South Carolina Retirement System

Discuss Current and Alternative Structures for Providing Retirement Benefits

Joe Newton

November, 2011

GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
www.gabrielroeder.com

Objective of Today's Discussion

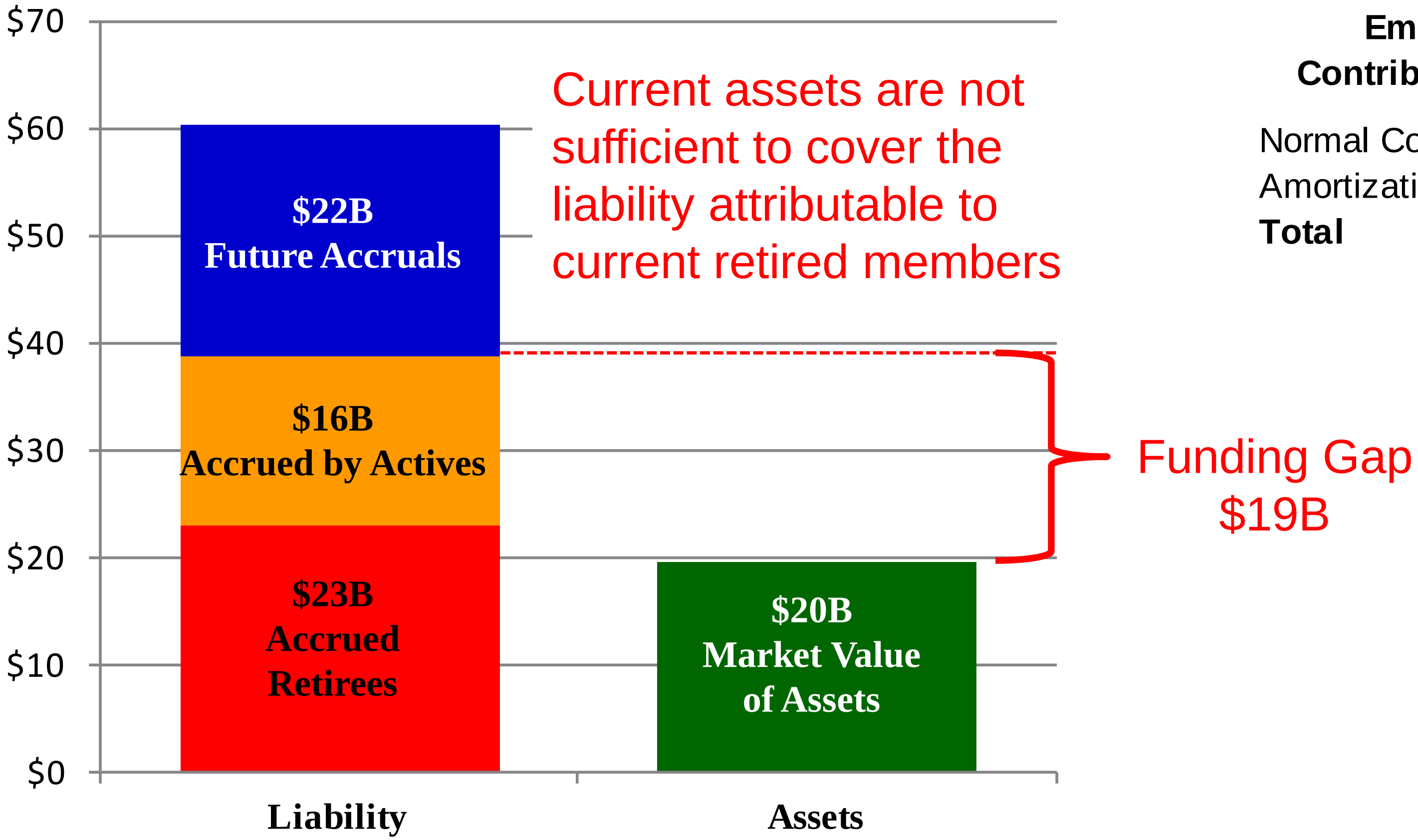
- Provide information regarding the current state of the program
- Identify characteristics of a successful and sustainable retirement program
- Present alternative benefit structures that have those key characteristics
  - Illustrate how the alternative programs impact the adequacy of retirement benefits

Current Program – Current (SCRS) Benefit

- Monthly benefit payable for the member's lifetime
- Retirement age
  - 65 with 5 years of service; or
  - any age with 28 years of service
- The benefit is equal to 1.82% of members 3-year average compensation times their years of service
  - Example: John Smith retires with an average monthly compensation of $48,000 and 28 years of service
    - Monthly retirement benefit is $24,460 (1.82% x $48,000 x 28)
    - Replaces almost 50% of the members pre-retirement pay
- Members contribute 6.50% of pay

Current State – Financial Condition

Funded Ratio as of July 1, 2010



30-Year Contribution Requirement on a Market Value Basis

	Employer Contribution Rate
Normal Cost	4.27%
Amortization	11.40%
Total	**15.67%**

