

SeLFIES: A New Bond to Address Retirement Security and Fund Infrastructure

Global Pensions Programme 2020

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Background: Both Sides of the Pension Coin

Pension Reform, Asset Management, and Academic



The World Bank

: Issued Bonds (early 1990s); Manager, Head of Research
Pension & Investments Dept (late 1990s)

JP Morgan

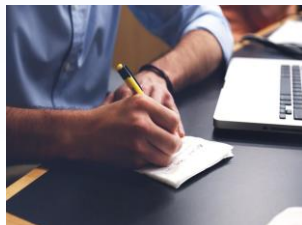
and



: MD, Head, FX Research (1999-'07)



: Co-Founder; Manage Institutional Assets;
Developed Unique Strategy (2002- Today)

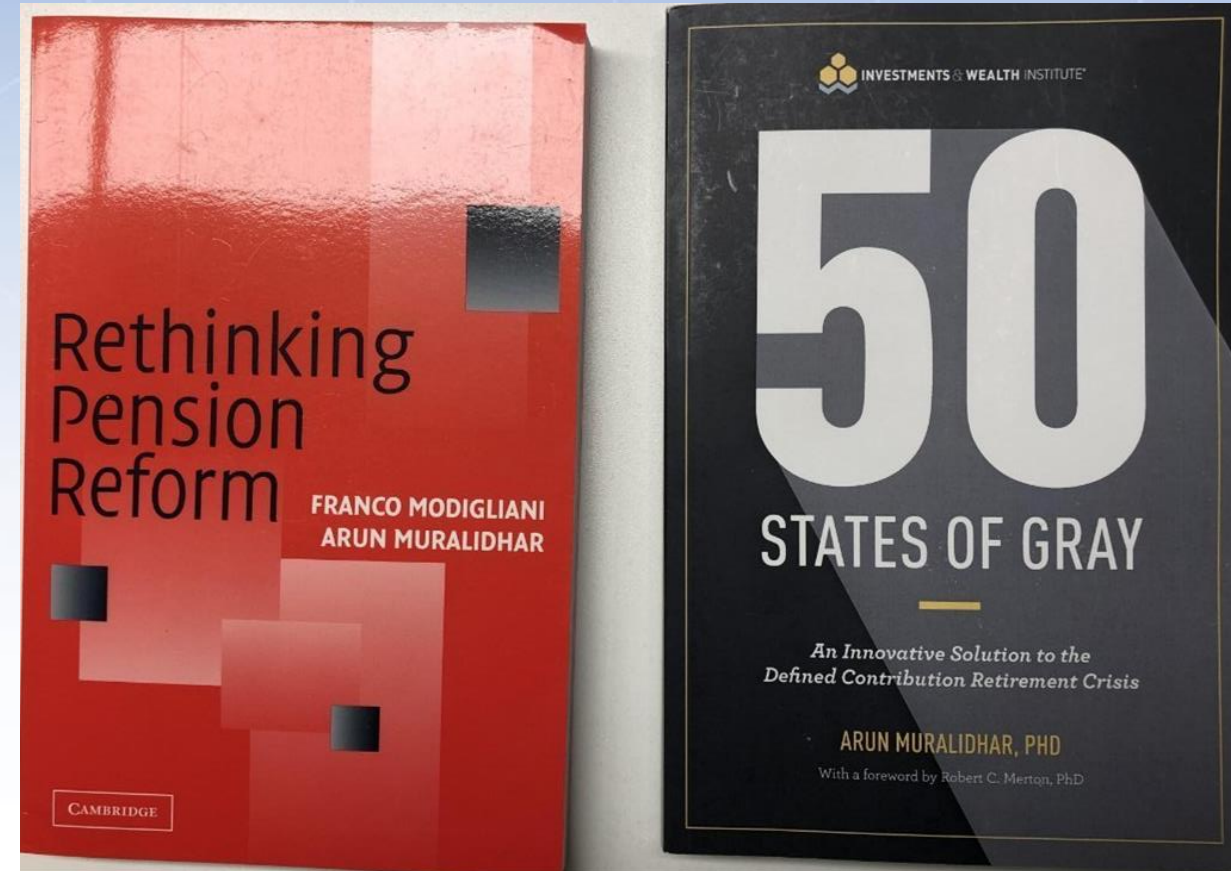


: *Innovations in Pension Fund Management (2001)*

Rethinking Pension Reform, with Prof. F. Modigliani (2004)

SMART Approach to Portfolio Management (2011)

Fifty States of Gray: An Innovative Solution to the Defined Contribution Crisis (2018)





Retirement Security: Challenges Are Global

Trend Has Been to Pass Responsibility to Individuals in DC Plans

DB Plans Closed/Not Offered to Individuals

Many Individuals Not Covered by Any Plan

Longevity Increasing. Families more Dispersed

Low Financial Literacy.



