

復旦大學經濟學院  
SCHOOL OF ECONOMICS FUDAN UNIVERSITY

# Reforming China's Public Pension System: Coping Effectively with Aging, Urbanization and Globalization

*Jin FENG and Lixin HE*

*School of Economics, Fudan University*

# MAIN IDEAS

- **Achievements** of public pension system in China in the past 30 years: expanding coverage, strengthening the link between contributions and benefits, increasing fiscal support
- **Problems and foreseeable challenges** : an aging population, inequality in benefits ,high contribution rate and low investment return on pension funds
- **Future reforms**: to take into account not only population aging, but also the opportunities that come with urbanization and the requirements addressed by economic globalization

# BASICS OF THE CURRENT PENSION SYSTEM

## Four Pension Schemes:

### *Urban*

- Basic Old Age Insurance system (BOAI), 1951-
- Public Employee Pension (PEP), 1953-
- New Rural Pension Scheme (NRPS) , 2009-
- Urban Residents Pension Scheme (URPS) , 2011-

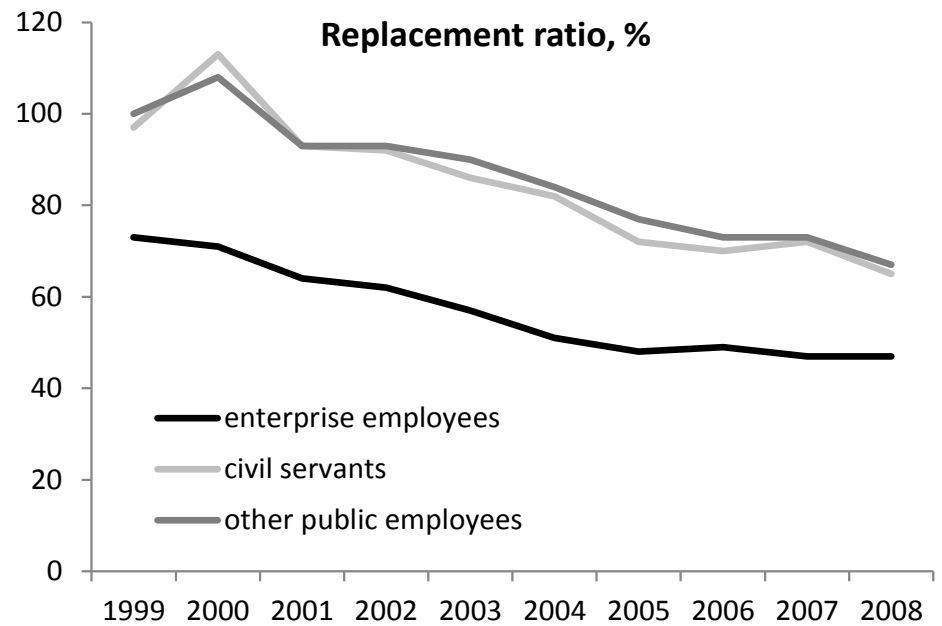
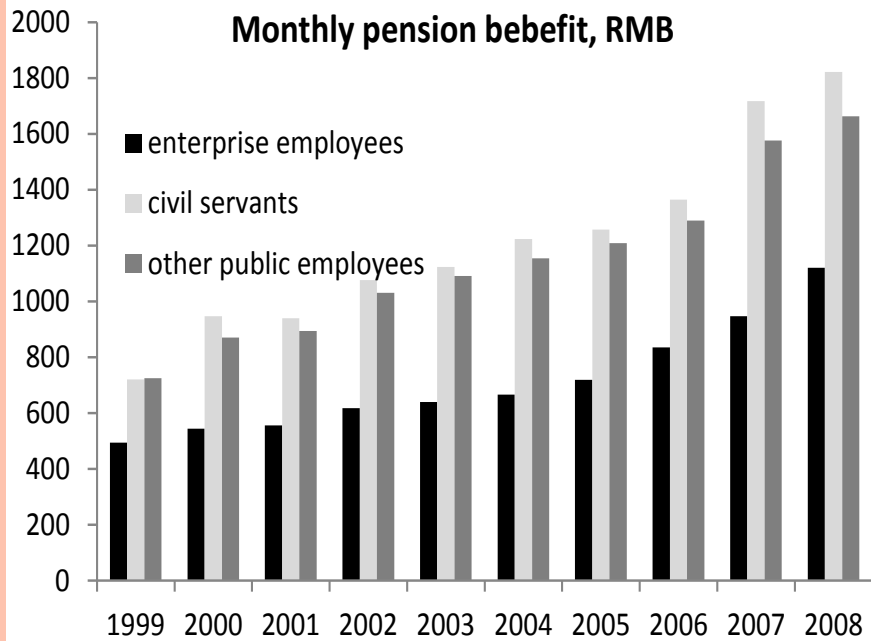
### *Rural*

