Rhode Island Pension Reform: Theory and Process

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First Thing We Did: Change Actuaries

- Good communication skills – public process
- Full Transparency- build trust
- Unbiased Approach / Problem Solver

Inter-Disciplinary Analysis

1. Legal Analysis: "Reasonable and Necessary for a Legitimate Public Purpose"
2. Investment Analysis
3. Actuarial Analysis
4. Fiduciary Analysis
5. Budget/Financial Forecast Analysis
6. Social Impact Analysis

The Pension Crisis is the Result of Five Key Drivers

Faulty assumptions

- Years of aggressively optimistic assumptions have led to decades of low state and employer contributions

Decades of benefit improvements

- Substantial benefit increases in the 1960s, 1970s, and 1980s without corresponding contributions

Current pension plan design

- Current designs enable retired public employees to earn , in many cases, more in retirement than while working

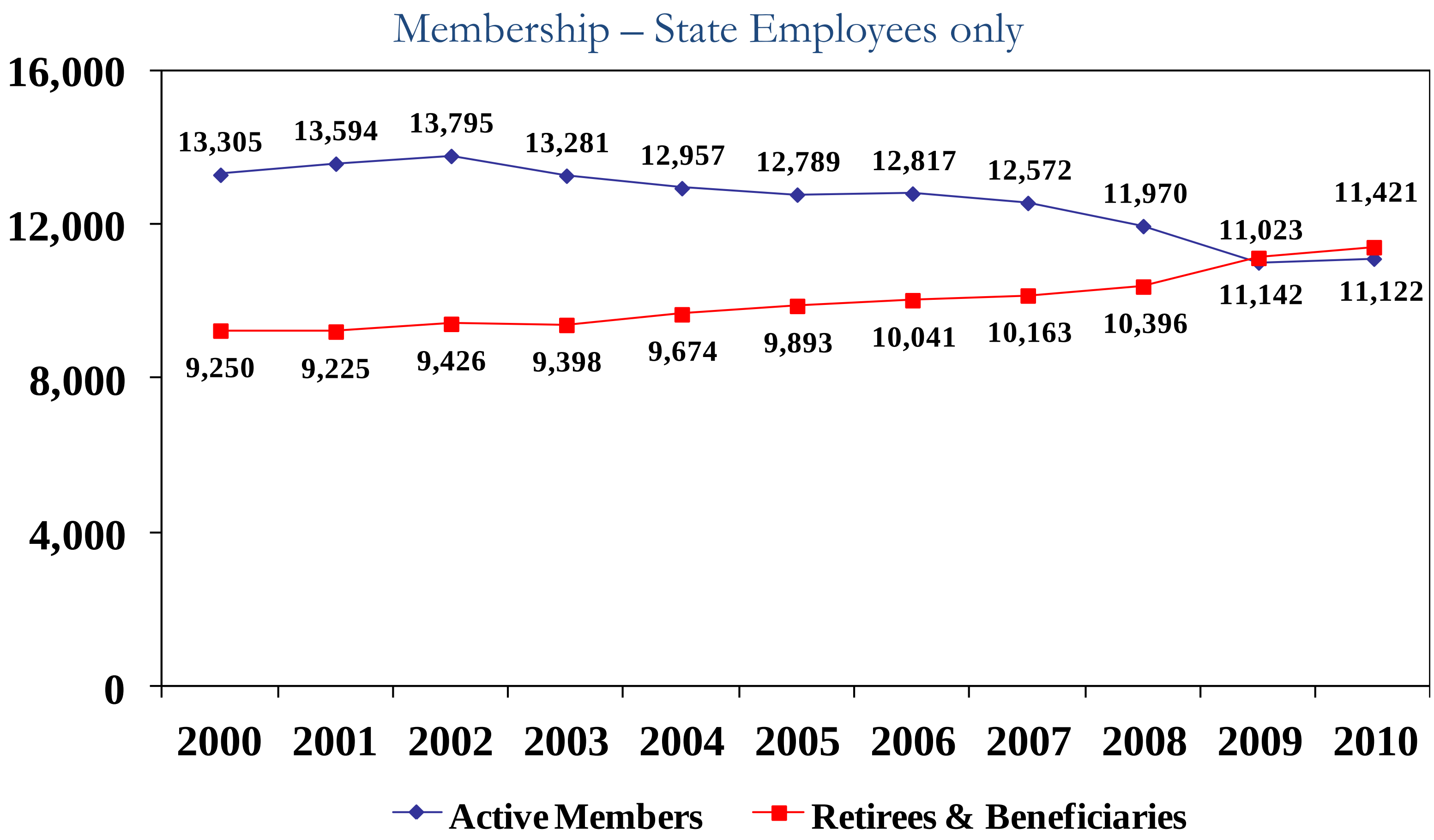
Retirees living longer

- Retirees receive benefits for extended periods
- Public safety plans pose significant challenges
- Impact of COLA especially large as people live longer

Lower-than-assumed investment returns

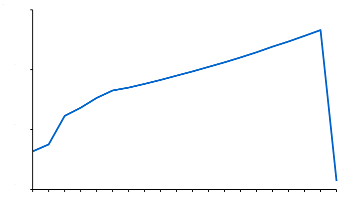
- RI's pension fund assumed an 8.25% discount rate, but has averaged returns of 4-5% since 2001
- As of July 1, 2012, the investment assumption was lowered to 7.5%, but the state has <50% chance of reaching that target

There are More Retirees Than Actives in Rhode Island's System



1.8% average decrease in active members since 2000
2.1% average increase in retired members since 2000

Contributions Will Rise Dramatically If Changes Are Not Made



$600 M

$320 M

Source: Gabriel, Roeder, Smith & Company Projection Results based on the June 20, 2010 Actuarial Valuation
Note: Note: All figures as of June 30, 2010, GRS Actuarial Valuation Reports - after assumption changes

Inaction Has Serious Consequences, Including a Serious Threat to Retirement Security

Threat to retirement security for hardworking Rhode Islanders

