Financing Pension Benefits: Design Issues

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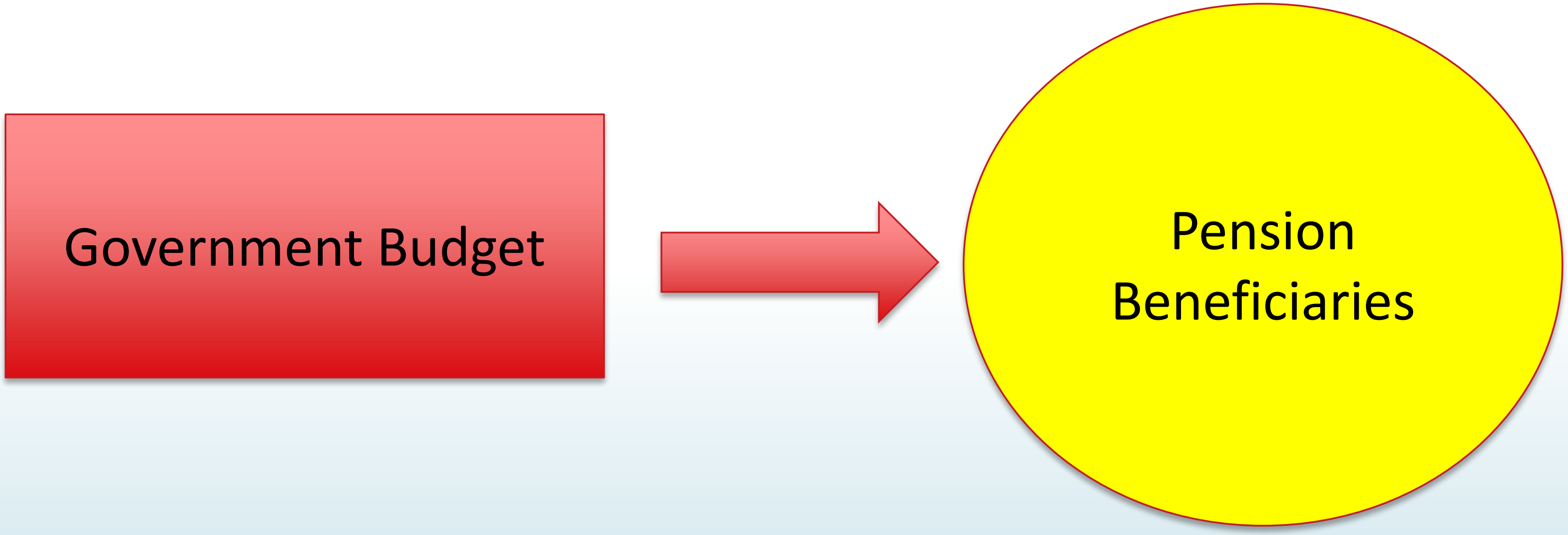
Anita M. Schwarz
World Bank
Lead Economist, Social Protection and Jobs