## Key Features of the Different Pension Schemes

| Categories            | Basic Old Age Insurance system (BOAI)  |  | Public Employee Pension (PEP)                 | Urban Residents Pension Scheme (RRPS)                                       | New Rural Pension Scheme (NRPS)   |
|-----------------------|--|--|---|---|---|
| Year of Establishment | 1951;<br>Current Practices Finalized in: 1997  |  | 1953;<br>Current Practices Finalized in: 1978 | 2011  | 2009  |
| Participants          | Urban employees in private sectors   |  | Urban employees in public sectors             | Urban non-employed <b>16</b> years or above                                 | Rural residents <b>16</b> years or above                                    |
| Contribution          | <b>Social pooling:</b><br>20% of payroll (depending on locality)   | <b>Individual accounts:</b><br>8% of individual wage   | Not contribution required                     | <b>Individual accounts:</b><br>Individual contribution + government subsidy | <b>Individual accounts:</b><br>Individual contribution + government subsidy |
| Benefit               | <b>Social pooling:</b><br>Minimum 15 years of contribution. 1 percent accrual rate 1%; 35% based on 35 years of contribution | <b>Individual accounts:</b><br>Individual account Pension. Total replacement ratio of pension from social pooling and individual account: <b>58.5%</b> | Average Replacement ratio: <b>70-90%</b>      | Basic Pension+ Individual account Pension<br><b>(55yuan + @)</b>            | Basic Pension+ Individual account Pension<br><b>55yuan + @)</b>             |
| Mandatory or not      | Yes  |  | Yes   | No  | No  |

# UNIVERSAL COVERAGE OF PENSION SYSTEM

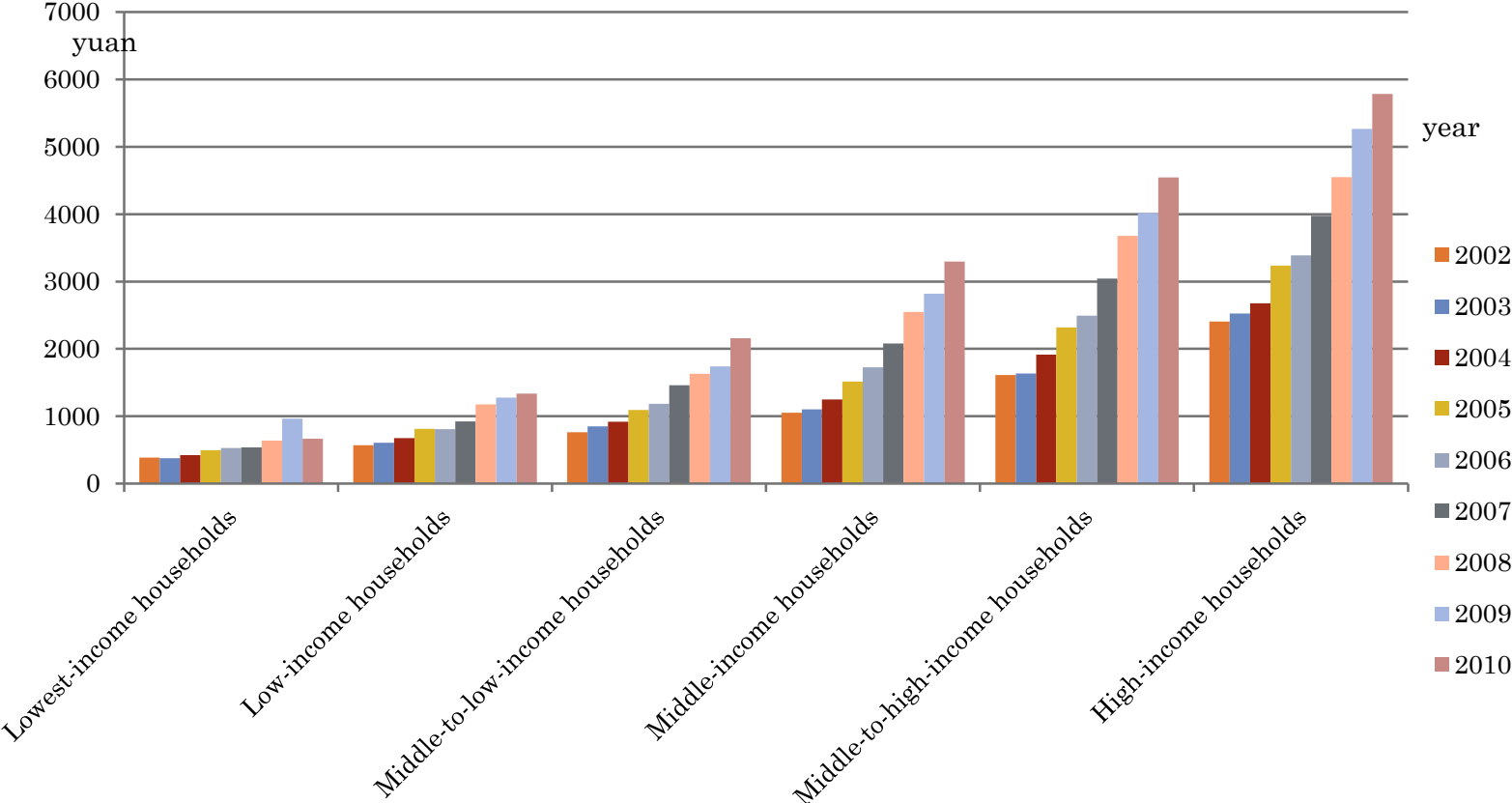
- **Redistribution effect of social security**
- 
- **Incentive for participation**