Unsustainable annual costs for taxpayers

- Taxpayer contribution has grown compounded at **12%** since 2003

Burden on active state employees

~75% of 2010 contributions funded past service

Serious threats to vital public services

Rapidly rising expenditures for funding pension liabilities means less money for critical state services

High borrowing costs due to low bond rating

Difficult to attract investors

System insolvency is potential outcome if corrective action is not taken

Source: GRS Actuarial Valuation Report, June 30, 2010, see *Truth in Numbers* for additional details

Actuarial Experience Study

- Investment Rate of Return
- Mortality

Expected Return Assumptions Comparison

10 Year Arithmetic Returns %

	PCA	Russell	Ennis Knupp	Callan	Cliffwater	Wilshire	Average	Average not including PCA
Cash	3.00	3.40	2.75	3.00	2.50	2.50	2.9	2.8
TIPS	3.75	3.90	3.90	3.60	3.50	3.50	3.7	3.7
U.S. Core Fixed Income	3.30	4.40	4.50	3.80	3.10	4.00	3.9	4.0
Core Real Estate	7.00	6.70	6.80	7.85	8.90	6.50	7.3	7.4
Real Return	6.50	6.70		6.50	4.50	6.50	6.1	6.1
U.S. Equity	8.75	7.30	8.70	9.35	9.10	8.25	8.6	8.5
Non-U.S. Equity	9.00	7.40	8.90	9.50	9.20	8.50	8.8	8.7
Private Equity	12.00	9.60	15.10	13.10	12.90	12.50	12.5	12.6
Inflation	2.75	2.50	2.40	2.50	2.30	2.25	2.5	2.4

Note: Real Return for Callan and Cliffwater are Commodities

ERSRI Portfolio: Expected Return

Based on Portfolio policy asset mix and PCA 2011 Ten-year capital market assumptions the expected **compound return is 6.7%**

The probability of ERSRI's current policy portfolio achieving the following compound return thresholds over the 10 year investment horizon are calculated to be as follows:

Compound Return Threshold	**7.25%**	**7.50%**	**7.75%**
Probability of Exceeding Threshold	**44.6%**	**42.5%**	**39.4%**

The compound returns are net of fees, but do not assume any potential added value from active management. In addition, these compound returns do not include ERSRI's administrative expenses, which are likely to be between 5bp-10bp of plan assets.

