California Secure Choice

Secure Choice Retirement Savings Investment Board Meeting

Project Status Update

Sacramento, California

September 28th, 2015

Table of Contents

September Summary Update

Program Design:

- Program Design Option Scoring Methodology finalized and results summarized.
- Meeting took place with EDD on September 25th, 2015 to discuss proposal and estimates: Awaiting written proposal from EDD.
- Discussion with three recordkeepers with direct connectivity to employers (as potential alternative to EDD): Expecting to get services framework and price estimates the week of September 28th, 2015.
- Potential list of employee and employer level policy issues has been compiled and will be addressed as operational model is finalized.

Market Analysis:

- Online Questionnaire Report targeted for October 16th, 2015

Online Questionnaire Status Update

August 3rd 2015: Complete

- Collect questions and suggestions.

August 14th 2015: Complete

- Circulate semi-final questionnaire.
- Start beta testing to make sure question wording and flow make sense.

August 21st 2015: Complete

- Finalize questionnaire.

Week of August 24th 2015: Complete

- Survey programming.

August 31st to September 13th 2015: Complete

- Data collection

September 14th- 29th 2015: In progress

- Data Analysis.

October 16th 2015:

- Final detailed report.

Program Design Option Scoring Results

- The Evaluation Committee has five members
- Two weightings used for “**Product Score”** comparison:
  - Secure Choice Retirement Investment Board ”SCRIB” Weightings
  - Program Design Team “PDT” Weightings

SCRIB Weightings	Product Design Team Weightings
BENEFITS (64.39%)	**BENEFITS (70%)**
Income Replacement (17.95%)	**Income Replacement (50%)**
Lifetime Benefit (20.42%)	**Lifetime Benefit (10%)**
Risks (21.14%)	**Risks (15%)**
	Interest Risk Rate at Retirement (25%)
	Guarantee (25%)
	Non-Fee Conflicts (50%)
Fund Inaccessibility (14.09%)	**Fund Inaccessibility (15%)**
Plan Cost/ Sustainability (26.42%)	**Plan Cost/ Sustainability (10%)**
	Administration Cost (33.33%)
	Investment Management Cost (33.33%)
	Cost of Guarantee (33.33%)
ADMINISTRATION (35.41%)	**ADMINISTRATION (30%)**
Ease & Efficiency of Administration (41.63%)	**Ease & Efficiency of Administration (33.33%)**
	At Secure Choice Level(50%)
	At Record Keeper Level(50%)
Financial Transparency (21.12%)	**Financial Transparency (33.33%)**
Ease of Communication (37.79%)	**Ease of Communication (33.33%)**

- We have added an “**Implementation Risk**” dimension to the evaluation.
- The Product Score will be displayed on the y-axis; the Implementation Risk score on the x-axis.

Program Design Option Scoring Results

- These are the eight options evaluated:

Key Characteristics	Option 1 Target Risk Fund	Option 2 Target Date Fund (Acc)	Option 3 Target Date Fund (Inc)	Option 4 Reserve Fund
Accumulation/Investment Approach	Asset Accumulation Strategy	Asset Accumulation Strategy	Liability Matching/Income Target Strategy	Liability Matching Strategy
Best Decumulation Strategy	Sys Withdrawal / Lump Sum / Collective Payout	Sys Withdrawal / Lump Sum / Collective Payout	Annuity	Annuity
Implementation	Balanced Fund 70/30	Immediate	TDF or Bal until Age 50 -> TIF	Immediate
Lowest Cost Option	Proprietary Funds + TPA	Proprietary Funds + TPA	Proprietary Funds + TPA	Proprietary Inv + Admin

