P-Solve

# Role of Actuary in DC World – Session 40-A

International Congress of Actuaries

Washington, DC

**1 April 2014**

# Discussion Agenda

- Introduction
- Sustainable Retirement System
- Defined Contribution Plans
  - What have we learned
  - What can actuaries do
- Benchmarking in Distribution Phase

# Introduction

- Daniel P. Cassidy, FSA, CFA
  - Co-Head of P-Solve US
  - Former Society of Actuaries Board member, Head of Education System
  - Author – A Manager's Guide to Strategic Pension Plan Management, Wiley

- P-Solve's business
  - Independent advice, no proprietary products
  - Advise on over $40 billion in institutional assets
  - Provide fiduciary management for over $15 billion
  - Have over 175 clients and over 150 employees

# Sustainable Retirement System

- “Unified Thesis of Retirement Plans”
- Does not depend on type of plan (DB or DC)
  - Well run DC plan will look and feel like well run DB plan
- Failures
  - Counterparty (Government/Companies)
  - Benefits (reduction in benefits)
  - Structure (insufficient savings)
  - Investments (employer stock in DC plans)

# Appropriate Transfer Vehicles – Key to Success

Savings today

- Portion of Total Compensation deferred for future consumption

Transfer Vehicle

- Holds/grows wealth until consumption

Consumption tomorrow

- Delivery of income or wealth

# What have we learned about DC Plans

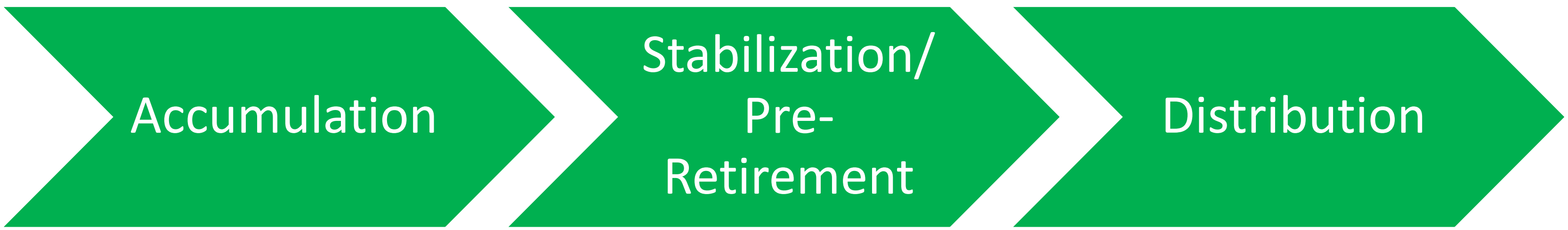
- Voluntary contributions don't work, plan design does
  - Auto enrollment
  - Auto escalate
  - Matching schedules encouraging higher deferrals
- Investment Education doesn't work
  - Dominance of default options (e.g. target date funds)
- Resistance from fiduciaries to offer robust retirement income solutions
  - Participants forced to rely on retail advisor marketplace outside of plan
  - Focus today on inputs to retirement system, not on outcomes

# What can actuaries do?

- Embrace plan design to solve savings problems
  - For example, Allianz’ Center for Behavioral Finance
- Work to improve participant outcomes
  - Improve default options within plans
  - Target Date 2.0 – next generation
    - **Using more information than simply age e.g. salary, account balance, etc.**
- Work to augment retirement income solutions at institutional level
  - Make the case with plan sponsors – why do it?
  - Leverage institutional products/services for better outcomes – how?

# Overview – Participant's Perspective

Three Major Stages for Account Management




This third and final stage is focus of article published in CFA Institute's FAJ Winter 2012 co-authored by Cassidy, Peskin and Sexauer titled "Making Retirement Income Last a Lifetime"

# Distribution Phase

- Key question
  - How should participants convert defined contribution account balances to real, inflation protected income?
- Current Options – both in-plan and out-of-plan solutions
  - Direct from insurers
    - MetLife, Pru, Genworth, others
  - Partnerships with investment/platform providers
    - Fidelity, Vanguard, BlackRock, AllianceBernstein, Hueler
- Major Limitation - capital markets are incomplete
  - Can not transfer retirement income in riskless manner
    - Inflation
    - Longevity
    - Counterparty
  - Forces trade-off between risk and utility
- Plan Sponsor Question
  - How best to help participants weigh these tradeoffs?

