Defaulting 401(k) Assets into Payout Annuities For "Pretty Good" Lifetime Incomes

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Motivation

- Old defined benefit plans paid lifetime income.
  - ✓ US 2025: Assets in private sector DB plans: $3 tr.
- Today, few retirees with DC plans elect lifetime payouts, exposing them to longevity risk.
  - ✓ US 2025: Assets in private sector DC plans and IRA: $48 tr.
- Few plan sponsors offer annuities at the payout stage, and none offer default annuities.
- We use realistically-calibrated life cycle model to design "pretty good" default annuities.

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Longevity

Looking back

- 2014: US Treasury allowed participants to use <25% of 401(k) assets to buy lifetime annuity starting no later than age 85.
- 2019: SECURE 1.0 Act instituted “safe harbor” for employers to offer qualified life annuity contracts (QLACs).
- 2022: SECURE 2.0 Act raised $ contribution limits & removed 25% cap on QLAC purchases in tax-qualified accounts.
- Yet these measures insufficient to overcome retiree reluctance to buy payout annuities.

We evaluate pros and cons of including annuities as a *default* in DC accounts:

- Proposed by Reps. Norcross (D-N.J.) & Walberg (R-Mich.) in bipartisan *"Lifetime Income for Employees"* bills (#3942 introduced 2023).

- We show that defaulting a portion of retirement assets over a $ threshold:
  - ✓ Enhances retirement security for most plan participants;
  - ✓ Is a cost-effective way to hedge longevity risk;
  - ✓ Even small default amounts can help retirees.

Our questions

- When/how much of the retiree's accumulated retirement savings should be used to purchase a life annuity?
- What type of life annuity should be selected?
- What is the impact of mortality heterogeneity?
- What is a good default solution ?

Life Cycle Household Model

- Realistically-calibrated lifecycle model of optimal consumption and portfolio choice (with 401k plan & life annuities).
- Risk: Uncertain labor incomes to R=66 & OOP med. expenses & mortality (by sex & 3 education levels); uncertain capital markets investments.
- Realistic institutional rules on taxation, 401k plans (RMD, matching, caps),Social Security benefits, ..
- Preferences: Bequest and risk aversion modeled too.

Approach

- IRS-compliant annuities (QLAC) using 401k assets must
  - ✓ priced based on (actuarial) unisex table → implied loadings
  - ✓ pay fixed lifelong benefits starting at age 67, 80 or 85.
- Step 1: Determine what % of DC assets different investor types would optimally allocate @66 to QLAC
  - ✓ M/F; 3 educ grps (<HS, HS, Coll+) → mortality & income profiles
  - ✓ 3 preference types for risk aversion and bequests
  - ✓ Quantify welfare gains relative to no annuitization.
- Step 2: Design and Evaluate Default Solution
  - ✓ Plan sponsor can differentiate retirees only with observable factors (i.e., 401k account balance).
  - ✓ Default type = {Start Age & Threshold & Annut. Rate of DC assets} must boost welfare of *most* plan participants, while minimizing welfare losses in exceptional cases.
  - ✓ This is what we call "pretty good" lifetime income defaults.

Step 1: Optimal expected QLAC purchase as % of DC assets for 3 deferral ages & 18 sex/educ/pref. subgroups:

Preferences		*Type 1*			*Type 2*			*Type 3*		
		High bequest Mod. risk aversion			Low bequest Mod. risk aversion			Low bequest High risk aversion		
Annuity Deferral Age		*@85*	*@80*	*@67*	*@85*	*@80*	*@67*	*@85*	*@80*	*@67*
Sex	*Education*									
Female	Coll+	1.7	3.5	9.7	8.3	14.1	29.7	12.4	20.6	39.6
	HS	0.9	1.8	5.6	5.3	9.9	26.1	9.3	16.2	41.0
	<HS	0.1	0.4	1.6	1.6	3.8	12.5	4.7	9.4	27.6
Male	Coll+	0.6	1.1	4.1	7.5	13.1	26.9	13.4	21.2	35.7
	HS	0.4	0.7	2.7	5.1	9.2	23.1	10.2	17.2	38.6
	<HS	0.1	0.1	0.8	1.5	3.6	11.7	6.0	10.8	29.4