Key Characteristics	Option 5 Bank Deposit	Option 6 Deferred Fixed Annuity	Option 7 Variable Annuity with GMAB	Option 8 Variable Annuity with GMWB
Accumulation/Investment Approach	Extremenly Low Risk	Low Risk	Asset Accumulation Strategy	Asset Accumulation Strategy
Best Decumulation Strategy	Sys Withdrawal / Lump Sum / Collective Payout	Annuity	Annuity	Annuity
Implementation	Immediate	Immediate	Immediate	TDF or Bal until Age 50 -> Variable Annuity GMWB
Lowest Cost Option	Bank + TPA	Insurance Company + TPA	Insurance Company + TPA	Insurance Company + TPA

Program Design Option Scoring Results

- This is the Implementability of the eight options evaluated:

Implementability	Option 1 Target Risk Fund	Option 2 Target Date Fund	Option 3 Target Date Fund	Option 4 Reserve Fund
Timing	Immediate	Immediate	15 years Prior to Retirement	Immediate
Ages Eligible in 1st Year of Launch for 5% Income Replacement using 2% COLA	All Ages	All Ages	>50 (Meaningful 50-51 Only)	All Ages
Recommendation	**Available at Launch**	**Available at Launch**	**Introduce 3 Years Post-Launch**	**Available at Launch**

Implementability	Option 5 Bank Deposit	Option 6 Deferred Fixed Annuity	Option 7 Variable Annuity with GMAB	Option 8 Variable Annuity with GMWB
Timing	Immediate	Immediate	Immediate	15 Years Prior to Retirement
Ages Eligible in 1st Year of Launch for 5% Income Replacement using 2% COLA	All Ages	All Ages (Meaningful for <48)	All Ages (Meaningful <51)	>50 (Meaningful 50-51 Only)
Recommendation	**Available at Launch**	**Available at Launch**	**Available at Launch**	**Introduce 3 Years Post-Launch**

Product Score

Criteria	Option 1 Target Risk Fund	Option 2 Target Date Fund	Option 3 Target Date Fund	Option 4 Reserve Fund
Design Team Weighted Overall Score	4.11	3.86	4.05	3.93
SCRIB Weighted Overall Score	3.46	3.33	3.41	3.53

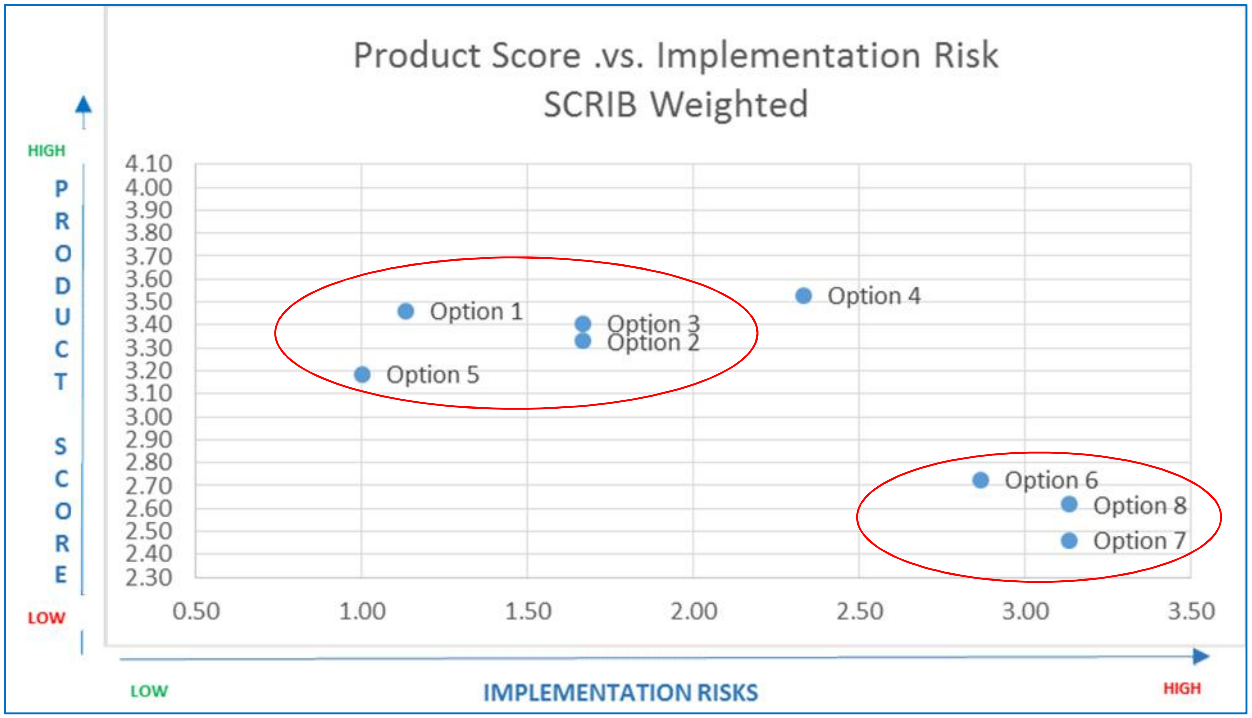
Criteria	Option 5 Bank Deposit	Option 6 Deferred Fixed Annuity	Option 7 Variable Annuity with GMAB	Option 8 Variable Annuity with GMWB
Design Team Weighted Overall Score	2.76	2.52	2.58	2.98
SCRIB Weighted Overall Score	3.19	2.73	2.46	2.62

