

(Financial) Knowledge and Retirement Decisions: Insights from Switzerland

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Financial Literacy around the World

	Interest Question	Inflation Question	Risk Question	All correct
Switzerland	79.3	78.4	73.5	50.1
United States	64.9	64.3	51.8	30.2
Netherlands	84.84	76.86	51.91	44.83
Germany	82.4	78.4	61.8	53.2
Italy	40.2	59.3	52.17	24.88
Japan	70.5	58.8	39.5	27
Russia	36.31	50.82	12.81	21.82
Sweden	35.2 ¹	59.5	68.4	21.4
New Zealand	86	81	27 ²	24

1: The wording for this question was more difficult than the original question

2: The question was different from the original question

Sources: Almenberg & Säve-Söderbergh (2011), Brown & Graf (2013a), Bucher-Koenen & Lusardi (2011), Crossan et al. (2011), Fornero & Monticone (2011), Klapper & Panos (2011), Lusardi & Mitchell (2011), Sekita (2011)

Financial Literacy and Retirement Planning

Percent of Planners and Non-Planners who answered all three questions correctly.

	Planners	Non-Planners
Switzerland	59.8	43.5
US	47	23.9
Italy	42.92	27.62
Japan	34.5	25.2
Netherlands	52.96	34.88
Germany	82.9	69.6

Why look at Switzerland?

- Experience from many decades
 - „Acclaimed“ 3 pillar system
 - One of the world`s largest fully funded systems
 - Almost no poverty in old age (including widows)
- Financial knowledge is an advantage (if not a necessity)
 - annuitization decisions on large sums (average around 400`000 ChF/US\$)
 - link between means-tested benefits and retirement income
- Reforms not in a political vacuum. Political constraints important

Swiss Old Age Insurance in a Nutshell

1. pillar:
government run
uniform PAYG
subsistence

2. pillar:
occupational plans
fully funded collect
living standard

3. pillar:
private provision
fully funded indiv.
indiv. supplement

OASI
payroll
+ tax

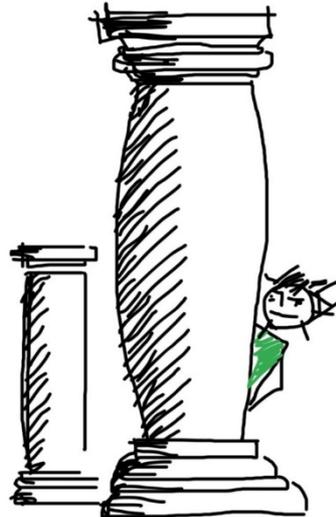
EL
means
tested

BVG
manda-
tory

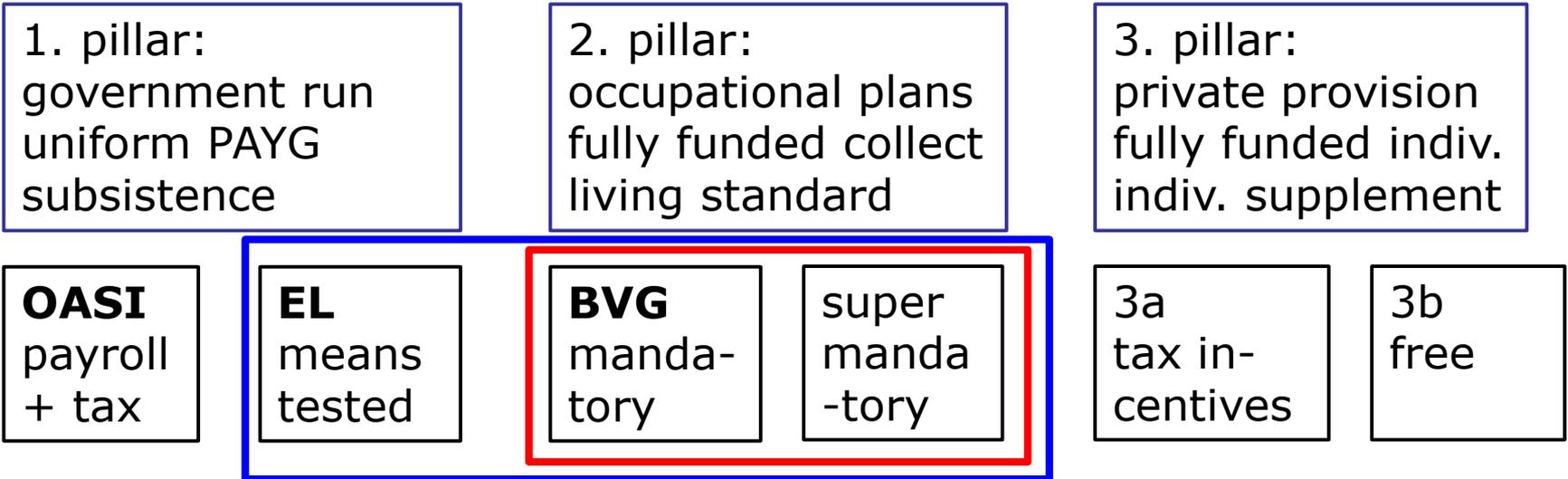
super
manda-
-tory

3a
tax in-
centives

3b
free



Swiss Old Age Insurance in a Nutshell



	replacement	(pillar 1/2)
- median income (70k):	~ 65%	(55/ 45%)
- 2/3 median income:	~ 65%	(75/ 25%)
- 2 * median income (BVG):	~ 40%	(50/ 50%)
- 2 * median income (+super):	~ 60%	(33/ 67%)

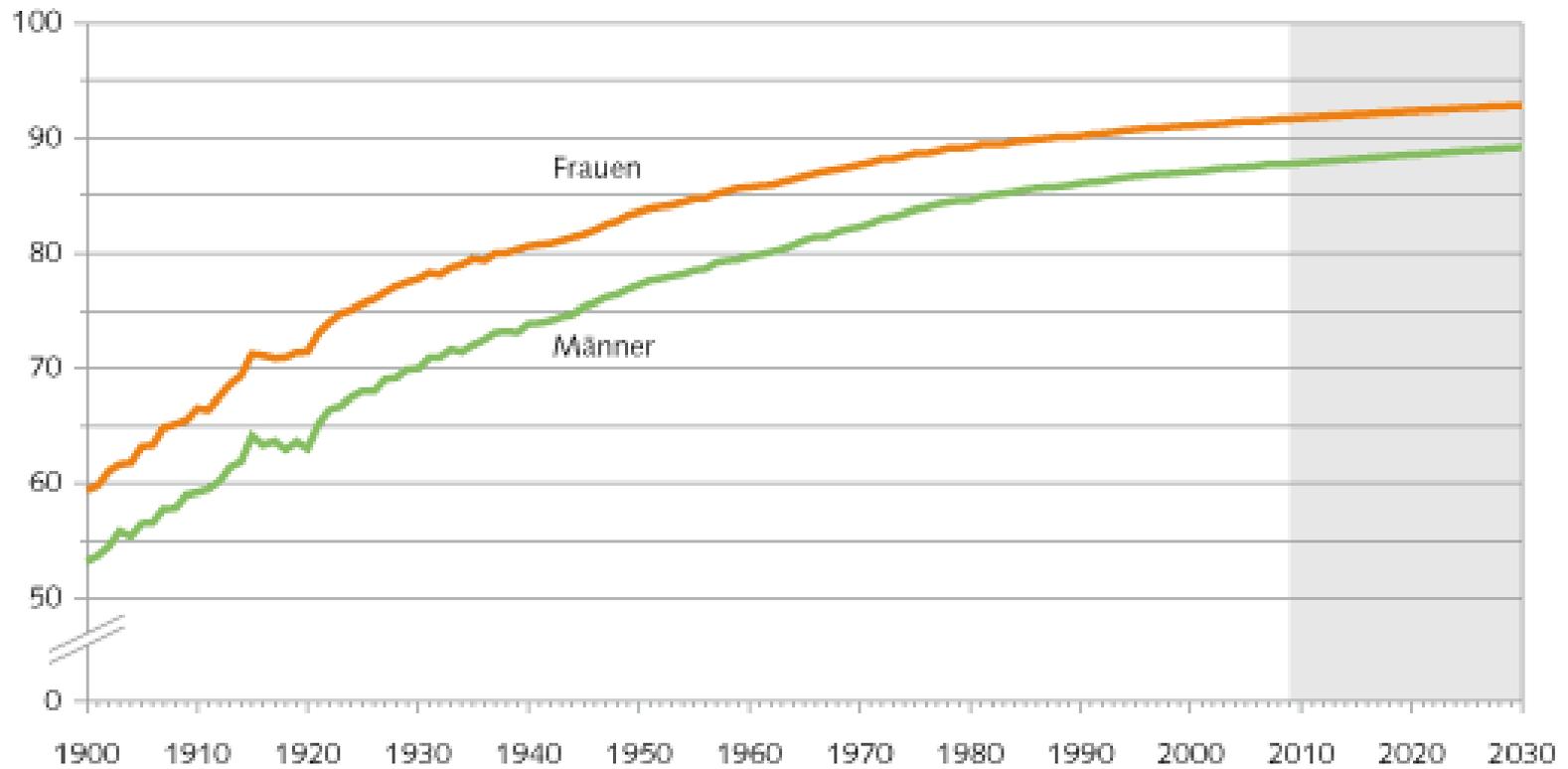
The Swiss Pension System: 1st Pillar

- Introduced in 1948
- Provides basic **subsistence level of income** to all retirees
- Contribution rate is 8.4% of wage earnings, of which employer pays ½. (+ 20% out of general tax revenues)
- Benefits depend **on contribution years** & (much less) on average income: min: 13,680 CHF/a, max: 27,360 CHF
- Majority of retirees qualify for pension close to maximum
- Add. benefits for surviving spouse and dependent children
- Statutory retirement age is 64 for women and 65 for men; earliest RA: 62/63 at benefit reduction of 6.8% per year

Strong increase in life expectancy...

Durchschnittliche Lebensdauer

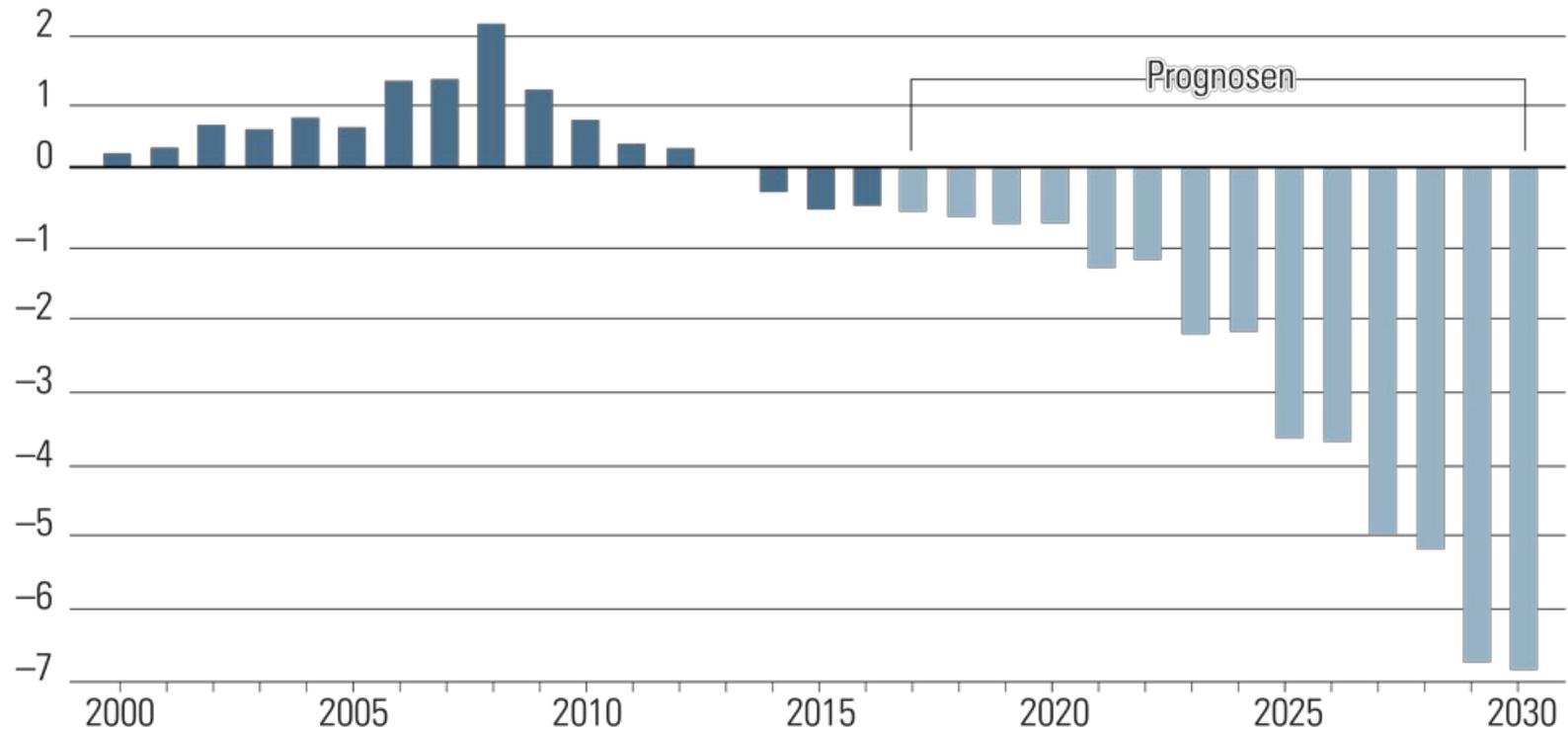
In Jahren bei der Geburt, nach Geburtsjahrgang



