

To: Oregon State Retirement Board

From: CRR

Date: April 29, 2016

Re: Outline of Feasibility Model

This memo describes the inputs to CRR's Financial Feasibility Model, and the financial projections that the model will generate based on these inputs. The model will give the Board a tool to evaluate the financial status of ORSP across numerous scenarios. Towards that end the model is designed to project plan finances contingent on three types of inputs: 1) those related to employee and employer eligibility; 2) those related to employee participation; and 3) those related to program costs and revenue. These inputs are described in more detail below. Model assumptions (e.g., opt-out rates, leakage rates, etc.) are based on real world data, but options are always given that are more conservative than these assumptions (i.e., that would reduce assets accumulated by the program). The model also makes assumptions on wage growth, inflation, and worker mobility, but these inputs are not designed to be flexible and will be baked into the model using generally accepted economic assumptions.

I. Eligible Population of Employees/Employers – Options in this set determine what share of the population of uncovered workers will participate in the program and how they will participate (automatically enrolled versus opt-in)

- Which employees will be automatically enrolled in the program?
Default: Employees with no plan at work
Option 1: All uncovered employees (including ineligible at employer providing plan)
- Which employees will be allowed to opt-in to the program?
Default: Employees who are ineligible at employer providing plan
Option 1: None
Option 2: Self-employed workers
Option 3: Both ineligible workers and the self-employed
- Which employers will be required to participate in the program?
Default: All employers
Option 1: Employers with payroll providers
Option 2: Employers with payroll providers or software
Option 3: Employers with 2+ years of tenure
- How will the plan be rolled out in terms of the employer mandate?
Default: All employers at once
Option 1: Over 2 years by payroll type (those using providers, then software, then manual)

- Will any mandated employers switch to private market?
Options ranging from 0 to 50 percent

II. Contributions, Participation, and Withdrawals – Options in this set determine how much participating workers contribute (as a default), how likely they are to participate, and how quickly their assets accumulate.

- Default contribution rate
Option 1 to 4: Flat values of 3, 5, 6, or 10 percent
Option 5: Auto-escalation from 6 to 10 percent
- Basic plan structure
Default: Roth allowing annual rate changes
Option 1: Roth allowing quarterly rate changes
Option 2: Traditional allowing annual rate changes
Option 3: Traditional allowing quarterly rate changes
- Estimate of opt-out rate
Default: Knowledge networks survey
Option 1: Private sector 401(k) data
Option 2: Conservative (30 percent opt-out)
Option 3: Very conservative (50 percent opt-out)
- Estimated opt-in rate
Default: Conservative (40 percent opt-in)
Option 1: Very conservative (20 percent opt-in)
- In-service leakages
Default: Estimated from 401(k) data (1 percent)
Option 1: Conservative (2.5 percent)
Option 2: Very conservative (4.0 percent)
- Share of leavers taking lump sum
Default: Estimated from 401(k) data
Option 1: Conservative (1.5 x estimated)
Option 2: Very conservative (2.0 x estimated)
- Rate of Return on Investments
Default: 0 years 1-3, 3 percent after
Option 1: Blended rate by diversified portfolio (5 percent)
Option 2: Flat rate of 1 percent
Option 3: Adverse market early in program
Option 4: Adverse market late in program

III. Costs and Revenue – Options in this set alter either the initial or ongoing costs of administering the program or relate to the revenue collected from account balances to pay for the program. Each cost category has a “recommended” option based on market research and then conservative and very conservative options in case costs are higher than anticipated.

- Recordkeeping service model
 - Default: Direct between employers and record keeper
 - Option 1: State/3rd party as data aggregator
- Startup record keeping costs
 - Default: Recommended
 - Option 1: Conservative (1.5 x recommended)
 - Option 2: Very conservative (2.0 x recommended)
- Other startup costs
 - Default: Recommended
 - Option 1: Conservative (1.5 x recommended)
 - Option 2: Very conservative (2.0 x recommended)
- Ongoing record keeping costs (systems, legal, marketing, contribution processing, call center)
 - Default: Recommended
 - Option 1: Conservative (1.5 x recommended)
 - Option 2: Very conservative (2.0 x recommended)
- Investment management costs (as share of net assets)
 - Options ranging from 5 to 50 basis points
- Other ongoing costs (operating, legal, investment, trustee services)
 - Default: Recommended
 - Option 1: Conservative (1.5 x recommended)
 - Option 2: Very conservative (2.0 x recommended)
- Revenue collected on net assets:
 - Options ranging from 30 to 100 basis points

IV. Screenshot of Forward Facing Model

Shell Feasibility Model

Model Inputs

I. Eligible Population

Auto-enrolled employees: Employees with no plan at work

Opt-in employees: None

Eligible employers: All employers

Roll-out of plan: All employers at once

Share of eligible employers using private sector: None

II. Contributions, Participation, and Withdrawals

Contribution rate: 3 percent

Plan structure: Roth allowing annual rate changes

Estimate of opt-out rate: Knowledge networks survey

Estimated opt-in rate: Very conservative (20 percent)

Rate of return on investments: 0 years 1-3, 3 percent after

In-service leakages: Conservative (2.5 percent)

Share leavers taking lump sum: 50 percent

III. Costs and Revenue

Recordkeeping service model: Direct between employers recordke

Startup record keeping costs: Recommended

Other startup costs: Recommended

Ongoing recordkeeping costs: Recommended

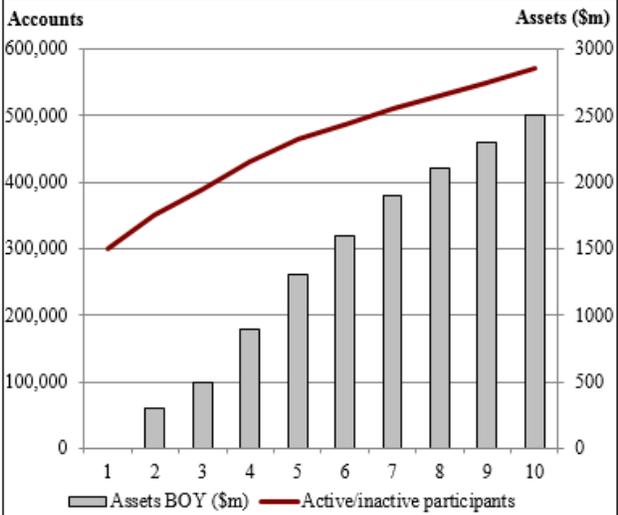
Investment management costs: 20 basis points

Other ongoing costs: Recommended

Fees on net asset values: 75 basis points

Model Outputs

Years until revenue exceeds costs:
 Years until startup and initial excess cost paid off:



IV. Outcomes

Year 1 Year 5 Year 10 Year 15

Accounts

Assets

Assets per Account

Inactives under \$1,000

Costs as share of assets

[\(For more detail on costs click here\)](#)