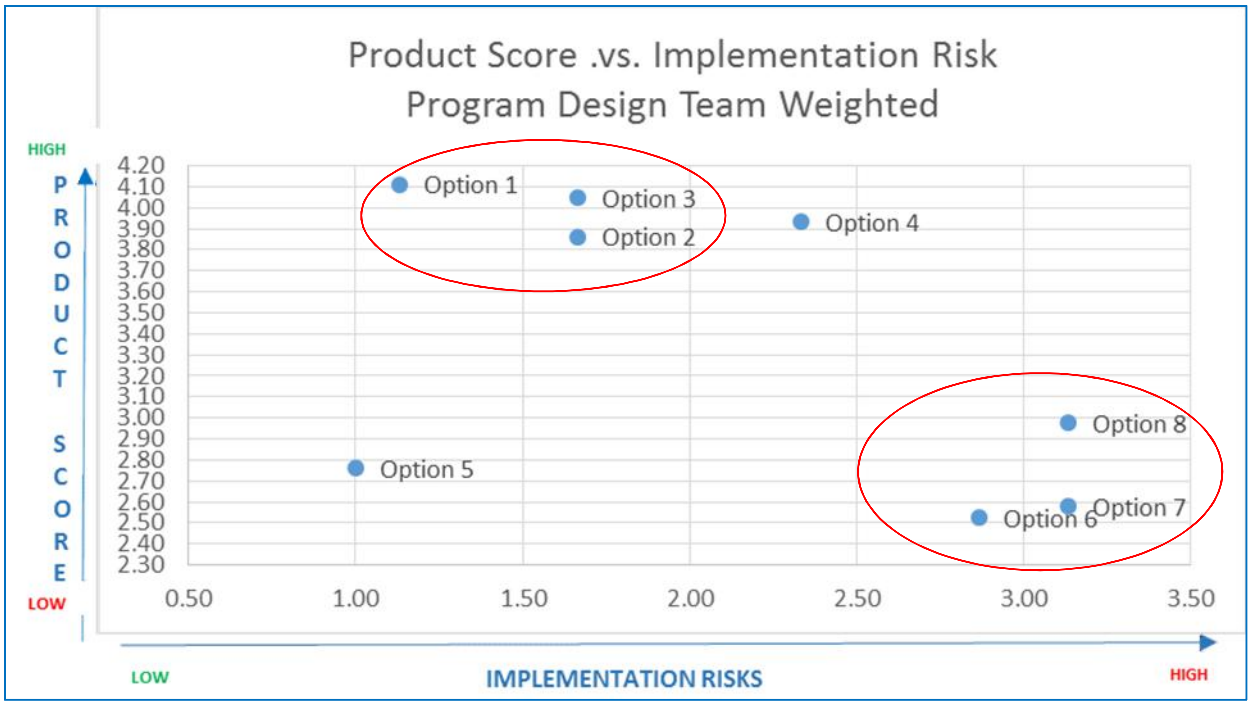
Implementation Risk

Implementation Risks	Option 1 Target Risk Fund	Option 2 Target Date Fund (Acc)	Option 3 Target Date Fund (Inc)	Option 4 Reserve Fund
Implementation Risk Overall Score	1.13	1.67	1.67	2.33

