These include:
 - Massachusetts – enacted legislation (prior to SCP; covers not for profit entities)
 - California – enacted SB 1234 (first SCP legislation; pooled IRA construct)
 - Connecticut – task force discussed
 - New York – Comptroller discussing retirement security for all
 - Maryland – legislation introduced and hearings held in the Senate (pooled IRA construct)
 - Minnesota – has held hearing on the concept of SCP type plan
 - Ohio – preliminary studies performed; legislation introduced
 - Washington-has held hearing on potential legislation

- NCPERS can provide which other states are considering additional initiatives

How Does SCP Stack Up to AGES Principles?

- **Alignment** – assigns investment decisions to those with expertise; focuses on sustainable lifetime benefits
- **Governance** – the structure places governance in the hands of professionals with skills and experience; balancing the complexities of broad coverage DB plan with pooled investment resources
- **Efficiency** – SCP provides a frame work for employers that is unavailable at present; utilizing existing public sector plan structures will limit initial costs
- **Sustainability** – SCP has been initially stress tested on investment returns and tested reasonably well; additional testing and refinements will be able to assure long-term sustainability

Questions

SCP Stress Testing

The following tables illustrate a sample projection of an employer group over a 10-year period

- The employer group assumes:
 - 25 employees
 - Ages uniformly distributed over the working career
 - Average salary of \$40,000

- Modeled investment return and crediting rates are as shown in the tables

SCP Stress Test 1

The projection below models an investment market assuming the valuation assumptions as described earlier are exactly met.

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Effective Contribution % | 6.01% | 6.03% | 6.04% | 6.04% | 6.04% | 6.03% | 6.00% | 5.99% | 5.93% | 5.89% | 5.88% |
| Funded % | 100.00% | 137.77% | 138.12% | 138.42% | 138.68% | 138.73% | 139.20% | 139.12% | 140.41% | 141.09% | 140.38% |
| Unfunded/ (Overfunded) Liability | 0 | (18,717) | (39,644) | (62,865) | (88,463) | (116,011) | (146,953) | (178,109) | (216,429) | (255,008) | (286,433) |
| DRF | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Investment Return | — | 7.00% | 7.00% | 7.00% | 7.00% | 7.00% | 7.00% | 7.00% | 7.00% | 7.00% | 7.00% |
| Total Payroll | 1,000,000 | 1,035,181 | 1,071,091 | 1,107,363 | 1,144,006 | 1,181,031 | 1,210,979 | 1,240,228 | 1,247,629 | 1,268,236 | 1,290,993 |

SCP Stress Test 2

The projection below models an investment market using actual returns for the 1990 to 2000 period.

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Effective Contribution % | 6.01% | 6.04% | 5.98% | 5.98% | 5.96% | 6.00% | 5.67% | 5.45% | 4.97% | 4.51% | 4.32% |
| Funded % | 100.00% | 136.60% | 140.12% | 141.51% | 142.51% | 142.12% | 140.52% | 138.59% | 134.23% | 134.51% | 139.30% |
| Unfunded/ (Overfunded) Liability | 0 | (17,047) | (40,455) | (66,519) | (95,704) | (124,574) | (150,316) | (174,103) | (181,973) | (212,750) | (277,111) |
| DRF | 0 | 0 | 0 | 0 | 0 | 0 | 13,062 | 32,012 | 76,994 | 121,387 | 152,960 |
| | | | | | | | | | | | |
| Investment Return | -- | 2.45% | 19.36% | 7.37% | 8.20% | 4.08% | 22.31% | 14.72% | 19.97% | 17.13% | 13.58% |
| Total Payroll | 1,000,000 | 1,035,181 | 1,071,091 | 1,107,363 | 1,144,006 | 1,181,031 | 1,210,979 | 1,240,228 | 1,247,629 | 1,268,236 | 1,290,993 |

SCP Stress Test 3

The projection below models an investment market using actual returns for the 2000 to 2010 period.

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Effective Contribution % | 6.01% | 6.05% | 6.12% | 6.25% | 6.14% | 6.12% | 6.14% | 6.05% | 6.06% | 6.74% | 6.47% |
| Funded % | 100.00% | 135.65% | 133.60% | 129.58% | 130.08% | 130.72% | 131.27% | 132.69% | 135.56% | 127.52% | 127.38% |
| Unfunded/ (Overfunded) Liability | 0 | (16,603) | (33,879) | (47,404) | (67,731) | (90,861) | (116,011) | (147,462) | (189,025) | (169,664) | (193,094) |
| DRF | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Investment Return | -- | -1.25% | -2.95% | -8.39% | 16.69% | 7.73% | 4.51% | 10.17% | 5.01% | -16.30% | 15.71% |
| Total Payroll | 1,000,000 | 1,035,181 | 1,071,091 | 1,107,363 | 1,144,006 | 1,181,031 | 1,210,979 | 1,240,228 | 1,247,629 | 1,268,236 | 1,290,993 |