Yet the Goal is: Be Able to Maintain Pre-Retirement Lifestyle until Death



Need an “Out-of-the-Box” Solution



Biggest Challenge

Mismatch between Investor Goals and Industry Response

❖ Investors Understand Their Goals

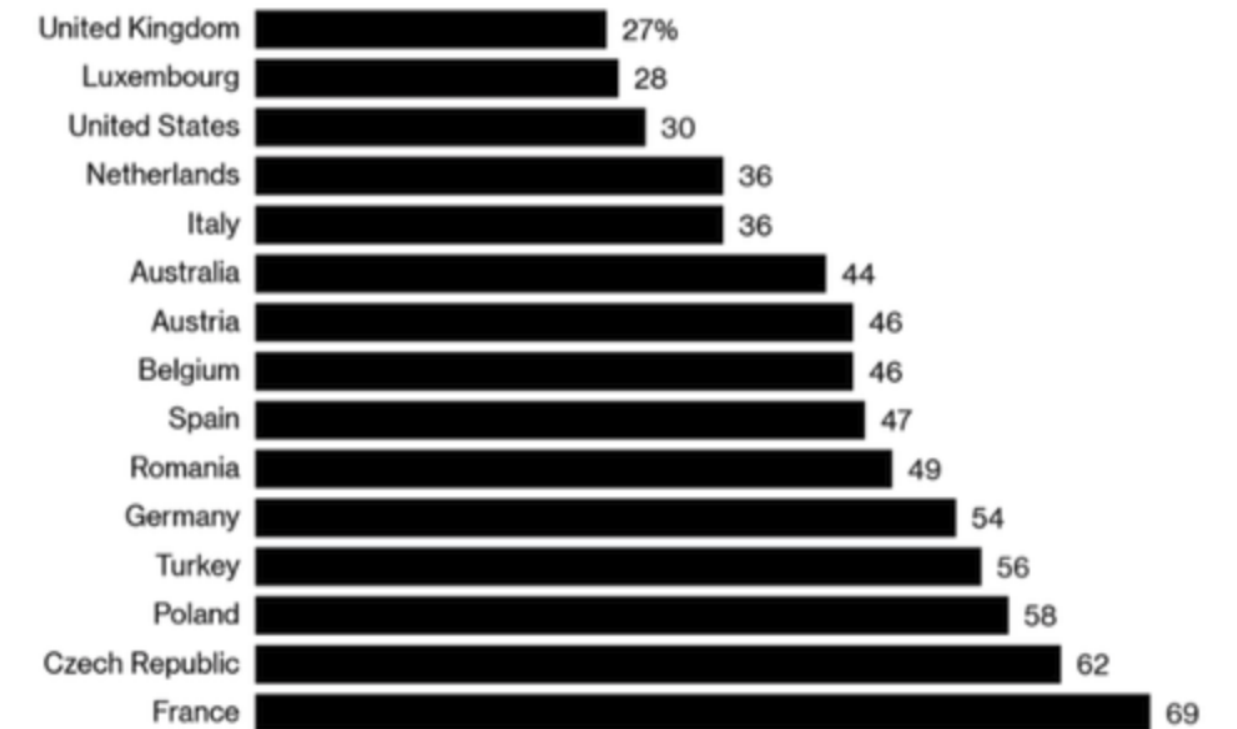
- ❖ Maintain standard of living with certainty
- ❖ Have access to products they understand

❖ Industry Response is Mismatched

- ❖ Uses end of period wealth as key metric
- ❖ Does not offer a “safety-first” approach for protecting base standard of living
- ❖ Solutions that require financial literacy

Reality Check

Share of current retirees who say they do not “enjoy the same standard of living I had when working.”