| Year | Benefits-1 | Benefits-2 | Benefits-3 | rate1 | rate2 | rate3 |
|------|------------|------------|------------|-------|-------|-------|
| 1999 | 494        | 721        | 725        | 0.73  | 0.97  | 1.00  |
| 2000 | 544        | 947        | 871        | 0.71  | 1.13  | 1.08  |
| 2001 | 556        | 940        | 894        | 0.64  | 0.93  | 0.93  |
| 2002 | 618        | 1077       | 1031       | 0.62  | 0.92  | 0.93  |
| 2003 | 640        | 1124       | 1091       | 0.57  | 0.86  | 0.90  |
| 2004 | 667        | 1223       | 1154       | 0.51  | 0.82  | 0.84  |
| 2005 | 719        | 1257       | 1208       | 0.48  | 0.72  | 0.77  |
| 2006 | 835        | 1364       | 1290       | 0.49  | 0.70  | 0.73  |
| 2007 | 947        | 1717       | 1576       | 0.47  | 0.72  | 0.73  |
| 2008 | 1121       | 1822       | 1663       | 0.47  | 0.65  | 0.67  |

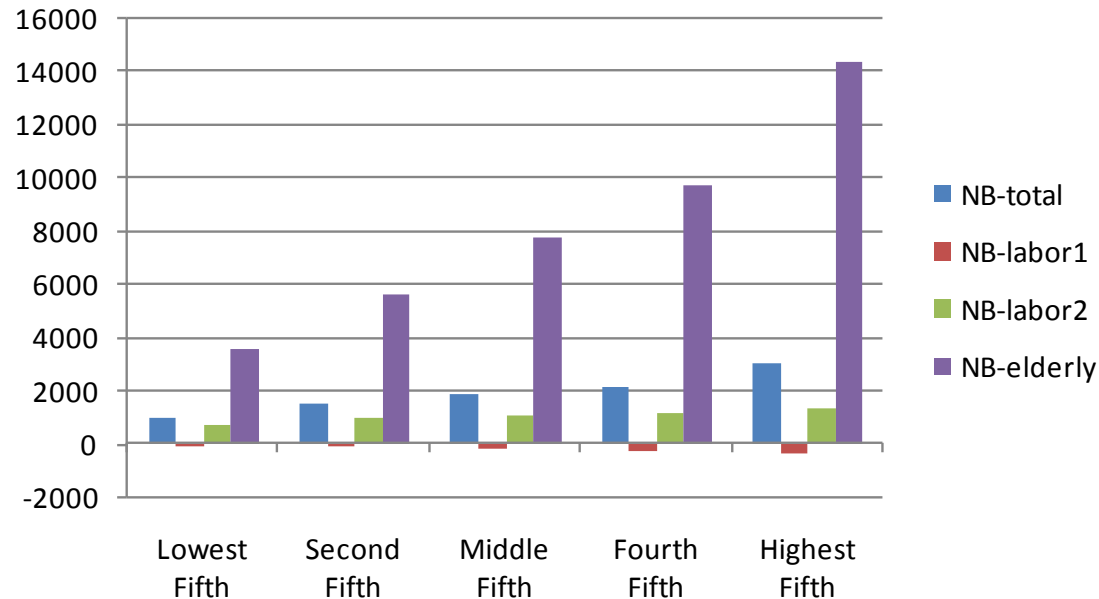
Source: He(2011),Feng and He(2012)