# Risk/Utility Tradeoff

- Current shortcomings
  - Participants have little/no context to evaluate alternatives
  - Platform providers' modeling tools over-reliant on mean/variance optimization using diversification as key method of risk management ("4% withdrawal rule")
- Need
  - A benchmark from which participants can make utility-enhancing decisions
- Requirements
  - Doable – in today's marketplace
  - Executable – by individual participants
  - Measurable – can be benchmarked, replicable

# DCDB™ Benchmark

- Introduced in paper in Financial Analysts Journal
- www.DCDBBenchmark.com
- Lowest-risk income stream minimizing the following risks:
  - Inflation
  - Longevity
  - Counterparty

"Lowest risk yardstick"

- Therefore, benchmark has two components
  - Self-liquidating, laddered portfolio of TIPS with maturities up to 20 years, providing retirement income from ages 65 to 85
  - Deferred, inflation-adjusted (real) life annuity, with payments starting at age 85
    - Scaled so that the first deferred annuity payment is expected to be the same, in real terms, as the last cash flow from the TIPS portfolio using current breakeven inflation

# DCDB™ Benchmark – Index February 2014

Hypothetical $100,000 Account

| Calculation | | Portfolio Allocation | | Annual Income Payment Streams | | | Deferred Annuity: Nominal Payment |
|---|---|---|---|---|---|---|---|
| *Month* | *Age* | *TIPS %* | *Annuity %* | *Payment in Yr 1* | *Inflation* | *Payment in Yr 20* | *Payments in Yr 21 +* |
| Apr-14 | 65 | 85% | 15% | $4,568 | 2.0% ☆ | $6,784 | $6,784 |

85% of balance allocated to self-depleting TIPS portfolio

15% of balance allocated to 20 year deferred annuity

Produces payment in year 1

☆ Using Fed Reserve breakeven inflation

# DCDB™ Benchmark – history

| Calculation | | Portfolio Allocation | | Annual Income Payment Streams | | | Deferred Annuity: Nominal Payment |
|---|---|---|---|---|---|---|---|
| *Month* | *Age* | *TIPS %* | *Annuity %* | *Payment in Yr 1* | *Inflation* | *Payment in Yr 20* | *Payments in Yr 21 +* |
| **Feb-14** | **65** | **85%** | **15%** | **$4,568** | **2.0%** | **$6,784** | **$6,784** |
| **Jan-14** | **65** | **86%** | **14%** | **$4,725** | **2.0%** | **$6,989** | **$6,989** |
| **Dec-13** | **65** | **86%** | **14%** | **$4,698** | **2.0%** | **$6,908** | **$6,908** |
| **Nov-13** | **65** | **85%** | **15%** | **$4,574** | **2.0%** | **$6,760** | **$6,760** |
| **Oct-13** | **65** | **85%** | **15%** | **$4,573** | **2.0%** | **$6,765** | **$6,765** |
| **Sep-13** | **65** | **86%** | **14%** | **$4,663** | **2.0%** | **$6,875** | **$6,875** |
| **Aug-13** | **65** | **86%** | **14%** | **$4,580** | **1.9%** | **$6,654** | **$6,654** |
| **July-13** | **65** | **86%** | **14%** | **$4,621** | **1.8%** | **$6,597** | **$6,597** |
| **June-13** | **65** | **85%** | **15%** | **$4,421** | **1.8%** | **$6,248** | **$6,248** |
| **May-13** | **65** | **87%** | **13%** | **$4,766** | **1.7%** | **$6,692** | **$6,692** |
| **Apr-13** | **65** | **87%** | **13%** | **$4,768** | **1.8%** | **$6,739** | **$6,739** |
| **Mar-13** | **65** | **87%** | **13%** | **$4,733** | **1.8%** | **$6,716** | **$6,716** |
| **Feb-13** | **65** | **87%** | **13%** | **$4,734** | **1.8%** | **$6,714** | **$6,714** |
| **Jan-13** | **65** | **87%** | **13%** | **$4,714** | **1.8%** | **$6,681** | **$6,681** |

# DCDB$^{tm}$ Benchmark - Decision Tool

- Common decisions retirees face
  - How much (if any) to annuitize
  - How much to withdraw from my account balance?  4% rule?
  - Should choose lump sum or annuity from DB plan
- Monitoring results
  - How did the choice of a risky asset pool and a 6% withdrawal rate do?

- Tradeoffs
  - Counterparty
  - Inflation protection
  - Longevity
- DCDB Benchmark provides “lowest risk” yardstick

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