



## Pensions Diagnostic Assessment and Conceptual Framework

**Pensions Core Course**

**Mark Dorfman**

**The World Bank**

**March 2, 2014**



## Organization

1. Diagnostic assessment process
2. Conceptual framework – design typology



# Diagnostic Assessment



## Diagnostic Assessment (1) – Evaluation Process & Criteria

### Initial Conditions & Inherited System

- Demand - Need for consumption smoothing & elderly poverty protection
- Supply - mandatory & voluntary pension & social security schemes
- Family & community support



### Enabling environment (Motivating reform, framing & constraining reform options)

- Existing design
- Demographic profile
- Macro-economic environment
- Institutional Capacity
- Financial market status
- Political economy



### Reform objectives

- Primary: improving **coverage, adequacy, & sustainability** for the long-term
- Secondary: improving labor markets, macro/fiscal position, & contributing to financial market development.

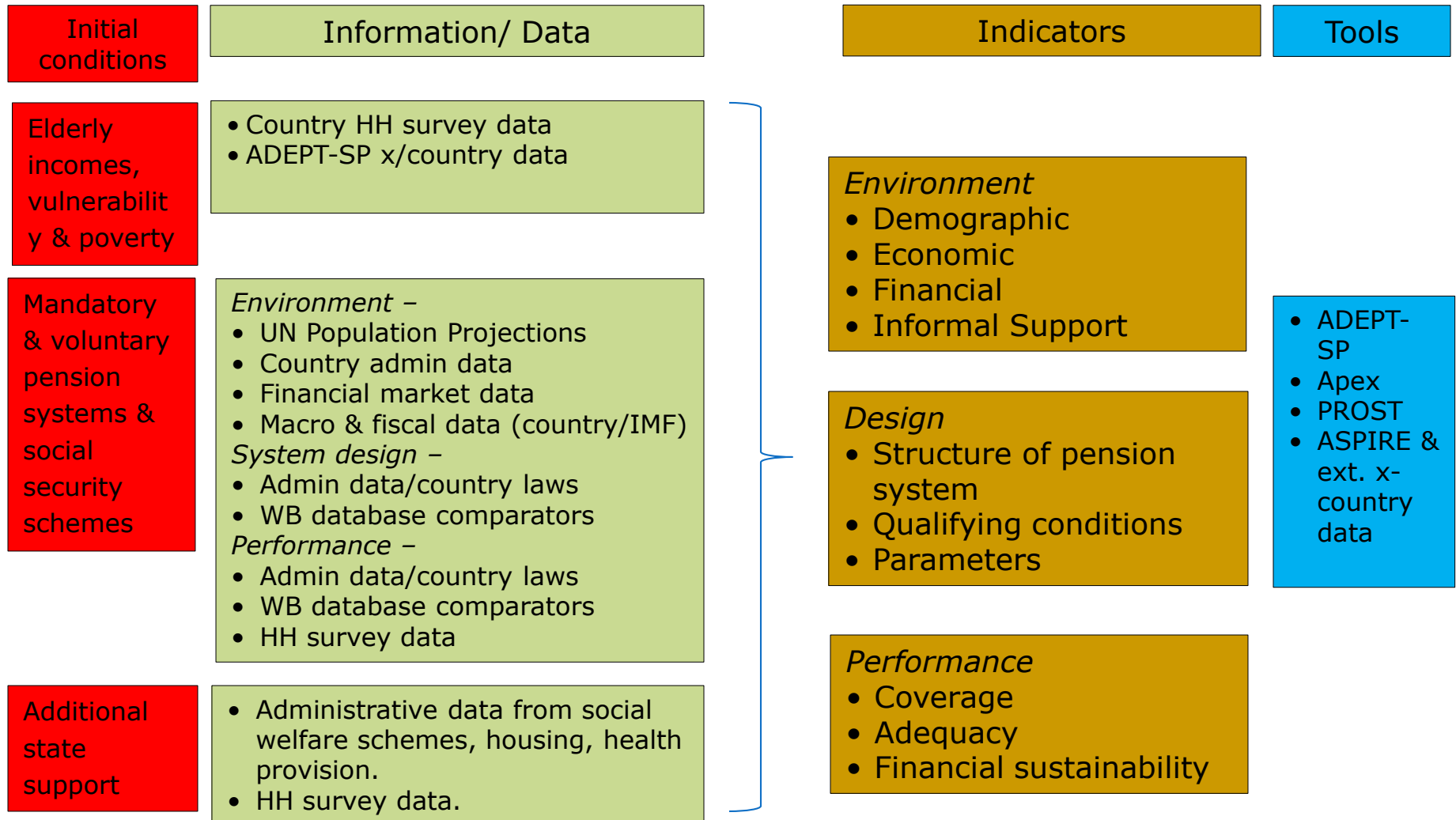


### Reform Design & Implementation Options

- Design reforms -introduce new schemes, parametric & structural reforms
- Governance, Institutional and regulatory reforms
- Strengthening institutions & implementation



## Diagnostic Assessment (2) – Data, Indicators and Tools





## Diagnostic Assessment (3) Indicators

### Indicators

#### Environment

##### *Demographic*

- Old-age & system dependency ratios (historical & projected)
- Life expectancy at retirement age (projected)
- Fertility (historical & projected)