ING International Survey

Bloomberg

➡ **Need Solutions that Individuals Can Implement With No Additional Training**



DC Pension Plans Have Multiple Challenges

Could Lead to Widespread Retirement Problems

- ☒ **Risk** transferred to Individuals (one lifetime)
- ☒ **Complex Decisions** transferred to individuals
 - ☒ How much to save?
 - ☒ How to Invest: What to buy? How much? Rebalancing?
 - ☒ How best to decumulate? What annuity to buy?
- ☒ **Financial Illiteracy** confounds decision-making
- ☒ **High Cost** from involvement of multiple parties

**Wrong
Goal**

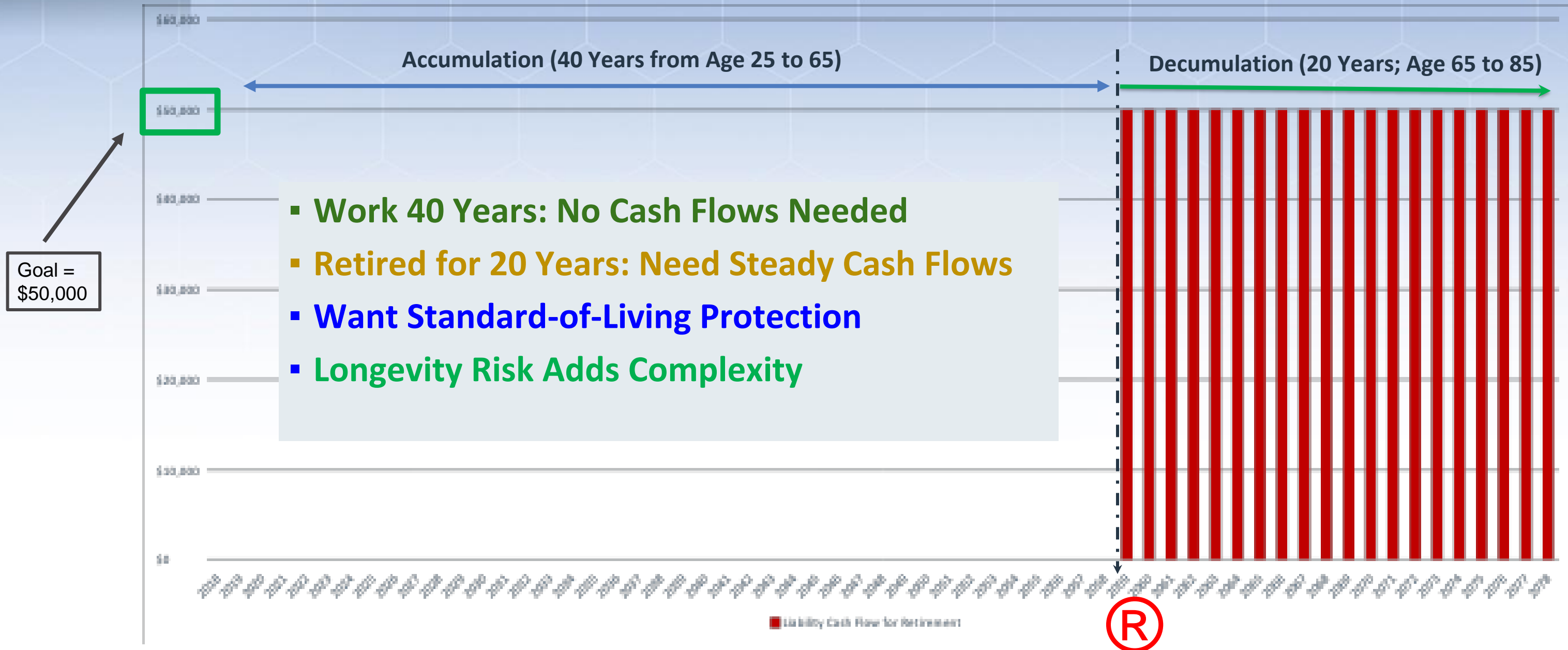


**Bad
Financial
Instruments**

➡ **But Goal Unchanged: Seek Guaranteed Real Retirement Income**

Simple Goal: Steady Cash Flow Till Death

Guaranteed and Real = Preserve Pre-Retirement Lifestyle



➡ Problem: No Asset has this Profile/Bridges Time Gap; Annuities Not Flexible

Industry Uses the Wrong “Safe” Asset

Current T-Bills, Bonds or TIPS are Not “Safe”



