CONNECTICUT RETIREMENT SECURITY BOARD MEETING

October 7, 2015

Rashid Hassan
Bradley Kellum
Neil Lloyd
Stacy Scapino

Hartford, CT

AGENDA

1. Annuities & Securing Retirement Outcomes
2. Guarantees
3. Financial Feasibility Modelling Overview

ANNUITIES & SECURING RETIREMENT OUTCOMES

ANNUITIES
SPECIFIC STATUTE

“The CRSB proposal should include, but not be limited to, the following goals and design features…

Sec. 185 (8)

The provision of an annuitized benefit with options for conversion to lump sum payout upon retirement, spousal benefit, and pre-retirement death benefits, to enable a Program participant to bequeath assets to designated beneficiaries.”

A USEFUL ROADMAP

For today, we:

1. Consider the annuitization question
2. Discuss a more holistic approach to developing a retirement income strategy.
   - Principles for development
   - Lifecycle approach
   - Retirement income options

ANNUITIZATION QUESTION
KEY CONSIDERATIONS

- Connecticut target population: 72% earn <$50,000 : social security will be the majority of their post-retirement income
- Research suggests most retirees should not focus on annuitization until they have sufficient assets for emergencies
- Less than 7% of retirees purchase annuities
- 50% Limit: Annuity exchange

GIVEN THE LEGISLATURE'S GOAL OF REDUCING POVERTY IN RETIREMENT, POTENTIALLY RECOMMEND

- Make annuitization one component of the retirement income strategy.
- Focus the retirement income strategy on the "reduced need for public assistance" objective as well as income in retirement.

A HOLISTIC STRATEGY SHOULD INCORPORATE RETIREMENT INCOME PRINCIPLES

Construct

- Build a solid income floor
- Design to the “U”
- Leverage buying power
- Know your fiduciary position
- Understand participant demographics