# Net benefits of social security for different urban households (2002-2010)



Source: He(2011)

# Net benefits of social security for redistributed income deciles



NB = social security benefits – social security payments

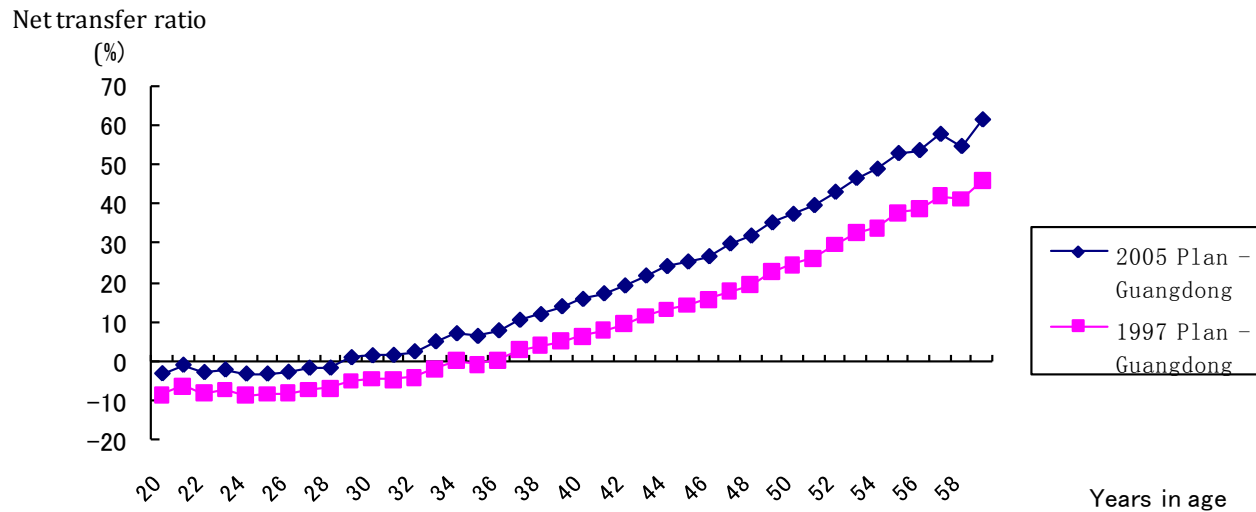
Labor1: population aged 16-39

Labor2: working age people aged above 40

Source: He(2011)