... resulting in financing gaps

Die AHV gerät in Schieflage

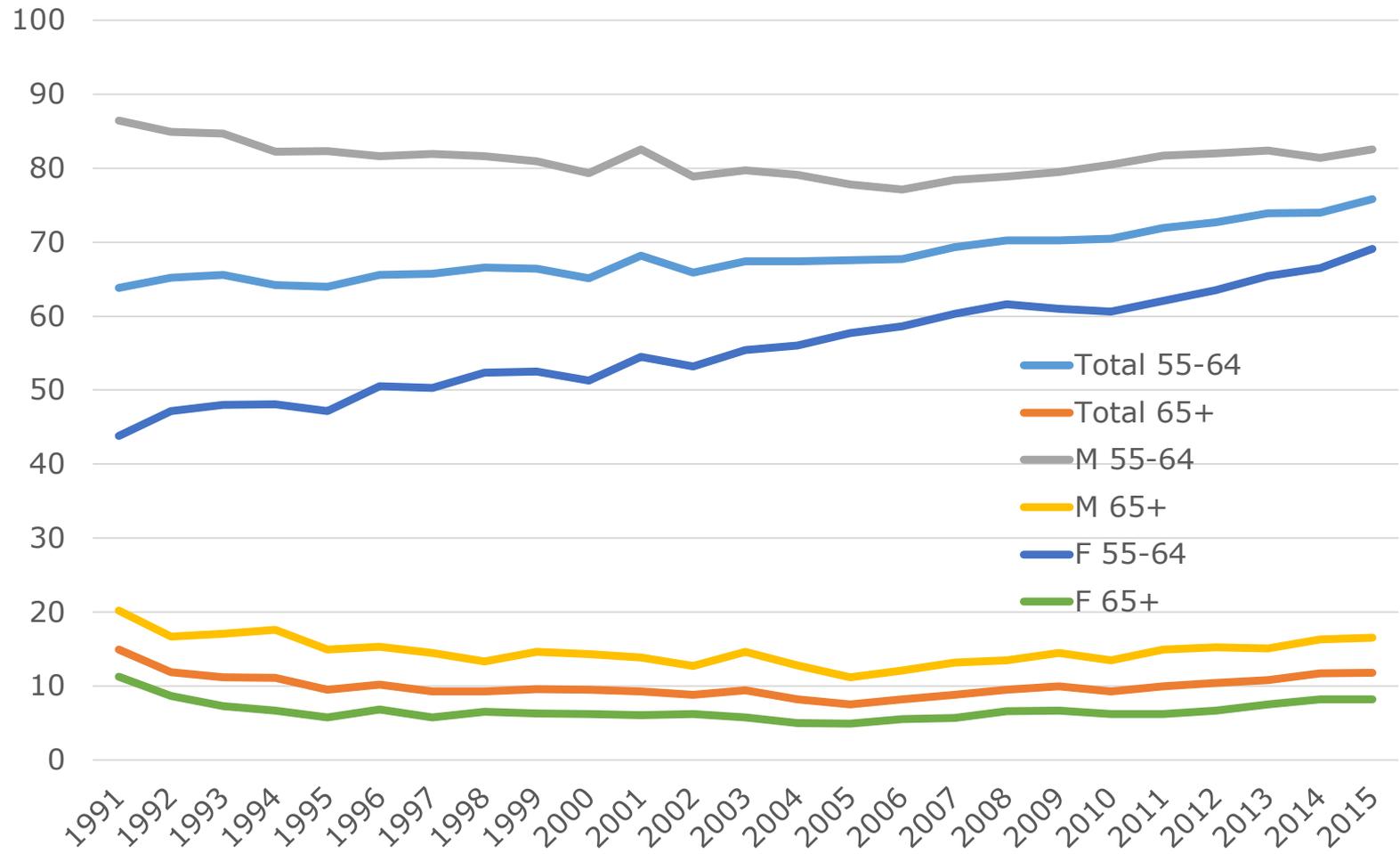
Das Umlageergebnis, in Mrd. Fr.



QUELLE: BUNDESAMT FÜR SOZIALVERSICHERUNGEN

NZZ-Infografik/lvg.

High labor force participation of elderly



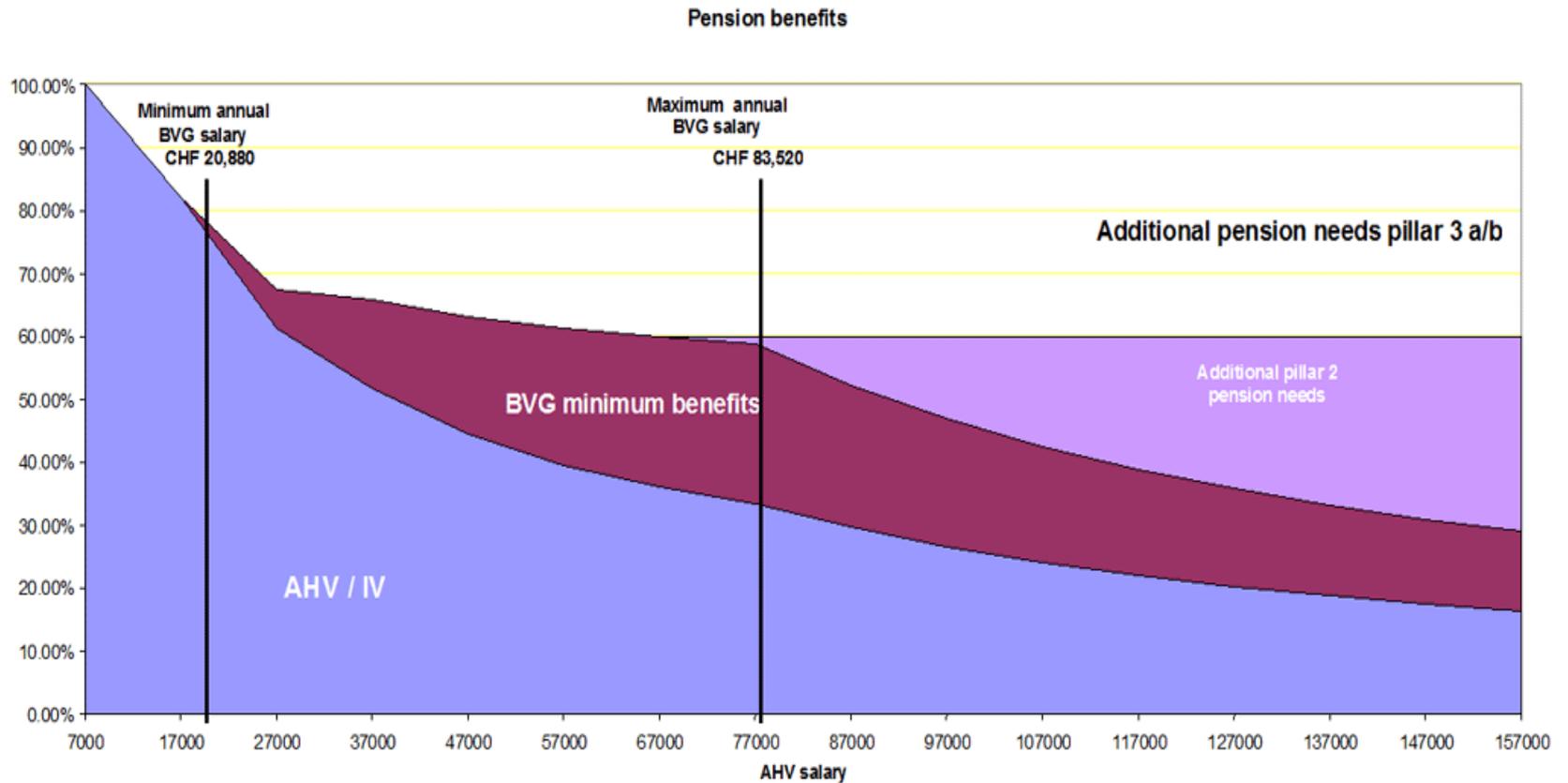
The Swiss Pension System: 2nd Pillar

- **Mandatory** participation if annual earnings \geq 20,000 CHF
 - **Mandatory part:** Income up to 83,000 CHF
Stringent regulation
 - **Super-mandatory part:** Income above 83,000 CHF
Pension funds not required to provide insurance in the super-mandatory part, but most do. Relaxed regulations
- 96% of working men, 83% of working women are covered
=> Important in attracting skilled workers
- Majority of pension funds are «**defined contribution plans**»
- Very fragmented: \pm 2'000 active pension funds

The Swiss Pension System: 2nd Pillar

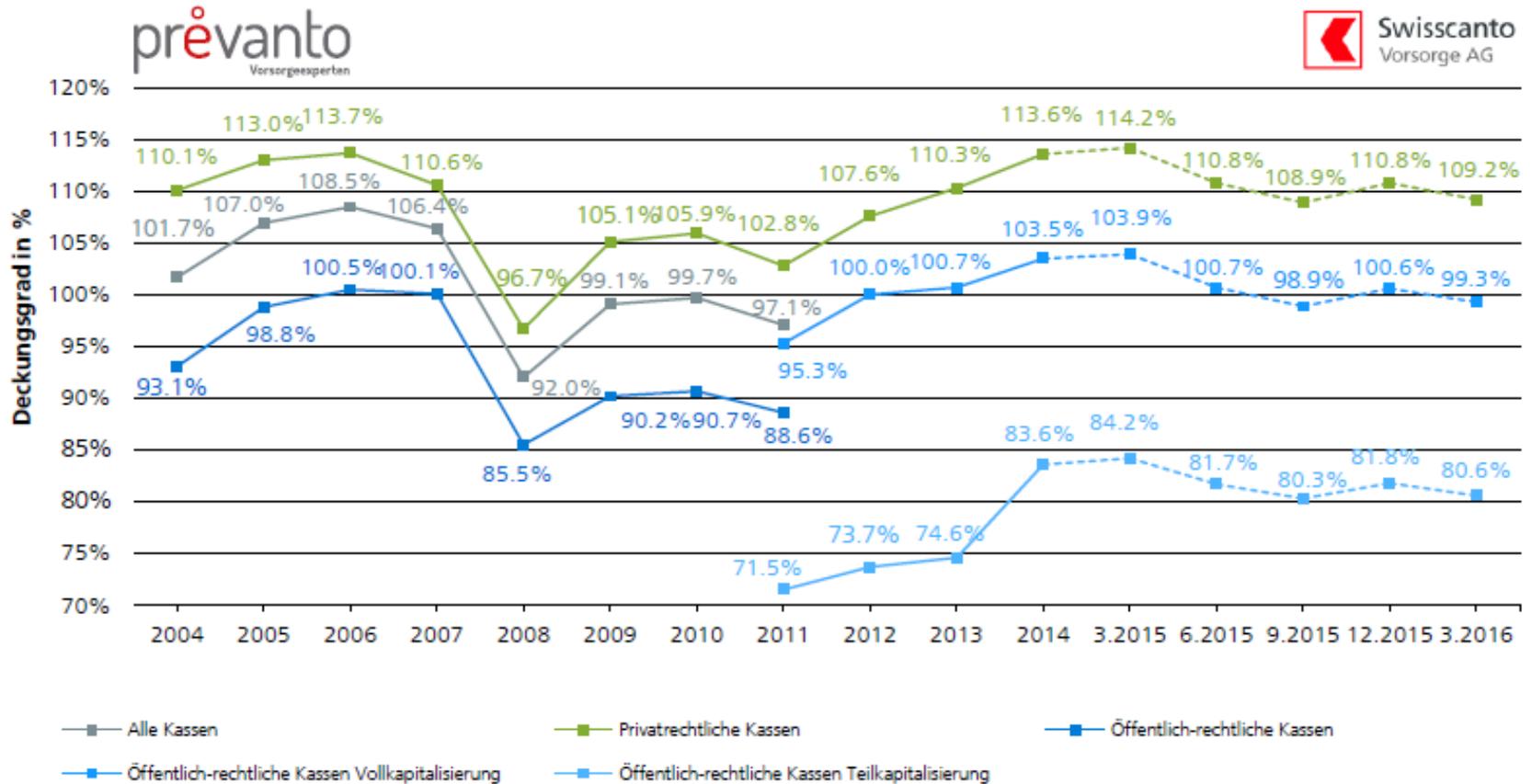
- Contributions (age-dependent!): Fraction of employee's eligible salary; employer covers at least half
- Accumulated contributions are transferable across funds
- Tax treatment: **EET**
- Pay-out options at retirement:
Annuity, lump sum or mix of the two, cash-out limits equal to 50 or 25% in some funds, must be declared in advance
- Calculation of **nominal annuity**:
 $B = \gamma * K$, conversion rate γ depends on ret. age.
Recent cuts in γ in mandatory and super-mandatory parts
- Includes survivor (and child!) benefits without adjustments in γ .