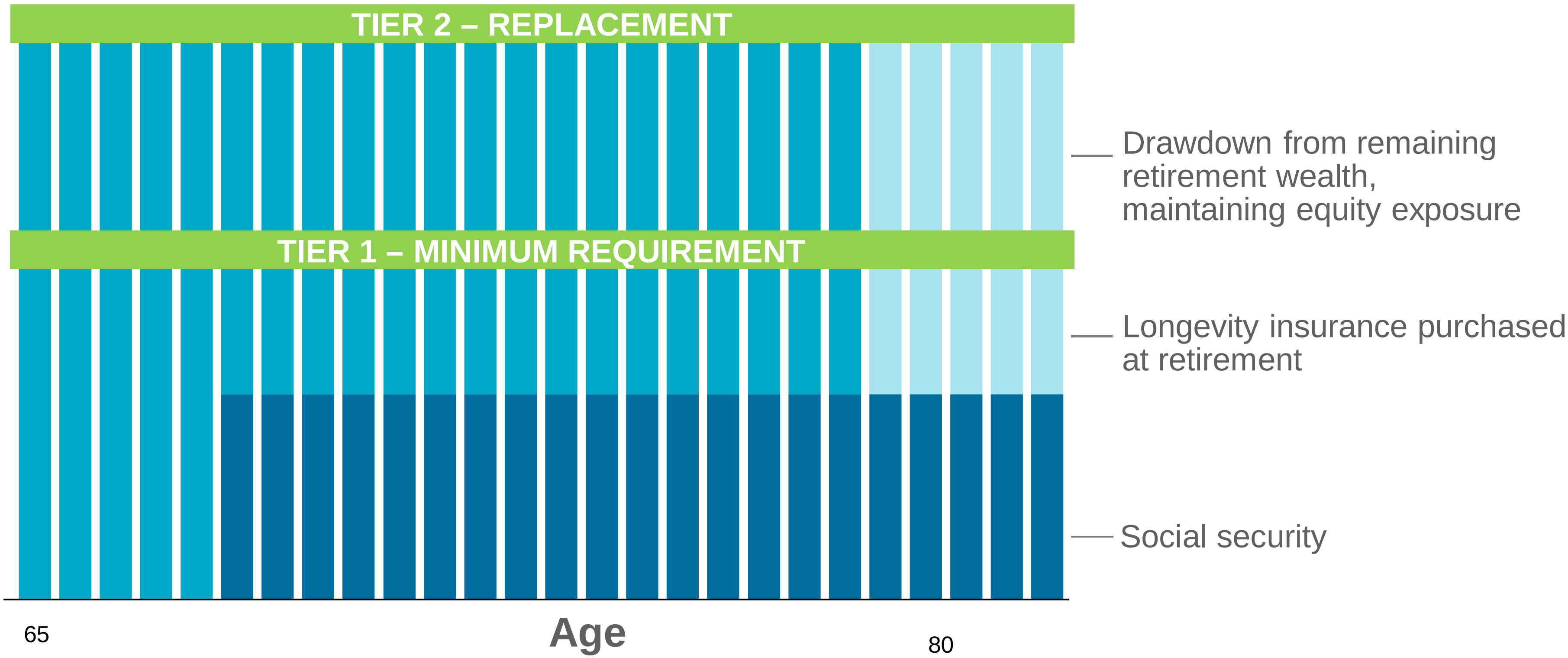
Engage

- Offer flexibility through an Income Menu
- Provide assistance
- Avoid too rapid drawdown

Execute

- ~~Integrate workforce planning~~
- Put all wealth to work
- Manage through the life cycle
- Manage market and longevity risks