Take-Away: Given the PCA capital market return assumptions and the current portfolio policy asset mix

The probability of achieving at least a 7.5% compounded return is 42.5%
The probability of achieving a compounded return below7.5% is 57.5%

Mortality

- Fourth experience study in 14 years
- Fourth substantial actuarial loss on mortality
- Recommend mortality table with built-in longevity increases – Scale AA

Financial Impact of Assumption Changes

- Investment Return Assumption Changed from 8.25% to 7.5%.

- New Mortality Table with Scale AA

- Increase in UAAL from $4.7 to $6.8 billion

- Increase in ARC from $320 to $600 million

- Funded Status: 48%

Defining Retirement Security and Guiding Principals

- Comprehensive.
All issues on the table

- Fair.
Everyone participates

- Affordable and sustainable.
Appropriate benefit levels to ensure retirement security for all

- Financially responsible.
Reasonable assumptions and no risky tricks

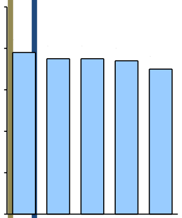
- Attractive to high quality workers.
Reward young or short-term employees and address vesting period

- Comparative to other plans.
Consistent with well-established programs (FERS, Social Security)

- Mindful of transition issues.
Recognize those closest to retirement and consider phase-in plan

- Self-correcting.
Permanence due to automatically adjusting mechanisms

Most Experts Recommend 70-80% Income Replacement, On Average



Center for Retirement Research: Target Replacement Rates			
House-hold Type	Bottom third	Middle third	Top third
All	81%	72%	67%
Couples	81%	72%	67%
Singles	81%	71%	65%

Source: "Retirement at Risk: A New National Risk Index," "Alternate Measures of Replacement Rates for Social Security Benefits and Retirement Income" – Social Security Administration

Studies Also Show That Social Security Replaces a Significant Portion of a Retirees' Income

Pre-retirement income	% replaced by SS		Other - range	Total approx. replacement (Aon)
	Aon	GRS		
$20,000	**69%**	**58%**	25-36%	94%
$30,000	**59%**	**49%**	31-41%	90%
$40,000	**54%**	**45%**	31-40%	85%
$50,000	**51%**	**42%**	30-39%	81%
$60,000	**46%**	**39%**	32-39%	78%
$70,000	**42%**	**36%**	35-41%	77%
$80,000	**39%**	**33%**	38-44%	77%
$90,000	**36%**	**31%**	42-47%	78%

Particularly at higher levels, this income will not all come from an employee's pension

On average, "other" needs to replace 30-40% of income

Source: Aon 2008 Replacement Ratio Study, Gabriel Roeder Smith

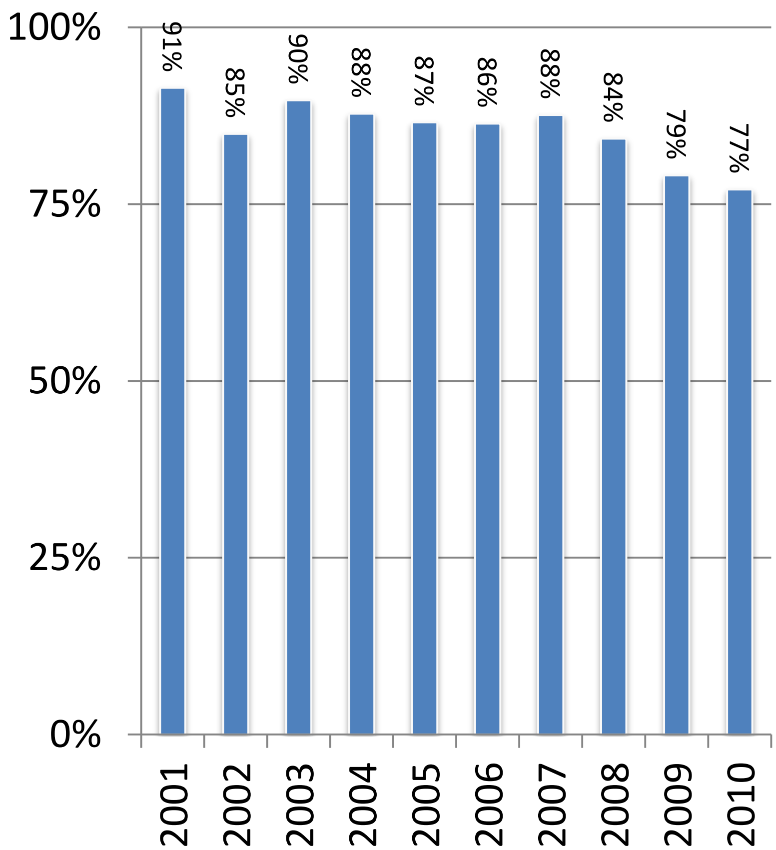
In Today's System, Many Employees Are Paid More Than 30-40% Of Their Income By The State