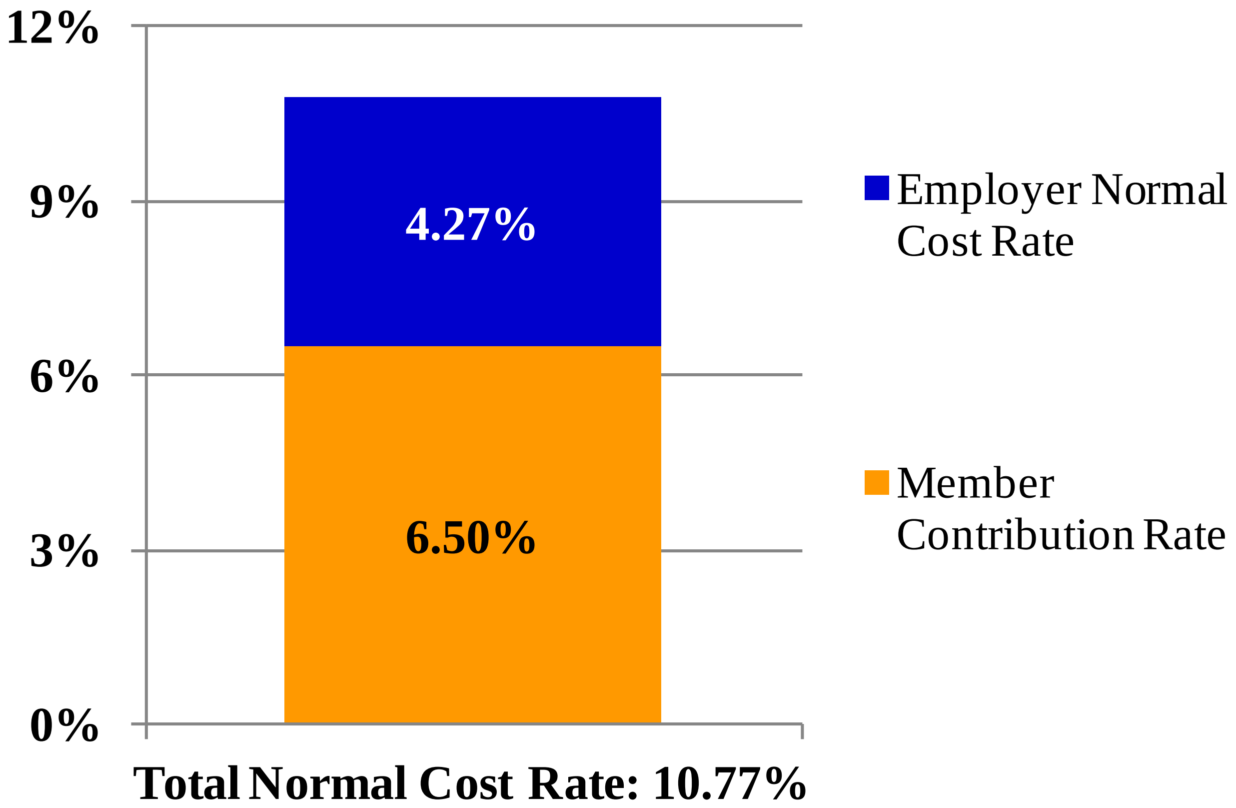
Note: The liabilities and costs are based on GRS's recommended assumptions, which includes a 7.50% investment return. Assumes a 1% guarantee COLA.

GRS

Cost of Providing Benefits – Total Normal Cost

It Costs 10.77% of Pay to Appropriately Fund Benefits

Members contributions fund over 50% of the benefit



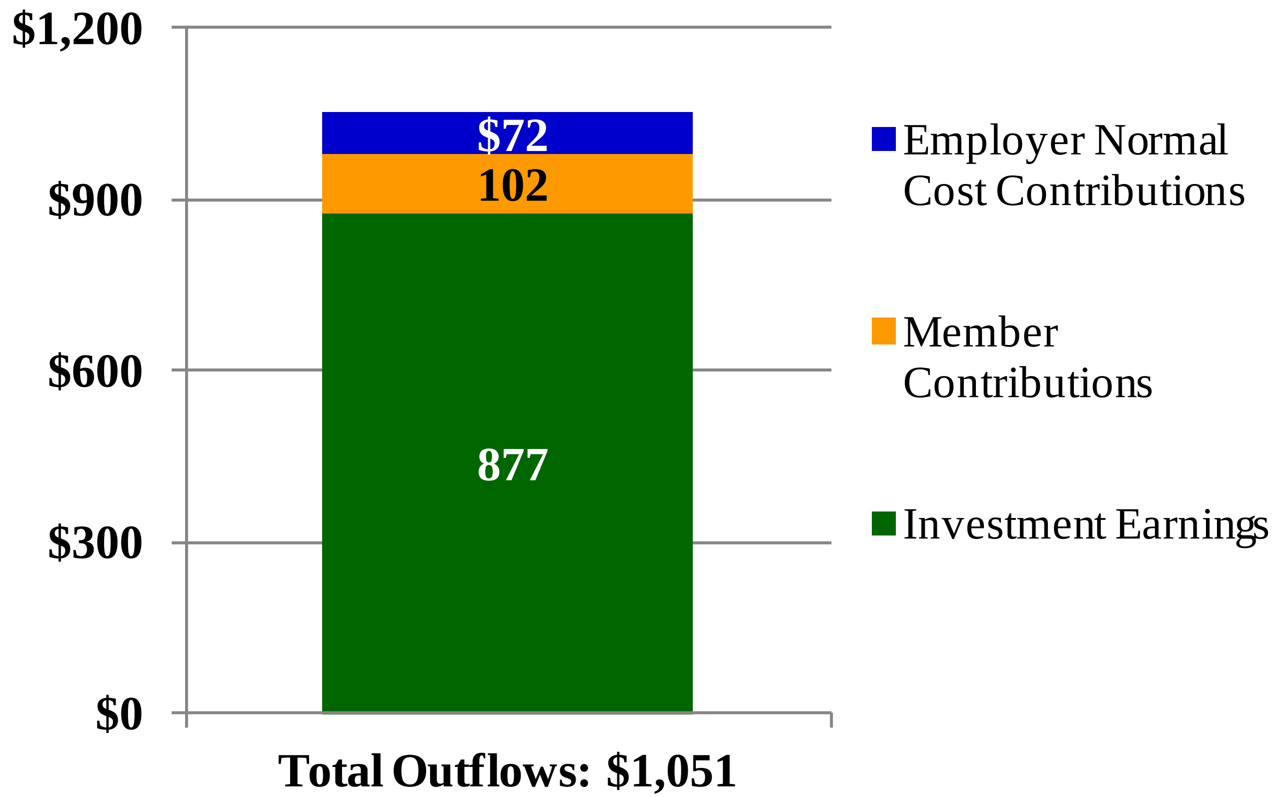
Note: The total normal cost rate is for SCRS determined using GRS's recommended assumptions, which includes a 7.50% investment return.