BUILD A SOLID INCOME FLOOR
PROTECTION AGAINST POVERTY

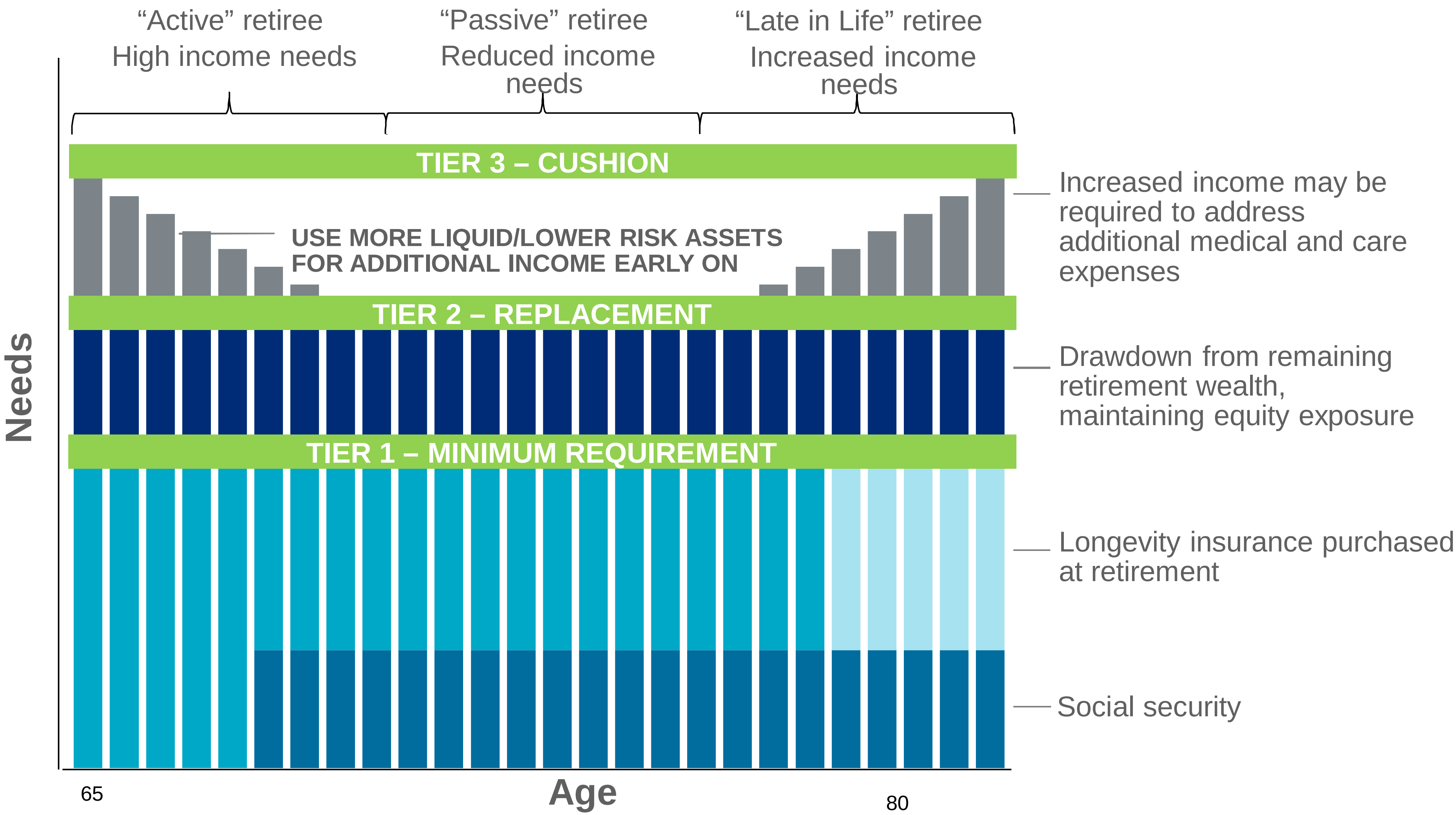


DESIGN TO THE "U"
INCOME NEEDS SHIFT THROUGHOUT RETIREMENT

"Active" Retiree (~65-75)	"Passive" Retiree (~75-85)	"Late in Life" Retiree (~85+)
• Still physically active • Want to travel – holidays, see grandchildren • High (as possible) income needs	• Less physically active but generally healthy • More likely to be "stay at home" • Income needs reduce	• Less physically active, increased health issues • May need long-term care assistance • Increased income needs due to health and long-term care

ACTIVE ▷▷▷▷▷▷▷▷ INCOME MAY REDUCE IN REAL TERMS ▷▷▷▷▷▷▷ LATE IN LIFE

DESIGN TO THE "U"



ADDITIONAL STATUTORY GOALS AND ELEMENTS THAT ARE RELEVANT TO THE DISCUSSION

(1) An increase in access to and enrollment in quality retirement Programs without incurring debts or liabilities to the state.

(3) A minimal need for financial sophistication in Program participants.

(7) Low administrative costs that shall be limited to an annual, predetermined percentage of the total Program balance.

(18) The dissemination of educational information concerning saving and planning for retirement to potential Program participants.

(23) Ensuring that any contract entered into by or any obligation of the Program shall not constitute a debt or obligation of the state and the state shall have no obligation to any designated beneficiary or any other person on account of the Program and all amounts obligated to be paid pursuant to the Program shall be limited to amounts available for such obligation.

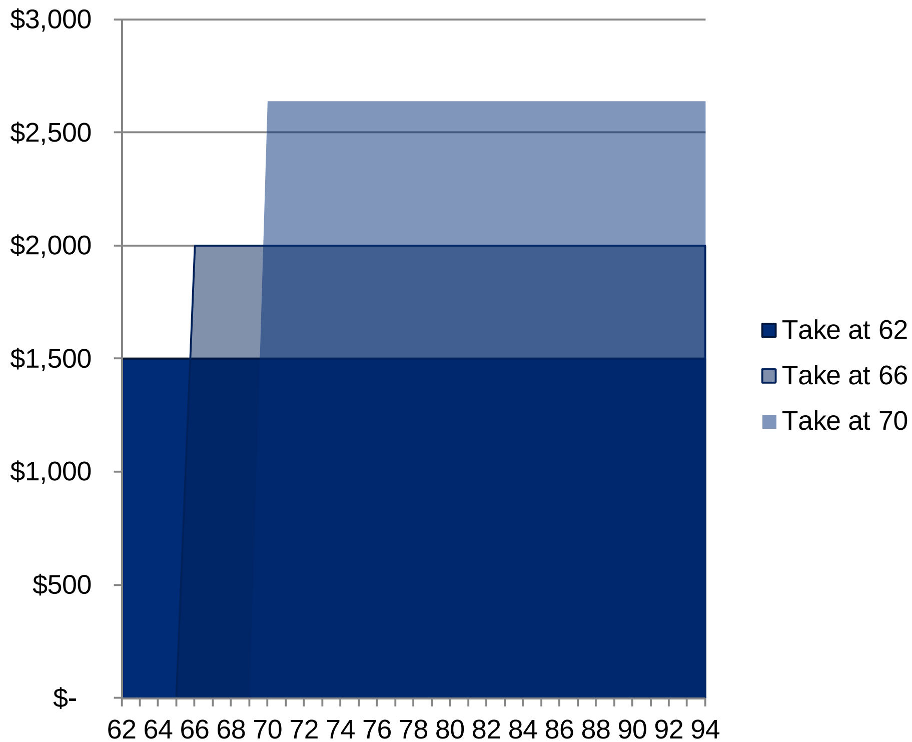
A RETIREMENT INCOME STRATEGY THROUGH THE LIFECYCLE (SOME OPTIONS)