High replacement rates – for «standard» employees



Serious funding issues in second pillar

Abbildung 1: Entwicklung der vermögensgewichteten Deckungsgrade, 2004 bis 31.03.2016



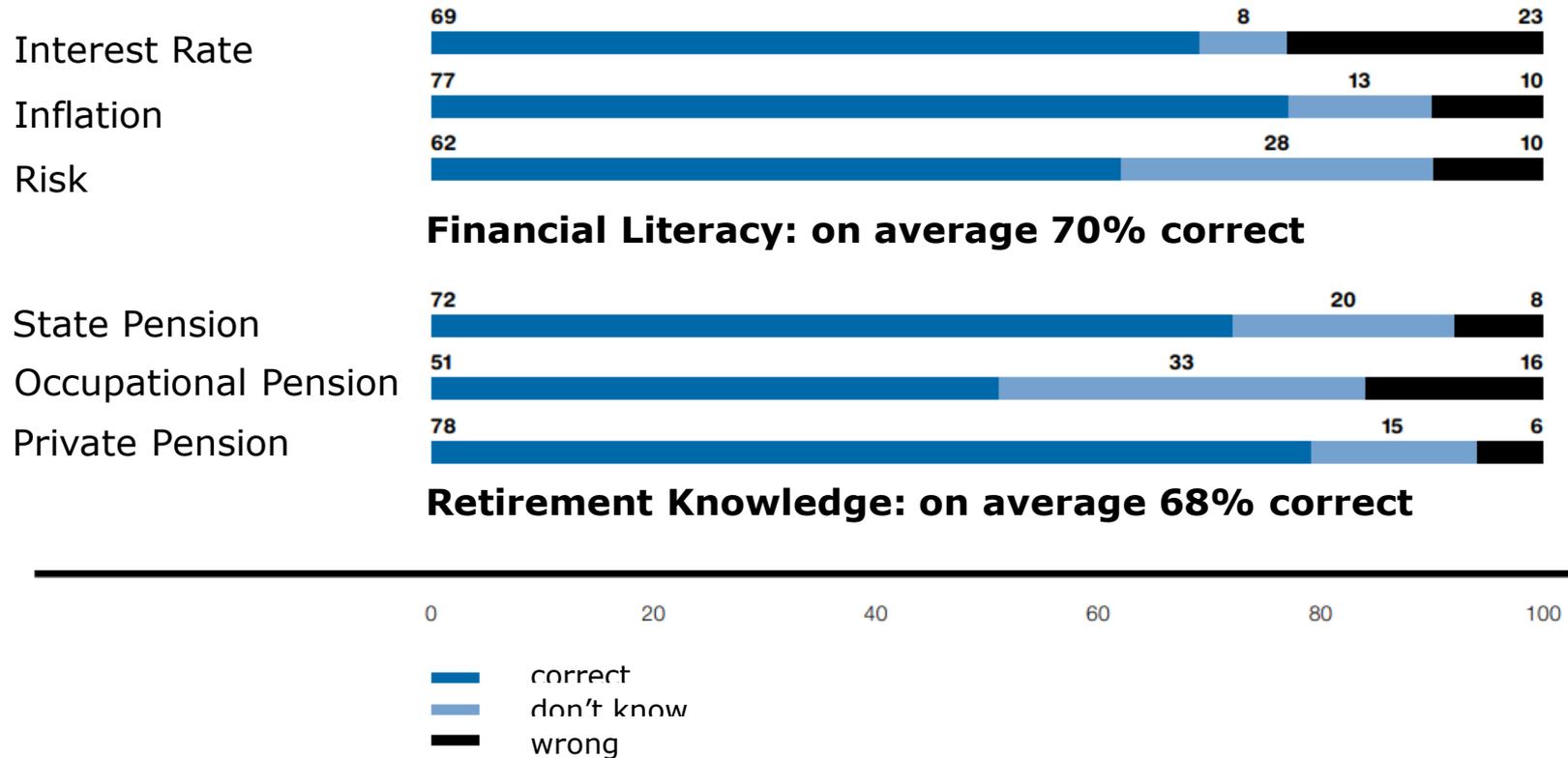
The Swiss Pension System: 3rd Pillar

- Earmarked savings enjoying preferential tax treatment
 - 3a (tied): up to 6'800 CHF/a (employed), 34'000 (self-employed), fully tax-deductible
 - 3b: retirement insurance contracts, preferential tax tr.
- Conditions for withdrawal:
 - Retirement (from age 60)
 - Purchase of home
 - Self-employment
- Given high replacement rate of 1st and 2nd pillar: mainly tax savings device. (Taxed separate from other income at withdrawal)

DC & DB Swiss Style

- “DB” (disappearing): entire contribution history
- “DC”: Extensive income guarantees, but...
 - Minimum interest rate ($\geq 0!$) on accumulated assets
=> but often too low for contributors
 - Minimum conversion rate for annuity (mandatory part) too high
=> cross-subsidy from young to old
 - Re-insurance of pension up to 150% mandatory coverage
 - No obligation for retirees to cover financial shortfalls
- Strong political constraints on scheme!

What do individuals know about pensions?

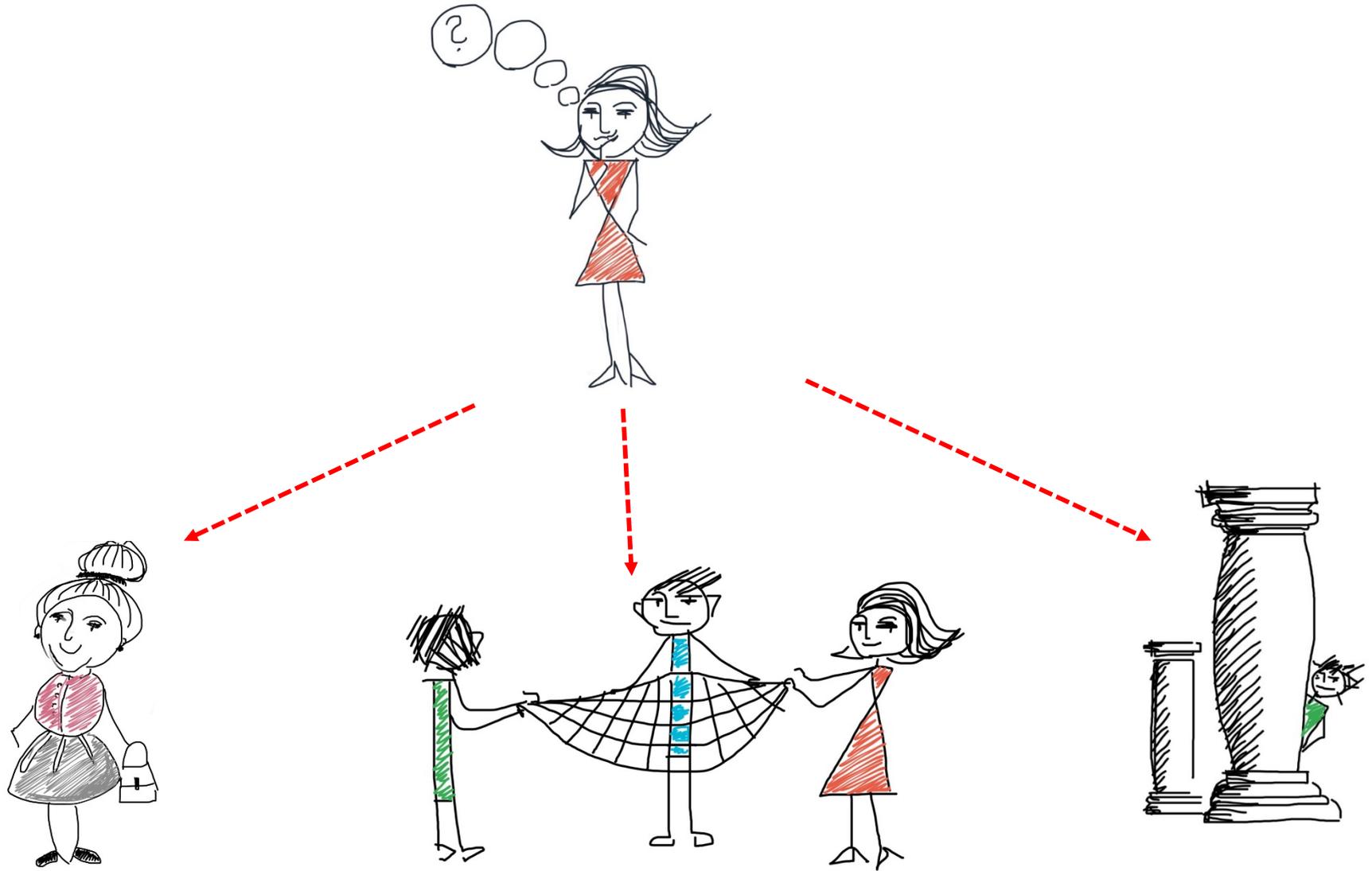


- 1) What is the maximum pension in the first pillar (**state pensions system**)?
- 2) What is the financing scheme in the second pillar (**occupational pension**)?
- 3) What is the maximum tax deductible amount in the third pillar (**private pension**)?

Knowledge on Occupational Pension

- Individuals **overestimate** their knowledge in 22% of the questions
- Pension knowledge positively correlated to age and education
- 20% of people **don't care** about occupational pension system
- 18% do not know the name of their pension fund
- 28% do not know how much money they have in their fund
- 24% of women don't know the statutory retirement age (men 6%)
- Pension knowledge positively related to having private retirement account (pillar 3a) and to the amount of deposits

Why care about retirement decisions?



Retirement Decisions in Switzerland

- Exit from labour market (age 58 – 70)
- Claiming 1. pillar benefits
- Lump sum or annuity
- Advance withdrawals of pension savings for real estate purchase
- Top up / replacement of pension savings
- Residence (tax!)

Not:

- Provider occupational pension
- Investment strategy



Coping with Choice: Regulation – Nudges – Education

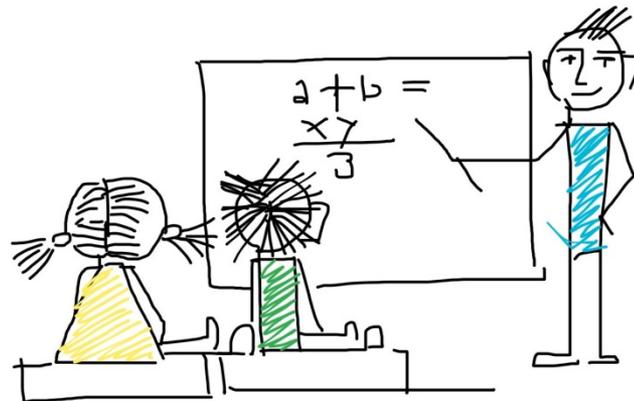
Government:

Subsistence
Regulation
Education



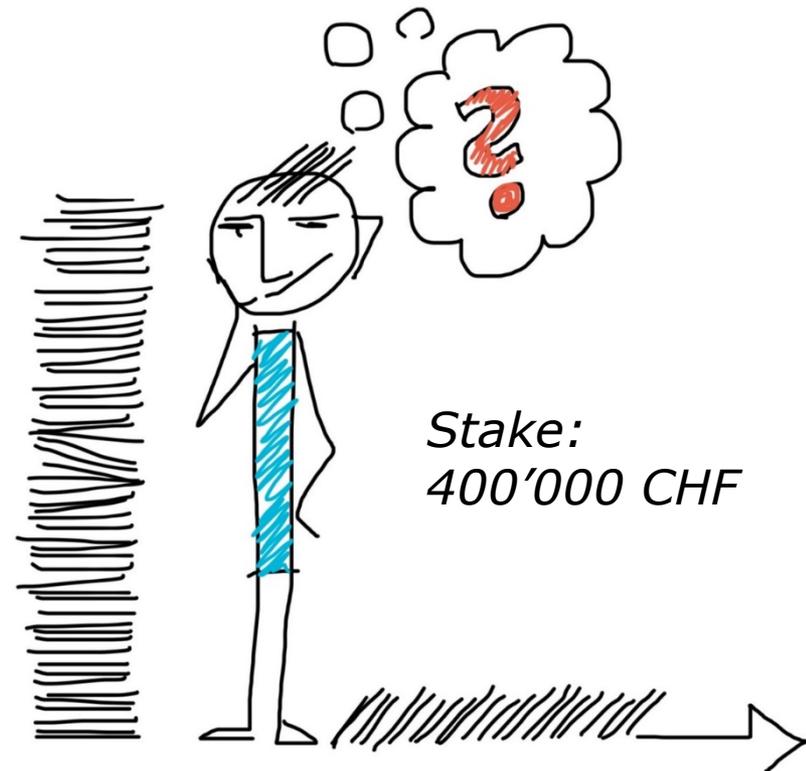
Private Sector

Plan Design
Choice Architecture



Example: Lump sum or annuity?