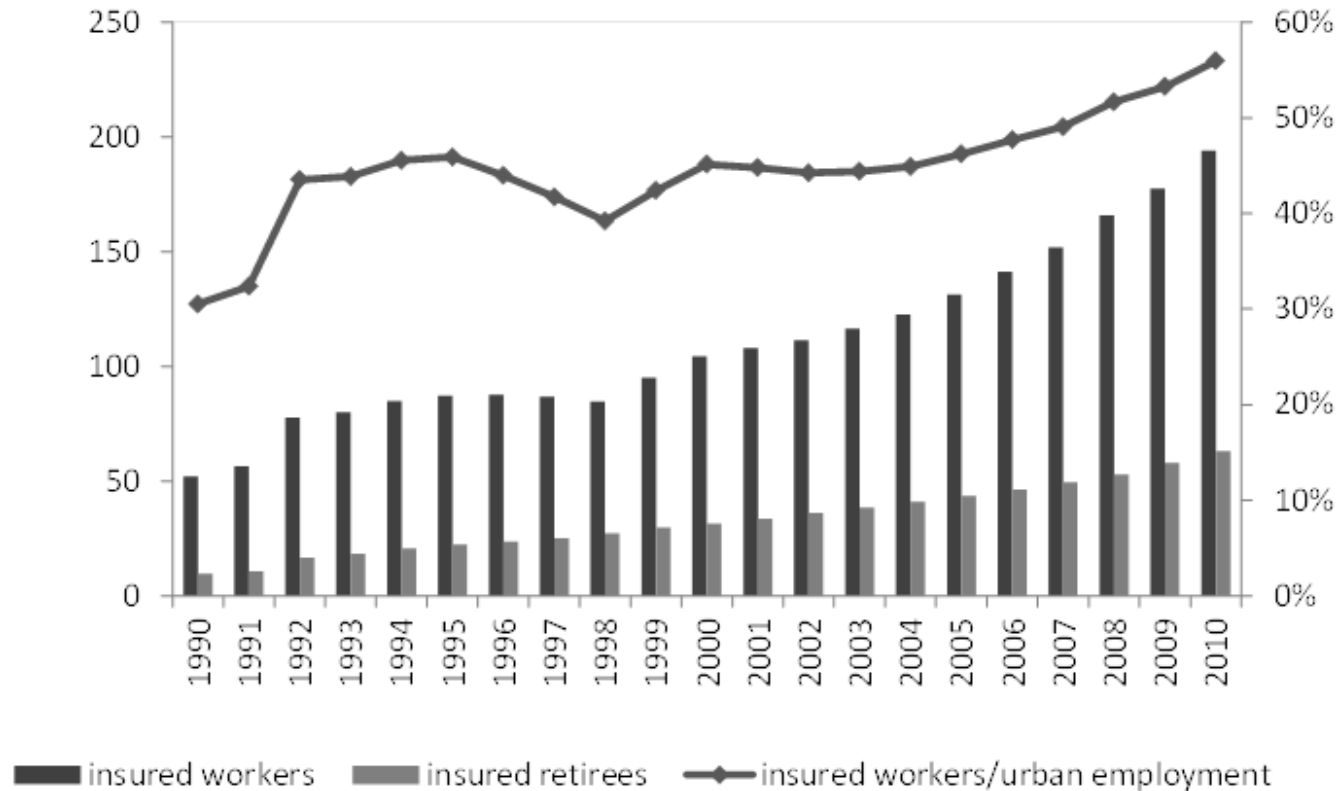
# Lifetime net transfer ratio of different age groups



Source: He(2008)

# BASIC OLD AGE INSURANCE SYSTEM (BOAI)

Million



(From the book Chapter)

# PARTICIPATION RATE OF OLD AGE PENSION

- More than 230 million rural migrant workers in urban non-agricultural sectors, only less than 20% covered by BOAI.

|                 | Urban Hukou |      |       | Rural Hukou |      |       |
|-----------------|-------------|------|-------|-------------|------|-------|
| participation=1 | Female      | Male | Total | Female      | Male | Total |
| Age group       |             |      |       |             |      |       |
| 35-45           | 0.59        | 1    | 0.67  | 0.1         | 0.14 | 0.11  |
| 46-50           | 0.67        | 0.69 | 0.68  | 0.02        | 0.05 | 0.04  |
| 51-55           | 0           | 0.55 | 0.46  | 0.06        | 0.06 | 0.06  |
| 56-60           | -           | 0.3  | 0.3   | -           | 0.05 | 0.05  |
| Total           | 0.51        | 0.59 | 0.57  | 0.06        | 0.06 | 0.06  |

Sources: CHARLS, 2008

# HOW TO EXPEND THE COVERAGE?

- Who is ultimately paying the payroll taxes even though it is a statutory contribution of the employer?
- Which firm evades contribution of social insurance?
- Reducing the institutional contribution rate