<table>
<tr><th>Accumulating member
(to ~55)</th><th>Pre-retiree
(~55+)</th><th>At retiree (~65)</th><th>Retiree
(65+)</th></tr>
<tr><td>General financial and retirement education</td><td>Retirement-focused education</td><td rowspan="3">At retirement assistance/advice:</td><td rowspan="3">In retirement assistance/advice:</td></tr>
<tr><td colspan="2">Frame retirement benefit as income</td></tr>
<tr><td rowspan="5"></td><td>Build lifetime income product into investment product</td></tr>
<tr><td colspan="3">Managed accounts</td></tr>
<tr><td rowspan="3"></td><td colspan="2">Ability to make systematic withdrawals</td></tr>
<tr><td colspan="2">Access to institutional products:
• Retirement income menu, including an annuity exchange</td></tr>
<tr><td colspan="2">Default retirement income option</td></tr>
<tr><td colspan="4">Consolidation</td></tr>
</table>

A RETIREMENT INCOME STRATEGY THROUGH THE LIFECYCLE

<table>
<tr><th>Accumulating member
(to ~55)</th><th>Pre-retiree
(~55+)</th><th>At retiree (~65)</th><th>Retiree
(65+)</th></tr>
<tr><td>General financial and retirement education</td><td>Retirement-focused education</td><td rowspan="3">At retirement assistance/advice:</td><td rowspan="3">In retirement assistance/advice:</td></tr>
<tr><td colspan="2">Frame retirement benefit as income</td></tr>
<tr><td rowspan="5"></td><td>Build lifetime income product into investment product</td></tr>
<tr><td colspan="3">Managed accounts</td></tr>
<tr><td rowspan="3"></td><td colspan="2">Ability to make systematic withdrawals</td></tr>
<tr><td colspan="2">Access to institutional products:
• Retirement income menu, including an annuity exchange</td></tr>
<tr><td colspan="2">Default retirement income option</td></tr>
<tr><td colspan="4">Consolidation</td></tr>
</table>

OPTIMIZE SOCIAL SECURITY AT RETIREMENT



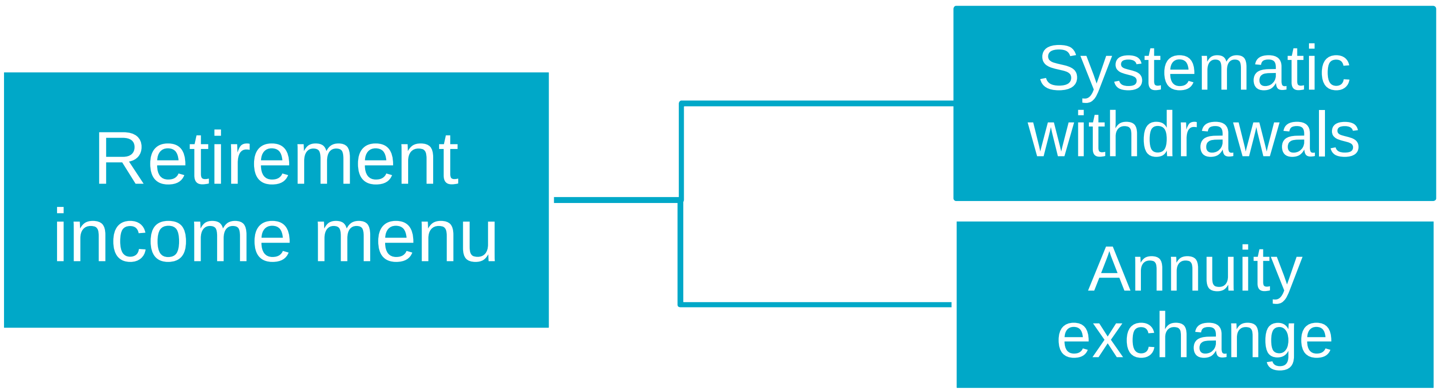
Other "at retirement" questions:

- If I delay social security, what do I do in the meantime?
- From which product/plan should I draw my retirement proceeds first? My 401K plan, my Roth IRA, etc…?
- How do I deal with the fact that Medicare only applies from 65 onwards?

