Pension Reform in Serbia

from international and regional perspectives

Proceedings of the Conference on Pension Reform in Serbia

(24-25 September 2009, Belgrade)

ILO Subregional Office for Central and Eastern Europe

Budapest

Contents

Foreword

Social security is a societal measure to protect its members based on broad solidarity of the members of society. Social security is not only a basic need – it is a basic human right. Fundamental international instruments adopted by the ILO and the United Nations, respectively, such as the Declaration of Philadelphia of 1944 and the Universal Declaration of Human Rights of 1948, affirm that every human being has the right to social security. It is also widely recognized that social security promotes human welfare and social consensus on a broad scale, and that social security is a productive factor and an essential element for development.

As a tripartite international organisation, the ILO has been deeply committed to the development of policies and programmes to improve working and living conditions worldwide. The ILO's mandate, as set out in its Constitution, is to contribute to universal and lasting peace through the promotion and development of social justice.

The ILO has four strategic objectives in fulfilling its Decent Work Agenda, namely promoting fundamental principles and rights at work, creating greater employment and income opportunities, establishing social protection for all, and promoting social dialogue and collective bargaining. These are the conditions that will enable women and men to obtain work in conditions of freedom, dignity, security and equity – in times of crisis, in recovery and beyond.

Since its creation in 1919, the ILO has actively promoted policies and provided its member states with tools and assistance aimed at improving and expanding the coverage of social protection to all members of the community across the full range of contingencies: health care, sickness, old age and invalidity, unemployment, employment injury, maternity, family responsibilities and death.

In Serbia, the Government, the social partners and the ILO have jointly agreed on a Decent Work Country Programme, which defines the programme of cooperation between the Republic of Serbia and the ILO for 2008-2011. Improvement of the effectiveness of the social protection system is one of the three priorities which have been identified and agreed upon by our tripartite constituents. Within this framework, the ILO has been providing technical assistance on social security which aims among other things at strengthening the capacity of our Serbian partners.

In Serbia, pension reform is high on the agenda. What are the main challenges facing the Serbian pension system today and in the future?

In the short run, the economic crisis has made it clear that the international community should assist countries, including Serbia, in formulating strategies for the global promotion of social security as a core element of policies to reduce poverty and of wider development policies to enable countries to grow with equity.

In the longer term, like other European countries, ageing population is an inevitable trend for the future in Serbia. It is a huge task to reform the pension system to make it sustainable in the long run and at the same time providing adequate income protection in cases of retirement, invalidity and death of the breadwinner.

We wish to stress that such a major reform can be achieved and implemented if, and only if, it is based on a broad tripartite consensus. Reforming the pension system is a common concern for all workers, employers and the government. The role of social dialogue in the policy-making process should not be underestimated.

The ILO's approach to pension reform has been and continues to be shaped by its unique tripartite structure in which governments and the social partners – employers and workers – have an equal voice in the development of its policies and programmes. This unique tripartite structure adds strength and legitimacy to our on-going efforts to improve the pension system for all.

Against this background, the ILO organized a Conference on Pension Reform in Serbia on 24-25 September 2009 in Belgrade[1]. The Conference aimed at providing a forum for advocating the vital need of social security – notably in the realm of pension systems – for sharing experiences of different countries in the region, for identifying the challenges of the current pension system, for discussing strategies to reform the system, and for consolidating the views of tripartite constituents in Serbia. This publication is a collection of the presentations delivered at the Conference.

We are grateful to Ms. Snežana Lakičević-Stojačić, State Secretary, Ministry of Labour and Social Policy, Mr. Slavoljub Luković, Secretary General, TU Nezavisnost, Ms. Slavica Savić, Secretary General, Confederation of Autonomous Trade Unions, and Mr. Nebojša Atanacković, President of the Assembly, Serbian Association of Employers, for their presence and messages delivered at the Conference.

We wish to thank the resource persons from various institutions and governments who shared their own countries' experiences with the Serbian participants. The ILO is also most grateful for the generous support of the Government of Italy.

Finally, we would like to thank and acknowledge the persons involved in the preparation of this Conference. In particular, we would like to thank Jovan Protić, ILO National Coordinator in Serbia, and his assistant, Andjela Pavlović, as well as Agnes Fazekas, Programme Assistant of ILO's Subregional Office for Central and Eastern Europe in Budapest.

We trust that this publication will be a useful reference source for those concerned with the development of a better pension system in Serbia.

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[1]   Conference webpage: http://www.ilo.org/public/english/region/eurpro/budapest/social/socsec/serbconf.htm

Reforming pensions:[1]

Principles, analytical errors and policy directions

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I. Strategic messages

1. The opening part of the talk sets out five strategic messages.

2. It's not the baby boom. The main cause of the pensions 'crisis' is a failure to adapt to three long-term trends: rising life expectancy, declining fertility, and earlier retirement. These trends are more important than two more recent phenomena, the baby boom and the increase in the scale of pension systems since World War II. There would be a problem of paying for pensions even if there had not been a baby boom.

3. It's not a crisis. There is no 'ageing problem', nor a 'pensions crisis'. People are living longer – the great untold good news story. This is not a problem but a triumph. The problem is not that people are living too long, but that they are retiring too soon.

4. Private pensions are not a panacea. Funded pensions are paid from an accumulated fund built up over a period of years out of contributions of its members. Pay-As-You-Go pensions are paid (usually by the state) out of current tax revenues, rather than from an accumulated fund. The World Bank and others have advocated private funded individual accounts, arguing that they promote growth, increase coverage, and improve old age security. These arguments can be true, but are not always and necessarily true. Some of the World Bank's arguments have significant analytical flaws, discussed in section 2, below, and more fully by Barr and Diamond 2008, Box 10.1; 2009, pp. 13-17.

5. Policy should address the multiple objectives of pensions. The major objectives of pension systems are poverty relief, consumption smoothing (i.e. redistribution from ones young to ones older self), insurance, and redistribution.

6. There is no single best pension system. Pensions have the multiple objectives just noted. The pursuit of these objectives faces a series of constraints:

    Fiscal capacity: stronger fiscal capacity makes it easier for the system to find additional revenues for a pension system;

    Institutional capacity: stronger institutional capacity makes feasible a wider range of options for pension design;

    The empirical value of behavioural parameters, such as the responsiveness of labour supply to the design of the pension system, and the effect of pensions on private saving;

    The shape of the pre-transfer income distribution: a heavier lower tail of the income distribution increases the need for poverty relief.

7. There is no single best system for several reasons:

    Policy makers at different times and in different countries will attach different relative weights to the different objectives;

    The pattern of economic constraints, including the value of key parameters, will differ across countries;

    Political processes, which vary across countries, affect what is politically feasible; these, in turn, may be influenced by a country's history.

In sum, if the objectives differ and the constraints differ the optimum will generally differ.

II. Analytical errors

8. The errors discussed in the presentation are not based on differences over value judgments or different views about empirical magnitudes – they are examples of flawed analysis.

9. TUNNEL VISION. The problem arises, for example, when analysis considers one objective in isolation. The system in Chile after 1981 focussed heavily on individual funded accounts. These offer consumption smoothing but do not address poverty relief and are thus not a pension system but only part of a pension system. This problem has now been recognised in Chile, which introduced a tax-financed non-contributory pension in 2008. The system now gives explicit weight both to poverty relief and consumption smoothing.

10. IMPROPER USE OF FIRST-BEST ANALYSIS. The problem arises where analysis ignores market imperfections. Examples of this error include:

    - Uncritical advocacy of competition, notwithstanding major information problems;
    - An uncritical assumption that people will respond rationally to incentives, for example, the argument that defined-contribution pensions lead to higher compliance. Such analysis ignores imperfect information about rates of return, lessons from behavioural economics (e.g. procrastination, immobilisation), and problems such as imperfect capital markets.
    - Ignoring frictions, in particular administrative costs.