- Free choice? → individual preferences and mortality
- Pitfalls with free choice:
 - Annuitization influenced by **behavioral factors**
 - **Selection** (but alleviates redistribution toward wealthy)
 - Interaction with **means-tested benefits**



Rational Decisions



Annuitization: Rational Factors

- institutional factors
 - a) price (annuity factor)
 - b) interest rates
 - c) notice periods, restrictions
- individual factors
 - a) life expectancy
 - b) marital status and age difference with partner
 - c) children

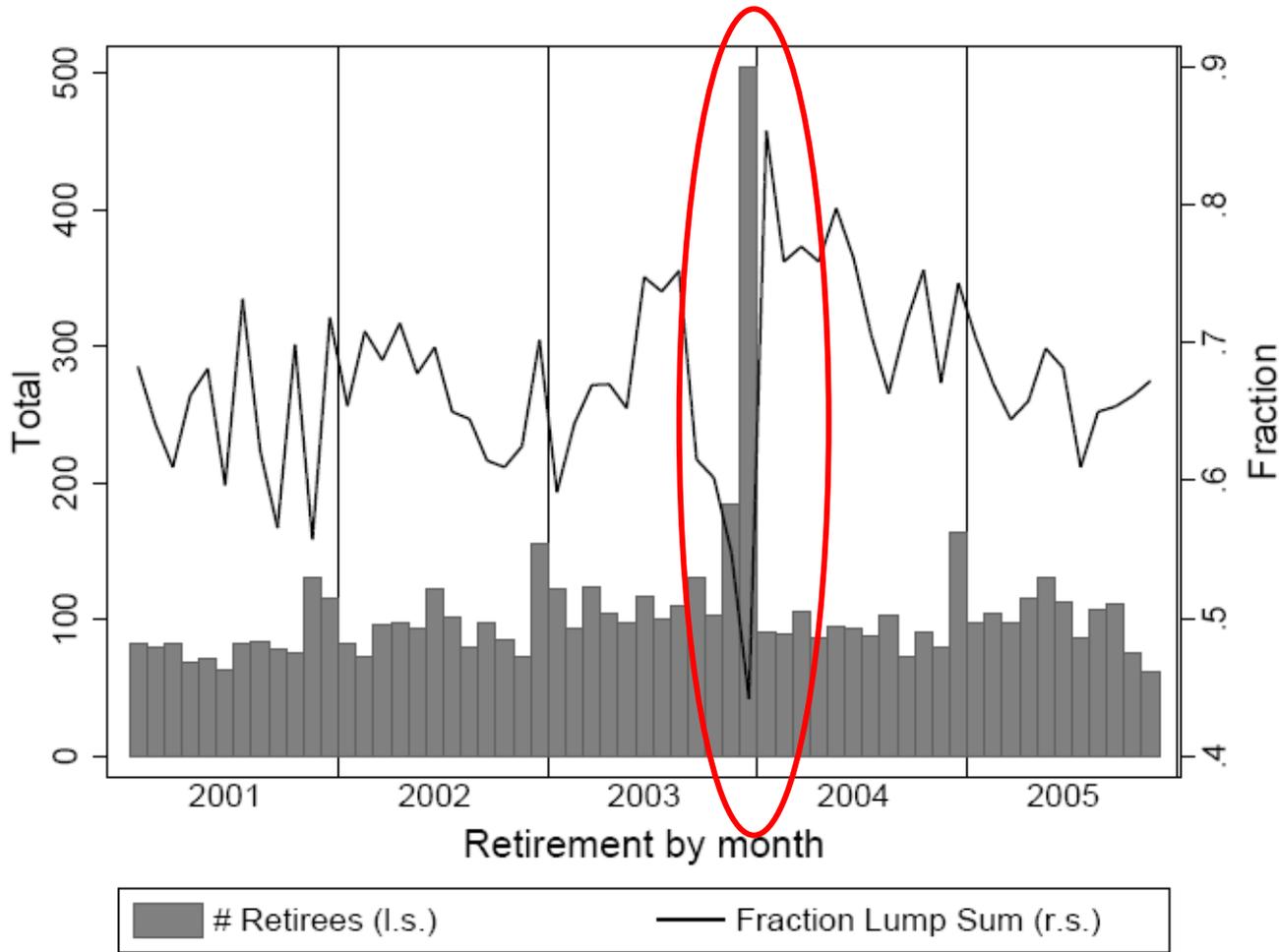


19% increase in annuity price adjustment => retirement age

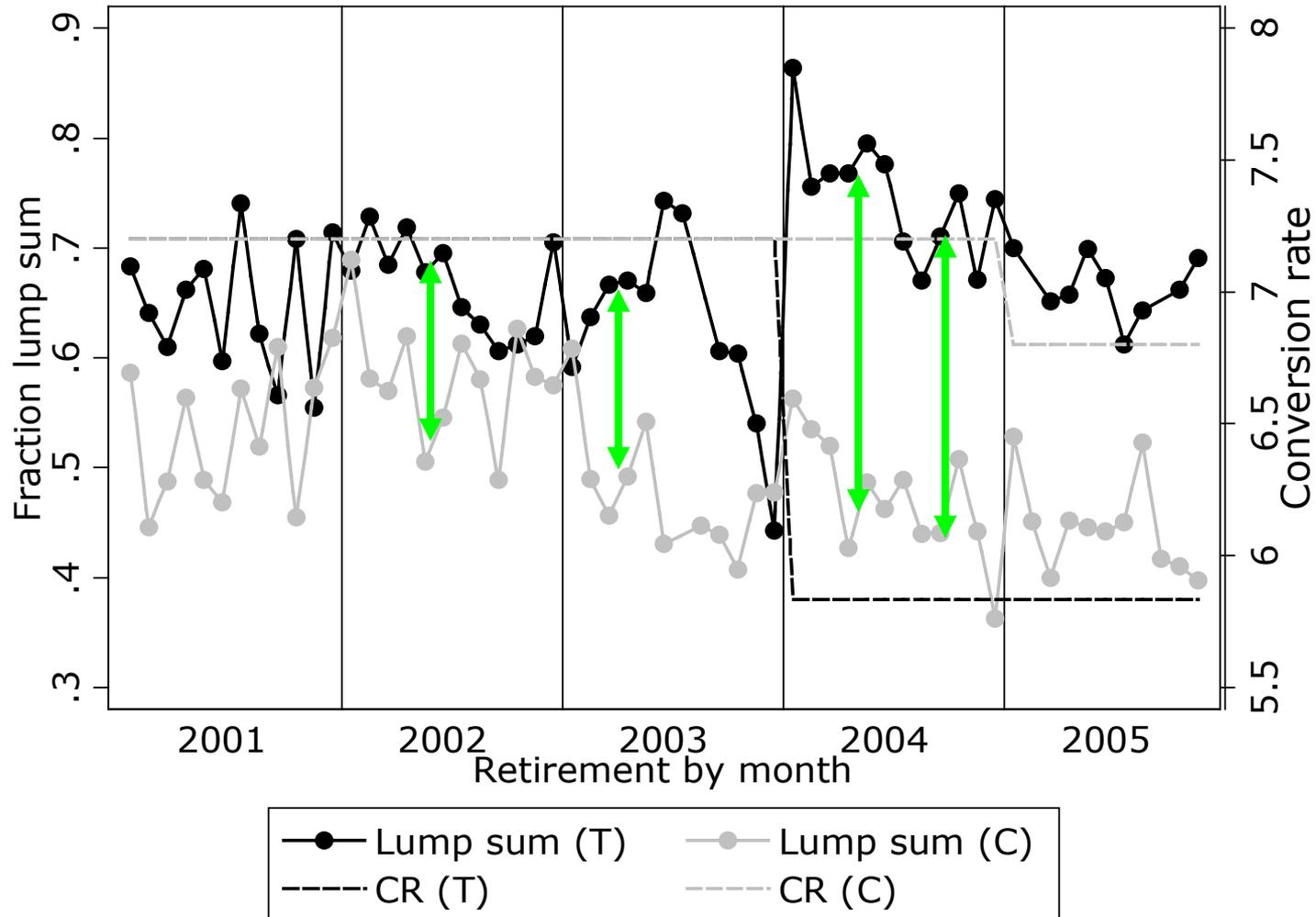
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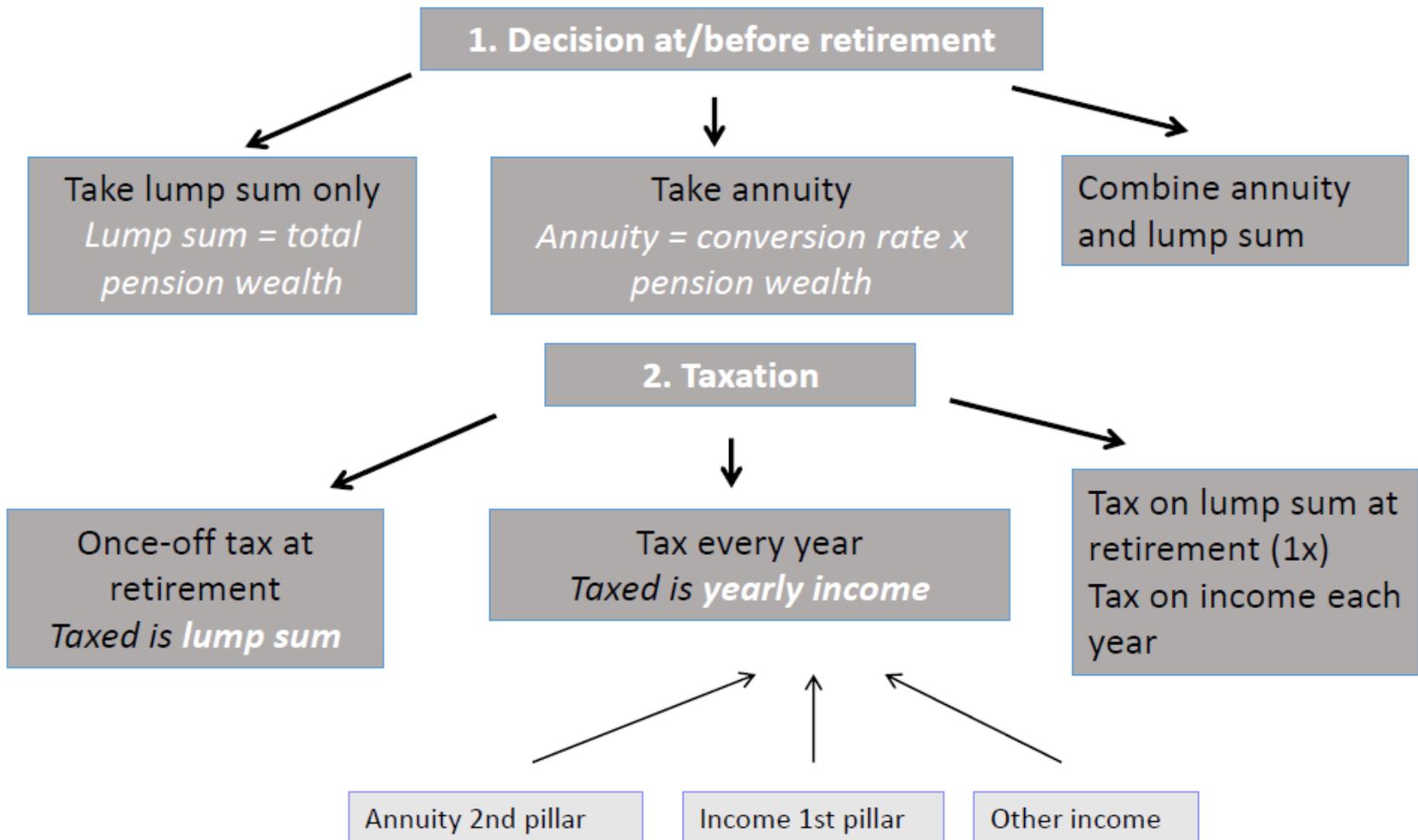
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*19% increase in annuity price
adjustment => annuitization*

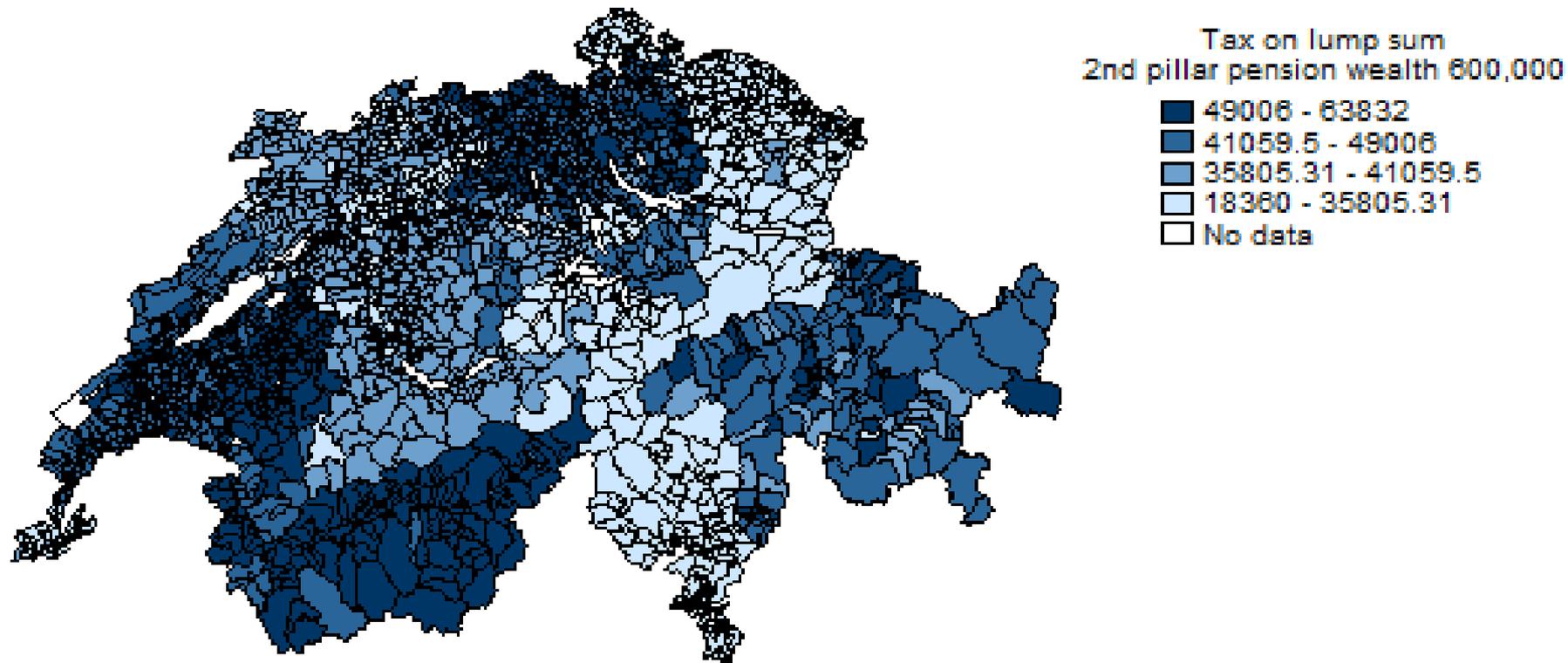


Taxes: exogeneous variation in annuity prices adjustment => optimal cash-out option