RETIREMENT INCOME MENU AND DEFAULT

Proposed default: Required minimum distributions as a systematic withdrawal

- Low income: nudge for an active choice
- Reversible option; can integrate with TDF; legal compliance



SUMMARY PROPOSED RECOMMENDATIONS

Regarding annuitization
Make annuitization one component of a retirement income strategy
Focus the retirement income strategy on the “reduced need for public assistance” objective as well as income in retirement
Regarding participants
Frame the Program benefits as a lifetime income benefit by the inclusion of an income projection not just a wealth accumulation
Provide retirement-focused education to pre-retirees that highlights how a retirement income strategy needs to be tailored to an individual’s circumstances and that there is not an ideal ‘one size fits all “ solution
Do not include a lifetime income solution or a managed account solutions as an investment option (at this stage) in the accumulation phase
Encourage participants to consolidate their retirement assets into this Program, consider facilitating a service that can assist participants in consolidating their retirement assets
Provide assistance that enables retirees to optimize their social security claiming strategy
Provide assistance and guidance on the many key questions that participants face in retirement
Make the default retirement income option a Required Minimum Distribution
Make available a simplified retirement income menu comprising: • The ability to make systematic withdrawals; ideally with accompanying retiree statements • Access to an annuity exchange for retirees to purchase annuity contracts with all or a portion of their retirement capital

GUARANTEES
FOLLOW UP

RELEVANT GOAL & DESIGN FEATURE

Sec. 185 (6)

Plan portability through maintenance of individual retirement accounts for each plan participant;

Sec. 185 (9)

"An annually predetermined guaranteed rate of return and the procurement of insurance, as necessary, to guarantee the stated rate of return;"

KEY CONSIDERATIONS IN OFFERING A GUARANTEE

<table>
<tr><th></th><th colspan="3">Benefits</th><th>Cost</th><th>Participant Communication</th><th>Portability</th><th>Operational Complexity</th><th>Retirement Readiness</th></tr>
<tr><th></th><th>Principal Protection</th><th>Retirement Income</th><th>Longevity Risk</th><th>Insurance Fees</th><th>Difficulty level of explaining</th><th>Withdrawal limit</th><th>Additional Operational Complexity</th><th>Improves Income Replacement Ratio in Retirement</th></tr>
<tr><td>Target Date Fund (TDF) with principal guarantee</td><td rowspan="2">Only at retirement</td><td rowspan="5">No, must buy an annuity</td><td rowspan="5">No</td><td>1.00%[1]</td><td rowspan="2">Simple</td><td rowspan="2">Participants lose the guarantee if assets are withdrawn</td><td rowspan="2">Yes</td><td rowspan="5">No</td></tr>
<tr><td>TDF with x% return guarantee</td><td>2.00%[2]</td></tr>
<tr><td>Stable Value Fund</td><td>Yes</td><td>0.50%[3]</td><td>Difficult</td><td>Yes</td><td>Yes</td></tr>
<tr><td>Conservative Fund</td><td>Yes</td><td>N/A[4]</td><td>Potentially difficult</td><td>Most likely</td><td>Yes</td></tr>
<tr><td>Money Market Fund</td><td>Yes</td><td>N/A</td><td>Simple</td><td>No</td><td>No</td></tr>
</table>

[1] Indicative pricing gathered from two insurers.

[2] Assumes 1% return guarantee.

[3] Based on Mercer's stable value fund survey for qualified DC plans.

[4] This type of solutions typically lack fee transparency. The guaranteed rate of return includes the cost of offering the guarantee.

