THE INVERTING PYRAMID:
DEMOGRAPHIC CHALLENGES TO THE PENSION SYSTEMS IN EUROPE AND CENTRAL ASIA

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IMPORTANT ACHIEVEMENT OF PROVIDING OLD AGE SECURITY

- Over last century, increasing number of workers insured against risks of old age, disability, and loss of a breadwinner
- Insured workers and their employers pay a percentage of wage as contribution
- When each new group of workers joins, contribution revenue goes up, but initially since no one from the new group is eligible for benefits, no additional expenditures occur
- Over time as the workers who have paid become eligible for benefits, expenditures increase
Maturation of Pension Schemes Throughout Europe

Established around 1900s >
- Industrial workers
  - Maturity expected in 1960

Since 1930s >
- Commerce, civil servants, salaried employees
  - Extended to 1990

Since 1950s - >
- Farmers, domestic workers, self-employed
  - Extended to 2010

Since 1960s (earlier in ECA)
- Increased female LFP rate
  - Extended to 2020

Since 1970s - >
- Baby boomers
  - Extended to 2030

Since 1990s in ECA - >
- Drop in total and formal LFP rate
  - No Extension, Added stress 1990-2030

Since 2010s - >
- Post-1990s babies enter LM
  - No Extension, Added stress 2010-2050
POLICY CHOICES CHANGED

1900
Pensions Designed to Supplement Other Income
• Provided at 70
• Limited to those who had lost working capacity
• Relatively small amount

1950
Pensions Supply All of a Pensioner’s Income
• Ages lowered
• Benefits increased
• Benefits extended to survivors

1970
Pensions Expected to Keep Up with Wage Growth of Working Age Population
• Wage indexation or more
Policy choices when flush with contribution revenues

Male Average Effective Retirement Age

Female Average Effective Retirement Age

- Austria
- Belgium
- Denmark
- France
- Germany
- Italy
- Netherlands
- Spain
- Sweden
- United Kingdom


Duration of Retirement Increased from Increasing Life Expectancy and Falling Effective Retirement Age

Average Effective Retirement Age Shown on Each Bar


Data Sources: OECD, Eurostat
**Elderly are Not In General More Poor Than Younger Cohorts**

The bar chart illustrates the ratio of consumption of households with pensioners to those without. The data is presented for various countries and shows the percentage of consumption for households with individuals aged 65+ and 80+. The chart indicates that, in general, the consumption ratios for pensioner households are not significantly higher compared to non-pensioner households across the regions shown.
Now Europe Is Aging

Percentage of Population over the Age of 65

- Luxembourg
- France
- Belgium
- Cyprus
- Malta
- Slovenia
- Greece
- Switzerland
- Spain
- Italy
- Iceland
- Ireland
- United Kingdom
- Norway
- Denmark
- Sweden
- Finland
- Netherlands
- Austria
- Germany
- Portugal
- Armenia
- Russian Federation
- Republic of Moldova
- Belarus
- Latvia
- Estonia
- Albania
- Hungary
- Lithuania
- Latvia
- Greece
- Slovakia
- Poland
- Czech Republic
- Croatia
- Romania
- Bulgaria
- Montenegro
- Ukraine
- Serbia
- FYR Macedonia
- Bosnia & Herzegovina
- Tajikistan
- Kyrgyzstan
- Turkmenistan
- Kazakhstan
- Uzbekistan
- Azerbaijan
- Turkey

Legend:
- HIGS
- HIMS
- LSTC
- HSTC
- YC

- 2010
- 2050
But more troubling is the projected decline in working age population.

![Projected Pension System Deficits in Average CE Country](chart.png)
Faced with the demographic onslaught, Europe has undertaken lots of parametric pension reform.

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![Bar chart showing various pension reforms across different income groups and countries.](chart.jpg)

- **Increase in Retirement Age**
- **Years of Service Reforms**
- **Increase in Contribution Rate**
- **Decrease in Contribution Rate**
- **Indexation Reforms**
- **Extension of Averaging Period**
- **Changes to Benefit rate**

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- High Income Generous Spenders
- High Income Moderate Spenders
- Lower Spending Transition Countries
- High Spending Transition Countries
- Young countries
Adopted a smorgasbord of structural reforms

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<th>Notional Accounts</th>
<th>Funded Defined Contribution</th>
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No Single Dominant Paradigm Has Emerged

- Pension systems have two main objectives:
  - Poverty alleviation among the elderly
  - Replacing the income retirees used to earn so that they don’t face a sharp drop in consumption ability

- So far, pension systems in the region have more or less done both – not so in other regions

- Country interest in ECA has been toward income replacement
  - Strengthening links between contributions and benefits

- Will this be affordable in the future?
**Impact of Reforms - Retirement Ages Went Up, But So Did Life Expectancy – Duration of Retirement Did Not Change Much**

![Bar chart showing changes in effective retirement age and life expectancy at effective retirement age across different countries.](chart.png)

- **High Income Generous Spenders**: Switzerland, Italy, Greece, Cyprus, France, Spain, Malta, Slovenia, Belgium, Norway, Denmark, Finland, United Kingdom, Ireland, Portugal, Germany, Austria, Sweden, and Netherlands.
- **High Income Moderate Spenders**: Iceland, Croatia, Latvia, Estonia, Hungary, and Slovakia.
- **Lower Spending Transition Countries**: Czech Republic, Lithuania, Poland, Bulgaria, and Romania.

- **Change in effective retirement age**
- **Change in life expectancy at effective retirement age**
LIFE EXPECTANCY AT RETIREMENT REMAINS WELL OVER 15 YEARS.