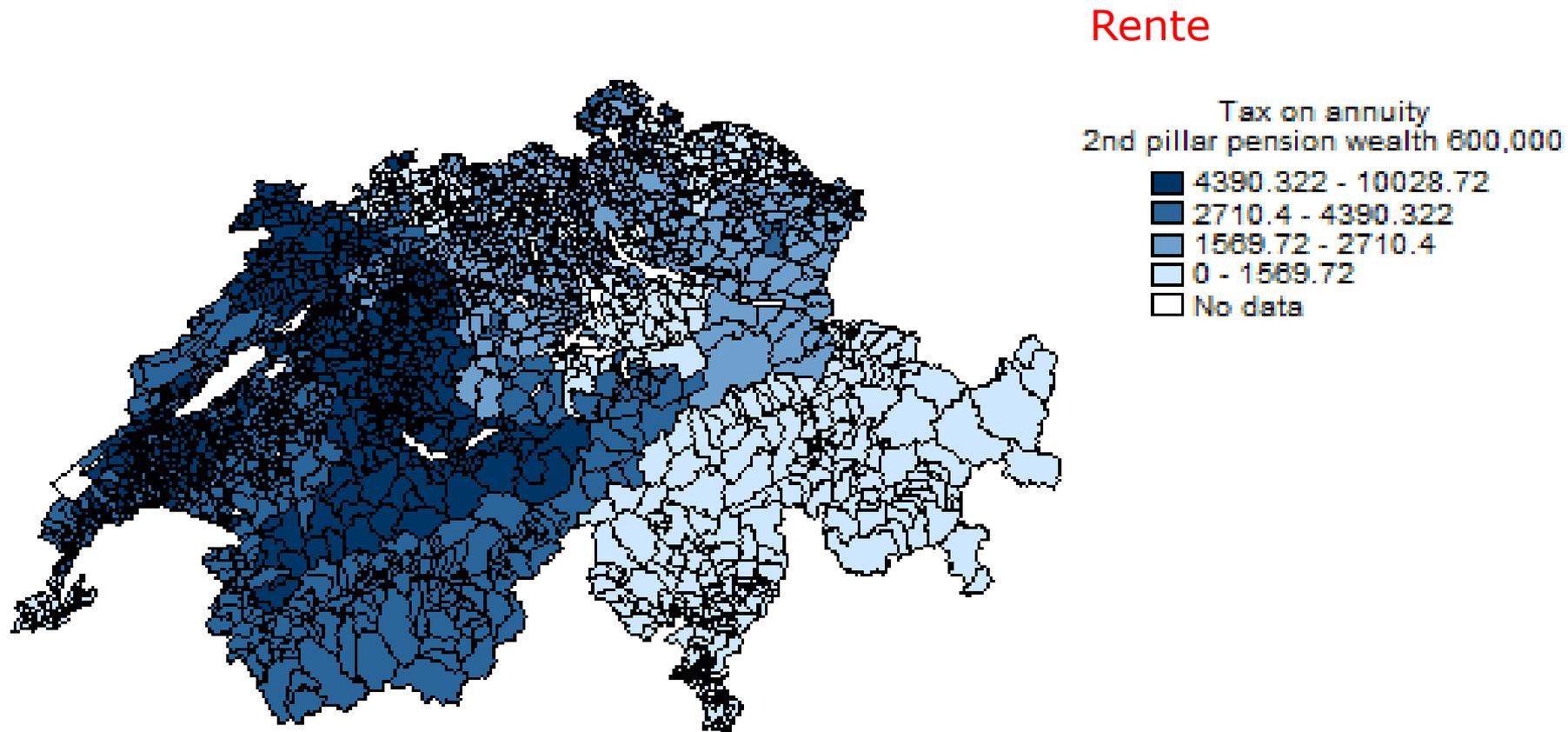


Taxes: exogeneous variation in annuity prices
adjustment => optimal cash-out option

Lump sup



Taxes: exogeneous variation in annuity prices
adjustment => optimal cash-out option

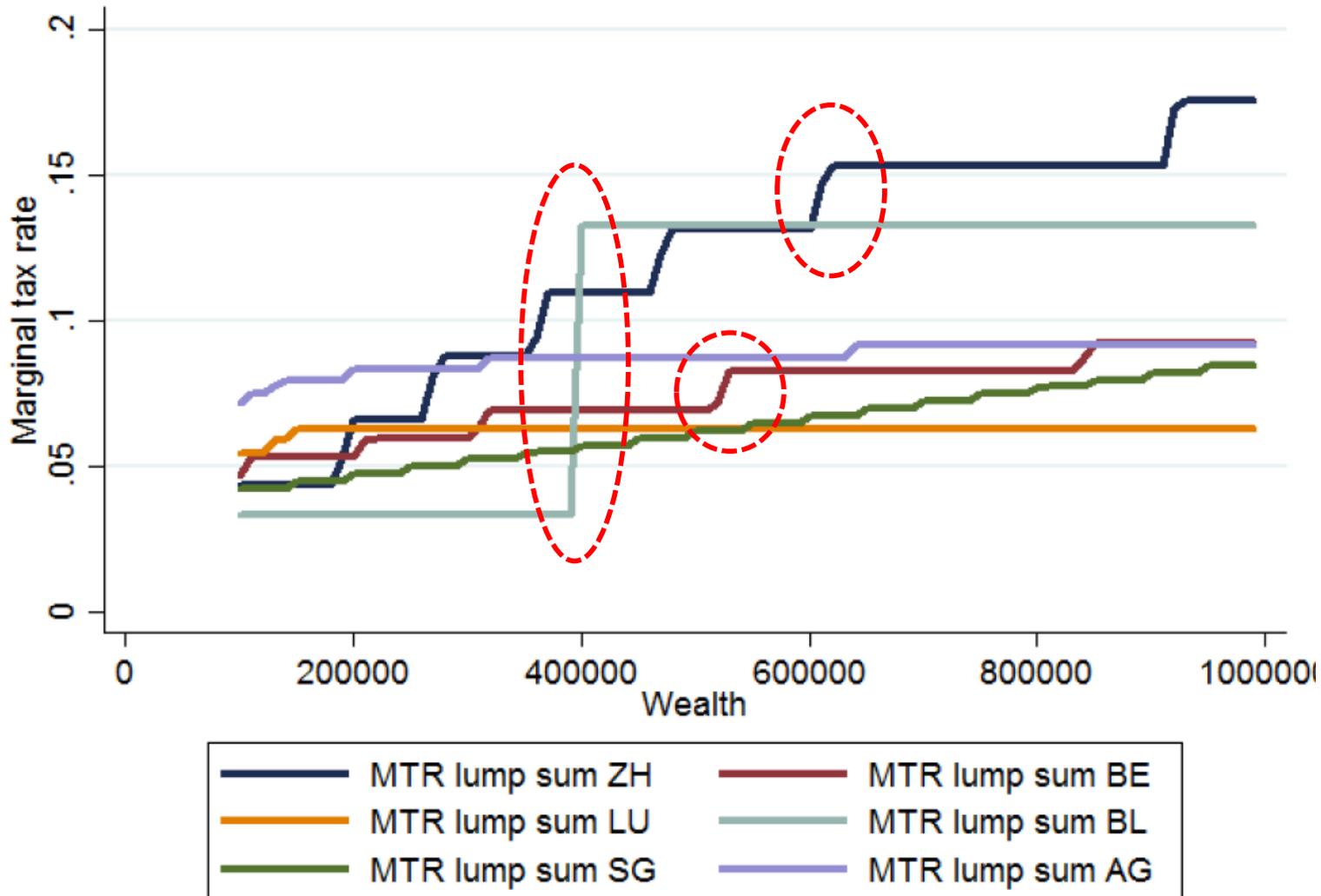


Taxes: exogeneous variation in annuity prices

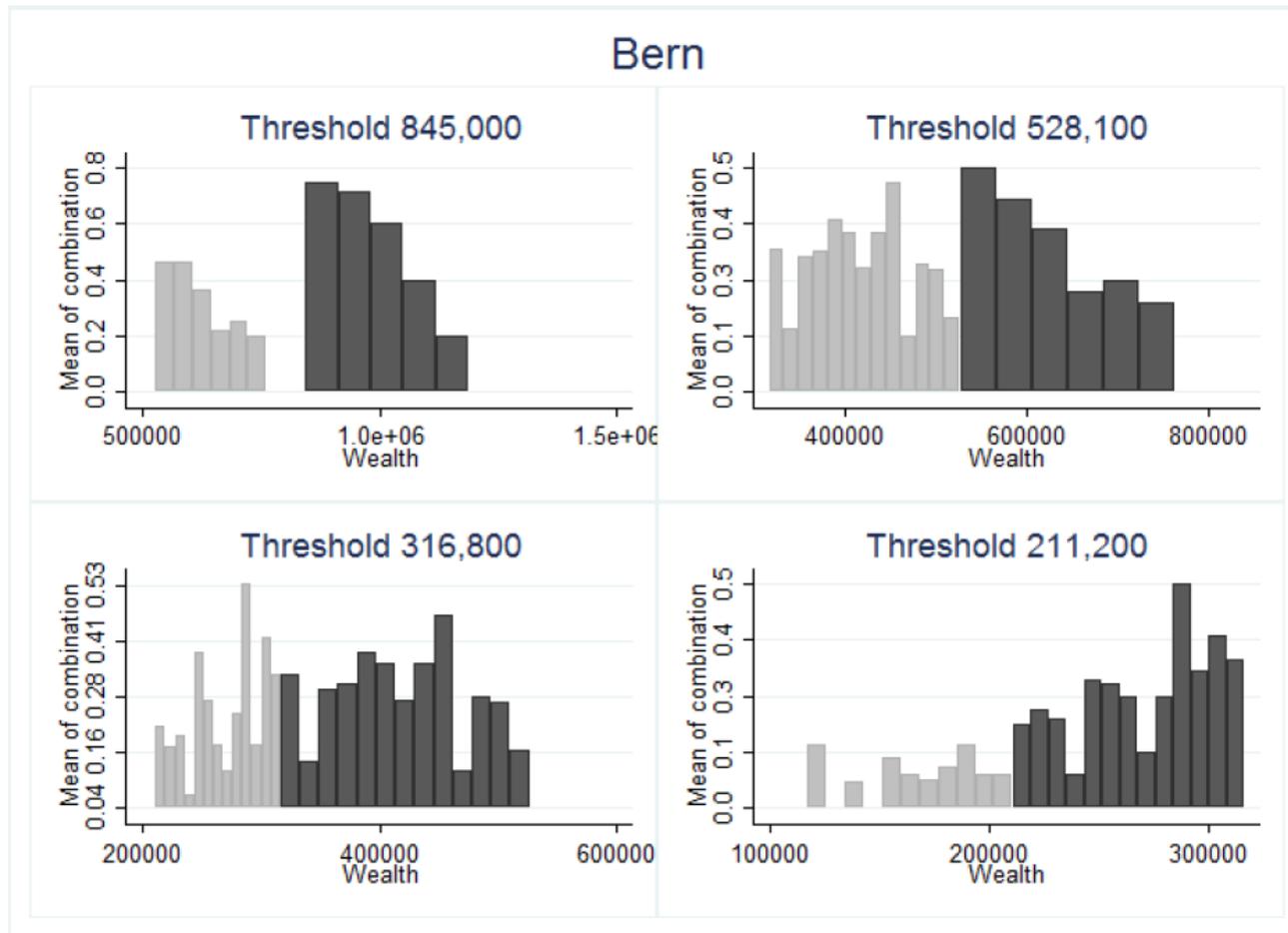
likelihood to choose annuity

Variable	all individuals	without richest 5%
Tax rate lump sum	0.99*** (0.22)	0.37 (0.24)
Tax rate annuity / income	-0.71*** (0.15)	-0.63*** (0.15)
Pension assets	++	++
Wage at retirement	-0.04*** (0.01)	-0.06*** (0.01)
Married	-0.05*** (0.01)	-0.03*** (0.01)
Advance withdrawal for home purchase	-0.07*** (0.01)	-0.08*** (0.01)
Sector dummies	YES	YES
# observations	12'186	11'573
R ²	0.065	0.122

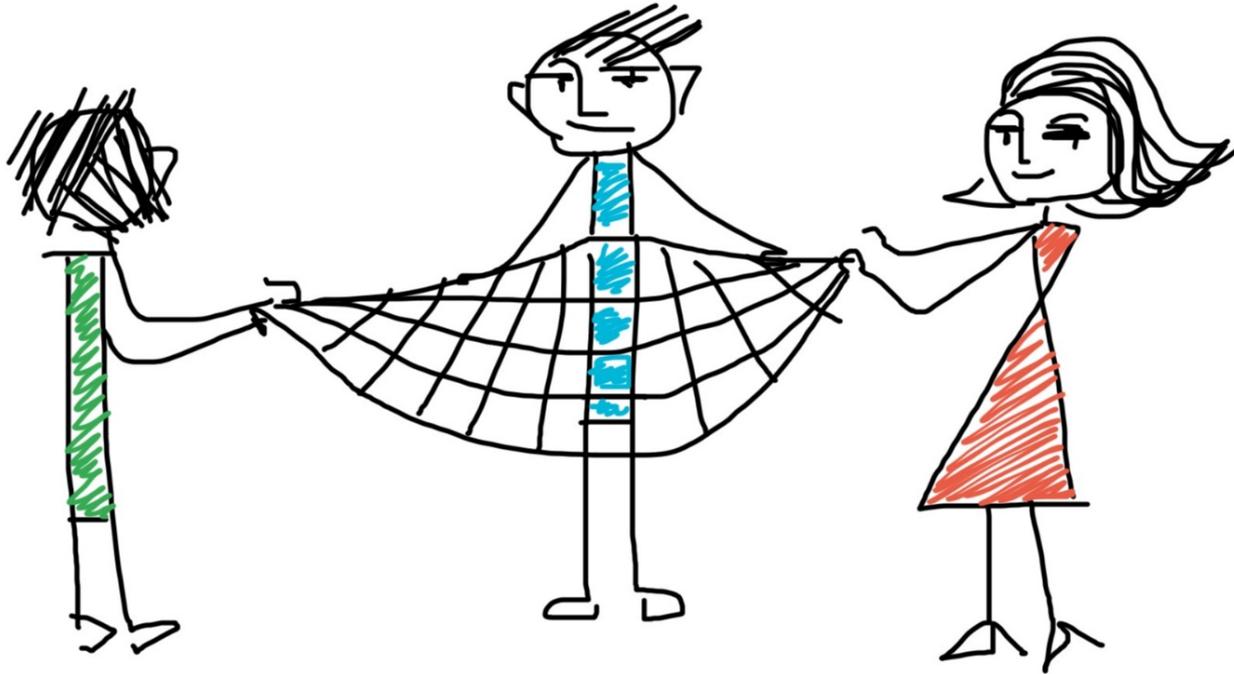
Taxes: exogeneous variation in annuity prices
adjustment => optimal cash-out option



Taxes: exogeneous variation in annuity prices likelihood to choose combination



Also Rational: Strategic Decumulation



Swiss Interior Minister Alain Berset: „The Federal Council wants to prevent pensioners from squandering their pension assets and then live off tax payers' money by receiving means-tested benefits“.