Years Of Service	Replacement Rate From RI Pension Alone: Schedule A	Replacement Rate From RI Pension Alone: Schedule B
10	17%	16%
20	36%	34%
25	51%	44%
30	66%	55%
35	80%	68%

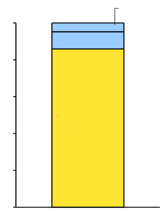
Source: ERSRI 2010

The State is Currently Responsible for 100% of the Market Risk

The financial crisis has highlighted the risks of DB plans



Today, 86% of a DB benefit relies on an uncertain market return



Source: GRS, illustrative example for 36 year old new hire with $34,000 starting salary; salaries assumed to increase based on historical patterns and retirement at age 65; investment earnings rate of return assumed to be 7.5%

Financing Options

All options must protect our credit rating

- While improved over the past decade, RI is still in the **bottom 10-15%** for critical debt ratios
- A state's unfunded pension liability is a **key driver of credit rating**, and a downgrade would cost millions in interest expense

Pension Obligation Bonds

- The state's bonding capacity is insufficient to make this a meaningful solution to the problem
- RI is likely to have other bonded debt needs in the near future that will need to be funded
- To the extent they could be used, the differential between the expected interest cost and the expected rate of return is not sufficient to warrant turning a "soft liability" into a "hard liability"

Re-amortization

- Re-amortization without comprehensive reform could have a negative credit impact because **it does nothing to reduce the unfunded liability**
- While freeing up significant funds in the short term, re-am without real reform could result in:
  - **GO rating downgrade** for continued reliance on "one shots"
  - **Credit downgrade** from AA to A (costing millions in interest expense)
  - **Reduced future financial flexibility** by adding billions of dollars to the State's future pension system funding burden