11. IMPROPER USE OF STEADY-STATE ANALYSIS. It is mistaken to focus on a reformed pension system in a steady state while ignoring the steps that are necessary to get to that steady state. This issue is particularly important when considering a move from PAYG towards funded pensions. A related error is to claim that funding is superior because stock market returns exceed the rate of wage growth; that claim is mistaken for several reasons, not least because it takes no account of how the move to funding is to be financed.

12. INCOMPLETE ANALYSIS OF IMPLICIT PENSION DEBT. Analysis that looks only at future liabilities (that is, future pension payments), while ignoring explicit assets and the implicit asset from the government's ability to levy taxes, is misleading. Too narrow a focus on costs also ignores the considerable improvement in people's well-being from increased old-age security. Just as public debt never needs to be fully paid off so long as the debt-to-GDP ratio does not get too large, so publicly provided pensions need not be fully funded, so long as the unfunded obligations do not grow excessively relative to the contributions base.

13. INCOMPLETE ANALYSIS OF THE EFFECTS OF FUNDING. A common example of this error is to argue that funding necessarily assists adjustment to demographic change. The reality is that a pensioner's living standard in old age depends on his or her ability to consume goods and services produced by younger workers. PAYG and funding are both ways of organizing claims on that output. Thus what matters is future output, and the effects of funding on future output will depend on the answers to a series of questions, many of which are often addressed incompletely or ignored:

    - Will a move to funding increase saving?
    - Is increased saving a good objective?
    - Will funded pensions strengthen the performance of capital markets?
    - If so, is it necessary for this purpose that pensions are mandatory rather than voluntary?
    - Are redistributive effects across generations—which are inevitable—desirable policy?

14.   Ignoring distributional effects. The point is most obvious if policymakers establish a pension system in a brand new country. If they introduce a PAYG system, the first generation of retirees receives a pension, but returns to subsequent generations are lower. If policymakers introduce full funding, later generations benefit from higher returns, but the first generation does not receive a pension. The same argument applies in a country that already has a PAYG system: a decision to move toward funding redistributes from the current generation to future generations. Thus *any choice between PAYG and funding is inescapably also a choice about the intergenerational distribution of income*. Different choices are, of course, possible, but it is a fundamental error to ignore distributional effects or to present the gain to pensioners in later generations from a move to funding as a Pareto improvement,[1] since it comes at the expense of the first generation.

15.   These analytical errors matter because analytical errors lead to policy errors.

III. Policy problems

16.   Paying for pensions. Many countries face problems in paying for pensions. In considering options, it is important to be clear that there are four, and only four, ways forward.

- Lower pensions, either through
  - » Lower monthly pensions, or through
  - » Later retirement at the same monthly pension;
- Higher contributions;
- Policies to increase national output.

Any proposal to improve pension finance that does not involve one or more of these elements is illusory.

17.   Making pensions portable. National systems differ, for example in terms of whether they are contributory (UK, USA) or not (Netherlands, Chile); the number of years of contributions necessary for a full pension; the pensions formula; and the role of private pensions. As a result, workers who move across countries may end up with little pension. This phenomenon creates impediments to labour mobility, a problem both because labour mobility matters for efficiency in a modern labour market, and because it is an element in human rights.

IV. What pension arrangements?

18.   Though there is no single best pension system, the presentation discusses some recent policy developments that should be considered seriously: avoiding elderly non-contributory basic pension; redefining retirement; the US Thrift Savings Plan; and notional defined contribution (NDC) pensions.

Avoiding elderly poverty: Non-contributory basic pensions

19.   This policy pays a tax-financed pension at a flat rate, on the basis of age and residence rather than contributions.

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[1]   A situation is described as Pareto efficient if resources are allocated in such a way that no reallocation can make any individual better off without making at least one other individual worse off. A policy that makes someone better off and nobody worse off is referred to as Pareto improving.

20. The contributory principle assumed workers with long, stable employment, so that coverage would grow. History has not sustained this argument. To explain why, consider the way the world has changed over the past 60 years. Social policy in 1950 was based on a series of assumptions:

- The world was made up of independent nation states;
- Employment was generally full time and long term;
- International mobility was limited;
- The stable nuclear family with male breadwinner and female caregiver was the norm; and
- Skills once acquired were lifelong.

Though not true even then, these assumptions held well enough to be a realistic basis for social policy.

21. The world today is very different.

- There is increasing international competition;
- The nature of work is changing, with more fluid labour markets;
- International mobility is increasing, and likely to continue to do so;
- The nature of the family is changing, with more fluid family structures, and with rising labour-market activity by women; and
- The half life of skills has declined.

22. Thus key drivers of change are

- More diverse patterns of work: thus there are problems for coverage of contributory benefits tied to employment;
- Increasingly fluid family structures: thus there are problems basing women's benefits on husbands' contributions.

23. The case for a non-contributory basic pension are that it strengthens poverty relief in terms of coverage, adequacy and gender balance; improves incentives relative to income-tested poverty relief; provides good targeting (age is a useful indicator of poverty); and can assist international labour mobility.

24. The obvious question is how to pay for this benefit. There are three instruments which match expenditure to budgetary constraints: the size of the pension, the age at which it is first paid, and the option of an affluence test, which keeps benefits from the best-off. As an example of the latter, the aim in Chile is to restrict the non-contributory benefit to elderly people in the bottom 60 per cent of income recipients; in Canada 95 per cent of older people get the full flat-rate benefit, and only 2 per cent are entirely screened out.

Redefining retirement: Later and more flexible retirement

25. Longer healthy life combined with a constant or declining retirement age creates problems of pension finance. An important part of the solution is that pensionable age should rise in a rational way as life expectancy increases. This is all the more the case since work is generally less physically demanding than in the past.

26. Retirement should not only be later on average, but should also give individuals greater choice over how and how fast they move from full-time work to complete retirement. Mandatory full retirement was introduced in the nineteenth century to move out of the labour force older workers who were reducing the productivity of younger workers. That argument made sense historically,

but no longer. Thus mandatory retirement is no longer necessary. In addition, increased choice about when to retire, and whether fully or partially is desirable, both to promote output growth (by encouraging older workers to continue to be active), and as a response to individual preferences. Thus greater flexibility is desirable for its own sake, irrespective of problems of pension finance.

Consumption smoothing: The US Thrift Savings Plan

27. Simple economics argues that policy should allow people to choose their own pension provider in a competitive market, such choice, it is argued, benefiting the individual in the same way as choice and competition for clothes, cars, restaurants and iPods. In the case of pensions, the analytical error is mistaken use of first-best analysis.

28. The economics of information explains why the model of the well-informed consumer does not hold in many areas of social policy. In the context of pensions, there is ample evidence that consumers are badly informed. A survey revealed that 50% of Americans did not know the difference between a stock and a bond. Most people with an individual account do not understand the need to shift from equities to bonds as they age. And virtually nobody realises the significance of administrative charges for pensions.

29. Recent lessons from behavioural economics also yield powerful lessons, explaining such phenomena as procrastination (people delay saving, do not save, or do not save enough), inertia (people stay where they are), and immobilisation (where conflicts and confusion lead people to behave passively, like a rabbit in a car headlight).

30. These bodies of theory suggest guidelines for the design of individual accounts:

   - Use automatic enrolment;
   - Keep choices simple: for most people, highly constrained choice is a deliberate and welfare-enhancing feature of good pension design (though one of the options could be to allow individual choice);
   - Design a good default option for people who make no choice;
   - Decouple fund administration from fund management, with centralised administration and fund management organised on a wholesale, competitive basis.