Lump sum with side effects

→ means tested benefits as backup

- Guaranteed subsistence level 40% above maximum 1. pillar income.
- Lump sum can be individually optimal
 - Low retirement assets: cash-out always optimal
 - otherwise: trade-off btw high monetary income (cash) and consumption smooting (annuity)

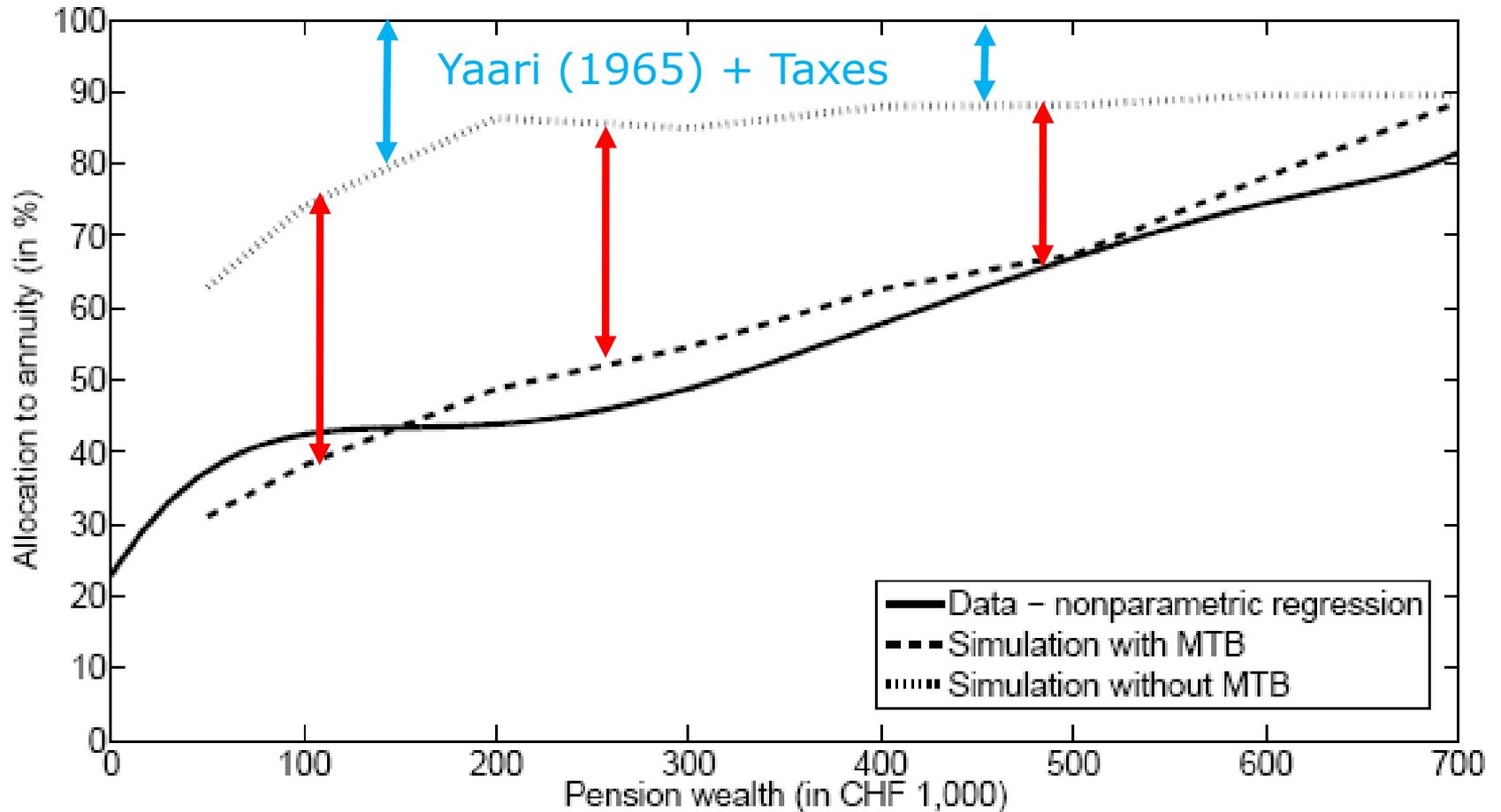
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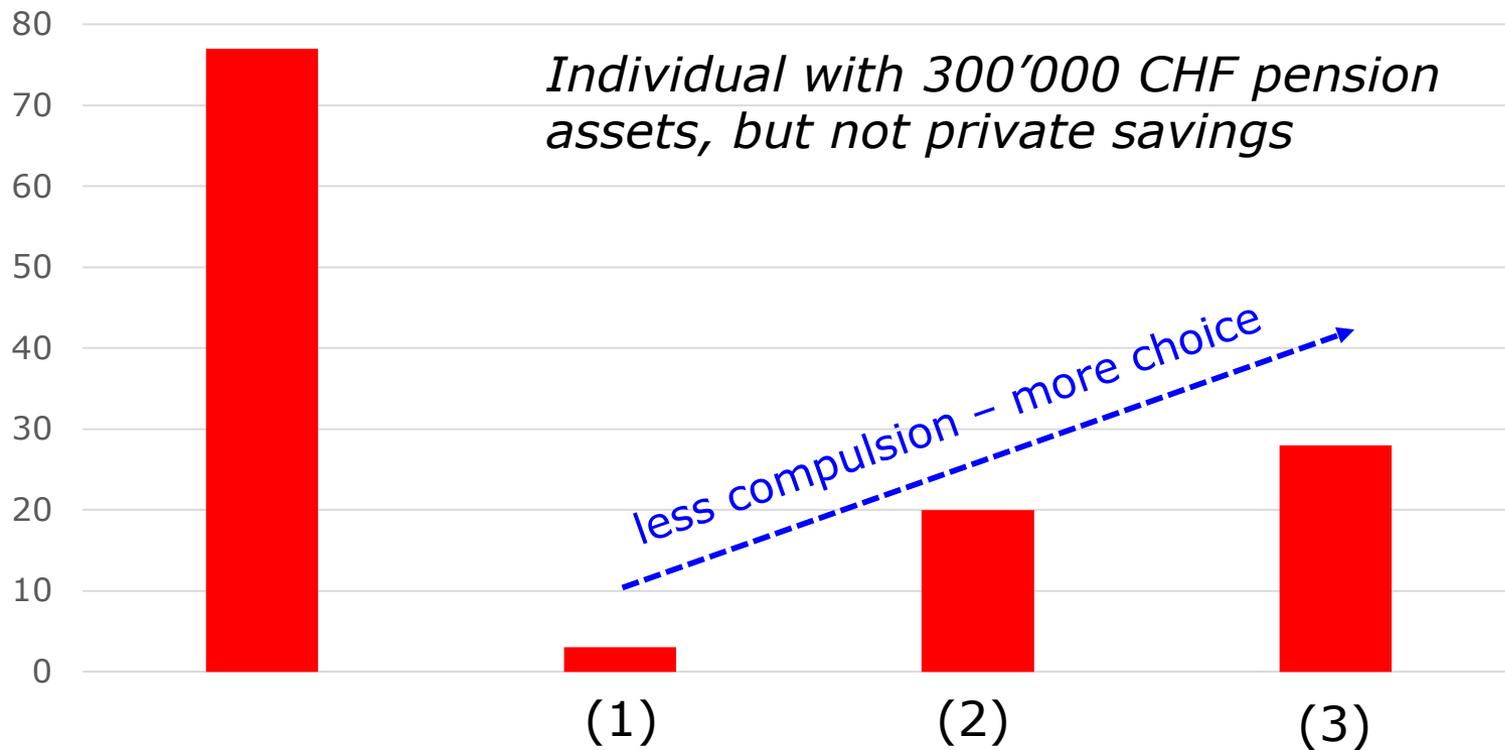