##### *Economic*

- Labor force participation
- Public & Publicly guaranteed debt (% GDP)

##### *Financial & Institutional*

- Financial sector development indicators

##### *Government effectiveness*

- Informal support
- Co-residence rates

#### Design

##### *Structure*

- Pillars (benefit design, financing, institutional structure)
- Civil service (integrated vs. separate)

##### *Qualifying conditions*

- Eligibility ages
- Vesting

##### *Parameters*

- Pension contribution rates + caps
- Social insurance contribution rates
- Target replacement rates
- Target pension wealth

#### Performance Indicators

##### *Coverage*

- Contributors/labor force or working-age population
- Recipients (% total & % age 65+)

##### *Adequacy*

- Replacement rates
- Pension income/elderly expenditures
- Elderly incomes
- Elderly poverty (before & after benefits)

##### *Sustainability*

- Pension spending (% GDP)
- PV of financing gap (% GDP)
- PV spending/PV contributions (%)



## Diagnostic Assessment – 4. Tools

### Tools

#### ADEPT-SP

- Elderly welfare
- Elderly poverty
- Co-residence
- Elderly income generation
- Comparisons of welfare, poverty across elderly, non-elderly & household types.

#### PROST

- **Baseline.** Long-term projections of *financing gap* for existing schemes + *replacement rates* for current and future retirees
- **Reform scenarios.** Long-term projections *financing gap* + *replacement rates* for parametric and/or structural reforms
- Outputs to simulate ***other instruments*** (social pensions, voluntary savings)

#### APEX

- Evaluation of individual level benefits across instruments + for different income groups.
- Individual replacement rates
- Replacement of average wage
- Pension wealth