Retirement for the AGES: Measuring for Success

The AGES Framework



Aligning Stakeholder Roles



Alignment

- Redefine employer role
 - Traditional role – establish, sponsor, administer, and contribute to plans
 - Alternative alignment
 - Use third party to manage and administer plans
 - Improve retirement/financial literacy of employees
 - Collect and transmit employee contributions
 - Advantages
 - Better aligned with core business
 - More transparent
 - Standardized disclosure and fees
 - Not totally dependent on employer



Alignment

- Improve individual decisions
 - Limit unstructured choices
 - Incorporate “auto” features and defaults
 - Employ professionals
 - Provide incentives in tax and other policies



Alignment

- Protect society from suboptimal decisions
 - Develop laws and regulations that enhance financial security systems
 - Balance voluntary incentives and mandatory requirements



Alignment Summary

- Aligns each stakeholder's role with their skills
- Redefines employer's role by placing responsibility for important roles with those appropriate entities
- Helps individuals by structuring their choices to be well-defined and enhance good decision making
- Develops systemic ways to enhance financial security through appropriate levels of laws and regulations



Fostering Good Governance



Governance

- Process by which decisions are made and implemented
- Key attributes
 - Stakeholder participation
 - Transparency
 - Accountability
 - Administration in accordance with law
 - Adherence to policies
 - Effective delivery of benefits



Governance

- Key building blocks
 - Clearly define roles and responsibilities
 - Reduce real and potential conflicts of interest
 - Recognize and manage competing needs
 - Staff appropriately



Governance

- Clearly define roles and responsibilities
 - Define purpose and goals
 - Ensure proper funding
 - Monitor operational compliance
 - Establish transparent procedures
 - Ensure execution of roles and responsibilities



Governance

- Reduce real and potential conflicts of interest
 - Require proper disclosure
 - Emphasize fiduciary responsibility
 - Avoid moral hazard



Governance

- Recognize and manage competing needs
 - Anticipate unintended consequences
 - Balance competing interests
 - Establish appropriate legislation, regulations, and rules
 - Ensure strong oversight
 - Incorporate disincentives for excessive risk taking
 - Use self-adjusting mechanisms



Governance

- Staff appropriately
 - Engage independent experts
 - Include representatives of key stakeholders
 - Establish explicit procedures and transparent mechanisms for appointments
 - Disclose remuneration policy and other terms



Governance Summary

- Clearly defines roles and responsibilities, and acts in accordance with them
- Reduces real and potential conflicts of interest
- Recognizes and manages competing needs
- Staffs boards with financial and other professionals who possess relevant expertise



Maximizing Efficiency



Efficiency

- Lower plan costs
 - Encourage economies of scale
 - Establish regional or national plans that any employer can join
 - Standardize fees
 - Ensure fees are fully transparent



Efficiency

- Broaden participation
 - Provide employees with access to payroll deduction plan
 - Reduce or eliminate age and service requirements
- Minimize leakage
 - Provide incentives for lifetime retirement income
 - Encourage reporting as lifetime income



Efficiency

- Pool risk
 - Encourage multiple distribution methods, by for example:
 - Offering managed account with longevity annuity
 - Including immediate annuities
 - Fixed or variable income
 - Allow partial annuitization
 - Limit guarantees to what is needed



Efficiency

- Narrow variability
 - Reduce risk as retirement approaches
 - Dedicate portion of accumulation to retirement income
 - Stress reliability and consistency of income



Efficiency Summary

- Allows smaller plans to group together, with standard and transparent fees to lower plan costs
- Provides consistent opportunities to accumulate assets during working lifetime to enhance participation and coverage
- Minimizes leakage for non-retirement benefits during accumulation and payout phases
- Encourages pooling and effective risk sharing so funds can provide lifetime income
- Incentivizes narrowing the variability of benefits by fostering risk hedging and allowing for pricing benefits and guarantees



Ensuring Sustainability



Sustainability

- Intergenerational equity
 - Retirement plans are essentially deferred compensation
 - Plans need to be adequately funded to avoid burdening future generations
 - Benefits that are too expensive to fully fund may not be sustainable



Sustainability

- Proper cost allocation
 - Costs should be reasonably allocated among stakeholders
 - Risk should also be allocated appropriately
 - Tax incentives affect cost to taxpayers and society
 - frequent changes affect cost allocation



Sustainability

- Market shocks
 - Financial crises are inevitable
 - Plans need mechanisms to deal with crises
 - Funding cushions
 - Adjustment of funding costs
 - Adjustment of benefits
 - Risk sharing enhances sustainability



Sustainability

- Balancing sustainability and adequacy
 - Little or no risk in plan enhances sustainability but decreases benefits or adequacy
 - Excessive risk in plan makes crisis inevitable and challenges sustainability
 - Self adjusting systems may enhance both by auto-changing:
 - Allocation or level of cost
 - Retirement ages
 - COLAs or other benefit provisions



Sustainability Summary

- Promotes intergenerational equity
- Allocates cost properly among stakeholders
- Withstands market shocks
- Maintains balance between sustainability and adequacy