Means-tested benefits decrease optimal annutization

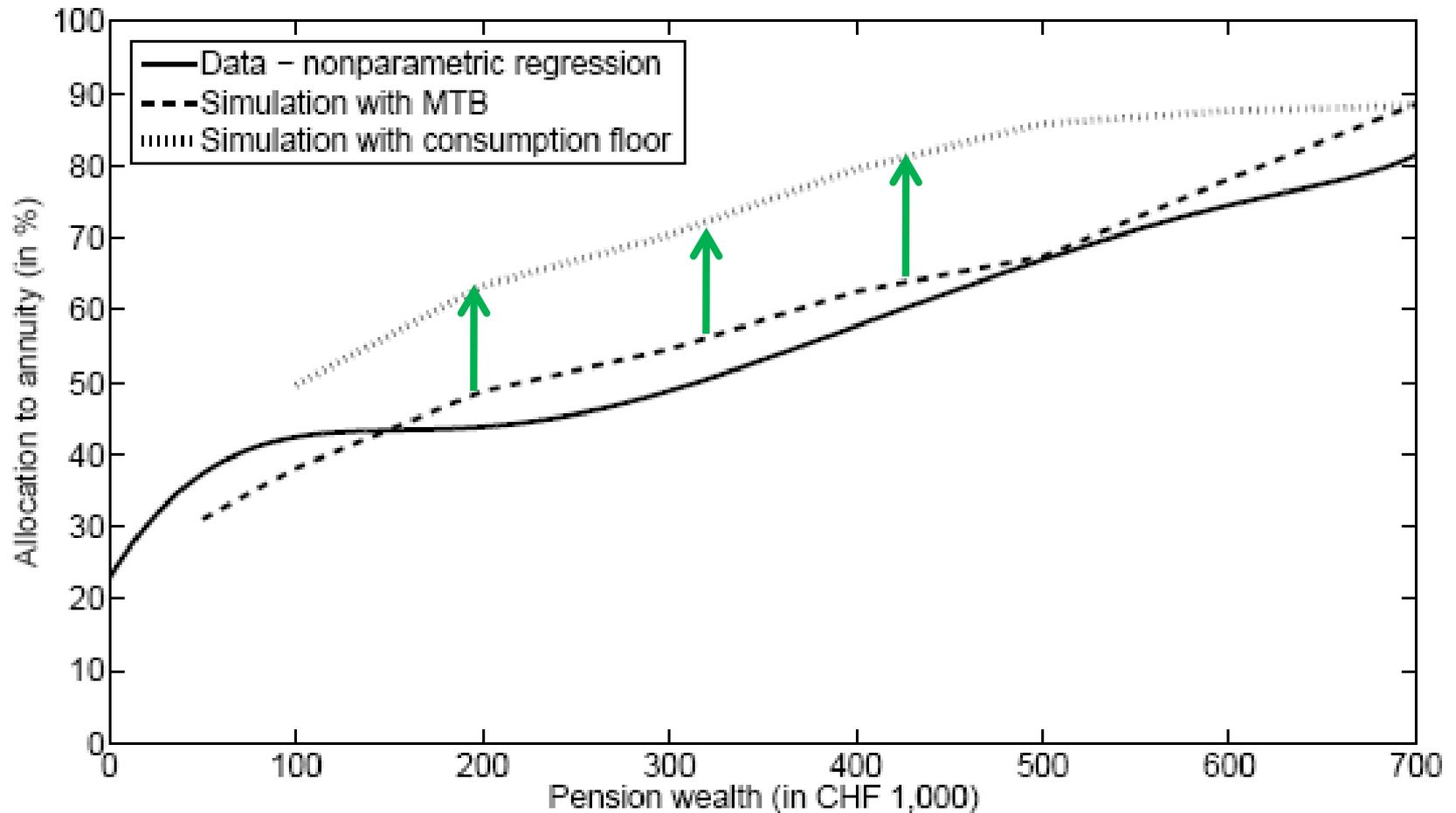


Means-tested benefits are expensive

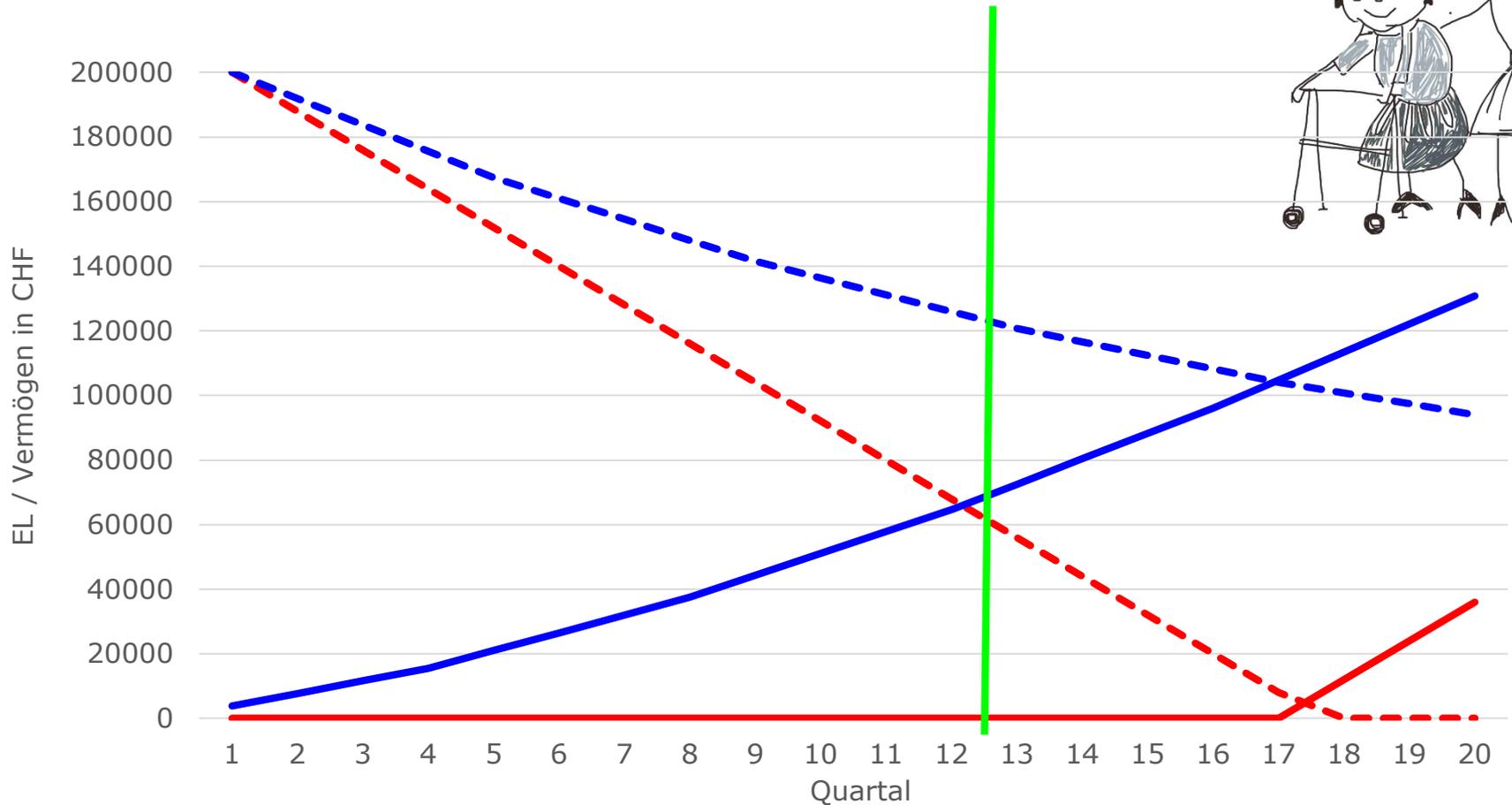
- (1) Mandatory annuitization (NL)
- (2) Minimal income rule
- (3) Stricter asset tests



Stricter asset rules may increase annuitization



Maybe even more important: long term care

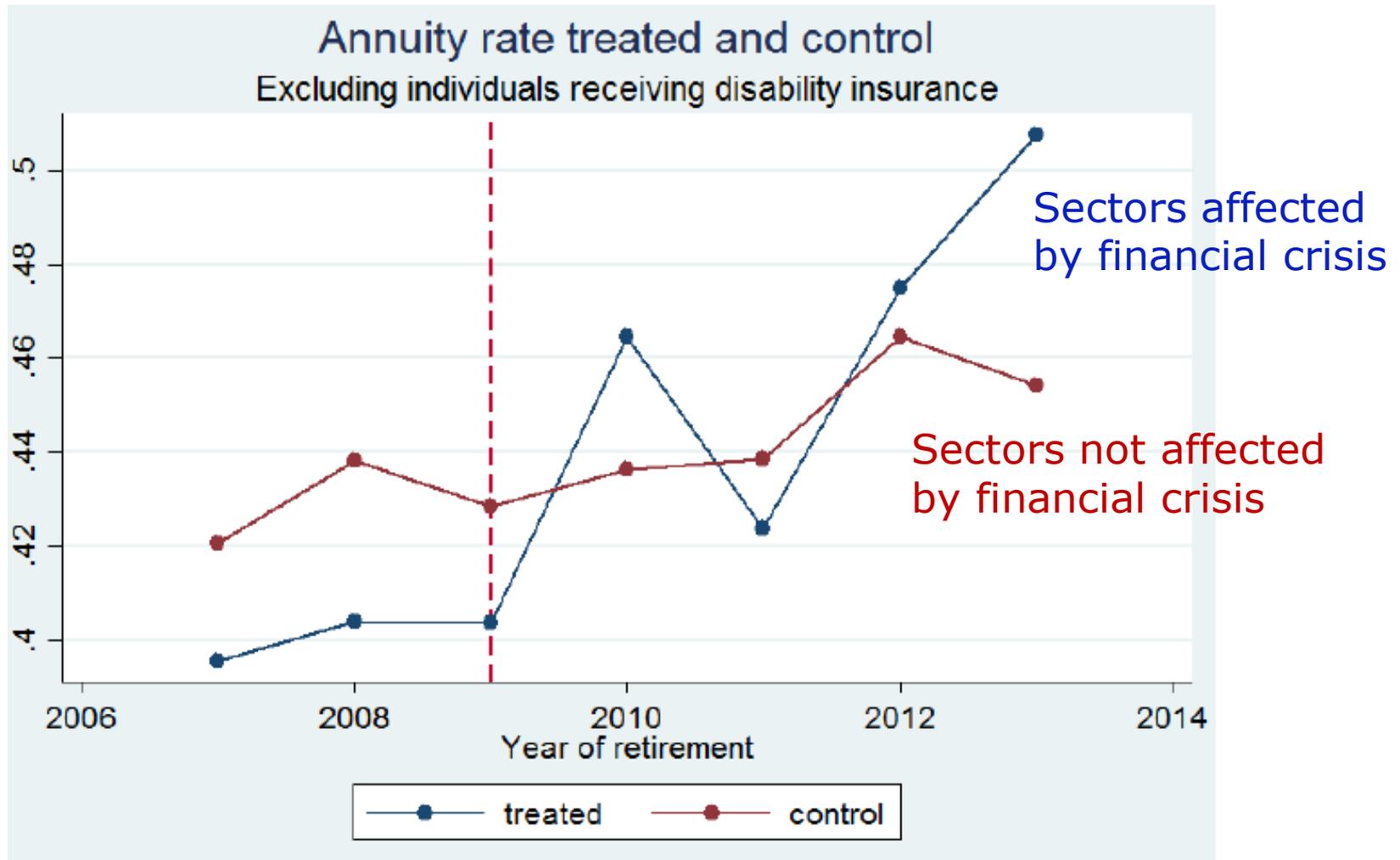


Means tested benefits (solid) and assets (dashed) for the well-informed
Means tested benefits (solid) and assets (dashed) for the IGNORANT

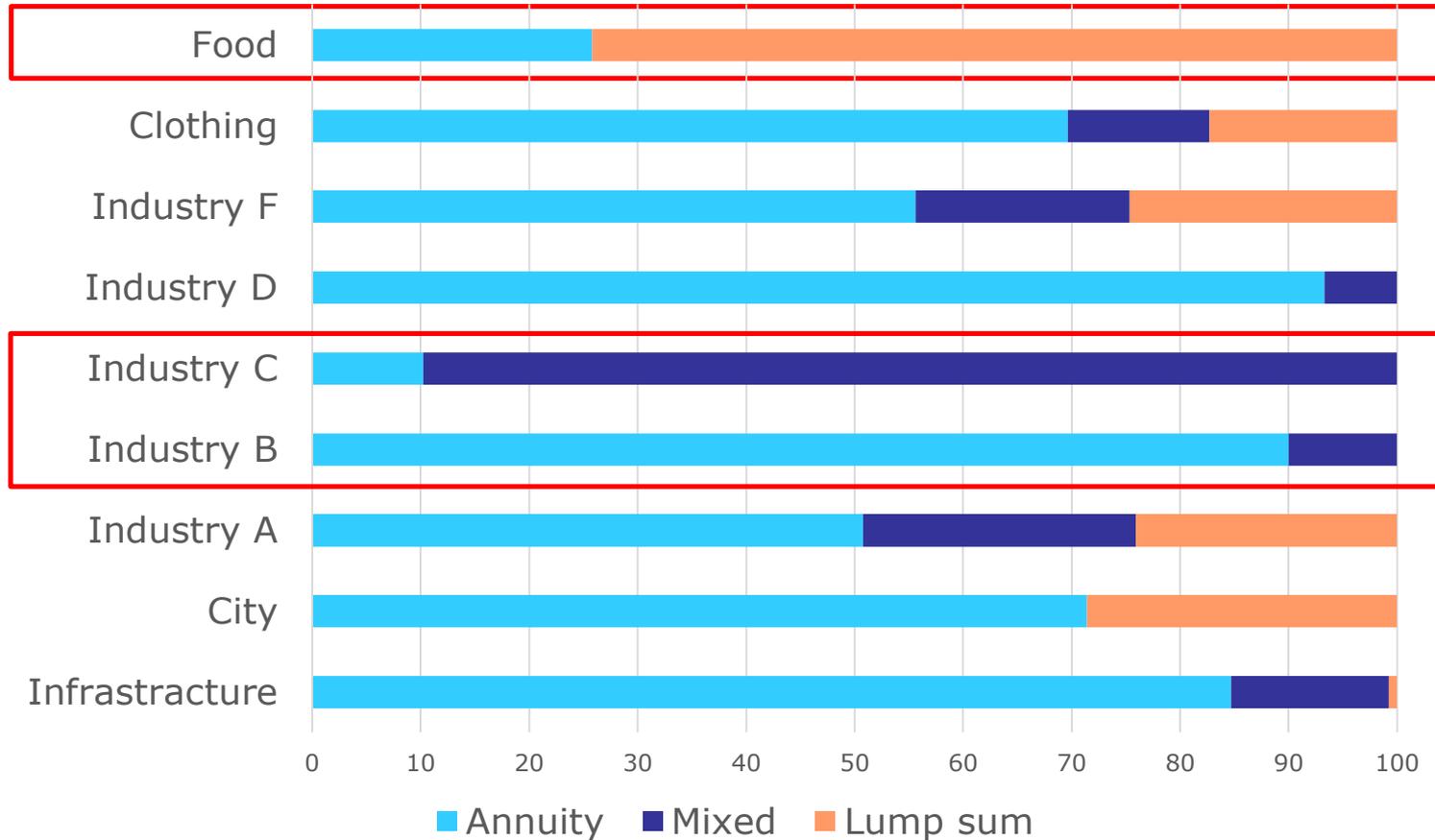
«boundedly» rational decisions



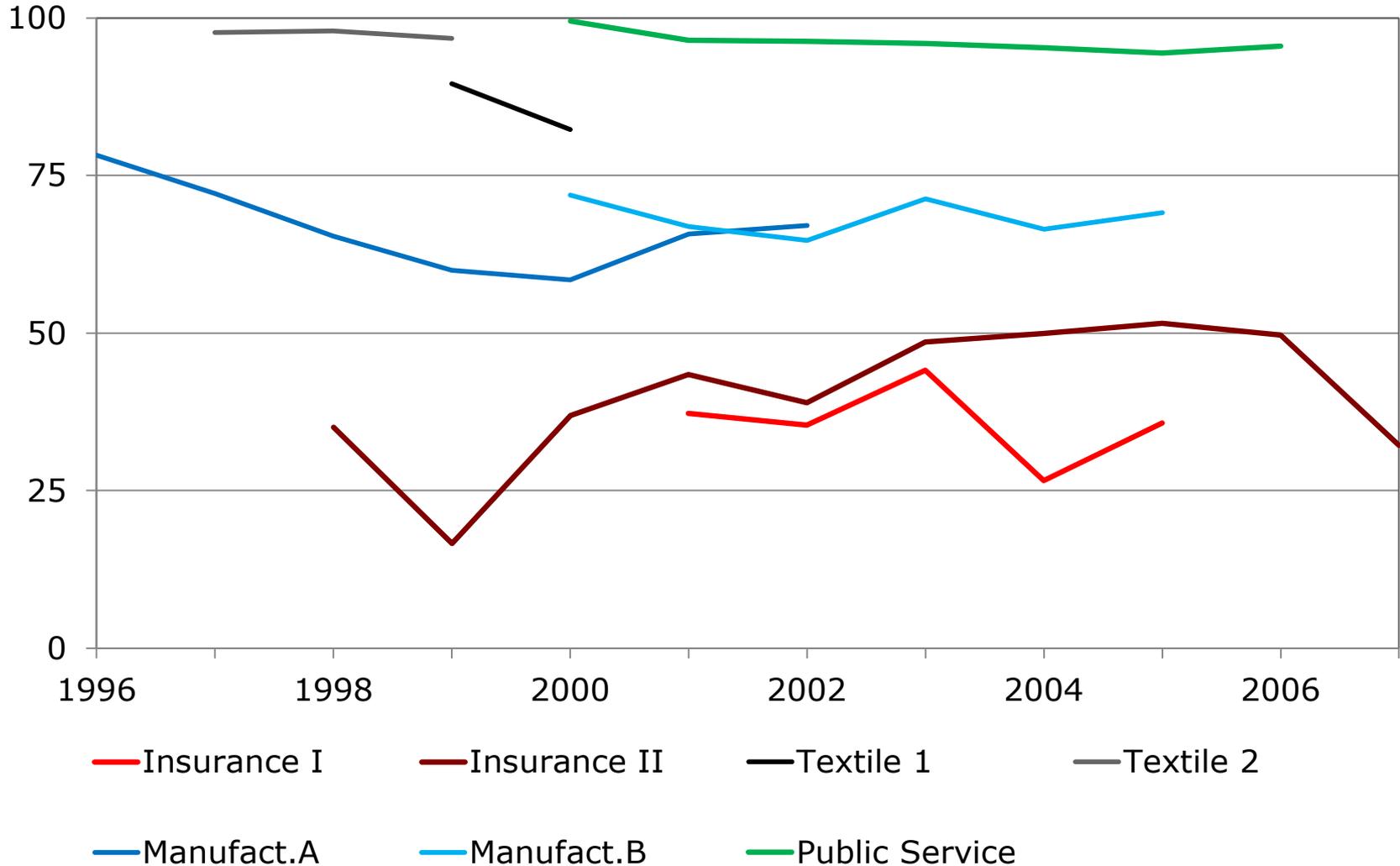
Macroeconomic events impact risk aversion/tolerance