#### WB Database & External X-Country Data

Cross-country comparisons

- Demographics
- Coverage
- Adequacy
- Affordability
- Sustainability

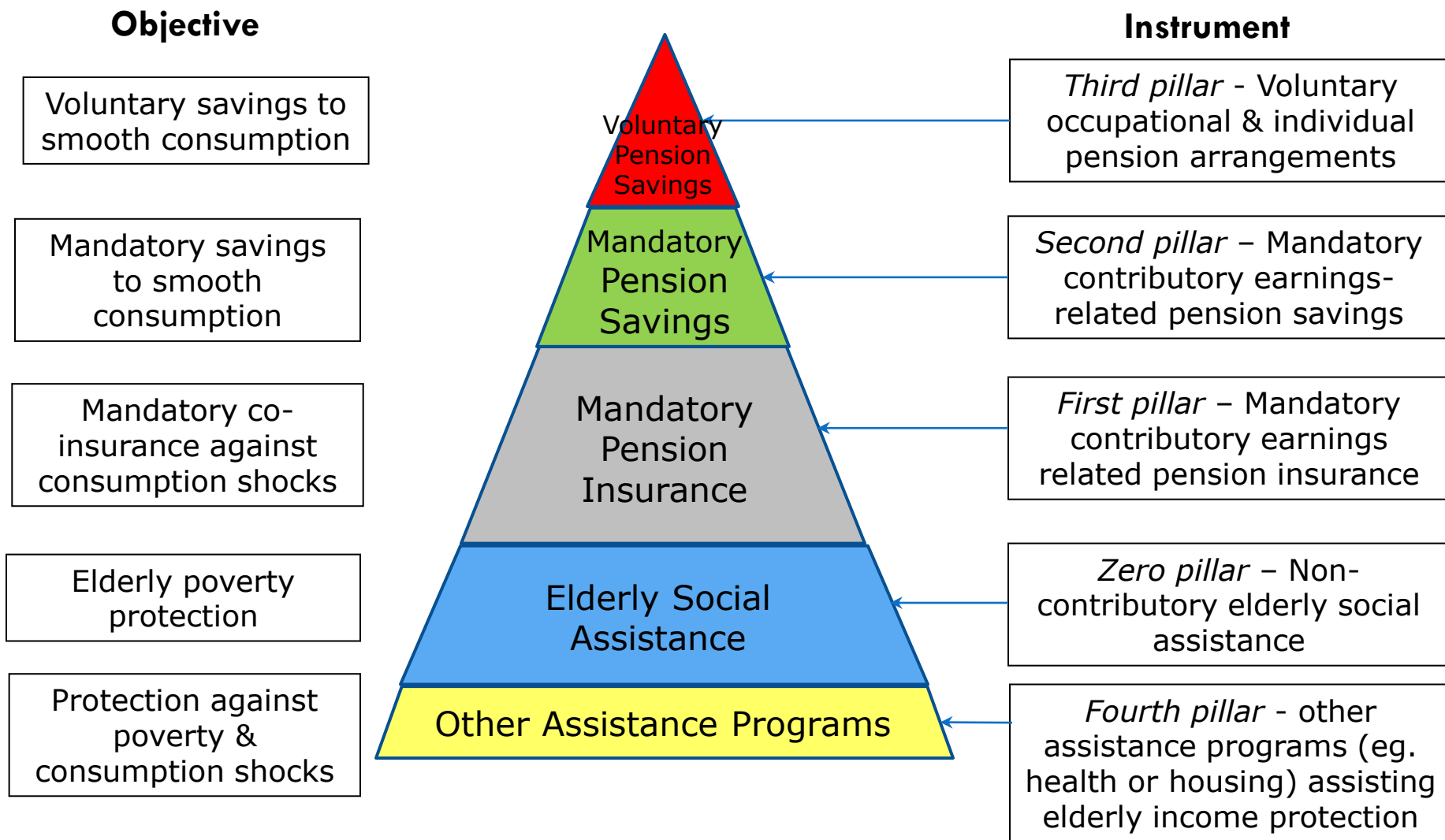