T-Bills/bonds protect principal (wealth),
not retirement income



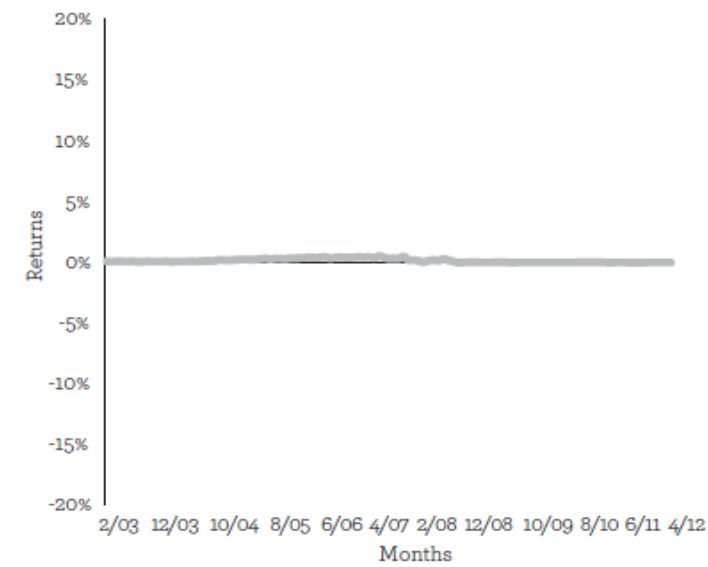
Highly Volatile: Annuity/income perspective



Current products (either Stock-Bond or
Life-cycle Funds) are risky

FIGURE 6-5: MEASURING RISK OF T-BILLS FROM AN ABSOLUTE AND RELATIVE VOLATILITY PERSPECTIVE

3-Month US T-Bill (USD)

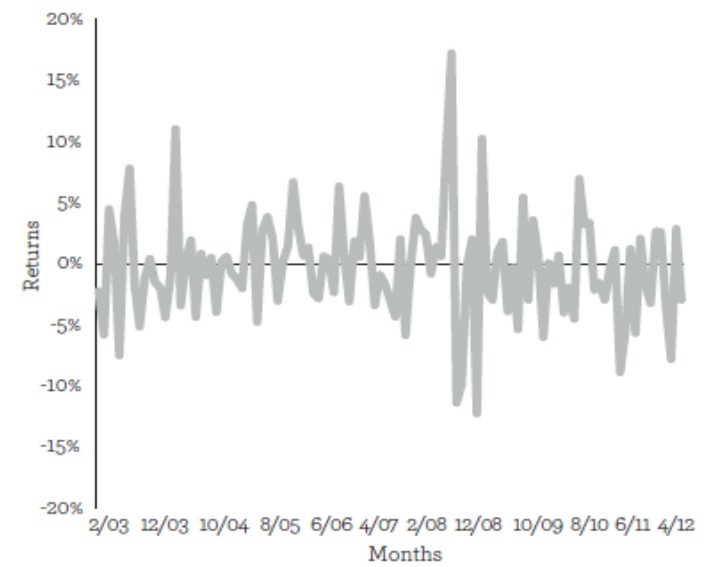


The volatility of T-bills is minimum risk when looking at it
as an asset value.

Based on T-bill data provided by Bloomberg.

Source: Merton (2014)

3-Month US T-Bill (AIU Unites)



The volatility of T-bills is high risk when measured in terms of AIU.