Pensions Core Course

3 ways to finance pensions

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

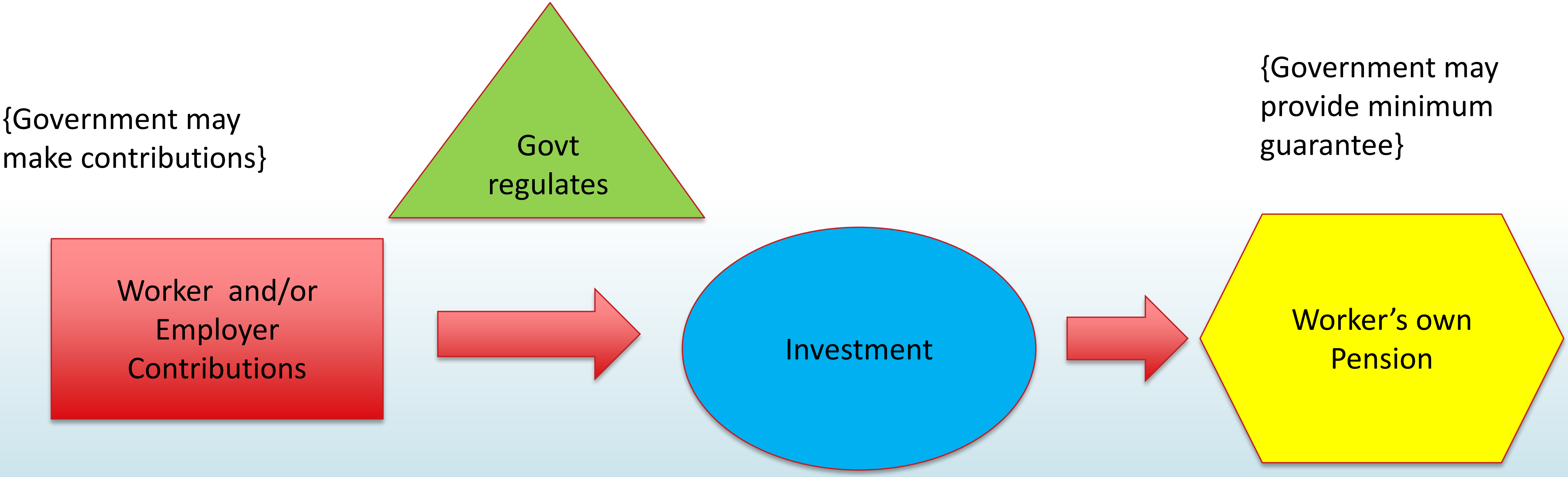
Budgetary Financing



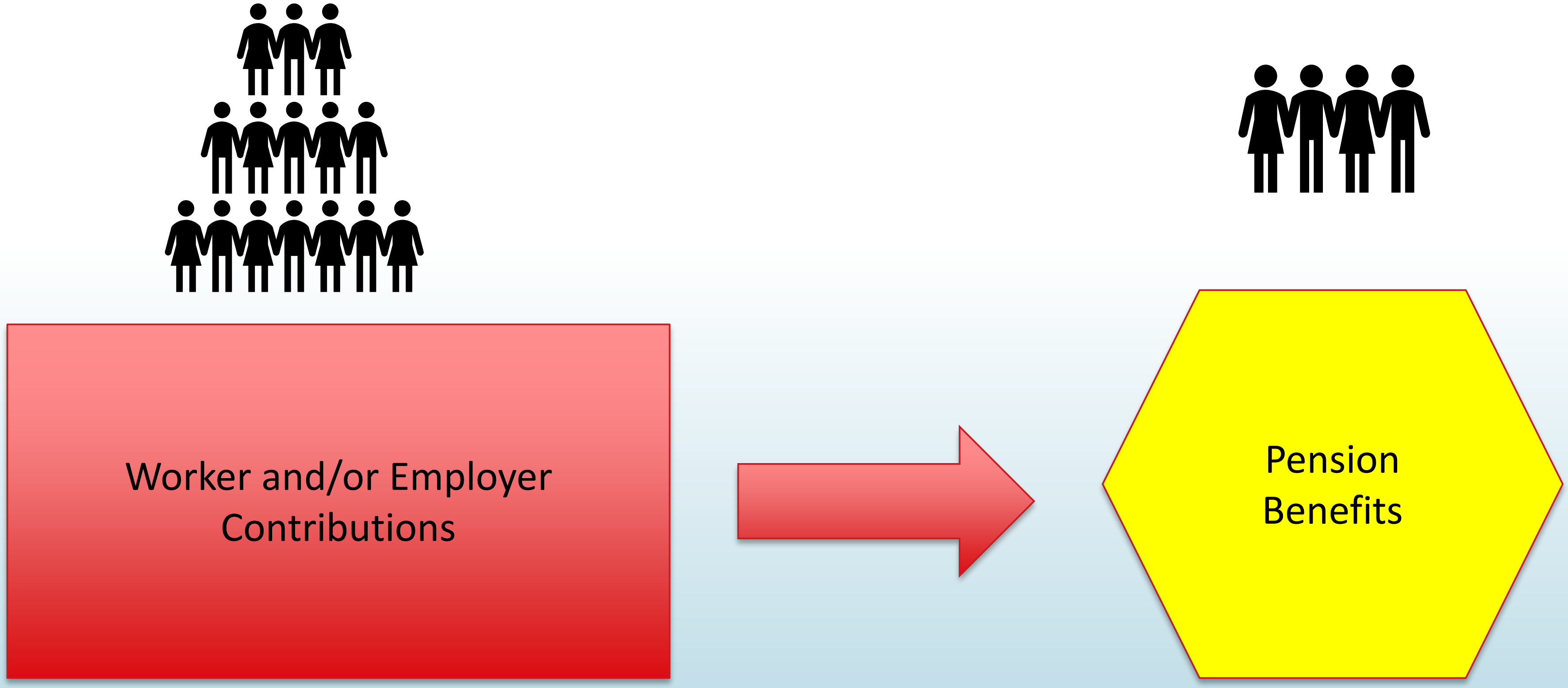
- Universal Pensions
- Means-tested Pensions
- Pensions to a particular category