GRS

Cost of Providing Benefits – An Alternative View

Source of Funds to Pay Benefits for a Member Retiring at age 63 with a $3,600 Monthly Benefit

Over 80% of the benefit payments are financed by investment earnings.



$ in thousands

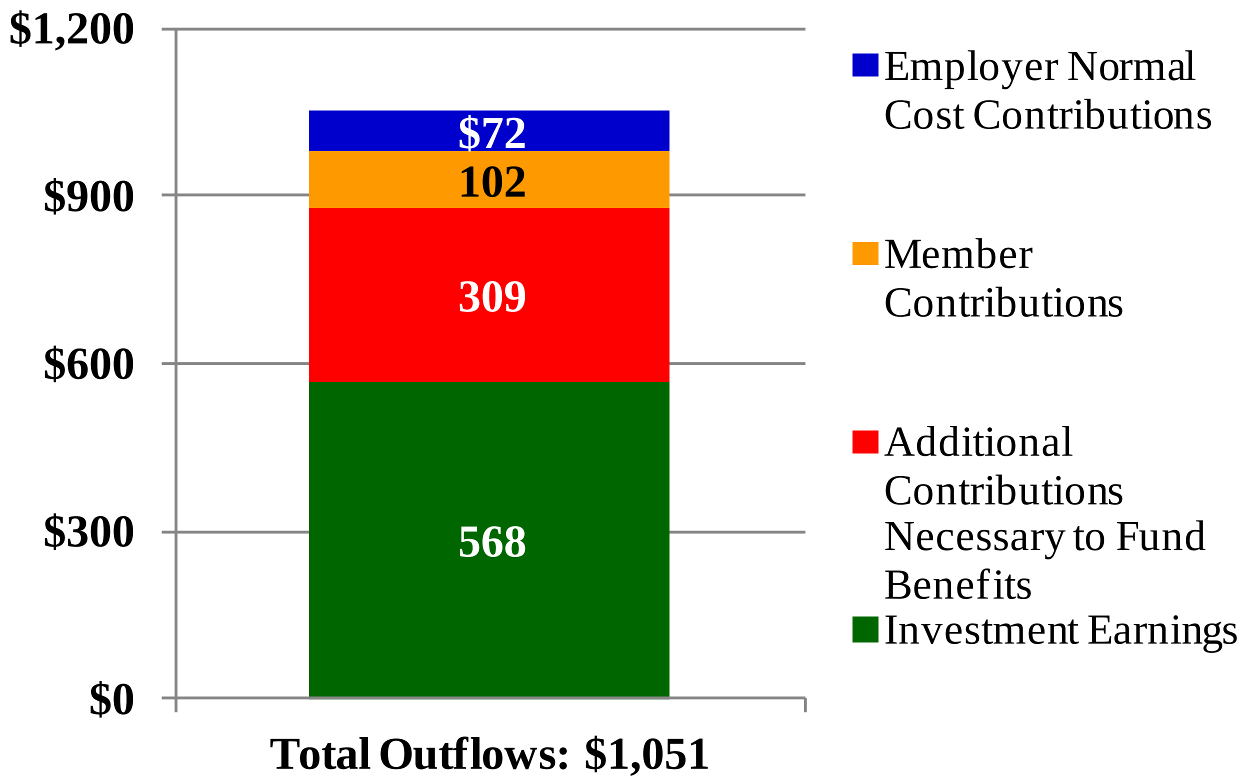
Example for a member retiring at age 63 with 28 years of service. The projected monthly benefit is funded as a level percentage of pay over the member's career.

GRS

Cost of Providing Benefits – An Alternative View (cont'd)

Illustration
Impact if the Fund only Earns 6.0% on Investments

Employers assume all the risk and must fund investment shortfalls.



$ in thousands

Example for a member retiring at age 63 with 28 years of service. Investment losses are assumed to be orderly funded over the employee's lifetime.