AIU = Annuity Income Units



Current “Safe” Assets Are Risky; Too Much Focus on Wealth vs Income



Even TIPs Are Risky in Retirement Plans



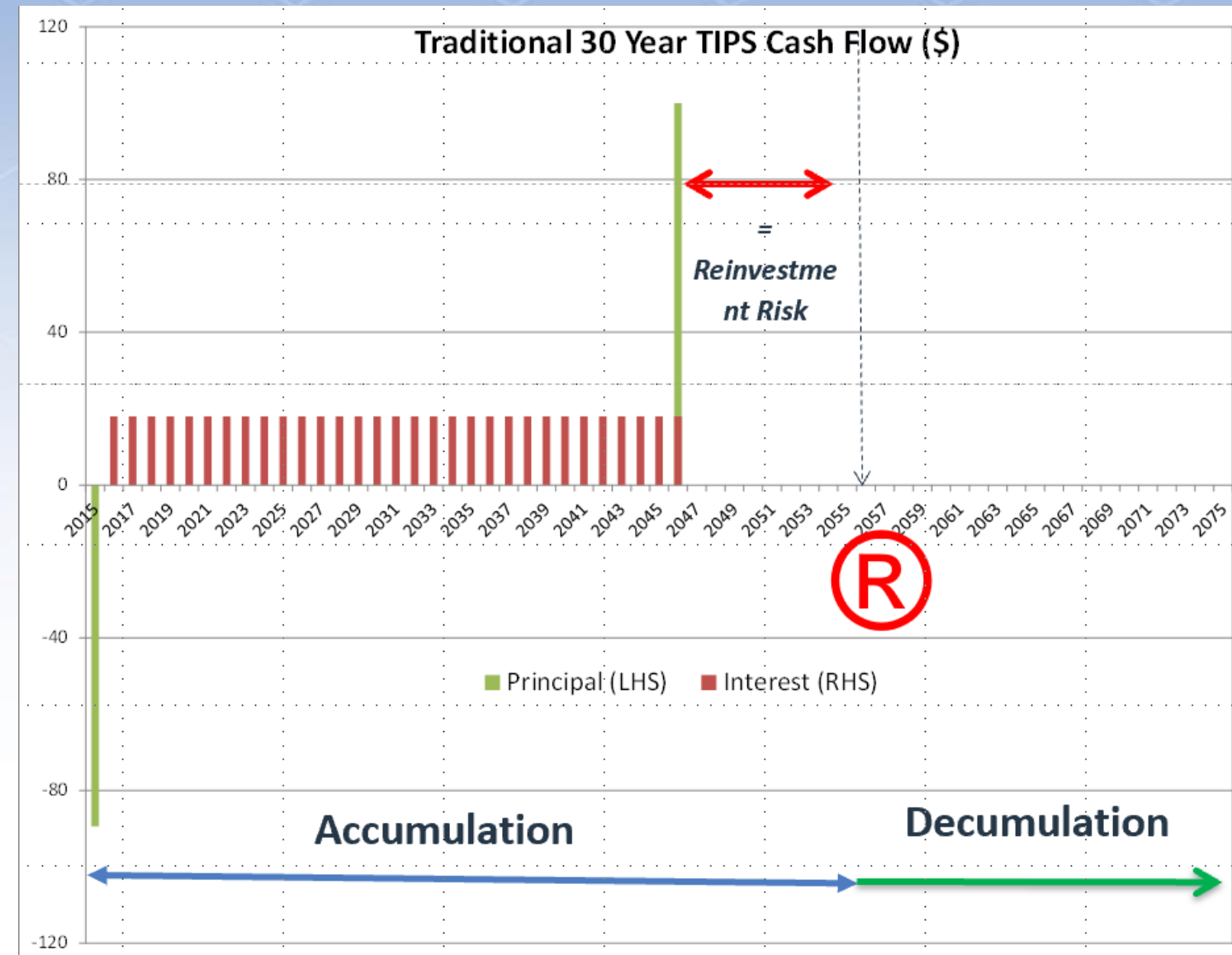
Cash Flow Mismatch/Reinvestment Risk



US TIPs maturity = 30 years maximum
(slightly longer in some countries - S.Africa)

- ❖ Can only hedge 10 years pre-retirement
- ❖ Do not need coupons when working
- ❖ Do not need Principal repayment
- ❖ Would require 61 additional small transactions to convert to desired outcome

➔ **More Pertinent Risk is Standard-of-Living Risk**
Annuity = Inflexible to Purchase during Working Life