Other Options for Rhode Island were Limited

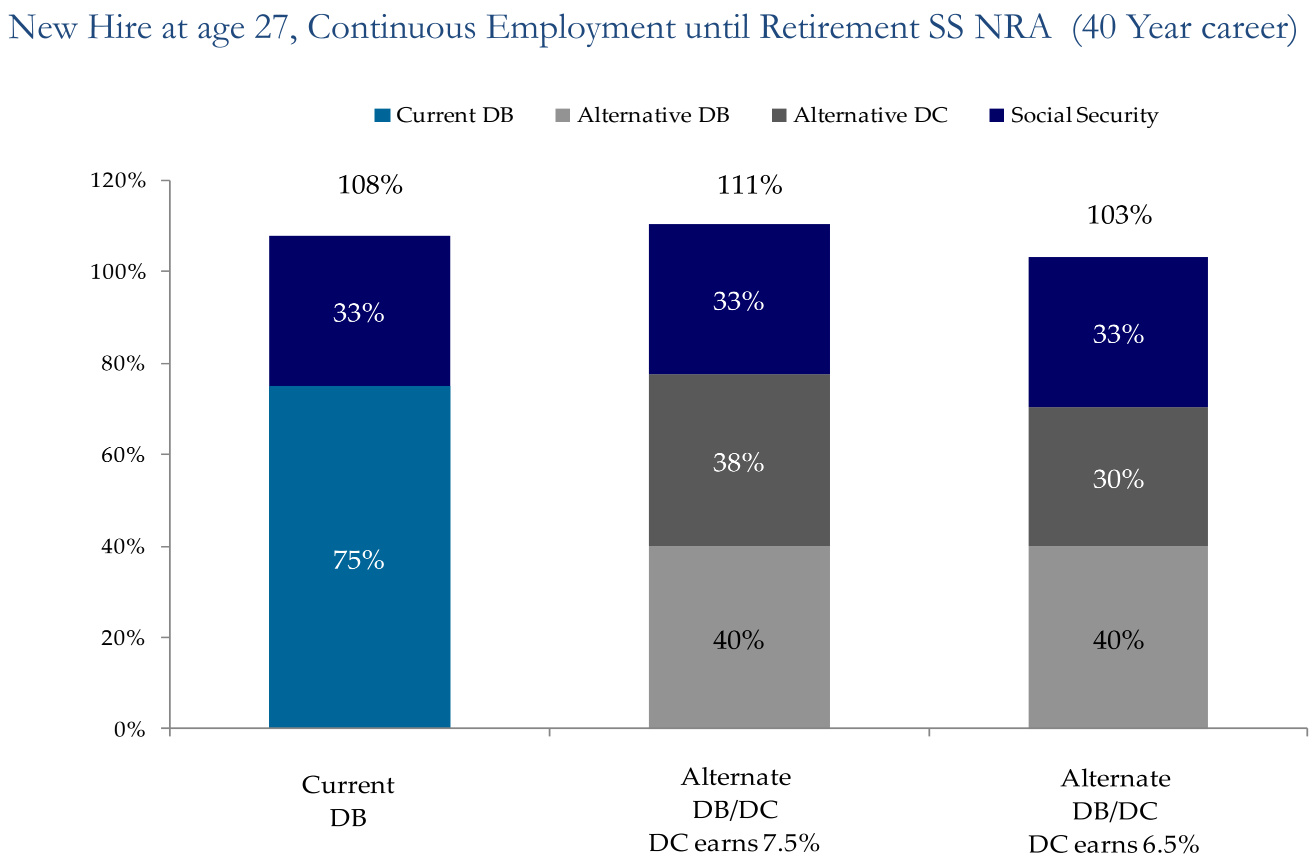
- Increase in tax rates
- Reductions in other state financed programs
- Federal Aid to states not likely
- Monetizing hard assets and traditional financing options
- The possibility of other state investments being transferred to the pension system

Rhode Island Design

Provision	Current Plan	New Plan
Member Contribution Rate	8.75%	3.75%
Replacement Accrual at 40 Years	75% (capped at 38 years)	40% (no cap) + DC balance
Replacement Income at Historical Average 26 Years	46%	26% + DC balance
Unreduced Retirement Eligibility	65/10, 62/29	SS NRA
Reduced Retirement Eligibility	62/20, reduced from 65	62/20, reduced from SS NRA
COLA (All members, including current retirees)	CPI capped at 3%, on first $35,000	Investment related COLA, with 2% target at 7.5% investment return on first $25,000*; suspended until plan is 80% funded
Average Salary Period	5 Years	5 Years
Vesting	10 Years	5 Years
DC Member Contribution		5.00%
DC Employer Contribution		1.00%

*Investment dependent COLA is based on 5 year smoothed investment return minus 5.5%.