Pre-Funding

- Works like a savings account

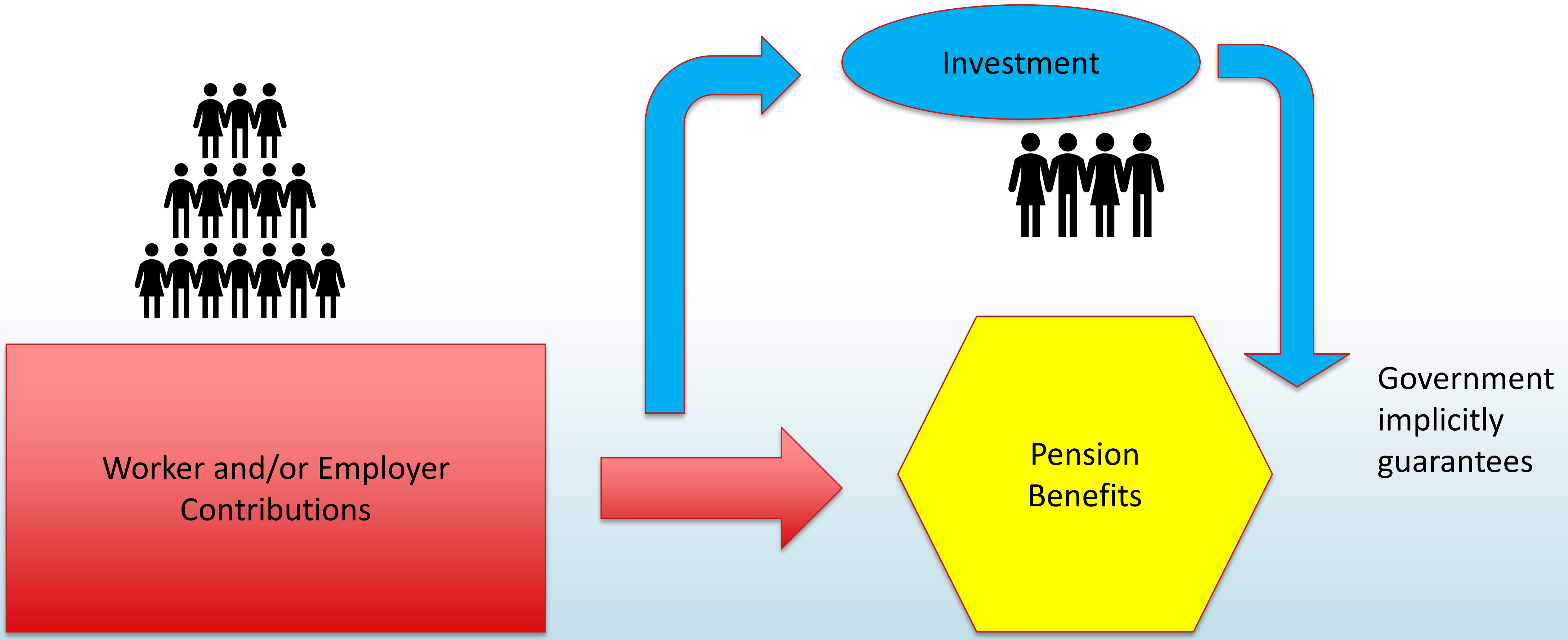


Pay-As-You-Go Financing

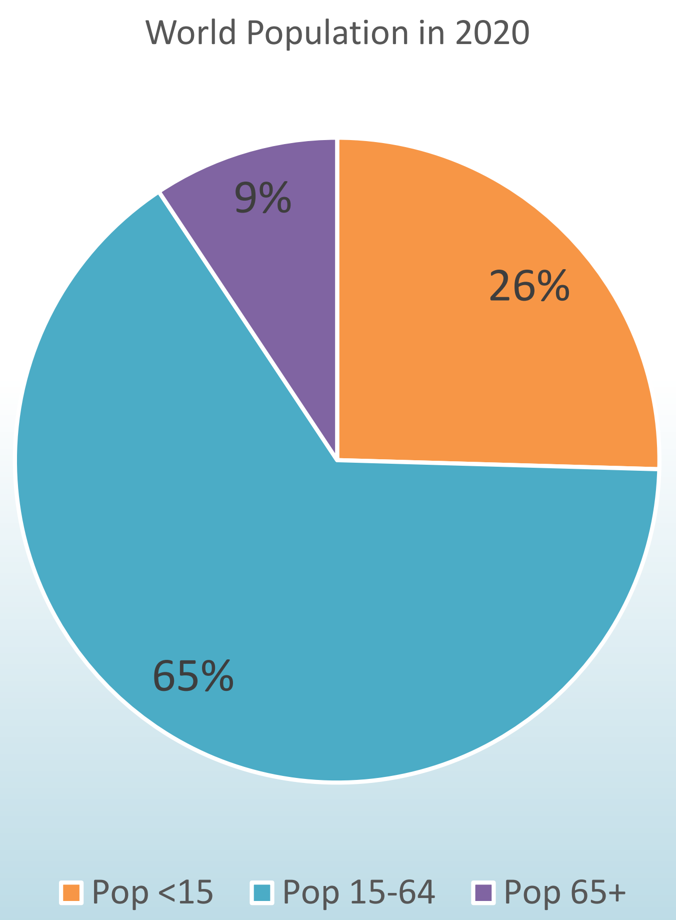


Government implicitly guarantees

Partially Funded Pay as You Go

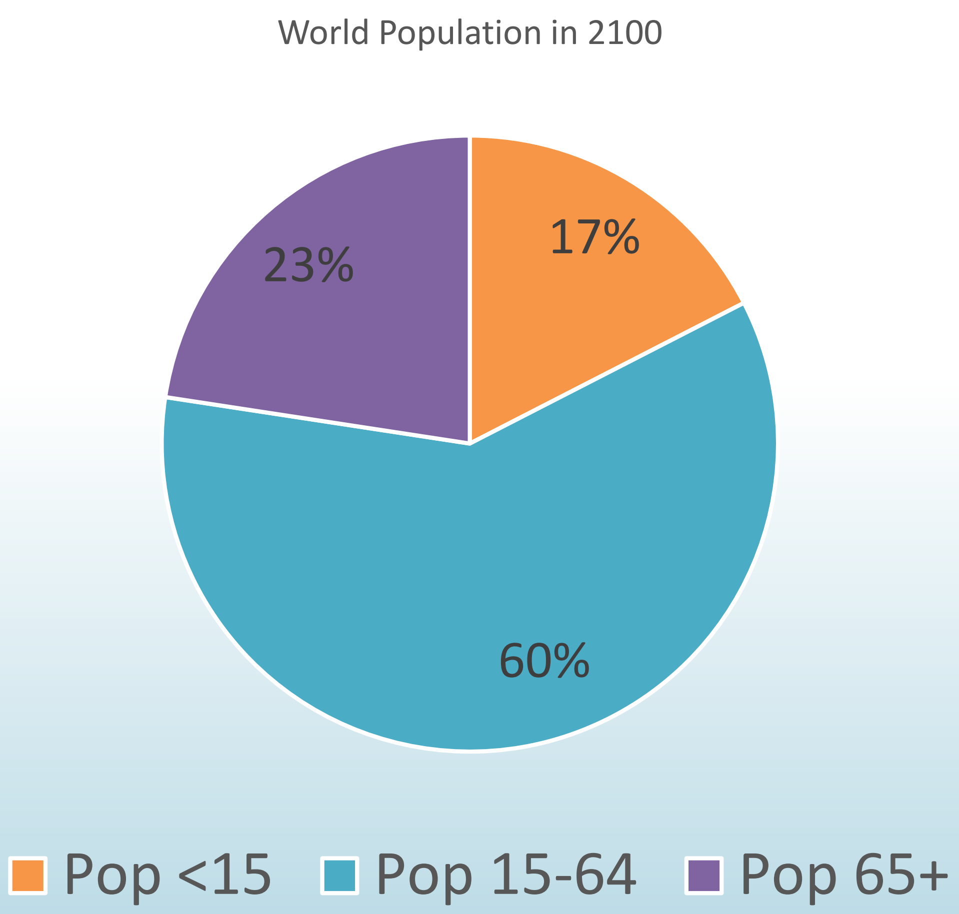


Pay as You Go and Demographics