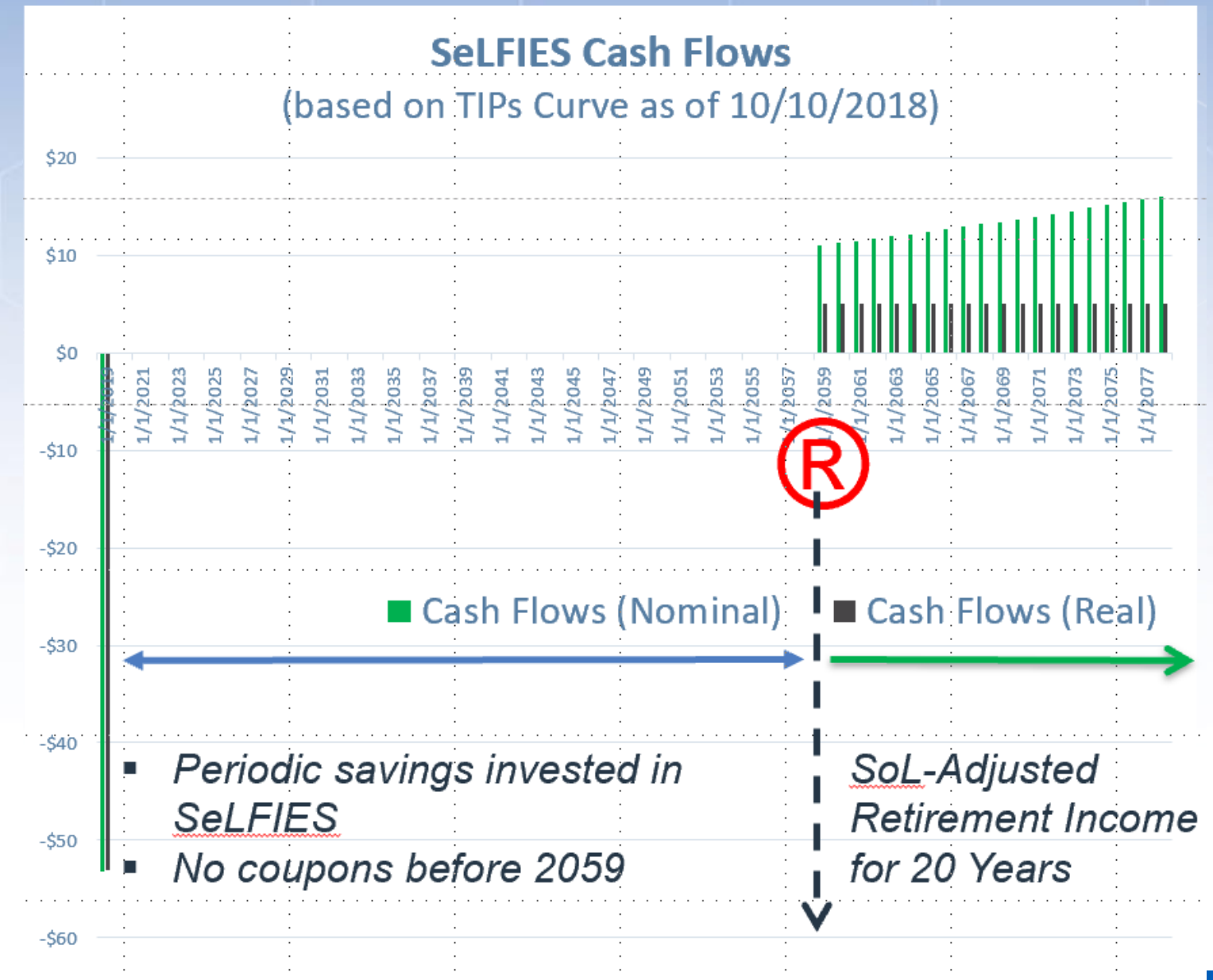


Solution: **SeLFIES** - A New Retirement Bond

Government Issues a New Bond

- **Key Features:**
 - Payment begins at age 65
 - Coupons-only for 20+ years (Life Expectancy)
 - \$5 real/year
- **Goal of \$50K annual @ \$5 real/year = 10,000 bonds**
 - Easy to track: 6,000 bonds = 60% of Goal
- If Individual Dies Early: **Heirs Inherit Bonds (Easy to Bequeath) And Can Collect Income or Sell Bonds**
- Change Retirement Date/Target Income: **Simple**