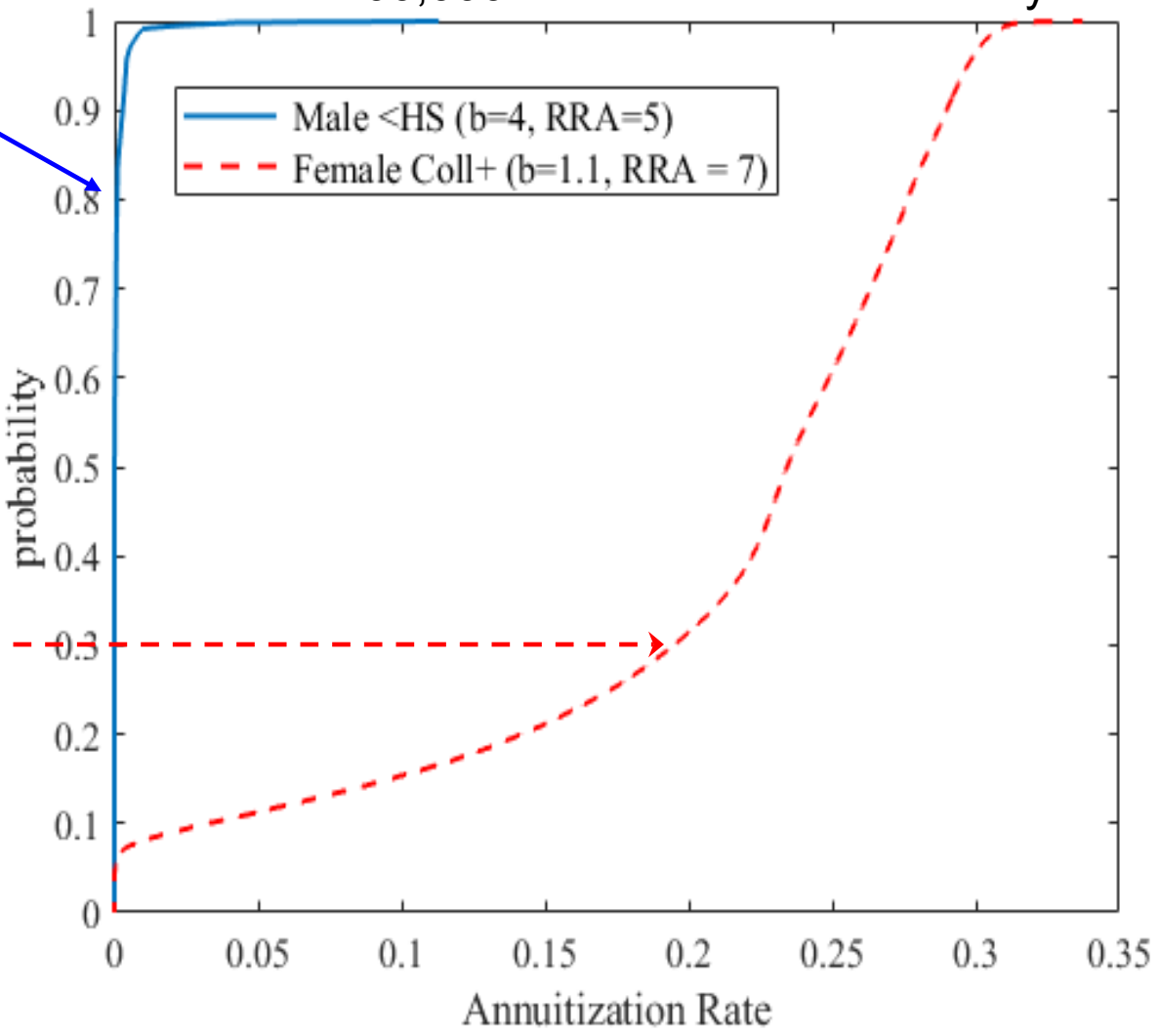
- Middle panel is ref: Higher beq. (L panel) reduces DIA demand; higher RRA (R panel) increases it.
- Women allocate more assets to annuities than men.
- Shorter deferrals preferred by all.
- Better educated (longer life exp.) favor annuities most, especially women.

Heterogeneity: Cumulative relative frequencies of optimal annuitization rates for QLAC@80

Based on 100,000 simulated individual lifecycles

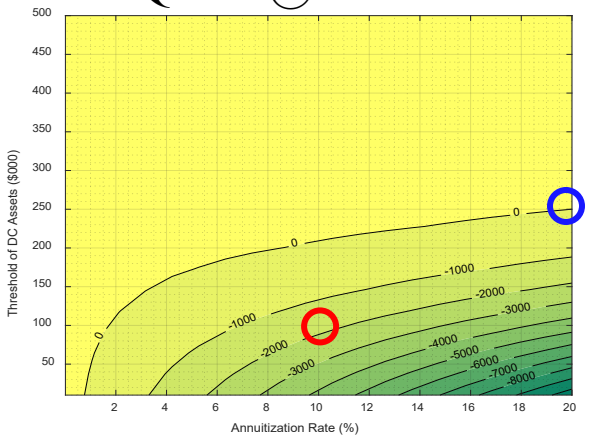
Male <HS:
(high beq, mod RRA)
No demand for
QLAC@80 in >80%
of simulated cases