- 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?*

Pay as You Go and Demographics 2

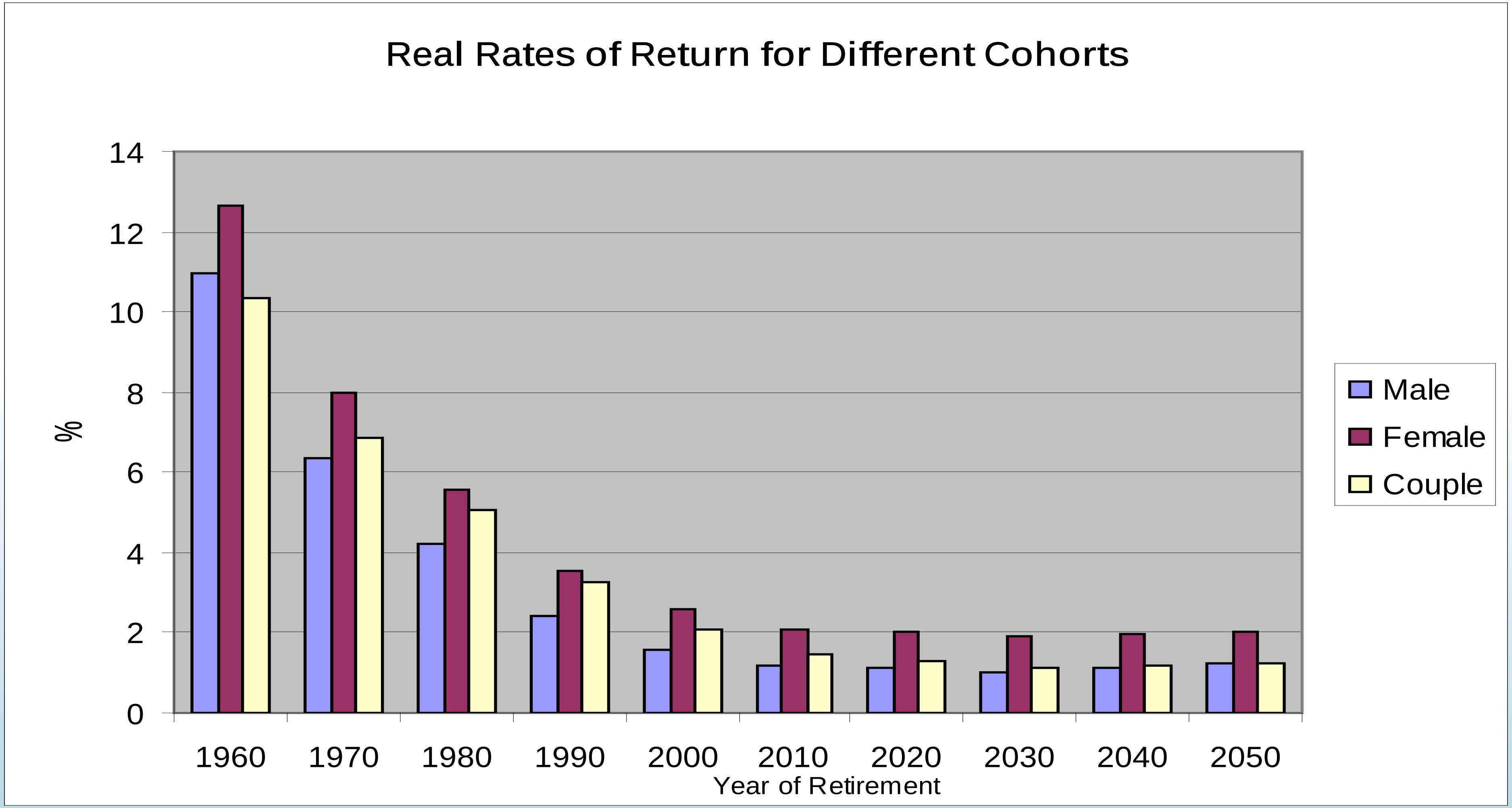


- In 2100 if we still want to pay pensioners 100% of average wage,
- Only 2.6 workers per pensioner
- Contribution rate has to rise to 38% of average wage
- Not sustainable – younger cohorts systematically pay more to get the same pension

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)

US Example


Real Rates of Return for Different Cohorts
14
12
10
8
6
4
2
0
%
1960
1970
1980
1990
2000
2010
2020
2030
2040
2050
Year of Retirement
Male
Female
Couple

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