GRS

Suggested Guiding Principals

- Provide an adequate level of benefits so members may retire at an appropriate age
- Costs are appropriately shared by the employer and member
- Risks are appropriately shared between the employer and member
- Self-correcting mechanisms can substantially increase the plan's ability to withstand adverse experience

Benefit Adequacy

- Provide an adequate level of benefits so members my retire at an appropriate age
- Financial planners often recommend a replacement ratio of 70% to 90% of preretirement income
  - Ratio could vary depending on family needs
- Members retiring after 28 years receive approximately 80% to 90% in preretirement income (without reflecting personal savings)
  - 50% from SCRS
  - 30% to 40% from Social Security

Cost / Risk Sharing

- The participating employers in SCRS currently assume all the investment and demographic risk
- There is political pressure to provide ad hoc COLAs when there is sufficient margin in contribution rates
  - Leaves no margin in the contribution rates to manage adverse experience.
- The State Statutes provide some self-correcting mechanism if the investment return assumption is reduced below 8.00% and a portion of the automatic COLA is "undone"

GRS

Strawman Design Alternatives

- Following are four strawman design alternatives that are each fundamentally different in structure
- The guiding principles were considered when developing each of the alternative structures
  - Benefit adequacy
  - Cost sharing between employee and employer
  - Risk sharing between employee and employer
- Other Considerations
  - It may also be possible to provide future benefits in a new program for current employees[1]
  - Transitional cost to maintain funding to SCRS
  - Modifications to the EIP to maintain appropriate alignment in the retiree health program

[1] This is not a legal opinion. South Carolina will need to seek legal counsel to obtain an opinion regarding the implications of changes in benefits for current employees.

Characteristics of Alternative Benefit Structures

What is the Appropriate Balance for Sharing the Risk?

Defined Contribution (State ORP)

Cash Balance

Hybrid Plan (DB and DC)

Traditional Defined Benefit (SCRS)

Member

Employer

GRS

Characteristics of Alternative Benefit Structures (cont'd)

Benefit Feature	Defined Contribution (State ORP)	Cash Balance	Hybrid Plan (DB & DC)	Traditional Defined Benefit (SCRS)
Cost Variability	Predictable and stable	Uncertain, can be partially managed with plan design	DB cost is uncertain but smaller in magnitude	Uncertain and can escalate
Investment Risk/Reward	Employee	Can vary with plan design	Shared by employee and the employer	Employer
Target Retirement Age	Uncertain, dependent on investment performance	Difficult to design to target a retirement age	DB portion has a defined retirement age	Defined normal retirement age
Payment Form	Lump Sum	Lump sum / Monthly Annuity	Lump sum / Monthly annuity	Monthly annuity

GRS

Structure Alternative 1 – Defined Contribution Plan

- A defined contribution (DC) plan provides a fixed contribution to an individual account and the member is responsible for the investment earning and the utilization of those for funds for retirement
- Implications
  - The employers cost are fixed and certain and there is no unfunded liability that will ever require financing
  - The ultimate benefit provided by those contributions are uncertain and will depend on the investment performance
  - Member is responsible for decisions to ensure those resources are sufficient for his/her retirement needs
  - Uncertainty in retirement security can create workforce management challenges
  - Disability benefits would need to be provided through another program

GRS

Structure Alternative 2 – Cash Balance Plan

- A defined benefit plan that looks like a defined contribution plan
  - Employees are communicated a notional account that receives pay and interest credits each year
  - The SCRS IC would remain in control of the assets
  - Primarily communicated as an account balance; however monthly annuity options will be provided to the member upon retirement
- Implications
  - Employees have increased certainty of interest credit on balance; not exposed to short-term investment volatility
  - Designing a plan to provided variable interest credits provides a risk sharing mechanism between the employee and employer
  - Less influence on the timing of an employee's retirement than a the current plan (i.e. there is no 28 & out in a cash balance plan)

Structure Alternative 3 – Hybrid Plan (DB & DC)

- A hybrid retirement program plan provides a smaller a DB and DC benefit such that both benefits combined provide adequate retirement resources
- Implications
  - The DB benefit provides a minimal guaranteed monthly benefit
  - The benefit combination reduces the cost risk for the employers
  - Investment and longevity risks are shared between the employee and employer
  - Many members may appreciate the access to their retirement resources as a monthly annuity and an account balance

Structure Alternative 3 – Hybrid Plan (DB & DC)

- Other hybrid type designs may also be viable for South Carolina
  - A "stacked" hybrid plan provides a DB benefit up to a given earnings threshold (e.g. $40,000) and a DC benefit for earnings in excess of the threshold
    - Lower wage earners receive a greater portion of their benefit in the DB plan

GRS

Structure Alternative 4 – Reduced Defined Benefit

- The State's culture and political views may be that continued use of a traditional defined benefit plan is appropriate
- Increasing cost pressures and the need to greatly improve financial security of the plan means significant changes are necessary
  - Benefit adequacy can be maintained after the changes
  - Prospective changes in benefits for current employees will have a significantly greater impact than enacting changes to new employees
  - We would recommend future ad hoc COLAs be funded with stronger policies
    - Immediate funding
    - Very short amortization period
    - Advanced funded based on a higher targeted COLAs

GRS

Structure Alternative 4 – Reduced Defined Benefit

- Several modifications have been analyzed in the last few years
- Some of these changes include:
  - Reduce the benefit multiplier
  - Increase the normal and/or minimum retirement age
  - Change in definition of final average compensation
  - Increase in the member contribution rate
  - Elimination of TERI and Return to Work Provisions
  - Etc.
- Enacting several of these changes in combination have the potential to significantly impact the cost and increase the likelihood the plan is sustainable in the long-term
- Changes in the retiree health insurance provisions can influence employee behavior which will also reduce the cost of providing retirement income benefits in SCRS