31. The US Thrift Savings Plan for federal civil servants (www.tsp.gov) complies with these criteria. The plan offers participants a very limited choice of portfolios. Initially there were three: a stock market index fund, a fund holding bonds issued by private firms, and a fund holding government bonds. In 2007 workers could choose from six funds, including a life-cycle option (i.e. an option in which a person's portfolio shifts automatically from mainly equities to mainly bonds as he or she ages). A government agency keeps centralised records of individual portfolios. Fund management is on a wholesale basis. Investment in private sector assets is handled by private financial firms, which bid for the opportunity, and which manage the same portfolios in the voluntary private market.

32. The plan (a) simplifies choice for workers, respecting information constraints, (b) includes automatic enrolment and (c) a default option, and (d) keeps administrative costs astonishingly low: as little as 6 basis points annually, or 60 cents per $1,000 of account balance. By 2007 the programme had grown to include 3.8 million participants and held assets of $225 billion. The United Kingdom is introducing a similar arrangement.

Consumption smoothing: Notional defined contribution (NDC) pensions

33.   A recent innovation internationally, pure NDC systems mimic individual funded accounts, but on a Pay-As-You-Go basis, i.e. actuarial Pay-As-You-Go. In the simplest such scheme:

- Each worker pays a contribution of *x*% of his earnings, which is credited to a notional individual account;
- Workers' contributions this year pay this year's pensions;
- The government keeps a record of individual contributions, each year attributing a notional interest rate to each worker's accumulation;
- When the worker retires, his/her notional accumulation is converted into an annuity;
- In a pure NDC system benefits are actuarial; the system can also incorporate redistribution, e.g. minimum benefits or pension credits for caring activities; and the scheme can incorporate partial funding.

34.   NDC schemes have a range of potential advantages: the system

- Is simple from the point of view of the worker;
- Is centrally administered, keeping administrative costs low;
- Avoids much of the risk of funded individual accounts, since it avoids the volatility of capital markets;
- Does not require the institutional capacity to manage funded schemes; in addition:
- Saving may be the wrong policy (China), or people may not want to save;
- NDC can be partially funded and can be the basis for a future move to full funding; thus may have advantages as a starting point if financial market turbulence continues.

NDC or funded accounts? There are solid economic principles for informing the choice (Barr and Diamond 2008).

Concluding thoughts

35.   There is no single best pension system. Thus what is optimal will differ across countries and over time. Pension systems look different across countries; this is as it should be. That said, the policies just discussed are potentially relevant to a wide range of countries.

36.   A developed economy has a range of options:

- 1st tier: countries should consider either
  - » a noncontributory, tax-financed pension (the Netherlands), perhaps with an affluence test (Canada), or
  - » a contributory pension aimed at poverty relief (many countries, including the UK and USA), with any of an array of different designs.
- Second tier: the menu includes (separately or in combination)
  - » a publicly organised, defined-benefit pension (USA);
  - » an NDC system (as in Sweden);
  - » an administratively cheap savings plan with access to annuities (like the Thrift Savings Plan in the USA);
  - » mandatory, funded, defined-benefit pensions sponsored by industry (the de facto system in the Netherlands); or
  - » funded, defined-contribution pensions (as in Chile and Sweden).

- Third tier: voluntary, defined-contribution pensions can be organized at the level of the individual, the firm or the industry; any tax favouring should seek to avoid excessive regressivity.

37. Why, in conclusion, does this matter?

- Pensions matter for the welfare of hundreds of millions of older people, and of hundreds of millions of workers, who anticipate their own retirement, and who have parents and grandparents who are currently retired.

- They matter for national economic performance: a well-designed pension system assists labour mobility, avoids unnecessary impediments to work effort and saving, and avoids excessive public spending. It might also be possible for voluntary pensions to help financial markets through improved corporate governance.

- Finally, pensions have a potential global role. One of the roots of the current economic turbulence is trade imbalances, fuelled in part by the high level of precautionary savings in China, saving connected with limited old-age security and inadequate access to medical services. A stronger pension system, especially if accompanied by policies to facilitate access to health care, would reduce pressures to precautionary saving in China and hence contribute to correcting such macroeconomic imbalances.

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US Thrift Savings Plan (http://www.tsp.gov)

Reforming pensions:

Principles, analytical errors and policy directions

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Power Point Presentation

Reforming pensions: Principles, analytical errors and policy directions

1 Strategic messages

2 Analytical errors

3 Policy problems

4 What pension arrangements?

5 Concluding thoughts

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1 Strategic messages

- Lecture draws heavily on Barr and Diamond (2008)

Reforming Pensions

Principles and Policy Choices

Nicholas Barr
Peter Diamond
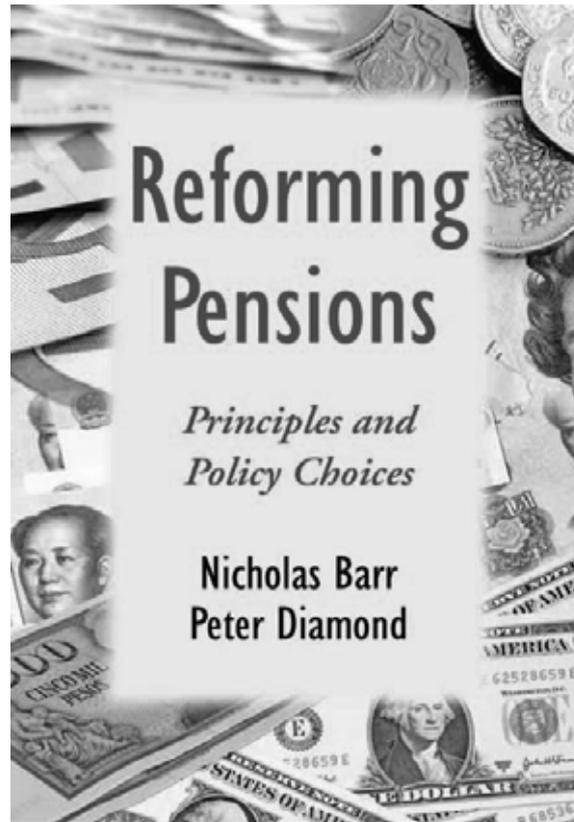
Message 1: It's not the baby boom

- The main cause of the 'crisis' is a failure to adapt to long-term trends
- Many pension systems face a series of trends:
    - a long-term trend of rising life expectancy
    - a long-term trend of declining fertility
    - a long-term trend to earlier retirement
- These are more important than two more recent phenomena:
    - the baby boom
    - the increase in the scale of pension systems since World War II
- There would be a problem of paying for pensions even if there had not been a baby boom

Age pyramids 2050, China, India, USA
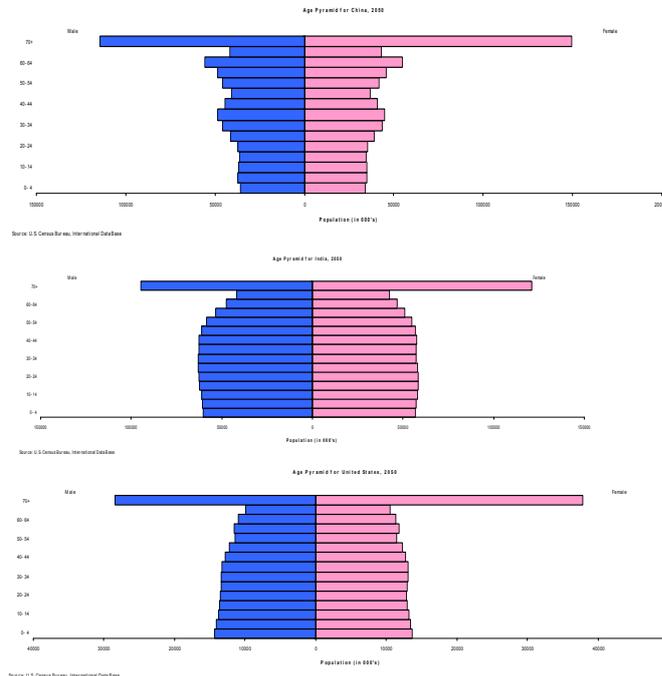
Message 2: It's not a crisis