GUARANTEE COSTS* REDUCE THE INCOME REPLACEMENT RATIO

EXPECTED INCOME REPLACEMENT RATIO (INCLUDING SOCIAL SECURITY BENEFITS) AT 6% CONTRIBUTIONS, IF INVESTED IN A TARGET DATE FUND WITH NO GUARANTEES**

	Age 25	Age 40	Age 55
Low Income	93.3%	68.5%	58.1%
Mid Income	88.8%	59.7%	49.5%
High Income	83.7%	51.8%	36.0%

THE EXPECTED DECLINE IN INCOME REPLACEMENT RATIO IF ASSETS ARE INVESTED IN A GUARANTEED OPTION LISTED BELOW VS. INVESTING IN A TARGET DATE FUND WITH NO GUARANTEE**

Across all income levels	Age 25	Age 40	Age 55
Target Date Fund with Principal Guarantee	10.7%	2.8%	0.3%
Target Date Fund with 1% Return Guarantee	18.0%	5.0%	0.6%
Stable Value Fund	20.4%	5.4%	0.6%
Conservative Fund	30.4%	9.2%	1.1%
Money Market Fund	30.6%	9.3%	1.1%

*Cost includes both higher fees and lower expected return. Please see Mercer's Guarantee memo for assumptions used to calculate income replacement ratios.

**Includes investment management cost of about 20 basis points and 1% cost of plan administration

MEETS STATUTORY GUIDANCE?

Options to Consider	Guarantee Statute	Portability Statute
Target Date Fund with Principal Guarantee	No	Yes
Target Date Fund with 1% Return Guarantee	No	Yes
Stable Value Fund	Yes	No
Conservative Fund	Yes*	No*
Money Market Fund*	Yes**	Yes

* The Conservative fund can be structured to have a withdrawal restriction or a withdrawal fee. Please note that the withdrawal fee can be in excess of the guaranteed rate of return, resulting in a loss of principal value.

**Meets the guarantee statute's requirement through its principal guarantee in most circumstances except in extreme capital market situation such as 2008. However, it is possible that after plan administration cost the asset value of an account invested in the money market fund may fall below its principal value.

DECISIONS

- Statutory Conforming Plan: What guarantee do you want to consider offering?
- Recommended Plan: Do you want to offer a guarantee at all? If so, in what format?

FINANCIAL FEASIBILITY STUDY

OVERVIEW

THE FINANCIAL FEASIBILITY MODEL WILL REQUIRE MAKING ASSUMPTIONS TO ADDRESS A RANGE OF QUESTIONS ABOUT THE CONNECTICUT RETIREMENT SECURITY PROGRAM

Key questions	Assumed plan design
What program structure	• IRA structure • Target date or similar investment vehicle assigned to individual based on age • Key parties include employers, payroll provider, IRA admin, IRA depository/custodian, asset manager
Which employers will participate	• "Qualified employers" that do not currently offer a qualified retirement plan, defined as any person, corporation, limited liability company, firm, partnership, voluntary association, joint stock association or other entity that employs five or more persons in the state[1]
Which employees will participate	• Automatic enrollment within 90 days of eligibility • Mandatory participation unless an employee chooses to opt out
How much will employees contribute	• Eligible compensation includes "Box 1' W-2 income and certain other forms of income such as commissions • Default contribution rate when employees are enrolled in the program • Employees can change default contribution rate by instructing IRA administrator
What is the expected investment return	• Expected investment vehicle performance will be a function of expected risk and return for different asset classes in multi-asset class products and relative mix • Guarantee option – decision pending
What are the expected costs	• Upfront: Program set-up (e.g. website, marketing collateral, advertising, contracting with service providers, legal fees) • Ongoing: Outreach, IRA administrator, IRA depository / custodian, asset managers, advisors, legal, enforcement, education, tools

[1]"Qualified employer" does not include: (A) The federal government, (B) the state or any political subdivision thereof, or (C) any municipality, unit of a municipality or municipal housing authority. Qualified retirement plans include Payroll deduction IRA, Simplified Employee Pension (SEP), Simple IRA, Profit sharing, with 401(k) feature, 403(b) (employer and/or employee contributions), Defined benefit plan (open to new participants and providing accruals), 457(b) plan