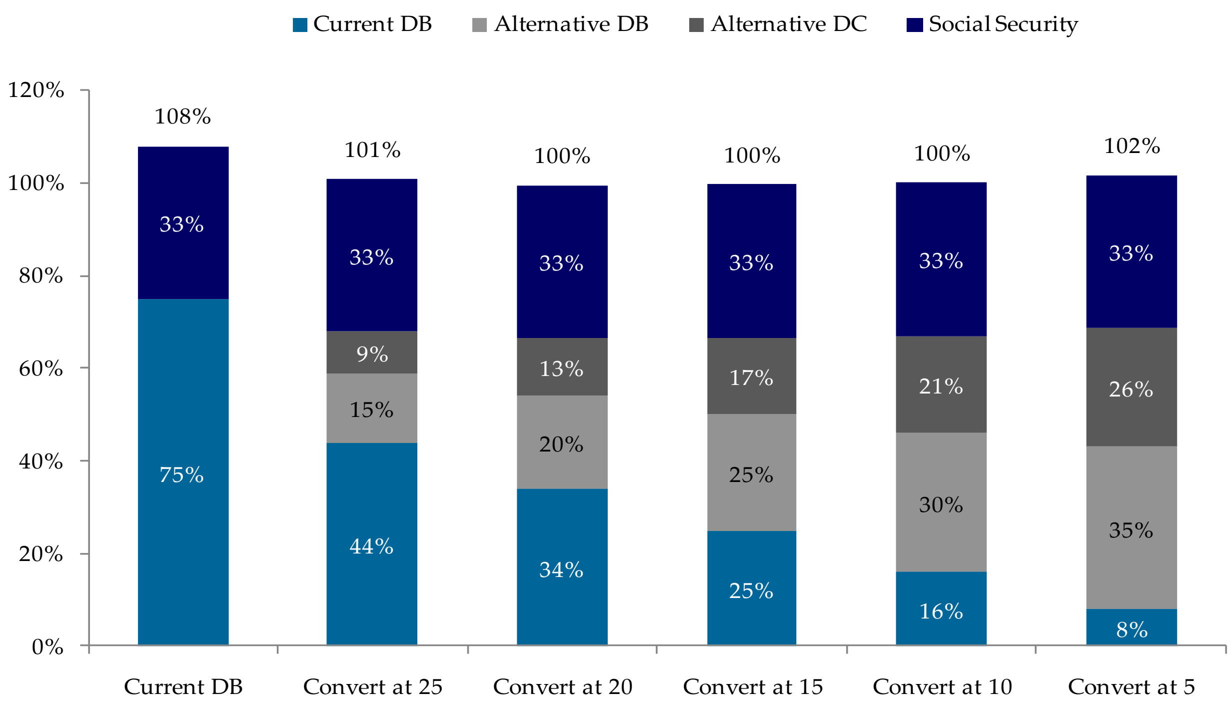
This Plan Will Provide the Recommended Level of Retirement Security…



*Assumes DC plan can earn stated return during active employment and annuitize the balance at 5.00% actuarial equivalence at retirement

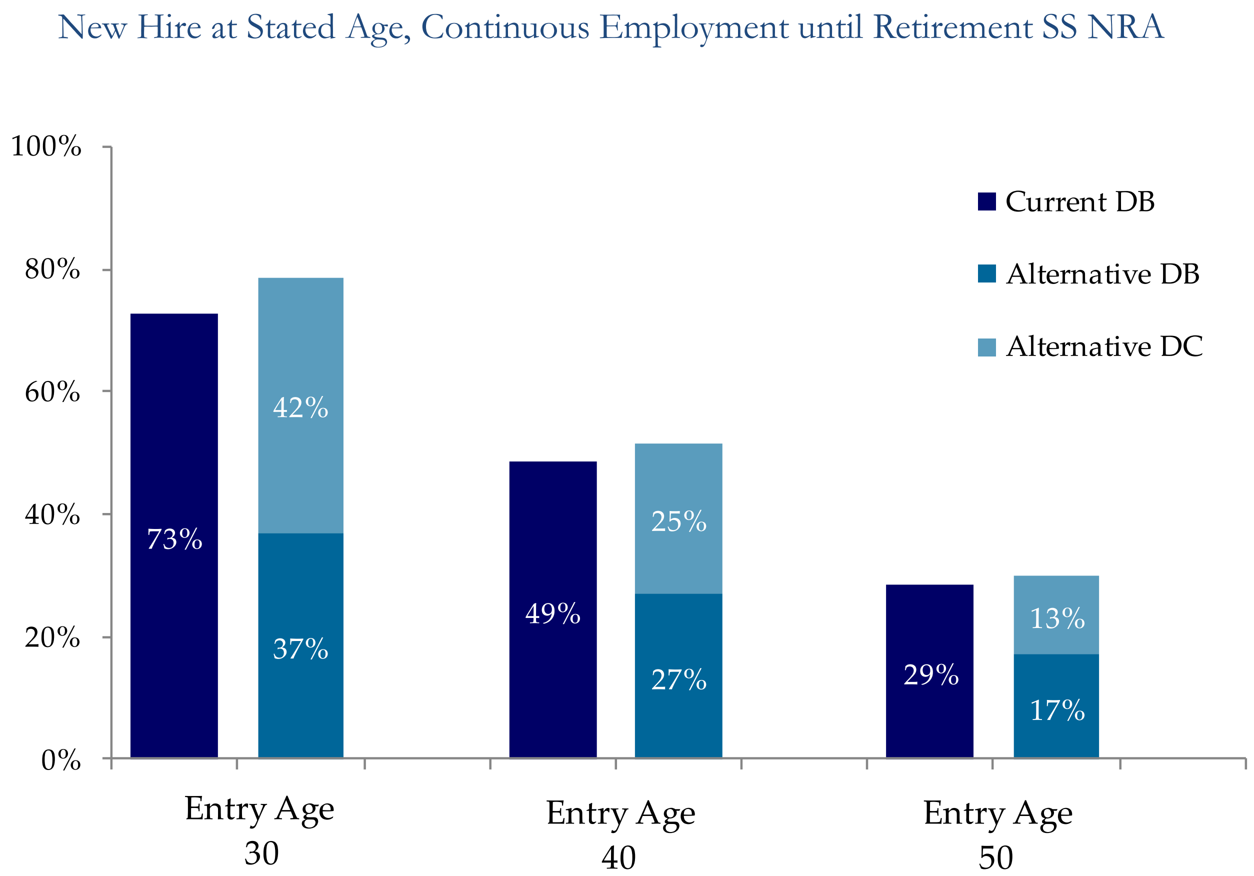
…While Maintaining Similar Benefit Levels for Those in the System