- There is no 'ageing problem', nor a 'pensions crisis'
- People are living longer – the great untold good news story; not a problem but a triumph
- The problem is not that people are living too long, but that they are retiring too soon

Message 3: Private pensions are not a panacea

- Funded and PAYG
  - Funded pensions are paid from an accumulated fund built up over a period of years out of contributions of its members
  - Pay-As-You-Go pensions are paid (usually by the state) out of current tax revenues, rather than out of an accumulated fund
- The World Bank has advocated funded private pensions, arguing that they
  - Promote growth
  - Increase coverage
  - Improve old age security
- These arguments can be true but are not always and necessarily true
- The World Bank's arguments have significant analytical flaws, discussed in section 2 and more fully in Barr and Diamond 2008, Box 10.1; 2009

Message 4: Policy should address the multiple objectives of pensions

- Poverty relief
- Consumption smoothing
- Insurance
- Redistribution, aka social solidarity

Message 5: No single best pension system

- Objectives: consumption smoothing, insurance, poverty relief, redistribution
- Constraints include
  - Fiscal capacity
  - Institutional capacity
  - Empirical value of behavioural parameters
  - Shape of the income distribution
- No single best system because
  - Policy makers attach different relative weights to the different objectives
  - The pattern of fiscal and institutional constraints differs across countries
- Thus
  - What is optimal will differ across countries and over time
  - Pension systems look different across countries; this is as it should be

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Optimisation: no perfect answers

'Designing a White House staff, like designing an aircraft, involves trade-offs. If you want speed of decision, you must narrow the number of those involved in the decision—thus sacrificing breadth of information and depth of debate. If you demand single-minded devotion to yourself, you will probably choose people who lack other career options—which is to say, people who are less than supremely able. If you want to recruit the best and the brightest, you will have little choice but to end up with people of strong wills, big egos and intense principles, who may put their beliefs before your interests. The problem of designing an effective political organisation cannot be solved, it can only be finessed.'

David Frum, 'They stood by their man,' *Prospect Magazine*, Issue 148, July 2008, pp 12-13

2 Analytical errors

Error 1: Tunnel vision

- The problem:
  - Considering one objective in isolation
    - Example: excessive focus on consumption smoothing (e.g. DC pensions), understating poverty relief (hence Chile reformed in 2008)
  - Considering one part of the pension system in isolation

Error 2: Improper use of first-best analysis

- The problem: ignores market imperfections
- Examples
  - Uncritical advocacy of competition, notwithstanding major information problems
  - Uncritical assumption of rational response to incentives, e.g. the argument that DC pensions lead to higher compliance. Ignores
    - Imperfect information, e.g. about rates of return
    - Lessons from behavioural economics, e.g. procrastination, immobilisation, etc.
    - Imperfect capital markets, so that some people are liquidity constrained
  - Ignoring frictions, in particular administrative costs

Error 3: Improper use of steady state analysis

- The problem: improperly compares pension systems in steady state; this is inappropriate if the question being analysed is a move from one steady state to another, e.g. PAYG to funded

- Example: comparing the simple stock market return with the rate of growth of the wage bill in comparing rates of return to funded and PAYG pensions

Error 4: Incomplete analysis of implicit pension debt

- The problem: treating implicit and explicit pension debt as equivalent
- The simple argument about implicit pension debt
    - Focuses only on liabilities, ignoring assets, e.g. ability to tax
    - Fails to recognize important differences in the economic effects of implicit and explicit debt, e.g. can reduce implicit debt through pension reform without repudiating explicit debt
    - Erroneously implies that paying off implicit debt in full is optimal; implicit debt (like government debt) should be optimised, not minimised
    - Ignores the intergenerational distributional effects of a change in balance between implicit and explicit debt
- Implicit debt is a useful concept, but has to be interpreted properly

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Error 5: Incomplete analysis of funding

- The problem: loses sight of fact that PAYG and funding are both ways of organising claims on future output
- Examples:
    - Arguing that funding necessarily assists adjustment to demographic change
    - Arguing that an actuarial relationship between contributions and benefits is possible only with a funded system, ignoring the option of NDC

Error 6: Ignoring distributional effects

- The problem: ignores the fact that any pension reform has distributional consequences.
- Examples:
  - Introducing a new PAYG system makes a transfer to the first cohort of retirees; if, instead, policy makers introduce a funded scheme, the first cohort receives no pension
  - Similarly, a move towards funding that increases saving redistributes from today's workers and pensioners to later generations
- Thus
  - Choices about pension systems are inescapably also choices about intergenerational redistribution
  - Such redistribution may or may not be good policy
  - But ignoring distributional effects is faulty analysis; so are claims of Pareto superiority

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3 Policy problems

- Paying for pensions
- Making pensions portable internationally

Public pension spending, % GDP

	2000	2030	2050
Denmark	10.5	14.5	13.3
France	12.1	16.0	n.a.
Germany	11.8	15.5	16.9
Greece	12.6	19.6	24.8
Netherlands	7.9	13.1	13.6
Sweden	9.0	11.4	10.7
UK	5.5	5.2	4.4
Source: UK Pensions Commission (2004, Table D2)			

Solutions

- Lower pensions
  - Lower monthly pensions
  - Later retirement at the same monthly pension
- Higher contributions
- Policies to increase national output

Any proposal to improve pension finance that does not involve one or more of these approaches is mistaken

Policies to increase output

- Increasing the productivity of each worker, through

    (1) Higher saving, leading to more/better physical capital

    (2) Higher investment in human capital, including that of older workers

- Increasing the number of workers from each age cohort

    (3) Higher labour force participation at all ages

    (4) A higher age of retirement

    (5) Importing labour directly (immigration)

    (6) Importing labour indirectly (export capital)

Portable pensions

- National systems differ, inter alia, in terms of
    - Contributory (UK, USA) or not (Netherlands, Chile)
    - Number of years of contributions
    - Pensions formula
    - Vesting period
    - The role of private pensions
- What is the problem?
    - Workers who move across countries may end up with little pension
    - This creates impediments to labour mobility
- Why does labour mobility matter?
    - For efficiency in a modern labour market
    - As an element in human rights

4 What pension arrangements?

- Though there is no single best pension system, this lecture discusses some policy directions that should be considered seriously
    - Avoiding elderly poverty
    - Redefining retirement
    - Consumption smoothing: learning from the USA
    - Consumption smoothing: learning from Sweden

4.1 Avoiding elderly poverty

- **Policy 1: Non-contributory basic pensions**
- Definition: a public pension paid at a flat rate, on the basis of age and residence rather than contributions
- Why?
    - The contributory principle assumed workers with long, stable employment, thus coverage would grow
    - History has not sustained this argument

The world then

- Social policy in 1950 was based on a series of assumptions
    - Independent nation states
    - Employment generally full time and long term
    - Limited international mobility
    - Stable nuclear family with male breadwinner and female caregiver
    - Skills once acquired were lifelong
- Though not true even then, true enough to be a realistic basis for policy

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What has changed?