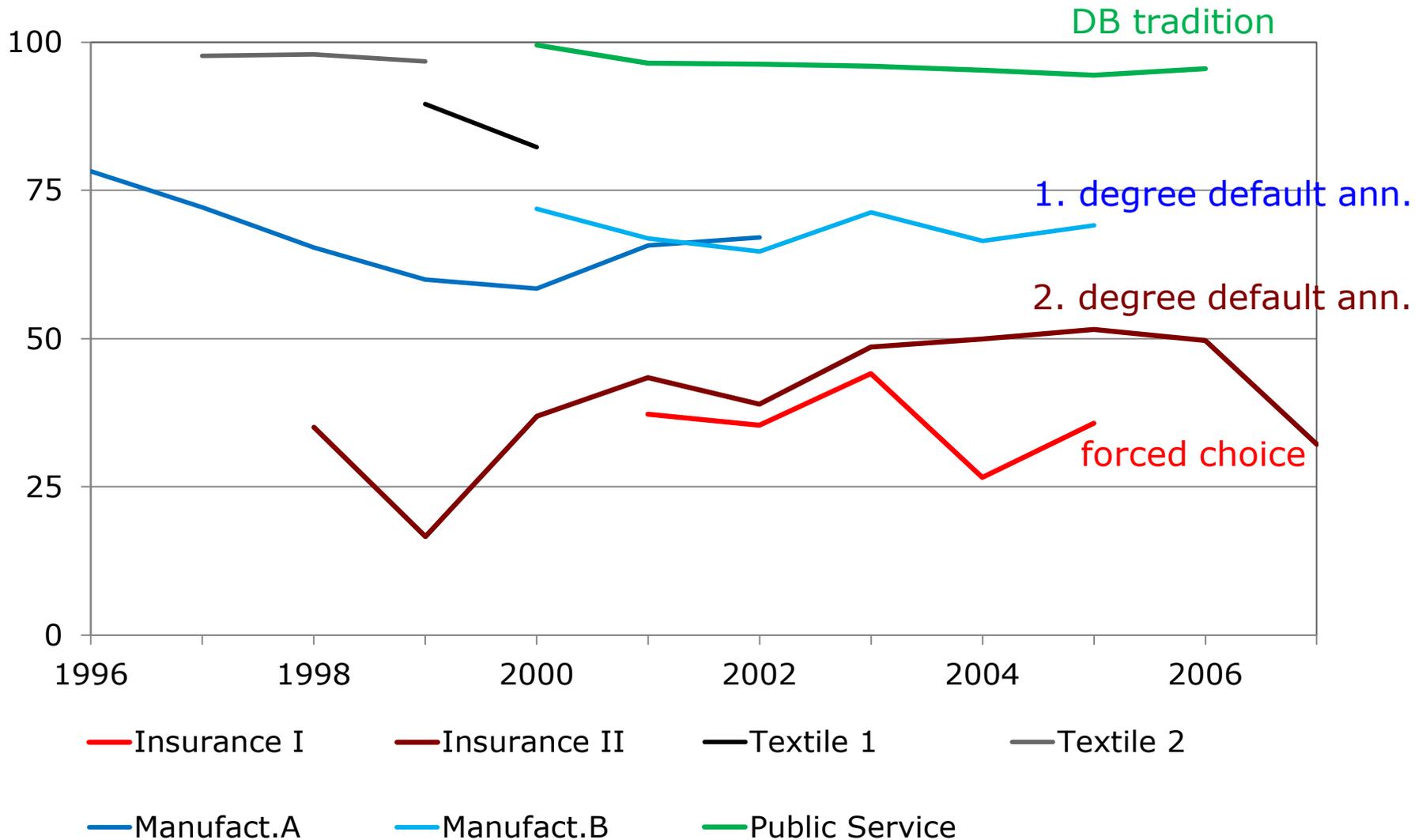
Default option wins (almost) always!



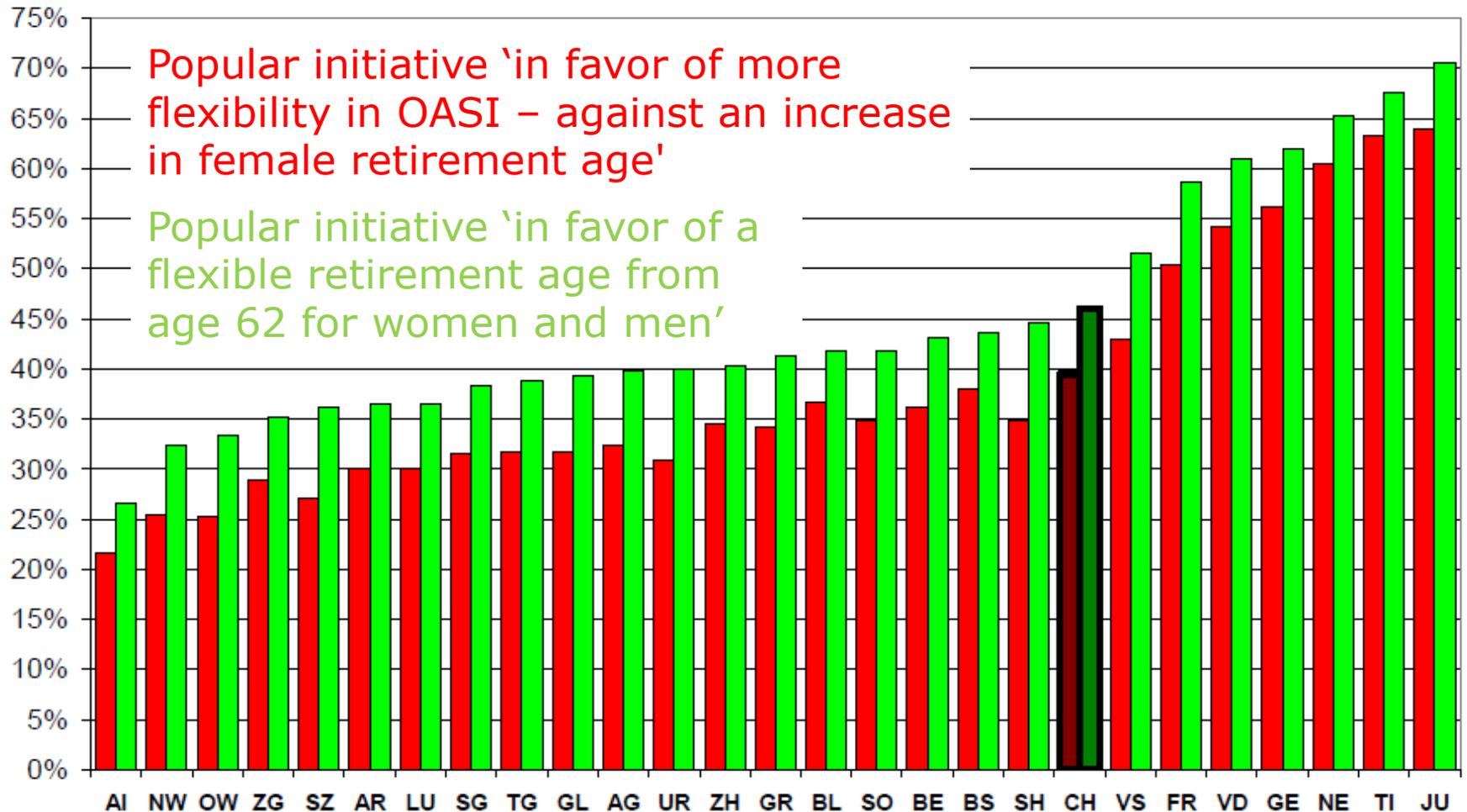
Information influences choices



Information influences choices

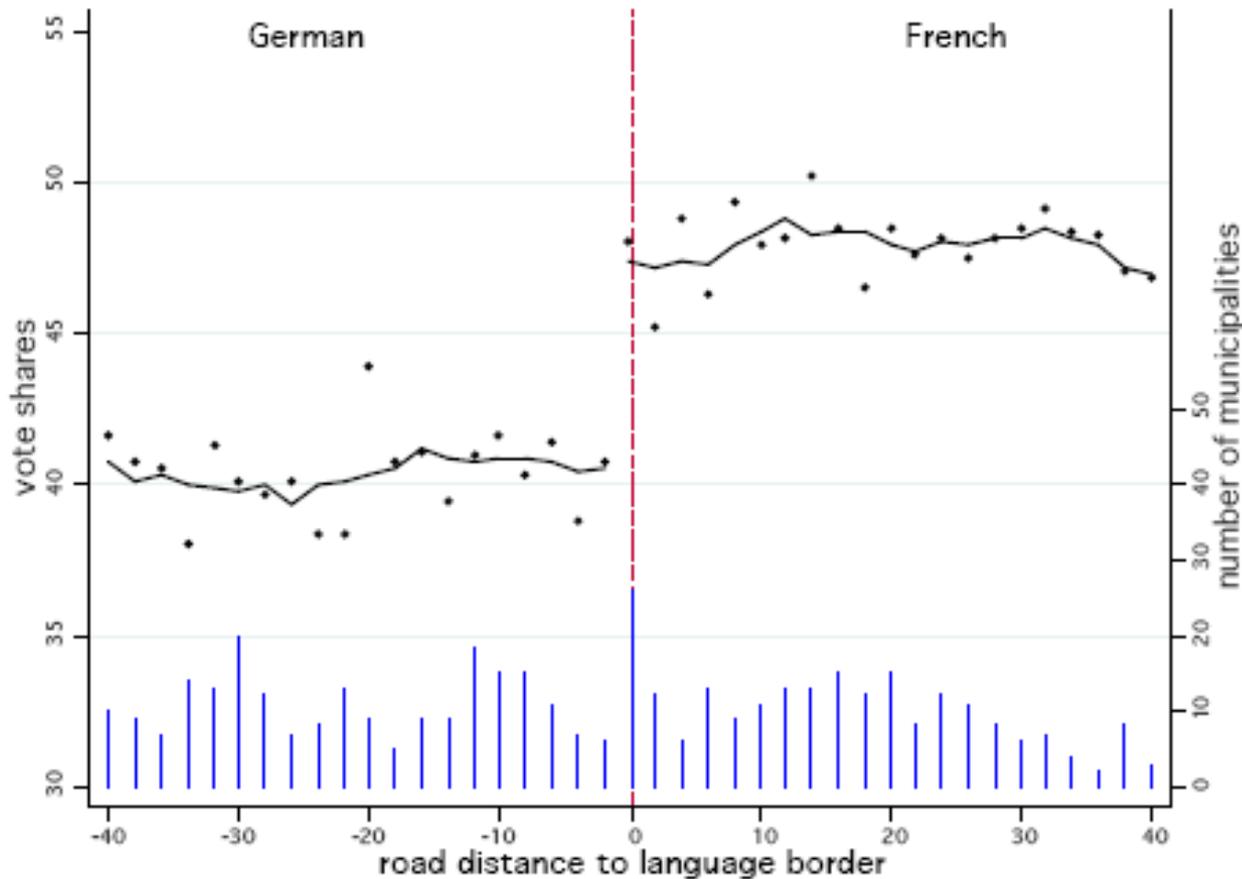


Framing in political decisions on retirement age



Preferences and culture: A striking example on preferences for redistribution.

Figure 3: Voting preferences of French and German speaking municipalities



Knowledge is Key for Pension Decisions

- Retirement choices among the most important decisions in life (but why do countries with much choice not fare much better in terms of financial literacy?)
- Better knowledge benefits the individual...
- ... but not necessarily the tax payers
- Policy options/questions
 - Educate
 - (Rethink) mandates/defaults
 - (Smart) regulation
- Insights from research:
Complexity is regressive
=> **"Keep it simple"**