Implementation Risks	Option 5 Bank Deposit	Option 6 Deferred Fixed Annuity	Option 7 Variable Annuity with GMAB	Option 8 Variable Annuity with GMWB
Implementation Risk Overall Score	1.00	2.87	3.13	3.13

Product Score vs. Implementation Risk





Option 1
Target Risk Fund

Option 2
Target Date Fund (Acc)

Option 3
Target Date Fund (Inc)

Option 4
Reserve Fund

Option 5
Bank Deposit

Option 6
Deferred Fixed Annuity

Option 7
Variable Annuity with GMAB

Option 8
Variable Annuity with GMWB

Key Parameters for Consideration

- The table below compares the different options based on key parameters:

		Asset Allocation Equity Path	Income Replacement Rate Median	Income Replacement Rate 5th %-tile	Product Score Costs and Benefits	Implemtation Risk Errors, Scalability, Structural Compelxity	Implementability At Launch	Recommendation To Be Considered
NOT GUARANTEED	**Target Risk Fund**	**70%**	**24.7%**	**13.5%**	**Hi**	**Lo**	**Yes**	**Yes**
	Target Date Fund (Accumulation)	**90% to 50%**	**24.2%**	**13.4%**	**Hi**	**Lo**	**Yes**	**Yes**
	Target Date Fund (Income)	**98% to 48%**	**24.4%**	**14.0%**	**Hi**	**Lo**	**No. 3-5 Years**	**Delayed**
RETURN SMOOTH-ING	**Reserve Fund (2058 Cohort)**	**70%**	**22.4%**	**12.3%**	**Hi**	**Med**	**Yes**	**Yes**
	Reserve Fund (2078 Cohort)	**70%**	**29.7%**	**15.4%**	**Hi**	**Med**	**Yes**	
GUARANTEED	**Bank Deposit**		10.0%	8.3%	Med	Lo	Yes	**No**
	Deferred Fixed Annuity		13.4%	10.0%	Lo	Med	Yes	**No**
	Variable Annuity with GMAB		19.0%	12.3%	Lo	Hi	Yes	**No**
	Variable Annuity with GMWB	*No COLA Guar.*	**22.0%**	**12.7%**	**Med**	**Hi**	**No. 3-5 Years**	**Delayed**

- The Non-Guaranteed Options are all cost-benefit competitive (i.e., High Product Score), present low implementation risks and the first two are immediately implementable.
- The Reserve Fund (Pooled IRA) option is cost-benefit competitive but presents special risks that need to be addressed.
- Amongst the Guaranteed Options only two stand out:
  - Bank Deposits: while the overall product score is average and implementation risks are low, the very low replacement rates make it unattractive.
  - VA with GMWB: while implementation risks are on the high side and overall the product score is average, income replacement rates approach the guaranteed options while offering a minimum guaranteed income (with no COLA guarantee). This can have positive behavioral effects such as higher contribution rates. On the downside, the product only makes sense 15 yrs prior to retirement.

See assumptions for income replacement rates in Appendix.

Reserve Fund Considerations

- The Reserve Fund allows for inter-generational investment return smoothing while affording attractive income replacement rates especially after the first generation of participants (approximately 20 years).
- At the same time it presents certain risks including:
  - Implementation Risk due to structural complexity and the requirement for an administrative/operational infrastructure.
  - An elevated level of fiduciary responsibility on Sponsor (i.e., SCRIB) and its members.
  - Principal-Agent Conflicts including potential political pressures to over-credit funds from reserve especially in down-years. Strong governance and legal constraints are essential.
  - Free rider problem during the early stages of the Reserve Fund: the early participants (adopters) will subsidize the later entrants in down years. The table below gives an illustration.