# Conceptual Framework – Design Typology



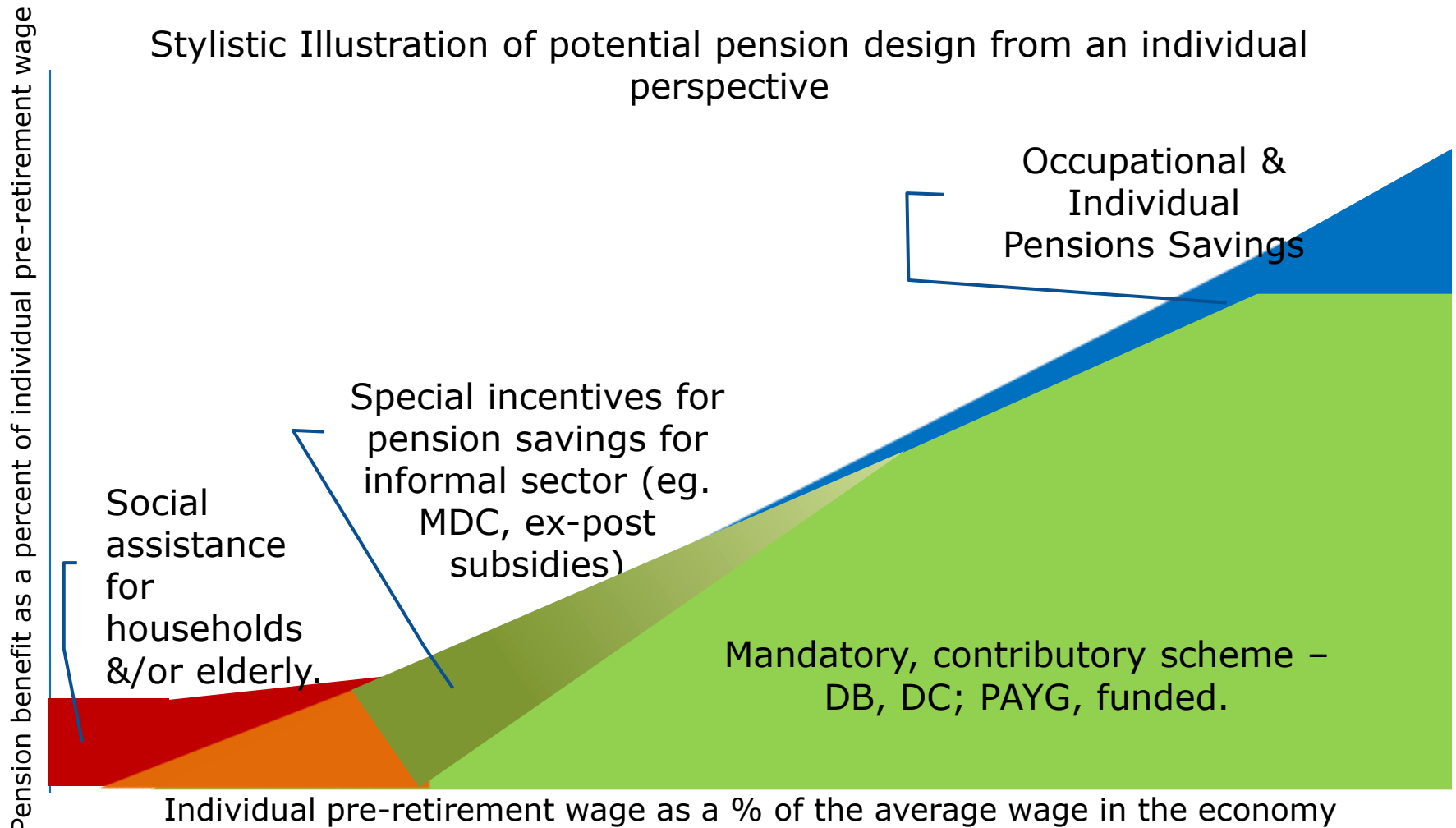


## Design typology



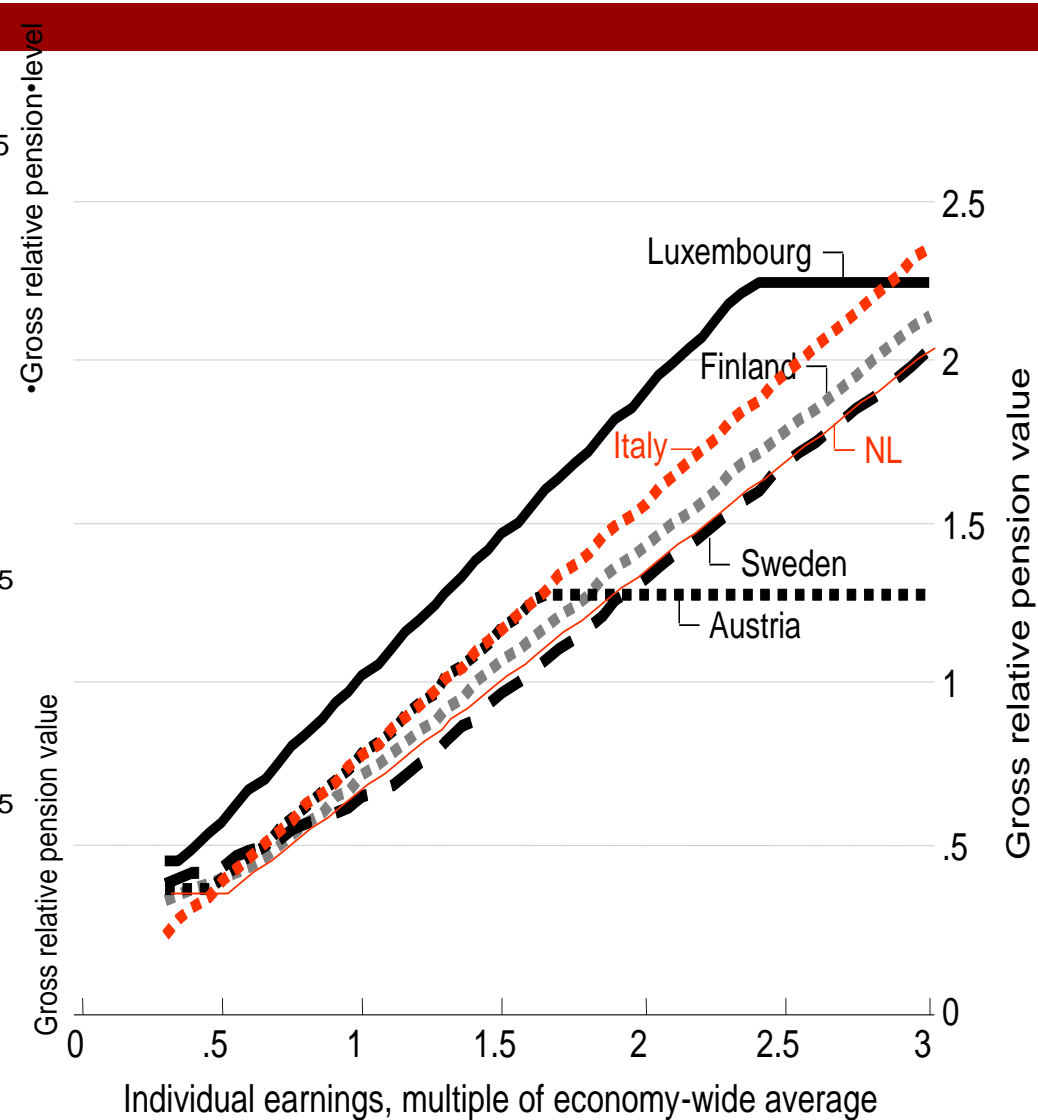
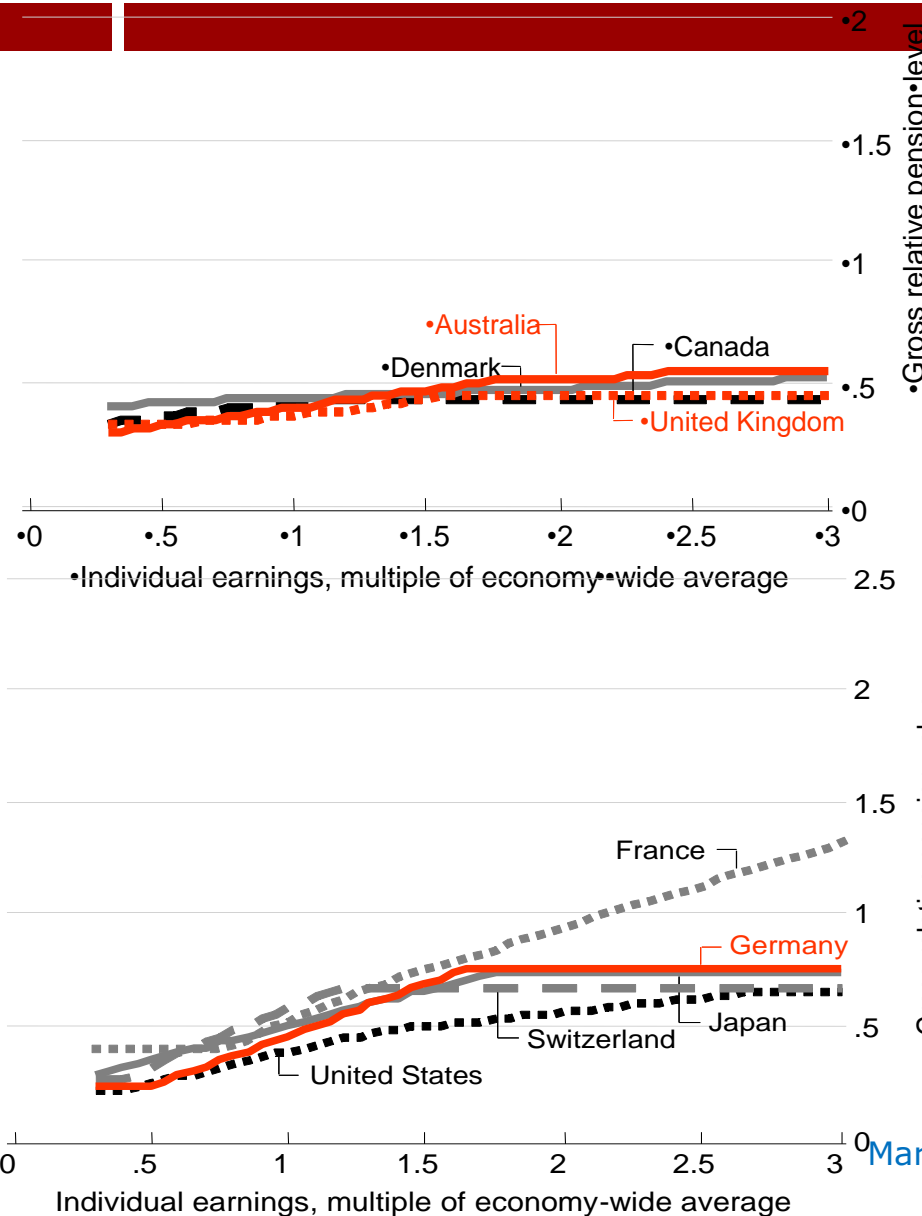