# A KEY TO UNIVERSAL COVERAGE: REDUCING THE CONTRIBUTION RATE

**The contribution rate in China is higher than most countries**

Table 6. Comparison of Contribution and Benefit of Pension System.

| Country or Region | Contribution rate                     | Replacement Ratio |
|-------------------|---------------------------------------|-------------------|
| Sweden            | 18.5%, employer: 11.5%, employee: 7%  | 70.9%             |
| Germany           | Lower than 20%                        | 55.1%             |
| U.S.              | 12.4%, employer: 6.2%, employee: 6.2% | 68%–90%           |
| France            | 18%, employer: 10.8%, employee: 7.2%  | 50%               |
| China's BOAI      | 28%, employer: 20%, employee: 8%      | 58.5%             |

(From the book Chapter)

# WHO BEARS EMPLOYER'S CONTRIBUTION

- Data (CHIP 1995, 2002, 2007)
- 1997 and 2005 Reform as Natural Experiments
- Employee: Higher HC vs. Lower HC; 2002 vs.2007
- Lower human capital workers bear more burden of employer contribution in 2002
- In 2007, Employer has to bear most of the burden of SS contribution



# REGIONAL DISPARITY OF INSTITUTIONAL CONTRIBUTION

## 养老和医疗雇主缴费率的地区差异

(江苏、浙江、福建、广东)

| 高缴费率城市<br>缴费率>26%  | 中缴费率城市<br>20.5%<缴费率<=26%   | 低缴费率城市<br>缴费率<=20.5%    |
|--|--|-------------------------|
| 南京、无锡、徐州、常州、苏州、南通、连云港、淮阴、盐城、扬州、镇江、泰州、杭州、宁波、嘉兴、三明、泉州、茂名、肇庆、梅州 | 宿迁、温州、湖州、绍兴、金华、衢州、舟山、台州、丽水、福州、厦门、莆田、漳州、南平、龙岩、宁德、广州、韶关、汕头、江门、湛江、汕尾、河源、阳江、潮州、揭阳、云浮 | 深圳、珠海、佛山、江门、惠州、清远、东莞、中山 |

数据来源：1) 相关政府文件、工作报告；2) 各地人力资源与社会保障局发布的政策文件；3) 中国劳动咨询网 (<http://www.51labour.com/>) 的部分统计数据

# PARTICIPATION INCENTIVE OF FIRMS

|                           |        | 缴费企业占比 (%) | 实际缴费率 (%)      | 参保程度   |
|---------------------------|--------|------------|----------------|--------|
|                           | 全部样本   | 78.35      | 10.82          | -0.60  |
|                           |        |            | <u>按所有制</u>    |        |
| ○ 2004-2007               | 国有     | 86.17      | 19.7           | -0.21  |
| Manufacturing enterprises | 集体     | 71.86      | 14.78          | -0.43  |
|                           | 私营     | 74.10      | 10.54          | -0.58  |
|                           | 港台     | 85.78      | 9.05           | -0.6   |
|                           | 外资     | 84.16      | 10.97          | -0.56  |
| ○ 54 city, 28             | 其他     | 80.49      | 12.56          | -0.49  |
| 20digital                 |        |            | <u>按省份</u>     |        |
| industry                  | 江苏     | 60.35      | 14.99          | -0.47  |
|                           | 浙江     | 85.04      | 10.17          | -0.62  |
| ○ 2005:108773             | 福建     | 85.95      | 8.7            | -0.66  |
| ,                         | 广东     | 85.69      | 9.37           | -0.51  |
| 2007:138214               |        |            | <u>按政策缴费水平</u> |        |
|                           | 高缴费率地区 | 71.51      | 12.35          | -0.57  |
|                           | 中缴费率地区 | 84.23      | 9.84           | -0.59  |
|                           | 低缴费率地区 | 87.27      | 8.98           | -0.48  |
|                           |        |            | <u>按人力资本</u>   |        |
|                           | 较高     | 83.86      | 13.38          | -0.44  |
|                           | 中等     | 78.52      | 11.3           | -0.546 |
|                           | 较低     | 77.07      | 8.97           | -0.64  |



## OUTCOMES OF LOW CONTRIBUTION RATE

- Less evasion: the actual contribution rate is even higher
- Improve the cash flow of the pension funds
- Low contribution should translate into lower benefits: Increasing retirement age

*Thank you!*