Current Member hired at age 27, currently with stated number of years of service, continuous employment until SS NRA



*Assumes DC plan can earn 6.5% until commencement and annuitize the balance at 5.00% actuarial equivalence at retirement, assuming 5.75% DC contributions begin immediately

This Plan Also Provides a More Attractive Benefit to Young and Short-term Employees



*Assumes DC plan can earn 7.5% during active employment and annuitize the balance at 7.50% actuarial equivalence at retirement

Note: These figures are based on the framework presented by Joe Newton, GRS at the September 12 meeting of the Pension Advisory Group

Distribution of Changes Across Generations

	Current Retirees and Members Eligible to Retire	Current Vested	Non-Vested and New Hires
Relative Value of Current Benefits from DB Plan	100	81	76
Illustrated changes to the current DB Plan	-19%	-24%	-50%
Relative Value of Illustrated DB Plan	81	61	38
Value replaced by Illustrated DC Plan	N/A	17	38
Approximate Relative Value of Combined Illustrated Plan	81 75 State Risk/6 Self Risk *	78 55 State Risk/23 Self Risk	76 38 State Risk/38 Self Risk

Relative Value above is a measurement tool to compare the benefit packages to one another. The Schedule A Plan received a score of 100, with all other scores distributed accordingly

* Future COLAs will be tied to the funding level and investment performance of the Fund

Good Governance and Self-correcting Mechanisms are Vital in Mitigating the Risks of Defined Benefit Plans

Best practices and self-correcting mechanisms include:

- Regular schedule of audits and actuarial studies
- Professional management that is well trained and well informed, and immune to political pressures or processes
- Fair and immediate triggers, and strict enforcement of those triggers, in the event of an unexpected downturn

These mechanisms typically apply to:

- Funded ratio or other indicator of overall plan health (% of budget, % of payroll)
- COLAs
- Other adjustable benefits (post-retirement death benefits, early retirement benefits, etc.)