GRS

Strawman Design Analysis

Structure Alternative 1 – DC Plan

- Illustrative Plan - State ORP
  - Total 11.50% of pay contributed annually to the member's account
    - Members contribute 6.50%
    - Employers contribute 5.00%
  - Members continue to control on the account's investments

GRS

Structure Alternative 2 – Cash Balance Plan

- Illustrative Plan
  - Members receive pay credits equal to 12.0% of pay
  - The notional accounts increase with interest equal to 75% of the fund’s actual investment performance, subject to a minimum interest credit of 2.0% and a maximum interest credit of 12.0%
    - Example: If the fund returns 8.00% then the interest credit for the year will be 6.00%
  - Members contribute 6.50% of pay
  - The members notional account balance is converted to an life annuity at retirement

GRS

Structure Alternative 3 – Hybrid Plan

- Illustrative Plan
  - Defined Benefit Plan
    - 1.00% multiplier
    - 3-Year final average pay
    - Removal of TERI and Return to Work Provisions
    - 1% guaranteed COLA
    - Defined benefit is mostly employer financed
    - Normal retirement is the earlier of 28 years of service or age 65
    - Members contribute 2.50% to the DB plan
  - Defined Contribution Plan
    - DC component is entirely funded by mandatory member contributions at the rate of 4.00% of pay
    - Members have control on the account's investments

GRS

Structure Alternative 4 – Modified Defined Benefit

- Illustrative Plan
  - Current SCRS Plan with the following changes:
    - Member contribution rate increased to 7.50% of pay
    - Normal retirement eligibility is the lesser of age 60 with 30 years of service or age 65 with 5 years of service
    - Final average compensation is increased from a 3-year average to a 5-year average
    - 1% guarantee COLA
    - Eliminate the inclusion of unused annual and sick leave in the benefit calculation
    - Elimination of the TERI program and significant changes the RTW provisions
    - The cost of purchasing service is actuarial cost neutral
    - Reduction for early retirement is 8.0% per year
  - Benefit multiplier remains unchanged at 1.82%

GRS

Principal Assumptions

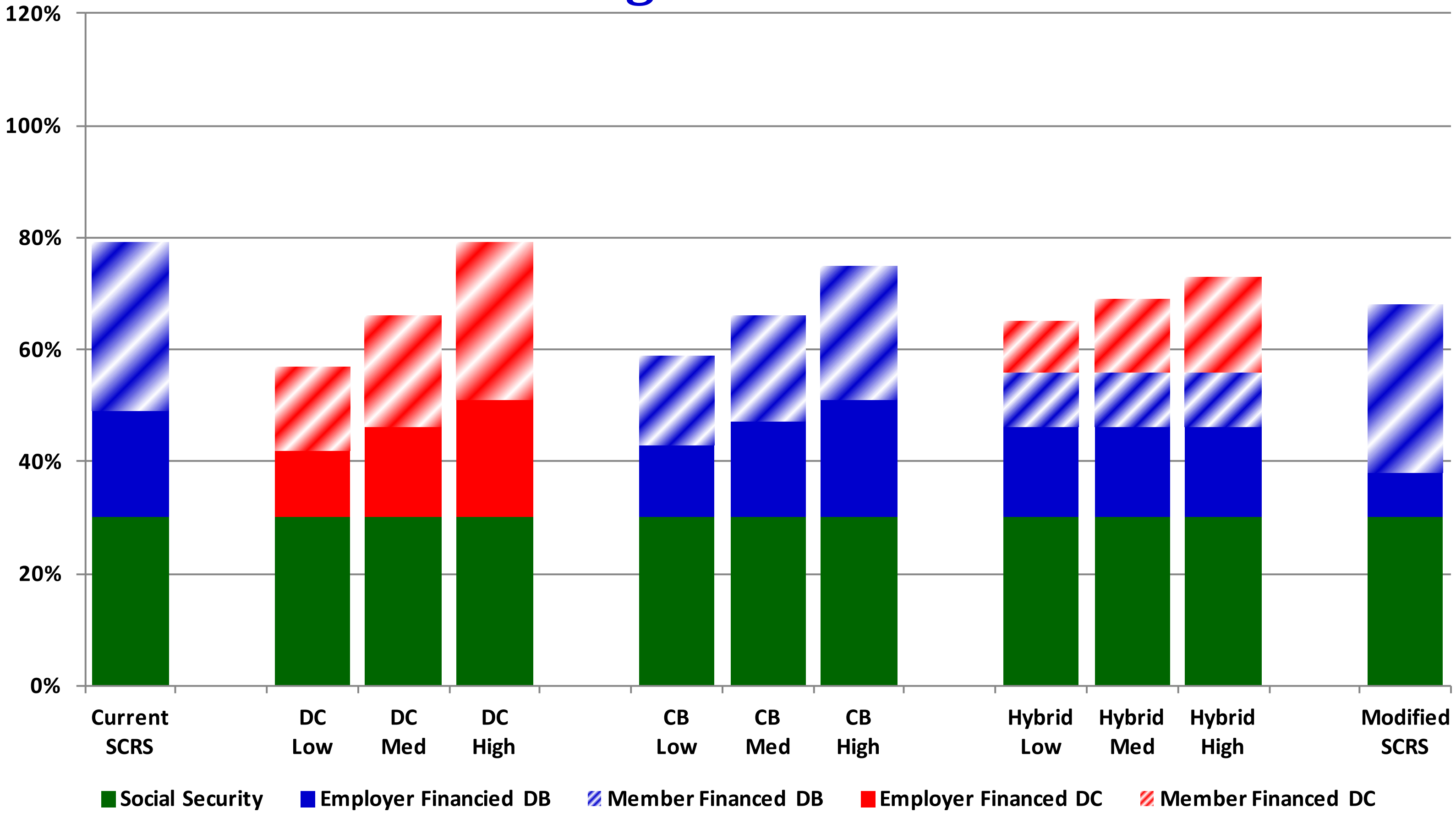
- The following analysis compares projected retirement income to projected income immediately prior to retirement for a new member in SCRS
  - Analysis includes income from Social Security and retirement benefits from the current and strawman design alternatives
  - Retirement income does not include other sources of retirement income, such as personal savings or retirement benefits earned with previous employers
- Certain assumptions must be made to project income and retirement benefits
  - Projections are provided under alternative economic assumptions to quantify the sensitivity of certain assumptions in the comparison analysis