Group 1	Year 1	Year 2	Year 3
No. of Participants	1,000,000	1,000,000	1,000,000
New Contributions	$1,500,000,000	$1,500,000,000	$1,500,000,000
Investment Growth Above Target	10%	0%	-5%
Gain/Loss Relative to Target	$150,000,000	$0	-$82,500,000
Reserve Fund Balance	**150,000,000**	**150,000,000.00**	**$67,500,000**

Group 2	Year 1	Year 2	Year 3
No. of Participants	-	2,000,000	2,000,000
New Contributions	$0	$3,000,000,000	$3,000,000,000
Investment Growth Above Target	10%	0%	-5%
Gain/Loss Relative to Target	$0	$0	-$150,000,000
Reserve Fund Balance	**-**	**-**	**-$150,000,000**

Groups 1 and 2	Year 1	Year 2	Year 3
Reserve Fund Balance	**$150,000,000**	**$150,000,000**	**-$82,500,000**
Percent of Loss Recovered by Group 1 and 2			**65%**
Percent of Loss Recovered by Group 1 if no Group 2			**100%**

- One way to overcome the lower income replacement rates and the Free Rider problem that affect the earlier generations is to seed the Reserve Fund with capital that gets withdrawn over the course of 2 to 3 decades as the fund builds its own reserves.

Target Risk Funds vs. Target Date Funds

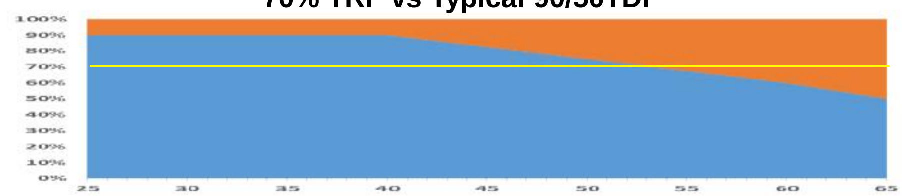
- Target Risk Funds (TRFs) and Target Date Funds (TDFs) are essentially wrappers (or packages) around asset allocation strategies as proxies for risk. TRFs have static risk targets that often translate into relatively static asset allocations; while TDFs reduce risk over time through dynamic shifts in asset allocation.
- Comparison of Income Replacement Rates is largely dependent on TDF glidepaths. TRFs and TDFs have similar implementation risks and income replacement rates for comparable average asset allocations. The table below compares typical TRFs and TDFs:

Income Replacement Rates

Income Replacement Rate	Target Risk Funds (Balanced)			
	Aggressive	Mod-Agg	Moderate	Conservative
Equity Allocation	**80%**	**70%**	**60%**	**40%**
Avg Equity Allocation	80%	70%	60%	40%
Median	**26.5%**	**24.7%**	**22.8%**	**19.1%**
5th %-tile	**13.3%**	**13.5%**	**13.5%**	**13.4%**
Downside Risk	**13.2%**	**11.2%**	**9.3%**	**5.7%**
Efficiency	**50%**	**45%**	**41%**	**30%**

Income Replacement Rate	Target Date Funds (Accumulation)			
	Aggressive	Typical	Moderate	Conservative
Equity Allocation Path	**98/50**	**90/50**	**75/35**	**60/20**
Avg Equity Allocation	79%	77%	61%	46%
Median	**25.0%**	**24.2%**	**22.1%**	**19.3%**
5th %-tile	**13.8%**	**13.4%**	**13.8%**	**13.7%**
Downside Risk	**11.2%**	**10.8%**	**8.3%**	**5.5%**
Efficiency	**45%**	**45%**	**37%**	**29%**