- Increasing international competition ('globalisation')
- **Changing nature of work, with more fluid labour markets ('post-industrialisation')**
- Rising international mobility
- **Changing nature of the family**
    - More fluid family structures
    - Rising labour-market activity by women
- Shorter half-life of skills ('information age')
- Thus the drivers of change are
    - More diverse patterns of work: thus there are problems for coverage of contributory benefits tied to employment
    - Increasingly fluid family structures: thus there are problems basing women's benefits on husbands' contributions

Arguments for a non-contributory basic pension

- Strengthen poverty relief in terms of
  - Coverage
  - Adequacy
  - Gender balance
- Improve incentives relative to income-tested poverty relief
- Provide good targeting (age is a useful indicator of poverty)
- Assists international labour mobility through pro-rata arrangements

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Containing costs

Adjusting to match budgetary constraints: three instruments

- The size of the pension
- The age at which the pension is first paid
- Perhaps also an affluence test

Country examples

- UK: illustrates problems of coverage, hence
  - Reduced contribution requirements, i.e. move towards a non-contributory basic pension
  - Ability to buy extra years
- OECD countries with non-contributory basic pensions
  - The Netherlands
  - New Zealand
  - Australia (which has an affluence test)
  - Canada (which has an affluence test)
- Other examples include the new solidarity pension in Chile

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4.2 Redefining retirement

- **Policy 2: Later and more flexible retirement**

Later retirement: Why?

- Longer healthy life + constant or declining retirement age creates problems of pension finance
- The solution: pensionable age should rise in a rational way as life expectancy increases
- Thus can say (UK Pensions Commission) that people can retire later but still have a longer retirement than their parents
- This is all the more the case since most work is less physically demanding than in the past

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The UK story

Life course, men retiring in 1950 and 2004

1950	14.1	53.1	10.8
2004	16.2	47.6	20.1

0   10   20   30   40   50   60   70   80   90

Education, work and retirement
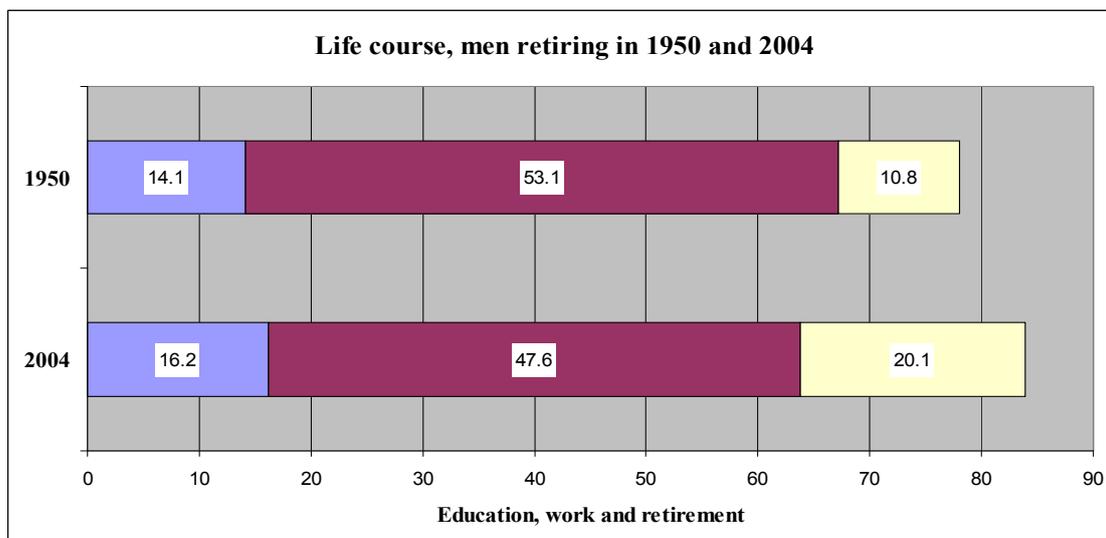
Also more flexible retirement

- Mandatory full retirement made sense historically, but no longer
- Increased choice about when to retire, and whether fully or partially is desirable
  - To promote output growth
  - As a response to individual preferences (and thus desirable for its own sake, irrespective of problems of pension finance)

Country examples

- USA: age for full pension of 65 (men and women) rising over time to 67
- UK: state pensionable age for 65 (men and women) will rise to 66 in 2024 and thereafter by one year each decade
- Norway: retirement age is already 67 (men and women)
- Not before time, retirement age is now a proper topic for polite society

4.3 Consumption smoothing: Learning from the USA

- **Policy 3: The Thrift Savings Plan approach**
- Why? Lessons from
    - The economics of information
    - Behavioural economics

Lessons from information economics

- In many areas of social policy the model of the well-informed consumer does not hold
- In the context of pensions
    - A survey, 50% of Americans did not know the difference between a stock and a bond
    - Most people do not understand the need to shift from equities to bonds as they age, if they hold an individual account
    - Virtually nobody realises the significance of administrative charges for pensions

Lessons from behavioural economics

- What conventional theory predicts
    - Voluntary saving to maximise lifetime utility (consumption smoothing)
    - Voluntary purchase of annuities (insurance)

What actually happens

- Procrastination: people delay saving, do not save, or do not save enough
- Inertia: people stay where they are; in theory it should make no difference whether the system is opt in or opt out – in practice, automatic enrolment leads to higher participation
- Immobilisation
    - Conflicts and confusion lead people to behave passively (rabbit in car headlight)
    - Impossible to process information about 700 different funds (90% go into Swedish default fund)

Why? Recent lessons from behavioural economics

- Experimental evidence shows high discount rate in short run, much lower in long run
  - Next week's snack: 2/3 chose fruit salad, 1/3 chocolate
  - This week's snack: 1/3 fruit salad, 2/3 chocolate
- Thus people are rational for the future, but not for the present; but when the future arrives it is the present, so the short-term wins
- Examples: start dieting tomorrow; give up smoking tomorrow; but when tomorrow comes ...

Clinical measurement of brain activity

- Two parts of the brain
  - Mesolimbic: old part of brain: impatient – 'eat now, won't last'
  - Prefrontal cortex: newer part of brain: patient and rational – this is rational economic man and woman
- Life is a constant fight between the two parts
- Clinical measurement (experiments while person is in scanner) shows that short-term decisions are made by the mesolimbic system, longer-term decisions by the prefrontal cortex
- These results call into question the simple model of long-term rationality

Implications: getting it right

- Use automatic enrolment
- Keep choices simple
  - Highly constrained choice is a deliberate and welfare-enhancing design feature
  - But one of the options can be to allow individual choice (Marks and Spencer or Saville Row)
- Design a good default option which includes life-cycle profiling
- Decouple fund administration from fund management
  - Centralised administration
  - Fund management: wholesale, competitive

The US Thrift Savings Plan

- The system (www.tsp.gov)
  - Initially voluntary for federal civil servants, now auto-enrolment
  - Workers choose from five funds
  - Centralised account administration
  - Wholesale fund management
- Comments
  - Simplifies choice for workers, respecting information constraints
  - Keeps administrative costs low
  - The new system of personal pensions in the UK is similar
  - If there were ever to be publicly-organised individual accounts in Chile this model bears study

4.4 Consumption smoothing: Learning from Sweden

- **Policy 4: Notional defined contribution (NDC) pensions**

How do NDC pensions work?