Principal Assumptions (cont'd)

- Principal Assumptions for all scenarios
  - Example is for a member earning $60,000 a year at the time of retirement. Historical compensation increases are based on historical patterns of compensation increases for State employees.
  - Retirement balances from defined contribution accounts are converted to an annuity with a 1% guaranteed COLA based on current market annuity rates.
- Scenario specific assumptions
  - Medium Assumption: 7.00% investment return on DC benefits
  - Low Assumption: 5.00% investment return on DC benefits
  - High Assumption: 9.00% investment return on DC benefits

Retirement Benefits – Age 35 Hire (Average Hire Age)

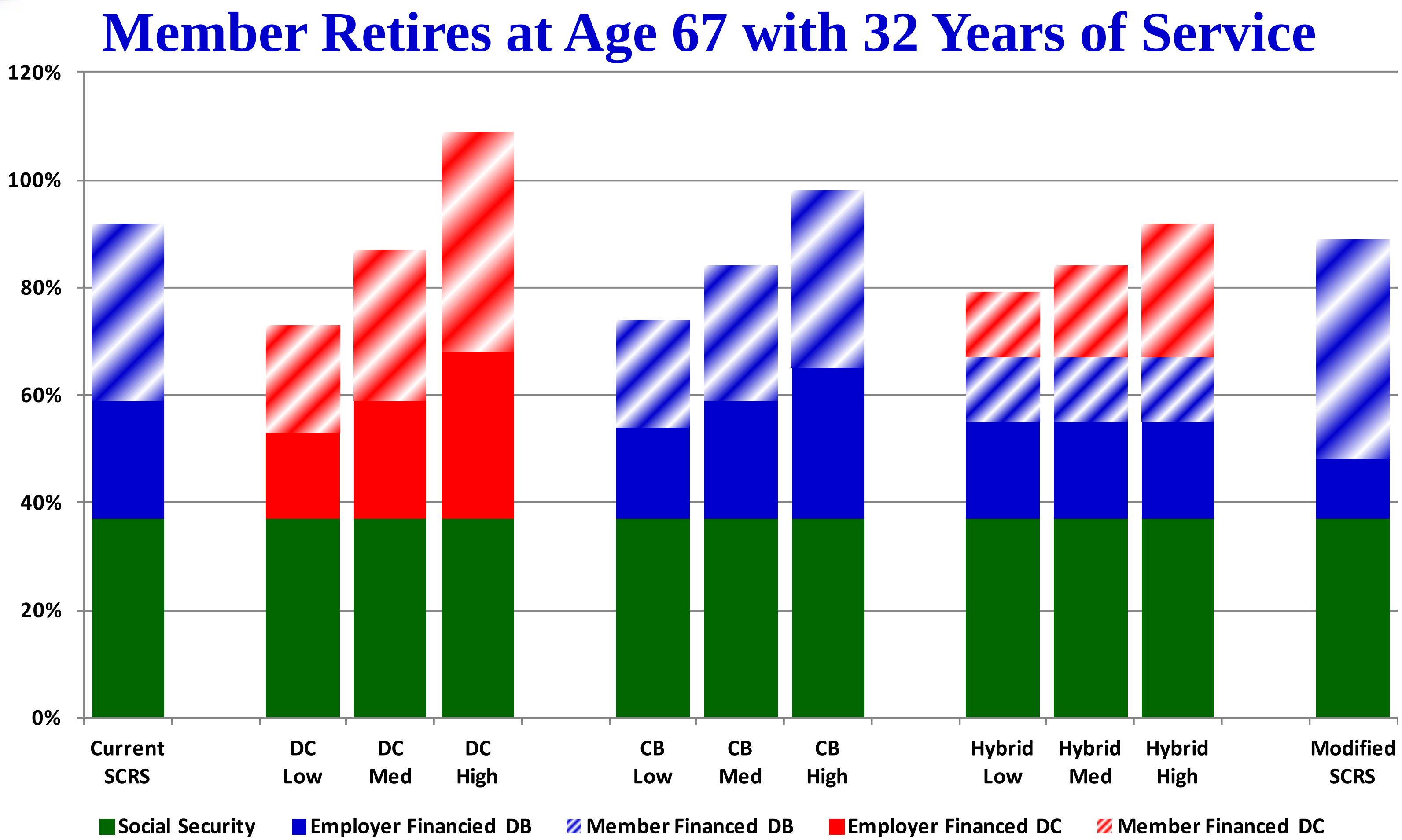
Member Retires at Age 63 with 28 Years of Service



Note: Replacement ratios shown above do not reflect retirement benefits the member earned prior to becoming a member of SCRS at age 35.

