SeLFIES:
A Globally-Applicable Bond Innovation to Improve Retirement Security, Infrastructure Funding, and Government Borrowing Cost

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General Disclosures: The simulated performance presented may differ from live performance experienced using the strategy for the following reasons:

The simulation assumes that we adjust the allocations to each asset on a daily basis after the close and at the closing price on that day, whereas the live product may not adjust the allocations exactly at that time or at that price and may have execution lags that affect the execution prices.

The simulation assumes certain transaction costs with respect to trades made, whereas the live portfolio might incur different transaction costs.

The simulation assumes implementation of the allocation shifts by buying and selling the underlying indices, whereas live portfolios may use other instruments (i.e. futures, forwards, active or passive managers) with a different return or cost.

Hypothetical or simulated performance results have certain inherent limitations. Unlike an actual performance record, simulated results do not represent actual trading. Also, since the trades have not actually been executed, the results may have under or over compensated for the impact, if any, of certain market factors, such as lack of liquidity. Simulated trading programs in general are also subject to the fact that they are designed with the benefit of hindsight. No representation is being made that any account will or is likely to achieve profits or losses similar to those shown.
My Background: All Sides of the Fence

Issued Bonds, Managed Pension Assets, Worked on Pension Reform, Founded an Asset Manager+Technology Firm

World Bank: Issued Bonds (early 1990s); Manager, Pension & Investments Depts (late 1990s); Retiree...


MCube/AEGIS: Manage Institutional Assets (2001 – Current)

GWU: Adjunct Professor of Finance

Author: Innovations in Pension Fund Management (2001)
Rethinking Pension Reform, with late Prof. F. Modigliani, Nobel Laureate (2004)
SMART Approach to Portfolio Management (2011)
Retirement security is a major challenge globally

Most adults are financially illiterate

Funding infrastructure is also a challenge

Innovation can address these challenges

Implications for public finance/market development

Requires governments and development banks to be creative

Countries running deficits (plus high Debt/GDP)

EM would like to de-dollarize debt (capital markets not developed)

Foreign investors = Hot money, esp. with rising rates

Good Debt Management = Effective ALM

MoFs/Treasuries Realize Twin Challenges of Infrastructure and Retirement Security


Global Pension Plans: Multiple Challenges
Going to Lead to a Global Retirement Crisis

- Risk transferred to individuals (one lifetime)
- Three big/complex decisions to make:
  - How much to save?
  - How best to decumulate? What annuity to buy?
- Big time-gap between savings and retirement
- Financial illiteracy of most participants
- Have to deal with multiple parties = High cost

Results in High Cost, Complex, Risky, Illiquid Options (“Annuity Puzzle”)
Retirement Goal: Guaranteed, Real, Target Retirement Income Till Death

Retirement Income Stream: Need Steady Real Cash Flow

- Work for 40 Years (25-65)
- Retired for 20 Years
- Maintain pre-retirement lifestyle
- Need steady real cash flow
- Till death, ideally (longevity risk)
- Goal: Looks more like a bond than a stock

Problem: No Asset Has This Profile/Bridges The Time Gap; Annuities Not Popular
The Challenge: Bad Instruments
Even Inflation-Linked Bonds are Risky in Retirement Plans

- Cash Flow Mismatches/Reinvestment Risk
- Max US TIPS maturity = 30 years
- Slightly longer in countries like South Africa
- Inflation adjustment embedded in principal
  - Can only hedge 10 years pre-retirement
  - Do not need coupons when working
  - Do not need Principal repayment
  - Financial engineering to create annuity profile = risky, costly, illiquid, complex

More pertinent risk is Standard-of-Living risk
Solution: New Retirement Bond
SeLFIES Idea with Nobel Laureate Robert Merton

- Government/supras issue new bonds
- Key features of each bond:
  - Starts paying at age 65
  - Pays coupons-only for 20 years (life expectancy)
  - Pays real $5/year
- Goal = $50,000 per year/$5 per year = 10,000 bonds
- Establish demand for safe retirement asset
- Original idea with Professors from Japan, Korea: BFFS - Bonds for Financial Security
- Merton version: SeLFIES - Standard-of-Living indexed Forward-starting Income-only Securities

Different from Traditional SCDI

SCDI = State Contingent Debt Instrument

- SCDI try to protect sovereigns in a bad state
  - SeLFIES issued regularly, offers hedges
- SCDI = Linkers/Floaters/Extendibles
  - SeLFIES a more intelligent form of linkers
  - LIVE bonds (extendibles) hedge longevity risk
- SCDI requires a novelty/liquidity premium
  - SeLFIES has natural demand (“safe asset”)
- SCDI = niche investors (and not clear why bundled)
  - SeLFIES = retail and institutional investors
  - Clear reason for bundling bond with SoL
- SCDI = adverse selection, moral hazard
  - SeLFIES less likely to suffer these issues
Demand for BFFS/SeLFIES: Retail, Institutional
Broad Group of Investors, Regular Purchases

✓ **Individuals**
  ✓ uncovered by any public/private pension plan, ensures retirement through personal saving
  ✓ covered by pension plan but low benefits, must accumulate additional assets through personal saving
  ✓ covered by pension plan but part of the plan requires personal decision-making in which to invest the plan asset

✓ **Pension Funds and Insurance Companies** (pension, annuity benefit liabilities) want effective, low-cost hedge

✓ **Institutional and Retail Investors** who would want efficient, low-cost core “best-diversified” portfolio

BFFS/SeLFIES: Good for Governments+Supras
Unique Cash Flow Profile Synergistic with Infrastructure Investing

✓ Reduces risk of retirement poverty/bailouts
✓ Helps finance infrastructure projects
  ✓ Key goal of many governments
  ✓ Cash flows from bond = Infrastructure needs
✓ VAT regime = government is hedged
✓ Boosts national demand for debt; sustained demand
✓ Provides near-term budget relief (DANGER)
✓ Insurance companies – lower annuity costs
✓ Could be transformational in typically under-developed emerging markets (I issued the first Greek drachma bond by a development bank)
Summary: SeLFIES Achieve Multiple Goals

- **Current DC trend necessitates need to innovate**
  - SeLFIES = Forward-starting IO-only Real Bond
  - Lowers cost, risk, complexity, and illiquidity

- **Good for Governments/Development Banks**
  - Funds infrastructure; new investor segment

- **Good for Individuals**
  - Secures and simplifies retirement planning

- **Applies to Developed and Developing Countries**
  - Proposed for USA, France, Japan, Turkey, Portugal, India, Korea, Chile, Colombia....

SeLFIES a good look for Australian retirement

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

The Treasury Department has issued a report seeking comment on ways to improve retirement income security in Australia (Retirement Income Covenant Position Paper: Stage...
Thank You!