- Mimic individual funded accounts, but on a Pay-As-You-Go basis, i.e. actuarial Pay-As-You-Go
- Workers' contributions this year pay this year's pensions
- The government keeps a record of individual contributions, each year attributing a notional interest rate to each worker's accumulation
- When the worker retires, his/her notional accumulation is converted into an annuity
- In a pure NDC system benefits are actuarial; the system can also incorporate redistribution, e.g. minimum benefits or pension credits for caring activities

Why NDC might be advantageous

- Simple from the point of view of the worker
- Centrally administered, hence low administrative costs
- Avoids much of the risk of funded individual accounts, since avoids volatility of capital markets
- Does not require the institutional capacity to manage funded schemes, including Thrift Savings Plan arrangements
- Saving may be the wrong policy (China), or people may not want to save
- In either case, NDC can be the basis for a future move to partial or full funding; thus may have advantages as a starting point if financial market turbulence continues
- NDC or funded accounts? Solid economic principles for informing the choice (Barr and Diamond 2008)

Country examples

- Canada
- Sweden
- Poland
- Latvia

5 Concluding thoughts

- No single best pension system. Thus
- What is optimal will differ across countries and over time
- Pension systems look different across countries; this is as it should be
- That said, the policies outlined above can be applied in a wide range of countries
- Thus earlier arguments have wider relevance

Range of options for developed countries

- 1st tier: choice of
    - Contributory pension aimed at poverty relief
    - Non-contributory tax-financed pension (Netherlands), perhaps with an affluence test (Canada)
- 2nd tier: choice of
    - A publicly-organized defined-benefit pension (USA), which may be integrated as a single system with the first tier
    - Notional Defined Contribution pension (Sweden)
    - An administratively cheap savings plan with access to annuities (the Thrift Savings Plan)
    - Mandatory occupational funded defined-benefit pensions (de facto in the Netherlands)
    - Funded defined-contribution pensions (Chile)
- 3rd tier: Voluntary defined contribution pensions at the level of the firm or the individual; any tax favouring should seek to avoid excessive regressivity

Why does this matter?
Answering the 'So what?' question

- Pensions affect the quality of life of hundreds of millions of older citizens and, as they look to their future, hundreds of millions of workers

- Pensions matter for national economic performance

- Pensions can matter internationally: global imbalances and China's precautionary savings rate of about 40% of GDP

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Challenges to social security pensions in times of global financial and economic crisis[1]

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Introduction – major concerns

This paper to a large extent focuses on old-age pensions but it looks as well here and there at other security programmes, as social security forms a comprehensive system where different programmes are complementary and interlinked. At the same time we do not discuss here social security programmes which aim at providing income security for unemployed (like unemployment insurance or unemployment assistance): role of these programmes is crucial in particular in times of crisis, however their importance would require a separate discussion linked closely to labour market and economic policies aimed at faster recovery.

In times of any economic downturn, revenues from contributions or taxes earmarked to finance social security programmes are falling, while expenditure – due increased number of beneficiaries – is on the rise. The countercyclical behaviour of social security expenditure is its inbuilt feature and a source of its power as automatic stabilizer of individual incomes and aggregate demand. However, funding for increased expenditure does not come automatically (beyond existing reserves of those social security systems which keep such contingency reserves) and has to come from increased overall deficit financing of public finance.

When reviewing[1] experiences of different countries there are a number of key areas at which one has to look in particular when discussing the role of social security in the crisis: (1) expansion of protection (either as automatic reaction of the existing social security system or policy induced changes or both; (2) financial constraints caused by the crisis lead to cuts or restrictions in benefit levels and – specifically for pre-funded define-contribution pensions (3) negative rates of returns of the pension funds undermine benefit levels of those already retired, those about to retire and those retiring in the future. But the biggest challenge stays in fact that large majority of world's populations have no access to even basic protection from social security schemes which leaves them vulnerable to all economic and social risks, including those brought by the current crisis.

<u>(1)   Expansion of social security – crisis response on the right track</u>

In those countries reviewed that have developed at least elements of comprehensive social security responses in the areas like pensions, health schemes or family benefits are usually expansions in coverage and in benefit levels of the existing schemes, except for a limited number of countries which were forced by circumstances to actually decrease benefits or narrow coverage..

Measures expanding benefits and coverage one can find everywhere – high, medium and low income countries. The difference is of course in the scale of the impact of such measures. In countries where coverage is comprehensive the expected impact in terms of not just of individual income levels of the covered recipients but in terms of the overall aggregate demand change is significant. On the other hand in countries with coverage limited only to those in small formal economy the impact is important from the point of view of the effective protection of covered recipients, however from the point of view of aggregate demand it is negligible.

Expansion (of various scale) of benefits and coverage we found in *Armenia* (various benefits), *Australia* (pension benefits), *Bangladesh* (old-age pension by 20 per cent), *Brazil* (social assistance extension, raise of old-age pension in line with minimum wage), *Chile* (extension of social pensions to another 5% of the poor elderly, raise in benefit level), *China* (gradual extension of the old-age pensions to rural

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[1]   Sources are the ILO 48 country reviews, ILO Social Security Department own continuous monitoring of selected countries experiences ongoing since the onset of the crisis, results of a survey undertaken by International Social Security Association (ISSA Survey: Social security responses to the financial crisis: http://www.issa.int/aiss/News-Events/News/ISSA-Survey-Social-security-responses-to-the-financial-crisis as well as information provided by OECD, in particular in chapter on "Pensions and the crisis; published in "Pensions at a Glance 2009, OECD, Paris.

population, lower health insurance premiums are encouraged), *Costa Rica* (15% increase in benefit level in non-contributory pensions), *Egypt* (health coverage has been extended), *France* (6.9% raise in old-age pensions, extension in health coverage), *India* (expansion of pension and health coverage), *Italy* (extension of certain social security coverage to hitherto excluded groups), *Kenya* (cash transfers to the elderly), *Pakistan* (health coverage and social safety net extended), *Philippines* (extension of health coverage), *Russia* (adjusted pensions to inflation forecast), *South Africa* (decreased retirement age for men, prolonged child benefit payments), *Spain* (increase in minimum pension benefit), *Tanzania* (increased minimum pension benefit levels), *UK* (child benefits raised), *Uruguay* (shortened minimum contribution period for full pensions from 35 to 30 years), *US* (extended health insurance coverage).

In addition to these changes in benefit levels of existing social security systems, some governments have announced special one-time payments, usually to low-income households, e.g. in Australia, France, Indonesia, Italy, Thailand, and the UK. But as opposed to the extension of coverage or permanent adjustments in benefit levels, such measures give temporary relief and may also boost aggregate demand if large in scale, but are not making a long-term impact on households' income situation.

Other responses include (usually temporary) exemptions from social security contributions with a view either to reduce costs for employers and thus stimulate employment or to raise net earnings of (low-income) workers. Among countries which introduced such measures one can find: *Canada* (lowering the contribution rate to unemployment insurance), *China* (numerous exemptions to unemployment insurance contributions, *Czech Republic* (regressive reduction of contributions compensated with higher state support to unemployment insurance), *Germany* (reduced contributions to health and unemployment insurance schemes) *Japan* (unemployment insurance contributions reduced by 0,4%), *Spain* (various exemptions from social security contributions for employers).

However tempting might be such reductions in social security contributions to decrease labour costs or increase net wages, when applying such measures one has to make sure that these are properly compensated both in terms of financing of the benefits currently paid as well as in terms of future benefit entitlements of contributors in case these depend on amount of contributions actually paid.

<u>(2)   Consolidating social expenditure – short-term and long-term concerns</u>

While most countries have expanded social security coverage and benefits as a reaction to the crisis, a few of the reviewed countries have announced cuts or freezes in social spending and in benefits, usually as part of the wider plan of consolidating public finances and reducing public deficits.