70% TRF vs Typical 90/50TDF



Probability of Short-Term Losses

Probability of ST Loss	Target Risk Funds (Balanced)			
	Aggressive	Mod-Agg	Moderate	Conservative
Over first 3 yrs	**18.9%**	**17.7%**	**15.1%**	**10.0%**
Over first 5 yrs	**13.7%**	**11.3%**	**8.7%**	**4.7%**
Over first 10 yrs	**3.6%**	**2.6%**	**1.7%**	**0.1%**

Probability of ST Loss	Target Date Funds (Accumulation)			
	Aggressive	Typical	Moderate	Conservative
Over first 3 yrs	**22.0%**	**21.5%**	**18.1%**	**15.1%**
Over first 5 yrs	**16.7%**	**15.3%**	**12.5%**	**8.7%**
Over first 10 yrs	**6.2%**	**5.2%**	**3.2%**	**1.7%**

- It should be noted that:
  - TDFs require higher average allocations to equity in order to achieve the same income replacement rates as TRFs. The reason is that the TDFs assume higher risks in the early years when account balances are low.
  - Therefore TDFs have higher probabilities of short-term losses in the early years due to the higher allocations to equity at the beginning of the glidepath.
  - Conversely, TRFs may have higher probabilities of losses in the latter years due to the lower equity allocations of TDFs

Implementation of TDFs and TRFs

- Managed Account Solutions:
  - Approach 1: TDFs can be mimicked by dynamic allocations to TRFs within a managed account.
  - Approach 2: Both TRFs and TDFs can be mimicked by dynamic allocations to ETFs within a managed account.
- Proprietary Solutions:
  - TDFs, TRFs and ETFs are all funds and with enough scale can be manufactured on a proprietary basis
  - The main advantages of a proprietary solution are customization (e.g., lockups); building costs into fund fees (converting regressive account fees into proportional asset-based fees) and lowering costs with increasing scale,
- The differences between TRFs and TDFs as relates to income replacement rates are minor compared to difficult implementation issues that involve behavioral, fiduciary and operational trade-offs.

	Behavioral	Fiduciary (Suitability)	Operational (Scalability of Proprietary Solution)	Operational (Employer Liability)
Target Risk Funds	Too Aggressive near Retirement	Defaulting to Conservative or Moderate Profiles Reduces Potential Income Replacement	High for Default TRF Low for Others	If younger particpants are defaulted to a higher risk TRF than older particpants, the age entry errors can be a source of employer liability.
Target Date Funds	Too Aggressive at Beginning	Defaulting to Conservative or Moderate Glidepaths Reduces Potential Income Replacement	High for Default TDFs Low for Others	Possible age entry errors. Can be mitigated
Managed Accounts	Can Implement Custom Glide Path (e.g., 3 yrs Near Cash+32 yrs Mod-Agg+7 yrs Conservative)	Defaulting to Conservative Tails and Mod-Agg Middle Years Reduces Tail Risk with Minor Loss of Income Replacement (e.g., 23%)	High for Initial (Near Cash) Low for All Others. Requires Recordkeeper with Automated Rebalancing Capability	Possible age entry errors but have 3 years or more to correct

Conclusion

- Target Date Funds, Target Risk Funds and Managed Account variations are all compelling options for a non-guaranteed offering.
- The Reserve Fund is also a viable option that stands midway between the non-guaranteed and guaranteed design options.
- Within the guaranteed space, the emerging category of Variable Annuities with Minimum Guaranteed Withdrawal Benefits offers reasonable benefits albeit at elevated costs (due to the guarantee) compared to non-guaranteed solutions. It is, nonetheless, not implementable for a few years after launch.
- The different design options are not mutually exclusive, but it is not advisable to offer more than one (at least initially) as this can present communication, operational and scale-related challenges.

THANK YOU FOR YOUR TIME

Assumptions for Income Replacement Rate Calculations

- Entry age at 25
- 5% contribution rate with no escalation on an initial salary of $30,000
- Retirement age at 67 (Social Security would cover 43% of final pay)
- Group annuity purchased at retirement with 2% COLA and 15-year period certain