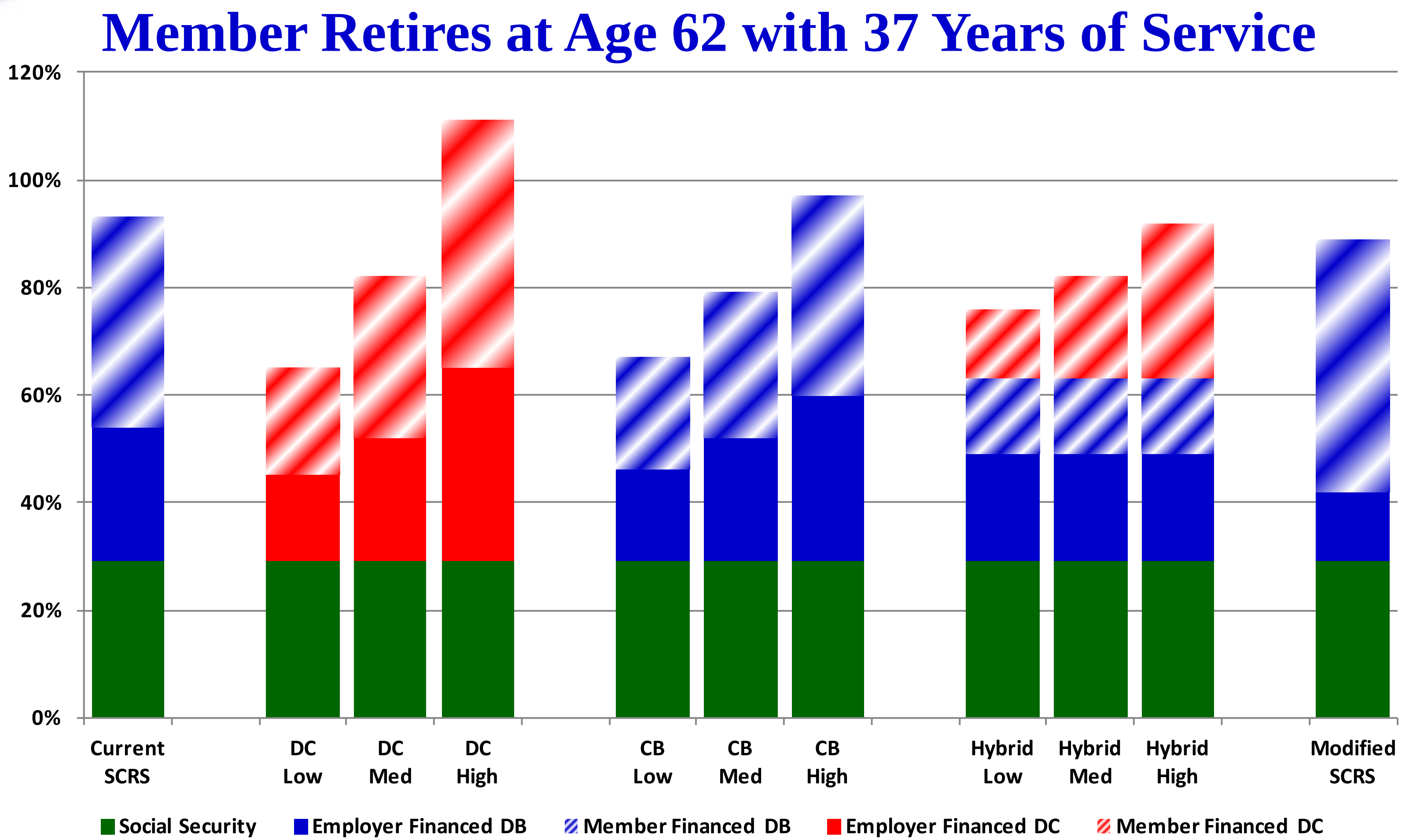
GRS

Retirement Benefits – Age 35 Hire (Average Hire Age)



Note: Replacement ratios shown above do not reflect retirement benefits the member earned prior to becoming a member of SCRS at age 35.

Retirement Benefits – Age 25 Hire (10-Years Younger than Avg.)