Self-correcting mechanisms help share pain in downturns and gains in upturns

Self-Correcting Mechanisms Adopted in Rhode Island

- COLA

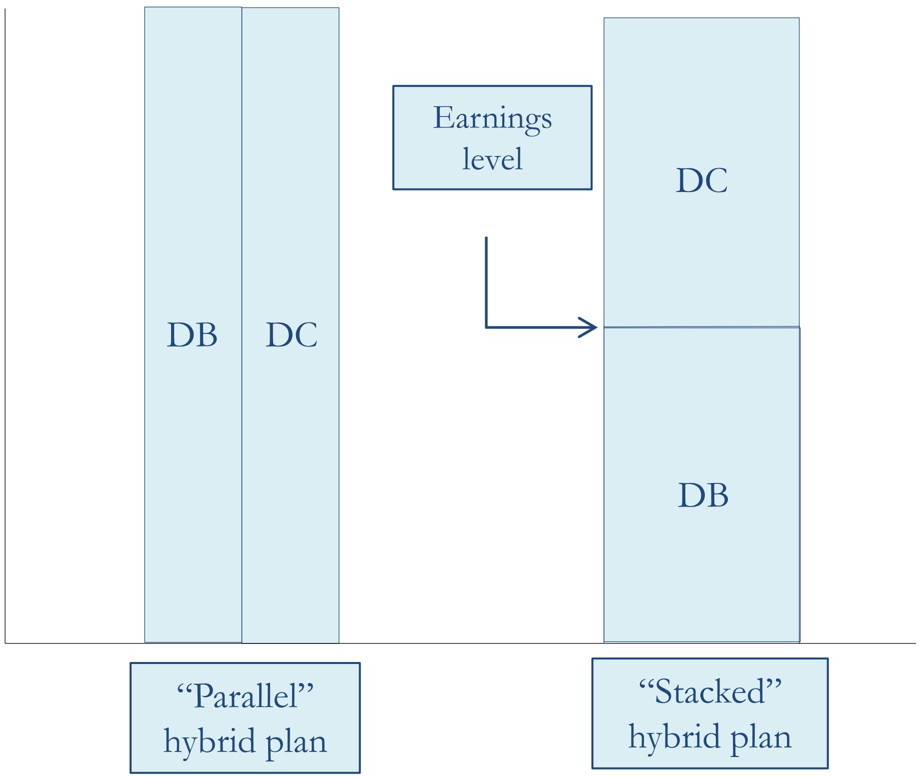
- Funding Improvement Plan mechanism modeled on Federal Pension Protection Act.

Design Alternatives

- Defined benefit plans are generally better for workers, but they require plan sponsors – and taxpayers – to bear all of the risks.
- Defined contribution plans alone shift all of the risk to employees, and elective plans faltered in practice.
- In the wake of the pension crisis, some state and local sponsors have adopted hybrid plans in an attempt to balance risks.
- Hybrid or combined plans can optimize benefits of DB and DC plans.

While Parallel DB/DC is the Common Design, a Stacked Approach Offer Advantages in Certain Situations.

“Parallel” Hybrid Plan versus “Stacked” Hybrid Plan



Source: Author’s illustration.

Cash Balance Plan

- Several Designs Considered

<u>Example:</u>

  - 5% employer contribution
  - 5% employee contribution
  - 4% guaranteed with 75% upside
  - 50% of accumulation as required annuity distribution

- More difficult to Communicate
- Legislature More Comfortable with DC Design

Adjustments for Members Not Covered by Social Security

- Additional DC Contributions
- Non- Public Safety: 2% Employee / 2% Employer
- Public Safety: 3% Employee / 3% Employer

Importance of Training

- Actuarial Training
  - Retirement Board
  - House of Representatives
  - Senate

- Fiduciary Training
  - Retirement Board

- Investment Training
  - Retirement Board

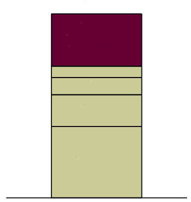
- Legal Training
  - House of Representatives
  - Senate
  - Governor

Communication

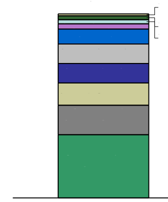
- Importance of Education
- Reaching Out to All Interest Groups
- Involvement of Union Leadership
- Public Process
- Media
- Make it Real

Next Year, Cranston will be Forced to Cut Critical Public Services In Order to Make Pension Payments

2012-2013 increases to pension payments



2012-2013 cuts required to balance budget



Locally administered (addl. cost to reach 100% funding status)

State

Cranston taxpayers have already been hit with 3 successive tax raises and can't afford any more
Cranston taxes would have to be raised by 8% to fund all pension payments

Source: Cranston Finance Dept.

Actuarial Services for Public Sector Reform

- Communication
- Transparency
- Unbiased – Solution focused
- Highest Ethical Standards