# Stylistic Illustration of Possible Multi-pillar design





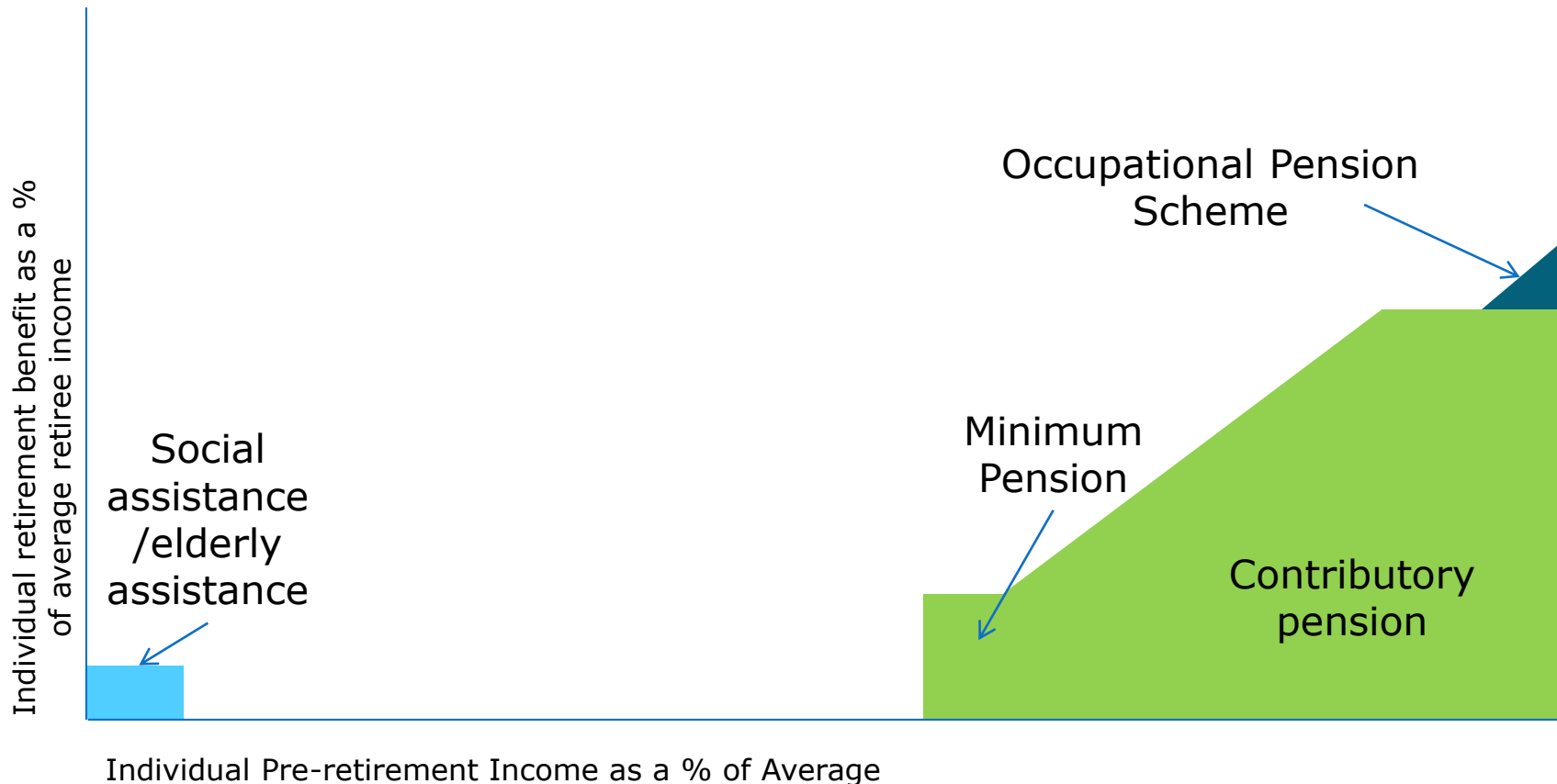
# Redistribution in Pensions – OECD Illustrations





