Rebuilding Retirement Systems
Post-COVID-19

Proverbial “3-legged Stool” of Retirement Security

• Public Social Security:
  – Often PAYGO (tax financed)
  – Insurance element: get more if pay in more
  – Welfare element: redistributive

• Employer-sponsored Pensions
  – Defined Benefit (DB)
  – Defined Contribution (DC)
  – Hybrid

• Private Savings
  – Home
  – Financial assets
Two Main Pension Types:

- **Defined Benefit (DB):**
  - Benefit formula promised
  - e.g. $B_t = 2\% \times (\text{Final Pay}) \times (\text{Years Service})$
  - Ex: Brazil, US, most European national systems

- **Defined Contribution (DC):**
  - Contribution amount specified:
  - e.g. $C_t = 6\% \times \text{current pay}$
  - Ex: Chile, Mexico, US 401(k) plans

→ Hybrid (Cash Balance) combine both…

Why fund a pension promise?

**Pros**
- May reduce uncertainty re future contributions
- Portfolio diversification
- Permits portability
- May deepen K mkt & enhance growth

**Cons**
- Requires start-up group to ‘pay twice’ – support retirees and save for themselves
- Admin costs may be higher (maybe not)
- Governance of funds
Individual Accounts

<table>
<thead>
<tr>
<th>Funded</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Govt PAYGO:</td>
<td>Notional</td>
</tr>
<tr>
<td></td>
<td>US, most</td>
<td>accounts:</td>
</tr>
<tr>
<td></td>
<td>Europe</td>
<td>Latvia,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sweden</td>
</tr>
<tr>
<td></td>
<td>Corp. DB:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Germany</td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>Provident Funds:</td>
<td>Individual</td>
</tr>
<tr>
<td></td>
<td>Singapore, Malaysia</td>
<td>Accounts: US</td>
</tr>
<tr>
<td></td>
<td>US corp./public DB (+/-)</td>
<td>401(k), Chile,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peru, Mexico,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Australia,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sweden</td>
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FULL Funding for DB and DC…

\[ \text{Assets} = \text{Liabilities} \]

DC full funding requires:
- Assets = Current Account Balance

DB full funding requires:
- Assets = EPV of Promised Benefits

→ Reporting and accounting rules play key role
Pre-COVID-19: Retirement Systems Not Healthy

- Social Security systems facing insolvency
- Private & public DB plans underfunded
- Low returns hurting DC plans
- Rising debt, falling saving

WEF: Underfunded pensions a global time bomb!

Retirement Savings Gaps, Pre-COVID-19

- Black bars reflect how many years of assets retirees have to live on.
- Blue bar refers to life expectancy at retirement.
Melbourne Mercer Pension Sustainability Rankings, Pre-COVID-19

<table>
<thead>
<tr>
<th>Grade</th>
<th>Countries</th>
<th>Descriptors</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Netherlands, Denmark</td>
<td>Robust, good benefits, sustainable, good integrity</td>
</tr>
<tr>
<td>B+</td>
<td>Australia</td>
<td>Sound but some areas for improvement</td>
</tr>
<tr>
<td>B</td>
<td>Finland, Sweden, Norway, Singapore, NZ, Canada, Chile, Ireland, Switz., Germany</td>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>USA, UK, HK, Malaysia, France</td>
<td>Some good features but also major risks, maybe not sustainable</td>
</tr>
<tr>
<td>C</td>
<td>Peru, Colombia, Poland, Saudi, Brazil, Spain, Austria, S. Africa, Italy, Indonesia</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Korea, China, Japan, India, Mexico, Philippines, Turkey, Argentina, Thailand</td>
<td>Major weaknesses, sustainability in doubt</td>
</tr>
</tbody>
</table>

Preparedness for Healthcare Costs, Pre-COVID-19

Ranking Global Pandemic Preparedness

This pre-COVID-19 report found that no country was truly prepared to manage a pandemic.