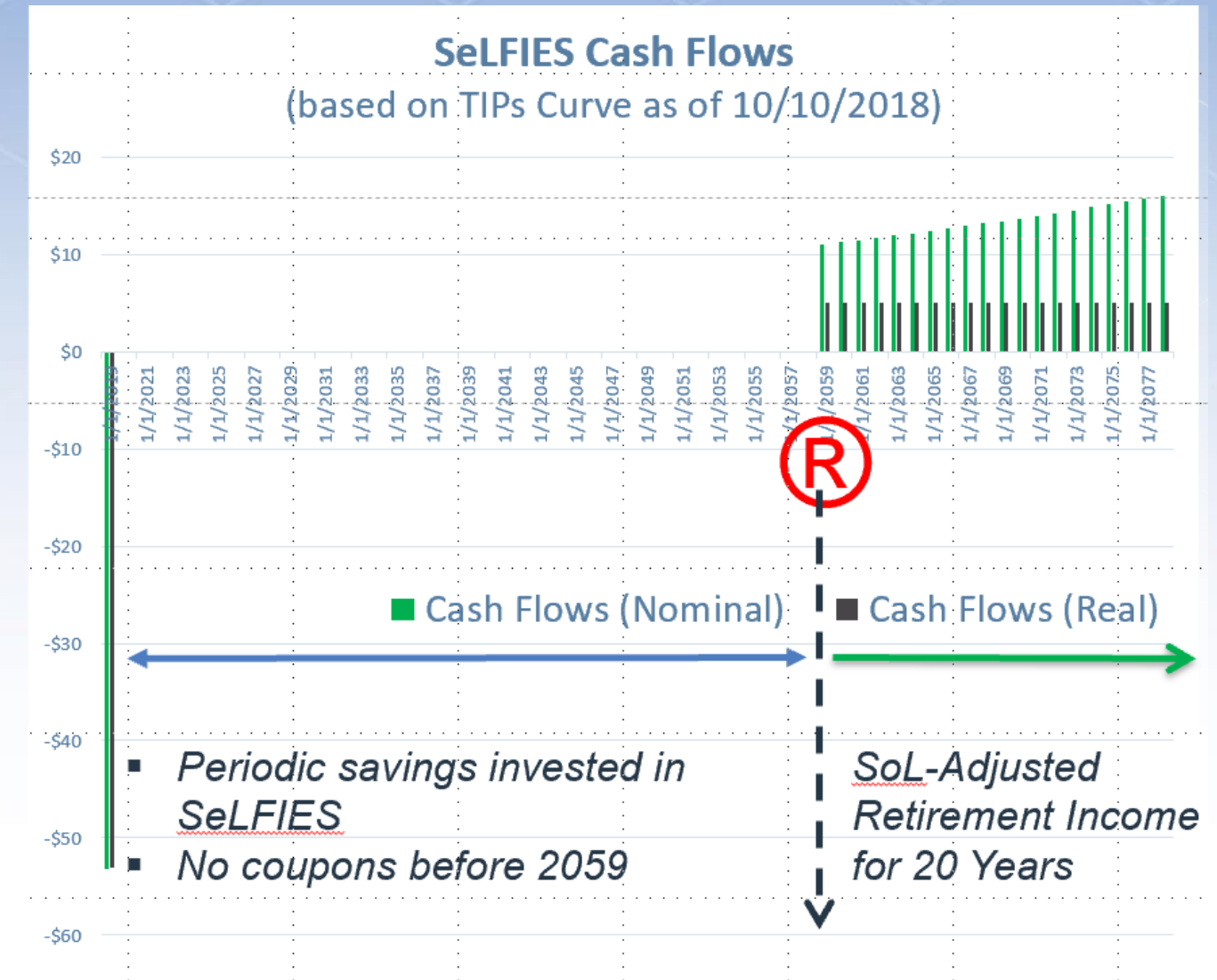
➡ **A Better “Safe” Retirement Asset**



SeLFIES Deliver What is Needed

Designed to Require No Additional Financial Training

- **Bond Cash Flows = Matches Retirement Goal**
 - No bullet repayment, only steady Cash Flow
- **Payment based on real amounts, not coupon (%)**
 - \$5 real/year
- **Nominal Index linked to Goal – Per Capita Consumption**
 - Hedges real Standard-of-Living risk for retirees
- **Forward-starting:** No cash flows when not needed
- **Designed for financially unsophisticated population**
 - Embeds Inflation, Compounding and Decumulation