# The coverage challenge

Stylistic Illustration of current benefits from an individual perspective





## A. Design options – Non-Contributory Schemes

### **Instrument Types**

#### *1. Elderly social assistance*

- Universal
- Pensions-tested
- Resource/means tested
- Subsidized minimum social insurance benefit

#### *2. Household social assistance*

### **Benefit Parameters**

Qualification criteria - eligibility  
age, means testing

Benefit level

Indexation

Clawback or other benefit  
adjustments

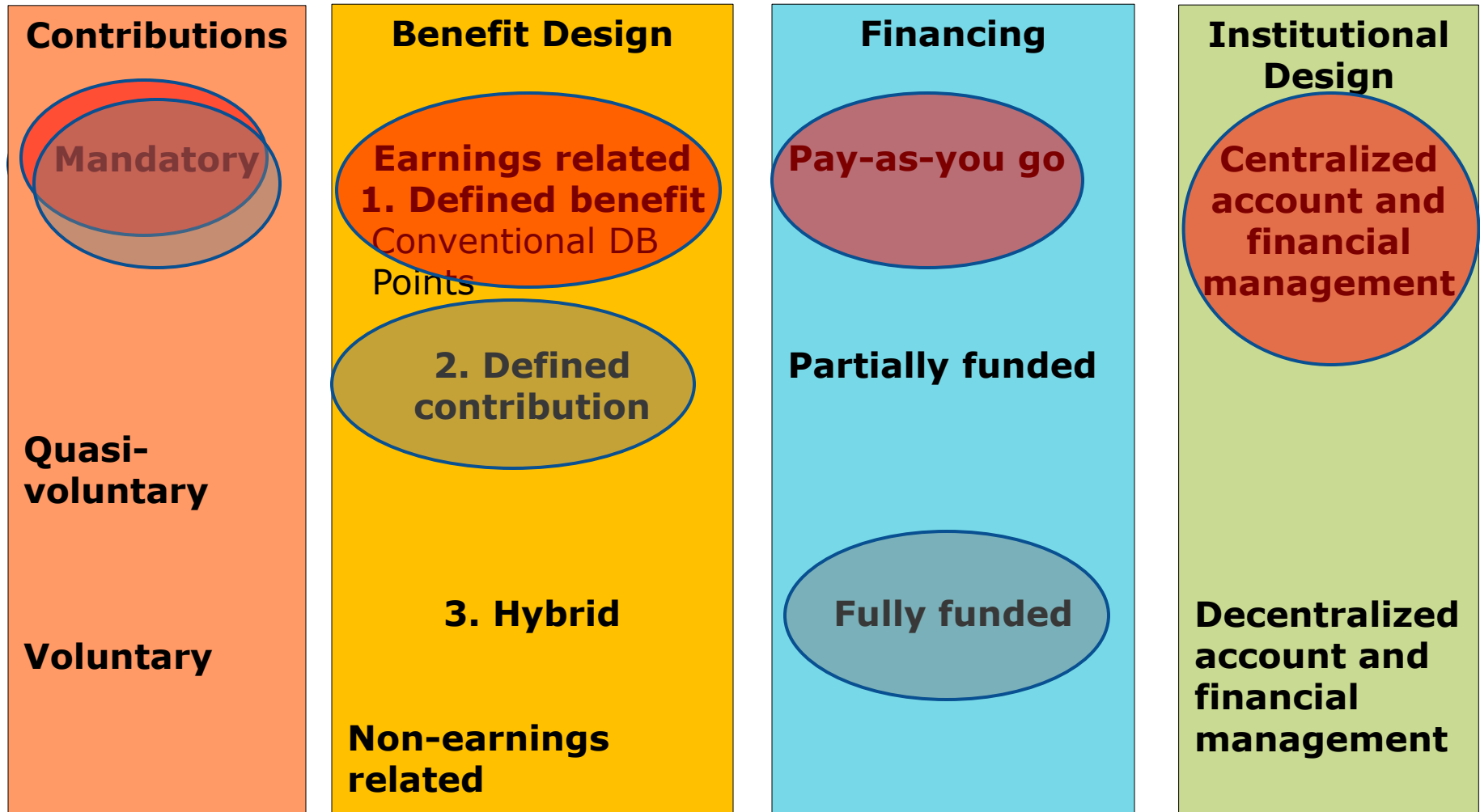


## A. Design considerations – non-contributory schemes

- Universal vs. targeted
- Integration w/contributory schemes – minimum benefit
- Elderly assistance vs. household social assistance
- Targeting methods – weighing targeting effectiveness
- Benefit level considerations
  - Reconciling coverage vs. adequacy & fiscal envelope
  - Fiscal affordability w/aging.
- Incentive effects of different designs & benefit levels



## B. Design options – Earnings-related Contributory Schemes





## B. Weighting the Advantages & Disadvantages of PAYG DB & FDC Schemes

### PAYG Defined Benefit Schemes

| Advantages  | Disadvantages  |
|---|--|
| Simplicity of design  |  |
| Limited information and infrastructure requirements   | Parameters need to be adjusted over time to respond to and anticipate demographic changes. Changes in parameters can result in an effective partial default in pension promises. |
| Longevity risks covered by plan sponsor; indexation risks may be covered in benefit formula                                       | Unsustainable benefit promises invite both partial default in pension promises and severe fiscal burdens.  |
| Scaled premium financing enables more generous benefits for the current generation than would be the case for an immature scheme. | Poorly designed DB schemes have weak incentives for working longer and can inequitably provide somewhat regressive benefits for higher income workers                            |
| Can compensate for risks of individual myopia, inappropriate planning, and financial market risks.                                | Central management can contribute to weak disclosure and participant accountability, poor service standards and weak investment returns.   |