WE WILL DEVELOP A 15-YEAR MODEL OF PROGRAM ASSETS AND FINANCIALS TO FORMULATE A PRELIMINARY PERSPECTIVE ON ITS FINANCIAL FEASIBILITY

A. Develop baseline view

- Size the number of employers and respective employee base in-scope for the program using Census data
- Define income and age segments based on available data (e.g. Census) and estimate employee population by income and age
- Estimate haircut to account for employees changing jobs during potential 90-day pre-enrolment period
- Estimate aggregate eligible income by income and age segment
- Leverage the Center for Retirement Research at Boston College's findings to
  - Calibrate default contribution rate
  - Estimate opt out rates by employee income and age segment
  - Estimate deferal rates by employee income and age segment
- Estimate contribution amounts by employee income and age segment

B. Develop 15-year projection

- Project number of in scope employers
- By income and age segment
  - Project base of eligible employees
  - Project participating employees
  - Project contribution amounts
- Map contributions for individual income and age segments to specific investment products (i.e. age-appropriate target date funds)
- Estimate the return for each product by year
- Develop baseline case for overall program balances by year
- Perform sensitivity analysis
  - Evaluate projected program balances using a range of inputs for key variables
  - We will also run the model with and without a guaranteed annual investment return feature

C. Model program financials

- Estimate program income by year
  - Evaluate income at different administrative fee levels
  - Consider both flat and asset-based fees
- Estimate one-time start-up expenses
  - High level costs for website, marketing collateral, advertising, contracting with service providers, legal fees, etc
  - Identification and initial enrollment of eligible employees, including know-your-client and anti-money-laundering controls
- Estimated ongoing expenses by year
  - Asset management fees
  - Payroll providers
  - IRA administrator
  - IRA depository / custodian
  - Other (e.g. Outreach, advisors, legal, enforcement, education, tools)
- Model program financials and perform break-even analysis
- Compare participant fee levels to existing private sector alternatives

D. Preliminarily assess program feasibility

- What do you have to believe about program participation, savings rates, investment returns, assets and expenses to cover costs at a reasonable fee level; how do the employee-related assumptions compare with Center for Retirement Research at Boston College research findings?
- How long will it take to achieve break-even status?
- What assumptions will need to be tested further during an implementation phase?

NEXT STEPS

- Receive final output from the Center for Retirement Research at Boston College
- Initiate research on key assumptions
- Develop model prototype and define required sensitivities
- Develop discussion document and initiate preliminary discussions with potential IRA administrators / depositors/custodians regarding potential one-time and ongoing expenses
- Synthesize findings and incorporate into draft model output

IMPORTANT NOTICES

References to Mercer shall be construed to include Mercer LLC and/or its associated companies.

This contains confidential and proprietary information of Mercer and is intended for the exclusive use of the parties to whom it was provided by Mercer. Its content may not be modified, sold or otherwise provided, in whole or in part, to any other person or entity, without Mercer's prior written permission.

The findings, ratings and/or opinions expressed herein are the intellectual property of Mercer and are subject to change without notice. They are not intended to convey any guarantees as to the future performance of the investment products, asset classes or capital markets discussed. Past performance does not guarantee future results. Mercer's ratings do not constitute individualized investment advice.

Information contained herein has been obtained from a range of third party sources. While the information is believed to be reliable, Mercer has not sought to verify it independently. As such, Mercer makes no representations or warranties as to the accuracy of the information presented and takes no responsibility or liability (including for indirect, consequential or incidental damages), for any error, omission or inaccuracy in the data supplied by any third party.

This does not constitute an offer or a solicitation of an offer to buy or sell securities, commodities and/or any other financial instruments or products or constitute a solicitation on behalf of any of the investment managers, their affiliates, products or strategies that Mercer may evaluate or recommend.

For the most recent approved ratings of an investment strategy, and a fuller explanation of their meanings, contact your Mercer representative.

For Mercer's conflict of interest disclosures, contact your Mercer representative or see www.mercer.com/conflictsofinterest.

Mercer universes: Mercer's universes are intended to provide collective samples of strategies that best allow for robust peer group comparisons over a chosen timeframe. Mercer does not assert that the peer groups are wholly representative of and applicable to all strategies available to investors.

MAKE
TOMORROW
TODAY

MERCER