Female Coll+:
(mod. beq, hi RRA)
>70% will rationally
hold >20% of assets
in QLAC@80



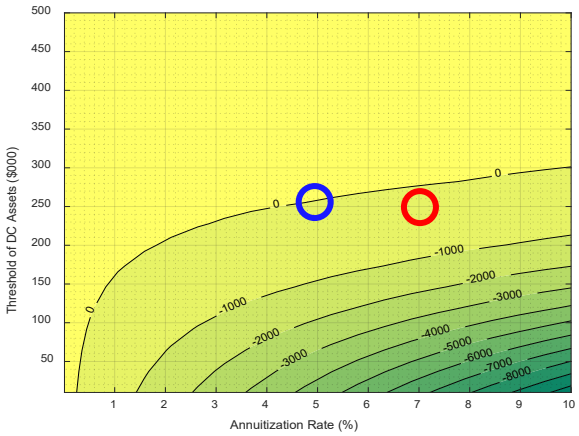
Step 2: Utility gains ($) for male <HS (b=4, $\rho = 5$) for alternative annuitization rates and DC assets.

QLAC@67



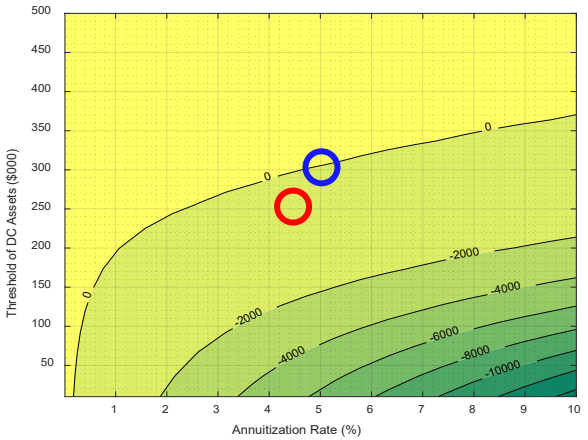
Neutral for 20% at $250K
Negative for 10% at $100K

QLAC@80



Neutral for 5% at $250K
Slightly Neg. 7% at $250K

QLAC@85



Neutral for 5% at $300K
Slightly Neg. 4.5% at $250K

- Male <HS has highest mortality so least interested in annuity (& especially deferred annuity).
- Next, compare with other education/sex groups.

Welfare Gains (@67) of QLAC Default Solutions: 3 default types & 18 subgroups

		Default Type 1			*Default Type 2*			*Default Type 3*		
Preferences		DIA@67 20% fixed fraction above asset threshold $250K			DIA@80 7% fixed fraction above asset threshold $240K			DIA@85 4.5% fixed fraction above asset threshold $250K		
Risk Aversion		*moderate*	*moderate*	*high*	*moderate*	*moderate*	*high*	*moderate*	*moderate*	*high*
Bequest Strength		*high*	*low*	*low*	*high*	*low*	*low*	*high*	*low*	*low*
Sex	**Education**									
Female	Coll+ (32%)	5,102	8,759	11,193	3,514	9,116	12,654	2,338	8,238	11,570
	HS (13%)	1,742	3,467	6,850	1,066	2,905	5,079	0,685	2,705	4,030
	<HS (5%)	892	1,277	2,917	782	991	2,379	471	630	1,747
Male	Coll+ (30%)	866	8,890	13,600	25	9,284	15,643	-75	8,010	13,626
	HS (15%)	820	5,250	8,371	263	4,801	8,360	73	3,927	6,999
	<HS (5%)	9	1,913	4,123	-223	1,484	3,467	-231	1,028	2,660

Population weights

Summary of results:

- Immediate QLAC@67 preferred in 14 of 18 cases, while QLAC@80 optimal in 4.
- QLAC@85 dominated by both other start dates.
- All retirees do better with immediate annuity (QLAC@67) using 20% of 401(k) balance above a ≥$250K: a “pretty good” default annuity.
- If goal is to benefit as many as possible without reducing wellbeing of most others, DIA@80 a better choice.

Conclusions:

- Current rules requiring that plan participants be allowed to opt out of defaults are inconsistent with annuity defaults.

- Yet plan sponsors could direct (part of) employer contributions to the DIA.

- To avoid adverse selection, would need to do this prior to retirement age.