## B. Weighing the Advantages and Disadvantages of PAYG DB vs FDC Schemes (2)

### Funded Defined Contribution Schemes

| Advantages   | Disadvantages   |
|--|---|
| Address population aging (compared to PAYG-DB)   | Transitioning requires the payment of both current benefits and contributions on behalf of current workers resulting in a financing challenge for “transition costs”                              |
| Can improve benefits for retirees if returns after fees greater than wage growth.                        | Administrative costs of individual choice materially affect pension benefits.   |
| Can insulate members from political risk - ensure that pension benefits are fully delivered              | Requirements for sufficient enabling conditions - fiscal conditions; depth, breadth and contestability of financial markets; regulation and supervision of financial markets & pension providers. |
| Eliminates a contingent fiscal obligation to make good on pension claims                                 | Significant institutional requirements including information systems, regulation and supervision.   |
| Strong incentives for work and contributions as benefits linked to contributions and life expectancy.    |   |
| Incentives for strong investment and account management through consumer choice & regulation.            | Subjects participants to financial market volatility and risk yet under a mandatory regime. Regulators generally need to constrain the investment choices of members                              |
| Can assist in achieving secondary objectives of labor market efficiency and financial market development |   |



## B. Weighting the Advantages & Disadvantages of PAYG DB & FDC Schemes (3)

Hybrid approach of 1<sup>st</sup> & 2<sup>nd</sup> pillars can diversify risks to individuals.

Well designed PAYG DB schemes & NDC schemes can

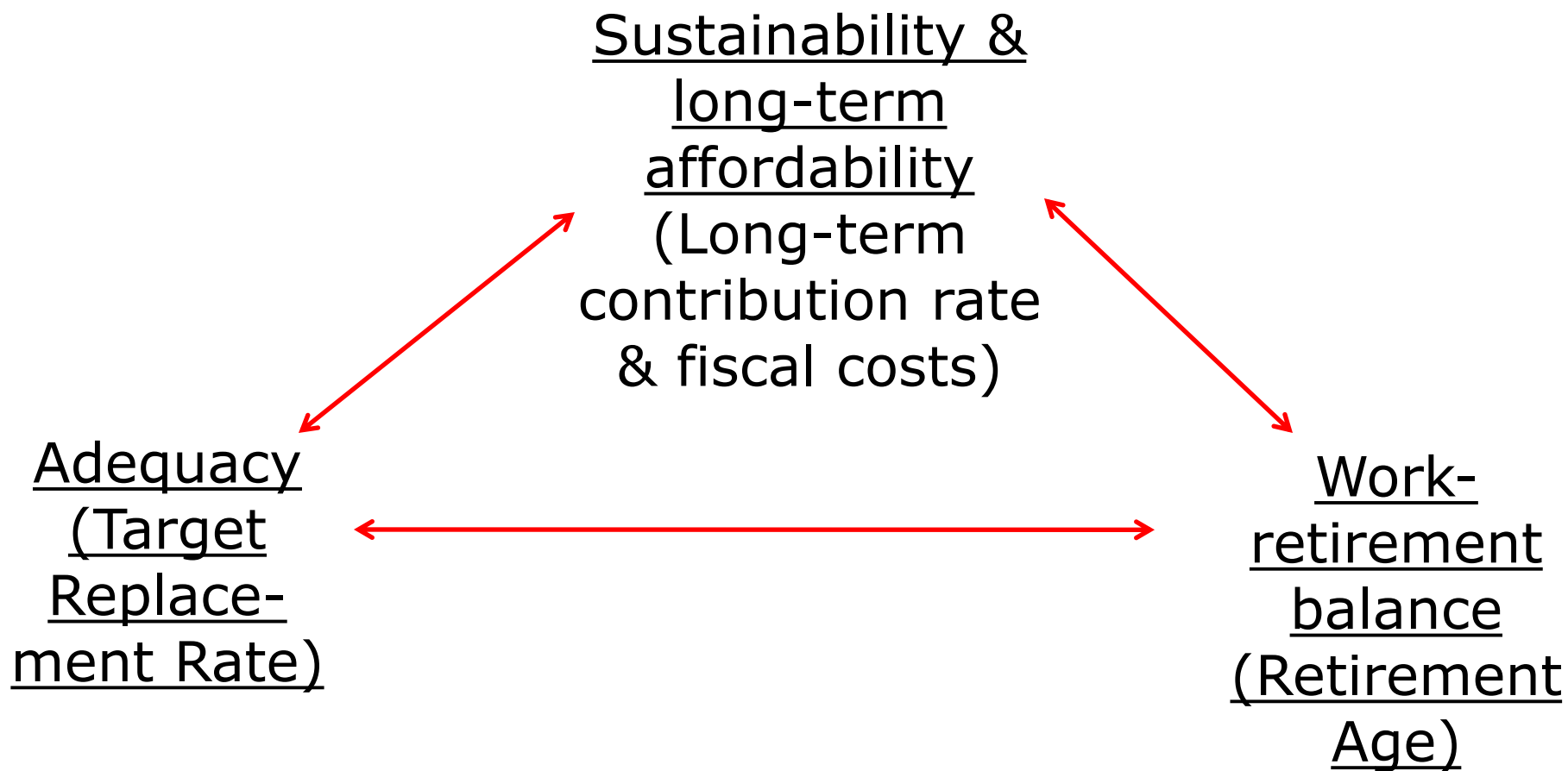
- align contributions & benefits
- ensure appropriate indexation
- ensure long-term sustainability
- establish automatic adjustment mechanisms.