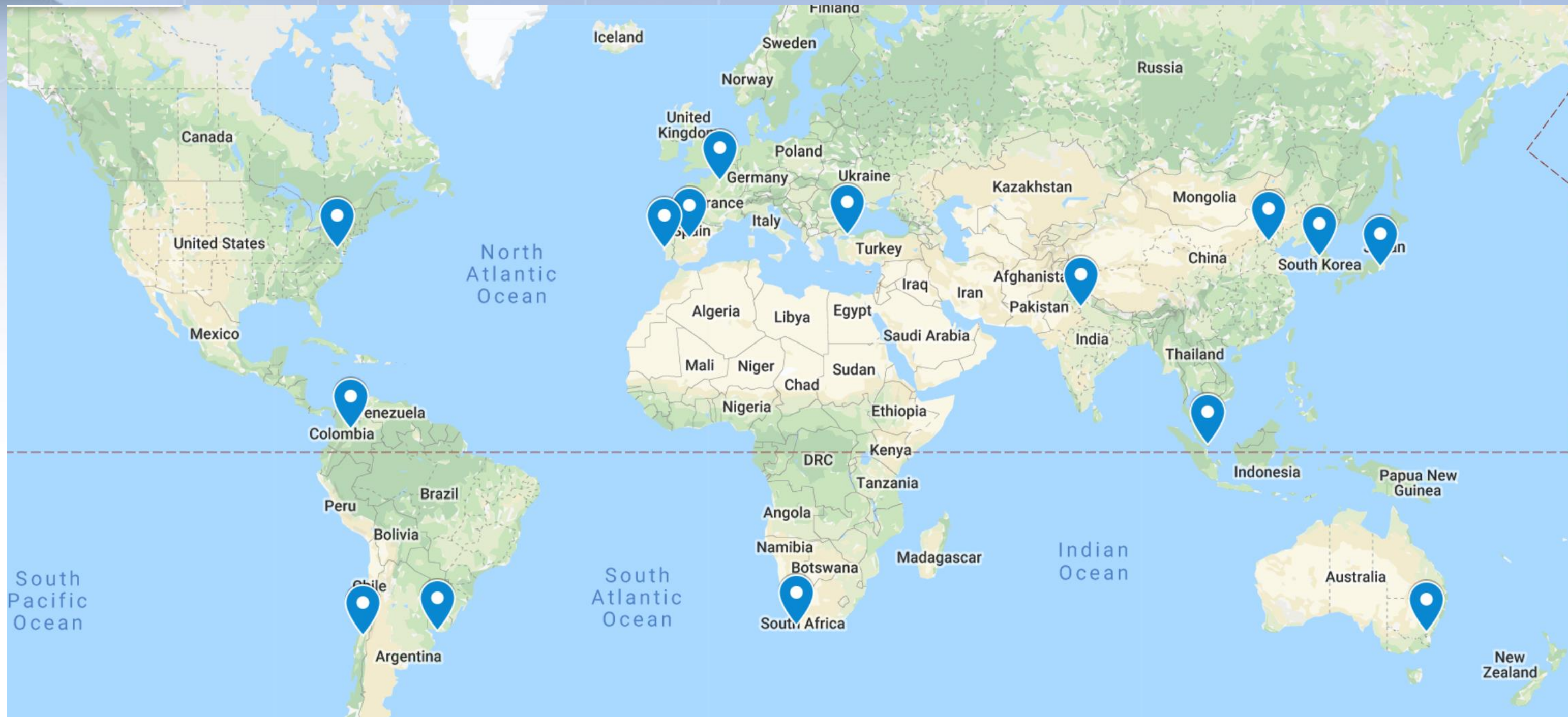


➡ **Individual Just Needs to Specify Retirement Date and Target Income**



Global Design – Suggested for Many Countries

Countries Can Customize to Their Unique Situation



SeLFIES – Good for Individuals

❖ Designed to Work with What People Know

- ✓ Date of Retirement and Target Income

❖ Embeds Compounding, Inflation & Decumulation

- ✓ Addresses Financial Competence

❖ Effective for Uncovered Workers Too

- ✓ Creates an “Individual DB”; Don’t Need Plan

❖ Easy to Track Progress Towards Retirement Goal

- ✓ Simple Math and Easy Calculations

➡ **Can Be Used “Out-of-the-Box”**

SeLFIES a good look for Australian retirement

By Robert C. Merton and Arun S. Muralidhar | 06/06/2018

in    



SeLFIES – Good for Governments

- ✓ Reduces Risk of Retirement Poverty/Bailouts
- ✓ Cash flows from bond = Infrastructure needs
- ✓ VAT Regime = Government Hedged
- ✓ Boosts National Debt Demand
- ✓ Provides Near-Term Budget Relief
- ✓ Could be Transformational in Emerging Markets

➡ **Multiple Benefits for Governments Too**



SeLFIES – Good for Financial Service Industry

✓ Goal of Individuals: Sustainable Retirement Income

Buy SeLFIES but Still Have Longevity Risk

✓ **Goal of Insurance Companies: Profit/Manage Risk**

Diversify Longevity Risk by signing large number of people

✓ Well-Designed SeLFIES

For right Maturity, Insurance Cos. would be willing to exchange 1 SeLFIES for Life Annuity paying \$5 real/year till Death.

Price of SeLFIES vs Price of Annuity provides information about
Design of Product and Longevity Diversification of Insurance Cos

➔ **Supports Product Innovation**



Source: Nikkei June 2018



SeLFIES: A Win/Win/Win

✓ Individuals

Retirement income product that meets actual goals and is easy to use

✓ Financial Services Industry

Improved hedging operations and product innovation

✓ Government

Lower financial pressures, better cash flow match and potentially fund infrastructure