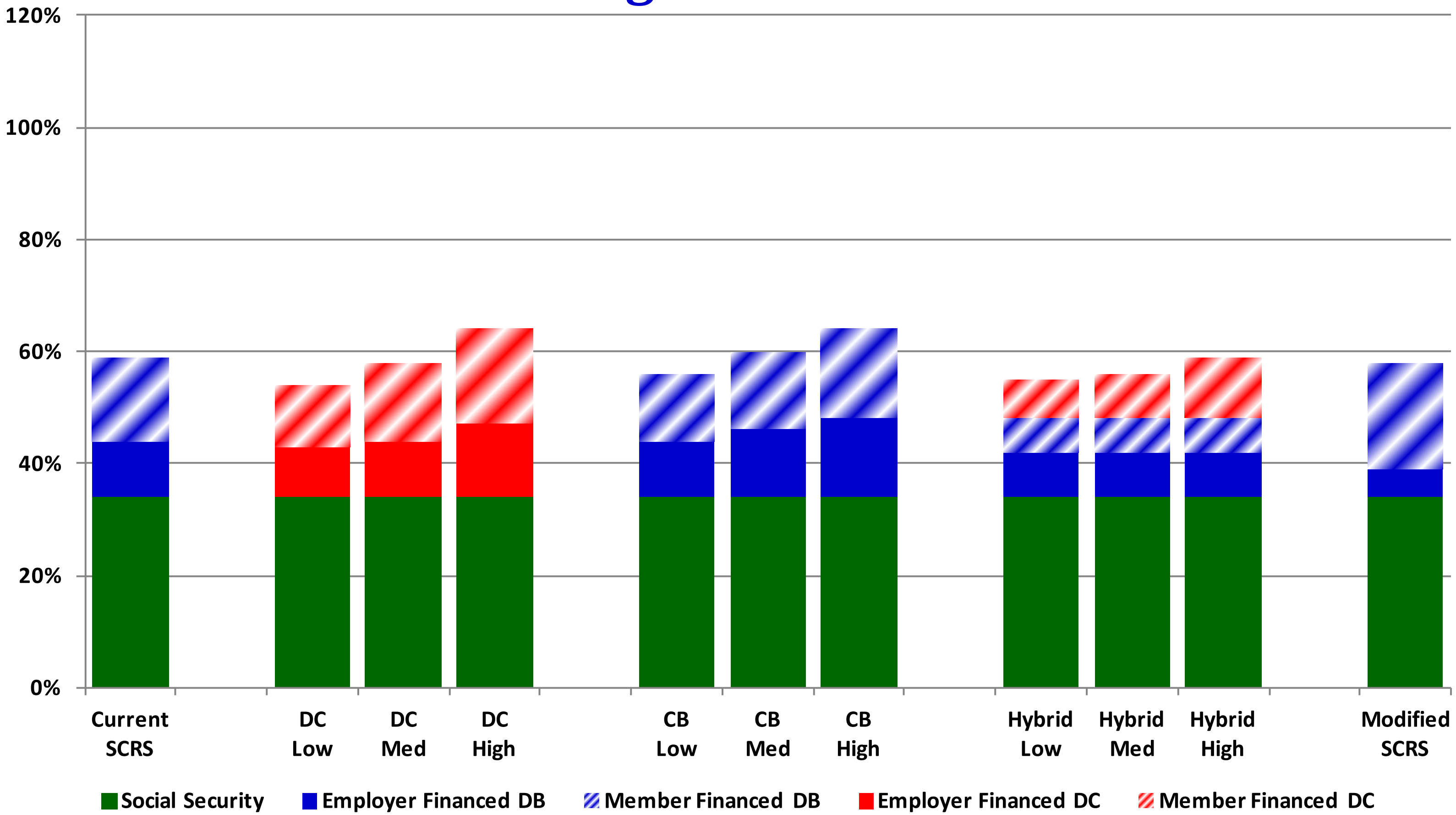


Note: Replacement ratios represent retirement income earned over a 37 year working career with an employer of SCRS.

GRS

Retirement Benefits – Age 45 Hire (10-Years Older than Avg.)

Member Retires at Age 65 with 20 Years of Service



Note: Replacement ratios shown above do not reflect retirement benefits the member earned prior to becoming a member of SCRS at age 45.

GRS

Cost Impact Analysis

(As a percentage of Payroll)

Normal Cost for a Newly Hired Employees

	Current Plan	Alt #1 DC Plan	Alt #2 Cash Balance	Alt #3 Hybrid Plan	Alt #4 Modified Plan
Total Normal Cost	10.8%	11.5%	8.3%	9.2%	9.1%
Member Cost	-6.5%	-6.5%	-6.5%	-6.5%	-7.5%
Employer Cost	4.3%	5.0%	1.8%	2.7%	1.6%

Employer Normal Cost Sensitivity to Investment Performance

Investment Return	Current Plan	Alt #1 DC Plan	Alt #2 Cash Balance	Alt #3 Hybrid Plan	Alt #4 Modified Plan
6.50% (-1.00%)	6.9%	5.0%	2.9%	4.0%	3.9%
7.50%	4.3%	5.0%	1.8%	2.7%	1.6%
8.50% (+1.00%)	2.3%	5.0%	0.8%	1.7%	0.0%

-Costs and contribution rates shown above include the cost of a defined contribution plan under Alt #1 and #3.
-Please see the following slide for regarding the assumptions and methods.
-Projected costs are based on GRS's recommended assumptions documented in the September 2011 experience study report.
-All costs are based on asset and census information as of July 1, 2010.

Next Steps / Transition

- Identify a preferred benefit structure
  - Refine the benefit structure to meet the Employers' needs
- Determine if the new structure will be applied to current employees
  - Current employee group could be determined by age, service, or years from being eligible for a retirement benefit
  - Verify that benefit adequacy is maintained for current employees that will be moved to the current benefit structure
  - Research potential legal issues
- Changing future benefits for current employees will have an immediate impact on the plan's cost and future risk

Disclaimer

- Circular 230 Notice: Pursuant to regulations issued by the IRS, to the extent this presentation concerns tax matters, it is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding tax-related penalties under the Internal Revenue Code or (ii) marketing or recommending to another party any tax-related matter addressed within. Each taxpayer should seek advice based on the individual's circumstances from an independent tax advisor.
- The strawman design alternatives are presented to provide a framework of different retirement benefit structures. We recommend obtaining a legal opinion to determine feasibility before enacting any changes that impact current members of SCRS
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.