**male life expectancy at exit age**

**female life expectancy at exit age**
PERSISTENCE OF EARLY RETIREMENT

Share of Old Age Beneficiaries Below the Age of 65

<table>
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<tr>
<th>Country</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
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<td>Turkey</td>
<td>20%</td>
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LSTC | HSTC | YC
NO EFFECTIVE DECLINE IN GENEROSITY (2001-2008)

Growth in Pension Spending Per Elderly Person Compared to Growth of GDP per Capita
In almost every country pension spending is projected to grow as share of GDP
AND COVERAGE OF THE ELDERLY IS EXPECTED TO FALL – MORE SPENDING NEEDED TO PREVENT OLD AGE POVERTY

Share of Elderly Receiving Benefits in 2010 and Projected to Receive Benefits in 2050
WHAT ARE POSSIBLE SOLUTIONS?

- Increase labor force
  - Fertility increases – too little, too late
  - Increase labor force participation rates in prime ages
  - Increase coverage – increases fiscal problem in future
  - Increase productivity – typically reflected in wages, which affect benefits
  - Immigration
  - Longer work life

- Use other fiscal resources
- Use savings to complement public benefits during retirement
INCREASE LABOR FORCE PARTICIPATION – NOT MUCH ROOM IN PRIME WORKING AGES

ECA circa 2009, men

ECA circa 2009, women
POTENTIAL FOR “ACTIVE AGING” IS HUGE IN ECA REGION

Potential labor force gain among the population age 45-64

[Bar chart showing labor force gain among the population age 45-64 in various countries, with countries listed along the x-axis and percentage gain along the y-axis.]
Room For Using Other Fiscal Resources Is Limited

Taxes Already High

- social security contributions
- other taxes
- taxes on goods and services
- income taxes

Percent of GDP

HIGS  LSTC  HSTC  YC

Slovenia  Armenia  Albania  Russia  Georgia  Lithuania  Romania  Estonia  Latvia  Slovakia  Bulgaria  Moldova  Poland  Croatia  Czech Republic  Belarus  Hungary  Macedonia  Ukraine  Montenegro  Bosnia & Herzegovina  Serbia  Azerbaijan  Tajikistan  Kosovo  Kyrgyz Republic  Kazakhstan  Turkey
Savings could help supplement public benefits, but limited saving actually taking place

Voluntary and Mandatory Pension Savings in 2012

% of GDP

III Pillar (Voluntary) II Pillar (Mandatory)
Take A Simpler Approach To Pension Design and Explain It Well

- What can we afford to spend on pensions as a percentage of GDP?
  - What do we spend now?
  - Do we see room realistically for increasing revenues?
- What are our expected future needs to cover old age and disability support?
  - How much is spending we have to do and how much is spending we would like to do, but can painfully reduce if absolutely necessary?
- How do we reconcile the two?
What Do We Spend Now?

2010 – average pension spending 9.5% of GDP
But this spending is not necessarily well prioritized

- Pensions provided and withdrawal from the labor force well below the age of 65
  - Impact both on pension spending and contribution revenues, but also on economic growth
- Pension levels unsustainably high in some cases
- Survivor benefits sometimes encourage women not to participate in the labor market
  - Affects contribution revenues and economic growth
- Spending does not include spending on noncontributory benefits required to prevent all elderly from poverty
  - Fewer future elderly expected to be eligible to collect pensions
What Kind of Priorities Could Societies Set?

1. No person over the retirement age (65) should fall below the poverty line (20% of GDP per capita)
2. Disabled individuals – those unable to provide for themselves - should be protected, regardless of age
3. Those who contribute to the pension system should receive a higher pension than the basic poverty alleviating one
4. Spouses and families of those who contributed should receive some additional supplement upon the death of the contributor to help support the family
An Example of Prioritizing Pension Spending and Costing It Out If Effective Retirement Age Is 65 With Prime Age Labor Force Participation Until Age 64

<table>
<thead>
<tr>
<th>Country</th>
<th>Basic to All Old</th>
<th>Disabled</th>
<th>Top-up to Covered</th>
<th>Survivor</th>
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Pension spending, percent GDP

| Region           | France | Slovenia | Greece | Belgium | Cyprus | Italy | Spain | Malta | Portugal | Ireland | Norway | United Kingdom | Denmark | Finland | Iceland | Germany | Netherlands | Austria | Albania | Georgia | Russian Federation | Moldova | Armenia | Belarus | Lithuania | Bulgaria | Hungary | Estonia | Czech Republic | Latvia | Slovakia | Poland | Croatia | FBH | Republika Srpska | Serbia | Tajikistan | Azerbaijan | Kyrgyz Republic | Kosovo | Turkey |
|------------------|--------|----------|--------|---------|--------|-------|-------|-------|----------|---------|--------|-----------------|---------|---------|---------|---------|-------------|---------|---------|---------|-------------|---------|---------|---------|-----------|---------|---------|---------|-----------|---------|---------|---------|------------|---------|---------|---------|------------|---------|---------|
SAME PRIORITIES AS BEFORE BUT WITH RETIREMENT AGE WHERE LIFE EXPECTANCY EQUALS 15 YEARS AND PRIME AGE LABOR FORCE PARTICIPATION UNTIL THEN
How to Get From Here To There

- How do we equitably divide the change across generations?
- What do these decisions imply for pension system design?
- What do these decisions imply for the financing of old age security?
- Accompanying changes:
  - Changes in labor markets that encourage full labor force participation until retirement and discourage earlier withdrawal from labor force
  - Encouraging retirement savings to provide more generous benefits than publicly provided
**Bottom Line:** It is possible to provide old age security even with challenging demographics!

- Will need some major changes in expectations
- Future may be more like past
  - Pensions given when people are too old to work
  - Pensions guarantee poverty prevention
  - May provide limited earnings replacement
  - Savings required for enhanced benefits