Here’s how countries scored in terms of health security:

- Global Health Security Index Score
- Preparedness for Healthcare Costs
- Risk Assessment for Pandemic Impact
- Capacity to Respond to a Pandemic
- Economic Impact of a Pandemic

The report found that most countries had weaknesses in their preparedness for pandemics, with some countries showing a high risk of impact.

[Graphic representation of ranking data]
Real GDP Growth Outlook Poor

OECD warns of the serious risk of a second wave of cases

2020 Projected Change in Real GDP

Source: KPMG Economics, OECD, Haver Analytics

Low interest rates forecasted to continue

Federal Funds Rate Adjusted for Core Inflation
CBO projections

Low returns drive up saving to provide $1/yr of retirement payouts for 25 years

Each vintage reflects a target year for retirement.

Rapid Rollout: Social Insurance Programs
Launched/Extended, COVID-19

[Map showing countries with social protection responses]

16/11/2020 (ILO)
Types of Social Assistance Programs
Adopted/Extended, Post COVID-19


Changes in Self-Employment over Time,
Pre-COVID-19

Index of self-employment as a proportion of total employment (2003 = 100)

Source: RF analysis of OECD Self-employment rate indicator.
Work From Home? Some can, others cannot.

Labor Markets May Take Longer to Recover Where Many Rely on Public Transportation
Job Benefits In the EU & U.S.

How Much to Save for 50% RR?

<table>
<thead>
<tr>
<th>Save for:</th>
<th>$r=0.03$</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 years</td>
<td>27.5%</td>
</tr>
<tr>
<td>30 years</td>
<td>16.5</td>
</tr>
<tr>
<td>40 years</td>
<td>11.11</td>
</tr>
</tbody>
</table>

Poterba 2015 NABE
And Longevity Still Rising

The world’s centenarian population projected to grow rapidly
Number of persons ages 100 and older

PEW RESEARCH CENTER

Retirement Ages must Rise
Many Have Substantial Capacity to Work

WORK CAPACITY IN OLD AGE
Additional years of work from ages 55 to 69 if men in 2010 worked as much as men of same mortality risk in 1977

- U.K.
- France
- Italy
- Spain
- Germany
- Belgium
- Canada
- Denmark
- U.S.
- Japan
- Netherlands
- Sweden

Source: Authors' calculations using data from the Social Security Programs and Retirement Around the World project

Pandemic setting poor countries back decades

Rising levels of poverty
The crisis could push tens of millions of people back into poverty.

Note: Poverty line defined at 2011 PPP $1.9/day. Scenarios are based on contraction in per capita household consumption. Figures exclude Afghanistan, Cambodia, Eritrea, and Somalia.
IMF fears for the least educated

The Way Ahead:

- **Who** should manage the risks facing the elderly?
  - Individuals, families, employers, govt?
  - Funded vs pay as you go?
  - Pension vs health care?

- **How much** of GDP should go to the elderly and who should pay for it?

- How do we get to political consensus?
To better manage retirement risk:

- Reinvent retirement!
  - Build human capital and work longer;
  - Invest in financial literacy;
  - Save more, invest smarter, diversify better;
  - Insure against longevity;
  - Make home equity accessible;
  - Restructure public/private pensions.

- New infrastructure needed to:
  prepare/mitigate; better educate; build better financial products and markets for an aging world.

International Pension Research Association (IPRA) www.iprassn.org

- IPRA is a new international organization seeking to improve the quality and impact of research on pensions and related aging issues, to optimize social and economic outcomes for an aging world.

- IPRA’s vision is to be the global voice of research in the fields of pensions, aging, and retirement.

- IPRA’s values are to promote breadth, originality, and challenging thinking, so as to foster respectful collaboration and engage stakeholders, and, by example, to support integrity and good governance.

- Join now online!
Thank you!

For more information:
Wharton’s Pension Research Council:
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http://www.pensionresearchcouncil.org/publications/books.php