Ireland has halved its unemployment benefit for jobseekers under the age of 20, introduced a pension levy of 1 per cent across all wage earners and announced a freeze in welfare expenditure for at least two years. In *Hungary* the 13th month pension and the 13th month salary have been scrapped, the time of paid parental leave was reduced, future pension increase will be indexed to GDP growth and inflation (rather than wages and inflation), and retirement age will be gradually increased from 2012 on. *Latvia* announced cuts in the unemployment benefit scheme, where benefits decrease quicker than originally foreseen, pensions for working pensioners decrease by 70%, family allowance are down by 10%, pre-retirement pension decreased from 80% of the full benefit to 50%, retirement pensions and length-of-service pensions will be decreased by 10% globally, parental benefits will be reduced by 50% for working parents; additionally the number of health centres will be halved and prep classes will be abolished. *Ukraine* tightened the eligibility conditions for the unemployment scheme, with the effect that the number of registered unemployed decreased by 17% compared to previous year, at the same time the level of contributions and contributors was widened (whether the benefit level has been affected is difficult to assess).

While the above examples show that in countries in questions restrictions of public spending to limit public finance deficits in view of the (often dramatic) crisis situation is treated as a priority, it is too early now to fully assess not just negative social impacts of the measures (in terms of living standards of the affected groups), but also potential longer term economic impacts in terms of the depth and lengths of the recession. In some countries measures of the above nature were adopted as a condition to receive large scale loans supporting financial sector and the economy.

There is always a conflict between the long-term financial sustainability concerns and countercyclical role of social security (and wider public) spending. Interesting illustration and solution comes from Sweden. Several years ago, within the main Swedish old-age pension scheme (which is PAYG funded but organised as so-called Notional Defined Contribution - NDC - principles) special feature was added in a form of a so-called automatic balancing mechanism. Special calculation methods have been established to make it possible to estimate the long-term assets and liabilities of the PAYG scheme. If the estimated liabilities of the system exceed its assets, the annual indexation both of the acquired pension rights and pensions in payment is supposed to be (automatically) reduced for a period necessary to bring equilibrium back. Obviously, such a mechanism would make the system financially stable. Whatever happens, it reduces current and future pensions by as much as needed in order to restore financial equilibrium to the system.

Until 2007 the so-called "balance ratio" of the Swedish pension system was above one (assets higher than liabilities) and thus automatic balancing mechanism was not activated. However situation has changed with the crisis. For year 2008 calculated balance ratio first became less than one (liabilities surpassed the assets). This means that pension levels would need to be actually decreased in 2010 and for at least another several years grow at much lower pace than with balancing mechanism activated. However, such perspective opened a debate if this should be allowed in the conditions of crisis. The debate concluded that one should allow discretionary intervention suspending existing rule and reducing scale of decrease of pension levels expected for 2010 and spreading it over longer period to cushion the impact on pensioners' living standards[2].

Above example shows clearly an important dilemma. On the one hand there is a revealed willingness to introduce automatic budgetary mechanisms which would help to ensure long term sustainability of specific expenditure programmes or overall public finances making it immune to discretionary political decisions. This one can see it not only in Sweden but also in other recent reforms of social security pension programmes in many countries and also in wider public finances' reforms requiring permanently balanced budgets at the local or national level. These long term automatic mechanisms and rules in the times of economic downturn, like a current one, may however act as "automatic de-stabilizers" rather than stabilizers as Joseph Stiglitz stressed in his speech in the ILO in March 2009, unless – like in case of Sweden or Germany[3] – politicians come in time with discretionary corrections of the "rules" in order to achieve policy outcomes desired in the current circumstances. OECD experts in the recent report apparently support such discretionary interventions and come to the conclusion that design of such "automatic balancing" "*needs a re-think*" as "*it does not seem sensible to reduce benefits in a pro-cyclical way, taking money from the economy when it is weak*"[4].

(3)   Special concern – pension funding

The effect of the financial and economic on crisis pensions systems and depends on category of pension schemes people belong to (defined contribution, defined benefit, PAYG or fully funded) and if they are already retirees, close to retirement or still have many years of contributing ahead of them.

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[2]   See article by KG Scherman in Svenska Dagbladet, June 3rd, 2009. Automatic adjustment mechanisms linking pension entitlements to state of the pension system finances exists also in different forms in Netherlands (occupational pensions), Canada and Germany.

[3]   "Sustainability" factor of the German pension system would lead in 2008 ad 2009 to pension increases of 0.46% and 1.76%. But the government has over-ridden the "automatic" mechanism increasing pensions by 1.1% and 2.41% respectively.

[4]   Pensions and the crisis, p.8, published in "Pensions at a Glance 2009", OECD, Paris

In defined benefit (DB) schemes where pension amounts are calculated without regard to the level of reserves the immediate impact will be less than in defined contribution schemes where benefits guarantees are less effective by nature. However, long-term contraction of employment and hence the number of contributors will also force governments to downward adjustments in defined benefit schemes.

However, in fully funded pension schemes pension entitlements in some cases might be lost completely. In OECD countries private pension funds lost their 23% of their value.[5] If the crisis turns into a long-term downward adjustment of asset prices, the outcome in defined contribution schemes will inevitably be lower benefits paid at retirement. Any prolonged suppression of interest rates and asset prices will to lead to serious difficulties by way of destabilized annuity rates (prices) and management of annuity reserve funds. The size of the long-term effect will depend on the depth and the duration of the downturn of asset prices. If the present price reductions turn into permanent level adjustments then old age income will be reduced, if the downturn is short-lived the effect will be transitional.

While these losses may not be permanent, they still show the vulnerability of pension levels in defined contributions schemes, notably for people that are close to retirement and whose savings portfolios might not recover during their remaining active life. . The most affected are people that will retire within the next months and years, those with long-period of membership in DB funded pension plans and in particular those with investment policy heavily exposed to riskier assets (many in US, UK and Australia). Also those pensioners in private pension plans who did not take annuity on retirement may be seriously affected.[6]

Now in OECD, private financial sources constitute on average fifth of retirement incomes, but more than 40% in 5 countries: Australia, Canada, the Netherlands, the United Kingdom and the United States (on the other hand less than 5% in countries like Austria, Czech Republic Slovak Republic, Hungary and Poland). However in the future private pensions (mandatory and voluntary) are expected to provide 75% of future retirement incomes in Mexico, 60% in Slovak Republic, half in Poland, 30% in Hungary. As many of the latter schemes are relatively young and thus even if current losses of the pension funds are significant (in Poland ILO estimates that in real terms members lost on average three years of their contributions), impact on incomes of future retirees of this single crisis might be relatively minor. However, as OECD stresses, these development "highlight the need for resilience to future crisis"[7].

The way forward

Three things are needed. The first is a fundamental overview of existing social security systems and the correction of mistakes made during the last two decades in countries where social security systems already are fairly developed. The second and perhaps more fundamental task is to introduce sound social security systems in countries where only rudimentary systems exist so far. The third and most challenging task would be to combine these two measures into a coherent long term developments paradigms for national social security systems. The crisis bears the risk that we are only seeking short-term quick fixes to poverty and insecurity while neglecting longer-term solutions that would help to correct the fundamental inequities in the global economy and society.

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[5]   OECD: Pensions and the Crisis, p.1, from "Pension at Glance 2009"

[6]   The reason that ILO Social Security (Minimum Standards) Convention No. 102 requires old-age pension to be paid as life annuity (periodical payment throughout a contingency) is also to protect income security of the elderly against the impact of such events as the financial and economic crisis.

