Financing Pension Benefits: Design Issues

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3 ways to finance pensions

• Budgetary financing
• Pre-funding
• Pay-as-you-go financing
Budgetary Financing

Government Budget

Pension Beneficiaries

- Universal Pensions
- Means-tested Pensions
- Pensions to a particular category
Pre-Funding

• Works like a savings account

{Government may make contributions}

Worker and/or Employer Contributions

Govt regulates

Investment

{Government may provide minimum guarantee}

Worker’s own Pension
Pay-As-You-Go Financing

Worker and/or Employer Contributions → Pension Benefits

Government implicitly guarantees
Partially Funded Pay as You Go

Worker and/or Employer Contributions

Investment

Pension Benefits

Government implicitly guarantees
Pay as You Go and Demographics

• Suppose we want to pay pensioners 100% of average wage
• In 2020, there are almost 7 workers per pensioner
• If each worker pays 14.3% of wage, pensioners can get 100% of average wage
• Reality: Are working age all contributing?
In 2100 if we still want to pay pensioners 100% of average wage,
• Only 2.6 workers per pensioner
• Contribution rate has to rise to 38% of average wage
• Not sustainable – younger cohorts systematically pay more to get the same pension
PAYG systems will not deliver for the young

- With aging, unreformed pension systems will face deficits
- Reforms in PAYG systems:
  - Raising contribution rates
    - Young pay more than the older generations
  - Lowering benefit rates
    - Young pay the same, but receive lower benefits
  - Raising retirement ages
    - Young pay more (longer) and receive less (fewer years)
Real Rates of Return for Different Cohorts

- %
- Male
- Female
- Couple

Year of Retirement

Growing role of pre-funded pensions

• Mandatory schemes
  – Defined-contribution in Australia, Chile, Denmark, Estonia, Mexico, Norway, Slovak Republic, Sweden, Ghana, Nigeria
  – Defined-benefit in Iceland, the Netherlands and Switzerland

• Automatic enrollment
  – New Zealand, United Kingdom, US

• Voluntary coverage
  – Canada, Czech Republic, Germany, Ireland, United States
  – Supported by tax incentives or matching contributions
Advantages of Pre-Funding

• Better able to deal with the aging of the population
• No systematic differences in rates of return between cohorts
  – Ex-post differences because investment returns vary
  – Ex-ante cannot predict that one cohort will do better than another
• Limits government’s fiscal liabilities
• Reduces politicization of the pension system
• Fewer unintentional redistributions
Can provide better rates of return on pension contributions, particularly when aging

- Rate of return on PAYG = growth in labor force + increase in average earnings
  - Can turn negative when labor force starts to shrink (aging population)
- Rate of return with pre-funding = capital-market return
  - Historically, even with financial crises, capital-market return higher than wage growth in developed countries
- BUT, there is risk involved
- AND, interest rates have hit historic lows for a prolonged period
Other Potential Advantages

• Could help develop capital markets
  – Particularly if government does not borrow heavily from the same market

• Potential positive impact on savings and investment
  – Particularly if government has balanced budget or a surplus

• Limits labor market distortions
  – Pension benefits depend on full career and each contribution matters
Disadvantages of Funded (Defined Contribution)

• Puts investment risk on individual
  – Long-term risk is usually not that large because over the long run, rates of return are relatively stable
  – Short-term risks are large: markets could be down when you want to retire

• Measures to mitigate, but not eliminate risk such as lifecycle investing
  – Invest in equities when young and safer, low-return assets when closer to retirement

• Face risks with PAYG as well
  – Government changes parameters
Disadvantages of Funding

• More difficult to do positive redistribution
  – One primary purpose of pension system is to prevent poverty in old age

• Options
  – Government contribution (matching, flat, selective)
  – Minimum pension guarantee
  – Pair with social pension
Conditions for Pre-Funding

• Is the macroeconomy stable enough to offer reasonably safe financial instruments?
• Are sufficient financial instruments available?
  – Ideally do not want to invest directly in companies or real estate, but liquid financial instruments
  – Available abroad, but need to cover exchange rate risk and often politically unpopular
• Financial market regulation and supervision must be strong
  – Contributions to funded system are often mandatory
  – Also longer-term savings – confidence in their security
  – Frequent reporting which allows regulator to put in place remedies at the first sign of trouble
• Administrative capacity: record-keeping, valuation
What if your country does not meet these conditions?

• Better off not pre-funding
  – Worker contributions will just disappear through poor investments

• Institute a small social pension or a small PAYG system, keeping contributions and benefits small

• When pre-funding conditions can be reasonably met, add a funded pillar
Administrative Structure for Funded Pensions

• Many possible structures
  – Single public agency
  – Single pension fund, but privately managed
  – A few private pension funds
  – Many private pension funds
  – Public and private pension funds
  – Single administrative entity with multiple investment managers

• Optimal decision often depends on market size
  – Economies of scale are important (small market size suggests fewer players)
  – Single pension fund, set up as a nonprofit, if well-managed can function with administrative costs as low as 0.08% of assets per year
  – Administrative costs above 2% of assets eat significantly into the return that participants receive
Investment Choice

• Many options
  – Single portfolio per pension fund
  – Multiple portfolios per pension fund
  – Crude restrictions on who can own what type of portfolio
  – Life cycle portfolios

• Also depends on capacity of regulator
  – More complicated to regulate as number of portfolios increases
Payout Phase

• Annuity
  – Pension balance transferred to insurance company which provides regular payments
  – Indexation choices?
  – Survivors’ benefits?
  – Re-introduces element of redistribution – those who systematically live longer will get more – higher income individuals, women

• Programmed withdrawal
  – Balance each year divided by life expectancy in months to determine monthly benefit that year
  – Remainder continues to earn interest
  – Upon death, remaining money given to survivors
  – Could run out of money or fall below poverty line

• Lump sum
  – Rarely recommended as only mechanism unless a very small amount

• Combination of the above or individual’s choice – also depends on what else is in the pension landscape
Transition from PAYG to Pre-Funded

• From pure demographics and economics, preferable to go with PAYG when country is young and switch to funded when country is older and more mature
• Costly to switch from PAYG to funded
• If worker contributions are now going to own accounts, then Government has to pay for those already retired, and soon to retire
  – Give workers recognition bonds payable at retirement for past contributions
  – Give workers pensions based on old parameters proportional to years contributed
  – Promise of return to old system if new pension is not higher at retirement
Government Financing of Transition Costs

• If Government finances the transition costs by borrowing from the pension funds, this can doom the pre-funded system
  – Capital market does not develop
  – Government dis-saving negates private sector saving, resulting in little net savings or investment in the economy
  – Government has an incentive to re-nationalize the pension system to get rid of its excessive debt
Bottom Line

• Funded pension systems can be a useful and fiscally sustainable way of providing pensions
• HOWEVER:
  – Conditions for successful pre-funding need to be met: stable macroeconomic conditions, sufficient financial instruments, strong regulation, administrative capacity
  – Administrative costs need to be kept low
  – Transition needs to be carefully thought out and financed, if needed
  – Government needs to consider appropriateness of complementary redistributive pensions, matching contributions, and guarantees, and the financing for these