Yet PAYG schemes still

- Require substantial buffer funds & pre-funding (aging + ensure payment in the face of shocks)
- Face challenges of adequacy in the face of aging



## Weighing the Tradeoffs in Pension Design





## C. Voluntary Occupational & Individual Schemes – Policy Considerations

*Occupational schemes* - important for formal sector employees –

- compensate design rigidities of other schemes
- enables deferred compensation which supports investments in human capital

*Individual schemes* - important role for middle and upper income self-employed

- Both entail financial and agency risks resulting from private pension management
- Strong regulation essential
- Tax incentives requires income limitations.



## C. Occupational Schemes for Civil Servants – Policy Considerations

- **Harmonization & integration** with national schemes for labor mobility - portability losses and labor market effects
- **Fiscal cost.** Often substantial deferred compensation with a high *fiscal cost* the expense of other critical fiscal priorities. *Consider in context of compensation review.*
- **Final pay schemes** - weak incentives & higher effective income replacement for the highest paid workers.
- **Weak/discretionary indexation** leaves retirees insufficiently protected.
- **Technical issues** – commutation, annuity factors, wage base.



## D. Institutional Issues

|   | Administrative Infrastructure and Institutional Arrangements   | Governance and Accountability   | Legal and Regulatory   | Supervision  |
|---|--|---|--|--|
| <b>Non-contributory pensions or old age assistance</b>        | <ul style="list-style-type: none"> <li>• Unique identification</li> <li>• Means-testing infrastructure</li> <li>• Application and eligibility certification</li> <li>• Record-keeping and data management</li> <li>• Disbursement mechanisms</li> </ul>                  | <ul style="list-style-type: none"> <li>• Rules, roles and controls.</li> <li>• Transparent disclosure</li> <li>• Complaint redress</li> </ul>   |  | <ul style="list-style-type: none"> <li>• External audit and evaluation</li> <li>• Periodic independent assessment</li> <li>• M&amp;E evaluation processes</li> </ul> |
| <b>1<sup>st</sup> Pillar Mandatory Defined-benefit scheme</b> | <ul style="list-style-type: none"> <li>• <b>Unique ID</b></li> <li>• <b>Record-keeping and data management</b></li> <li>• <b>Funds management infrastructure and governance</b></li> <li>• <b>Contribution and disbursement mechanisms + payment systems.</b></li> </ul> | Above<br>+ Governing body & policies for managing institutions  | Legal framework specifying the rights & resp. of contributors, beneficiaries, employers, agents, managers etc. | <ul style="list-style-type: none"> <li>• External oversight of managing institution useful.</li> <li>• External audit and accountability processes.</li> </ul>       |
| <b>2<sup>nd</sup> Pillar funded defined benefit scheme</b>    | Administrative systems + infrastructure for competitive individual choice of fund managers & custodians  | <ul style="list-style-type: none"> <li>• Governance policies &amp; oversight to address principle-agent issues</li> <li>• Accounting, audit and valuation infrastructure.</li> <li>• Depth, breadth and contestability for pension fund investments.</li> </ul> | “  | Competent, empowered & independent pension supervisory authority authorizing & supervising all necessary agents, instruments and processes.                          |



## E. Combining Multi-Pillar Design Options (1)

Multi-pillared pension systems - ***elements with varying risk characteristics.***

***Portfolio approach*** can accommodate the diversity of societal needs and economic characteristics. Multiple instruments can optimize desired individual and societal benefits while minimizing relative risks.

***Mix of instruments*** (& pillars) depends upon:

- Objectives (income replacement & poverty protection)
- Inherited policies and institutions
- Environmental conditions (demographic, fiscal, admin systems, financial markets)
- Policy choices who bears what risks



## E. Combining Multi-Pillar Design Options (2)

- Earnings-related 1<sup>st</sup> & 2<sup>nd</sup> pillar schemes generally only been effective for formal sector workers with wages or in countries with strong tax net coverage
- Occupational schemes (3<sup>rd</sup> pillars) generally cover established firms & often the least poorest workers
- Individual schemes (3<sup>rd</sup> pillars) considered for workers of all incomes (formal & informal) though often only cover workers with relatively high and/or stable incomes.
- Non-contributory schemes (Zero pillars) generally aim to assist at least the poorest elderly.





# Conclusions



## Conclusions

*Diagnostic assessment* – existing programs, reform needs & reform scenarios based on:

- Coverage
- Adequacy
- Sustainability

*Simulation and modeling tools* are employed to ensure an evidence base for policy evaluation including ADEPT, PROST and APEX; comparative data is also reviewed.

*Menu of mandatory and voluntary pensions savings and insurance instruments* - appropriate to its needs and enabling conditions.

*Elderly social assistance* – can address gaps in coverage but needs to be considered against other needy populations.