[7]   OECD: Pensions and the Crisis, p.3, from "Pension at Glance 2009"

Correcting past mistakes

Corrections are needed first and foremost in pension systems. The vulnerability of pension levels to the performance of capital markets that was introduced in so many pension systems during the last that three decades clearly was a mistake that stands to be corrected. What is needed immediately is to protect the pension levels of people that are close to retirement. Existence of strong minimum pension guarantees may work here as "automatic stabilizer" of the retirees living standards. Some countries have it already; others included on-off payments to older people into their stimulus packages as a temporary relief (Greece, Australia, UK and US). Others, as a result of the current crisis, decided to strengthen and expand minimum guarantees in their pension systems (Finland, Belgium, France and UK, and also countries with the higher than average poverty incidence among elderly: Australia, Korea, and Spain).

Policies of strengthening pension guarantees of low income earners and thus significantly correcting past reform trends will have to be strengthened further. As OECD shows, in the future, in countries like Germany, Japan or United States low income earners will be receiving pensions at the level of 20-25% of the average earnings (OECD average will be 36% with Denmark at the top of the list with 62%)[8]

In the short run the state may authorize pension schemes to reduce the level of capitalization for a transitional period (like it was done for example in Netherlands). This is probably the only realistic option at the moment – given global resource constraints. If asset prices rebound at some point than the overall cost of the guarantees will be only a fraction of the momentary looses of pension assets.

In their observations in response to the crisis, the OECD have suggested that governments could play a more active role in managing risks associated with the payout phase of pensions and annuities, with the idea they could encourage the market for longevity hedging products by producing an official longevity index. Other OECD experts' proposals included suggestions that governments should issue longevity bonds that "would set a benchmark for private issuers", while they "should also consider" issuing more long-term and inflation-indexed bonds, a move already taken by a small number of countries; most recently by the Danish government with the release of a 30-year bond that was primarily bought by domestic pension funds and insurance companies[9].

But much more fundamentally, this is the time to for a systematic overall reassessment of global pension policies. The ILO does not have a specific pension model – but it does have a set of basic requirements for pension systems. These are included in social security standards which have been built up over many decades, and specify the way in which social security systems should perform. It has never been timelier than now to remind, to promote and to apply those principles:

1. Universal coverage: Everybody has a right to affordable retirement through pension systems that provide all residents with at least a minimum level of income protection in old age. Similarly, everybody has a right to income security in case of a loss of a breadwinner and disability.

2. Benefits as a right: Entitlements to pension benefits should be precisely specified as predictable rights.

3. Equity and fairness. There should be no discrimination and equal treatment of all, including equal treatment of national and non-national residents. Entitlement conditions and benefit provisions should be gender-fair.

4. Protection against poverty: Pension systems should provide a reliable minimum benefit guarantee that effectively protects people against poverty in old-age, loss of a breadwinner or disability

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[8]   OECD: Pensions and the Crisis, p.5, from "Pension at Glance 2009"

[9]   IPE.com 13 November 2008 12:06

5. Lost income replacement: contributory earnings-related systems should provide guaranteed replacement rates at least to those with earning lower than average

6. Collective actuarial equivalence of contributions and pension levels: amounts of benefits for all contributors should adequately reflect the level of the contributions paid

7. Guarantee of a minimum rate of return on savings: The real value of contributions paid into savings schemes wherever these are part of the national pension systems should be protected.

8. Sound financing and fiscal responsibility: Schemes should be financed in such a way as to avoid uncertainty about their long-term viability. Pension schemes should not crowd out the fiscal space for other social benefits in the context of limited overall national social budgets.

9. Policy coherence and coordination: pension policies should be inherent part of coherent and coordinated social security policies aimed at providing affordable access to essential health care and income security to all those in need.

10. State responsibility: The State should remain the ultimate guarantor of the right to affordable retirement and access to adequate pensions.

Such guarantees can be applied to both PAYG and fully funded pension schemes. They can be legislated by any government. Most likely they will not lead to major real expenditure, but in any case they will cost a fraction of what the present bail-out of the financial system could cost us.

Building social security for all

Social security will effectively cushion the negative impacts of the crisis if its foundations based on solidarity are strengthened. The ILO is promoting the reshaping of national social security systems based on the principle of progressive universalism. We first seek to ensure a minimum set to social security benefits for all, or the social protection floor. Based on that floor higher levels of social security should then be achieved for as the economies develop and the fiscal space for redistributive policies widens.

Higher- and middle income countries: Despite the talk of over-burdened welfare states in the past decades, this crisis gives new visibility to the crucial role of social security in weathering economic storms, now and in the future. The memories of the devastating effects, which an economic crisis can have on households and individuals, have nearly faded for most people in the high-income countries. Where this is the case, the success can largely be attributed to the comprehensive social security systems that have been established – often as response to earlier crises. Thus, also in developed economies, comprehensive and state-organized social security based on the principle of solidarity may not be treated as a relict from the past – they are powerful tools for economic and societal development in the future. It is thus of central importance to sustain the fiscal space for public social security schemes through government policies.

Low-income countries: While many higher income and some middle income countries are relatively well equipped in social security and thus effective instruments of preventing poverty, this is far from being a case in many other countries of the world, where only large minority has access to even basic levels of social protection. Fortunately it seems the crisis helps to reach a wide consensus on the necessity of investments in social protection also in low income countries. OECD Development Assistance Committee says: "*Social protection directly reduces poverty and helps make growth more pro-poor. It stimulates the involvement of poor women and men in economic growth, protects the poorest and most vulnerable in a downturn and contributes to social cohesion and stability. It helps build human capital, manage risks, promote investment and entrepreneurship and improve participation in labour markets. Social protection programmes can be affordable, including for the poorest countries, and represent good value for money.*"[10]

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[10]   OECD DAC: Making Economic Growth More Pro-Poor: The Role of Employment and Social Protection: Policy Statement; DAC High Level Meeting, 27 and 28 May 2009

Sharing the above view, the Chief Executives' Board of the UN System comes with idea of establishing a Social Protection Floor[11] by ensuring access to basic social services and empowerment and protection of the poor and vulnerable. Such social protection should consist of two broad main elements: (a) Services: geographical and financial access to essential public services (such as water and sanitation, health, and education); and (b) Transfers: a basic set of essential social transfers, in cash and in kind, paid to the poor and vulnerable to provide a minimum income security and access to essential services, including health care. ILO Global Jobs Pact of June 2009 thus requests the countries to develop "*adequate social protection for all, drawing on a basic social protection floor including: access to health care, income security for the elderly and persons with disabilities, child benefits and income security combined with public employment guarantee schemes for the unemployed and the working poor*" and urges "*the international community to provide development assistance, including budgetary support, to build up a basic social protection floor on a national basis*".

Donors seem to be positive to the call for support to expanding social protection in low income crisis in the crisis and beyond. OECD DAC declares[12]: "*Donors' support for social protection programmes should provide adequate, long-term and predictable financial assistance to help partner governments establish gender-sensitive social protection programmes and create the conditions for those programmes to be politically and financially sustainable. This is especially important in the current situation of contracting fiscal space and declining financial inflows. Such support must be provided through harmonised and co-ordinated financing mechanisms in support of nationally defined strategies and programmes.*" UK Government in its recent White Paper on International Development, "Building our Common Future"[13] urges the World Bank to "*pay greater attention to social protection*" and use the Rapid Social Response Programme to more effectively help low income countries to build necessary basic social protection programmes.

Such growing global coalition has a real chance to make a difference and help the uncovered majority to go through the current crisis and be better prepared to the future ones.

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[11]   Secretariat of the United Nations System, Chief Executives Board for Coordination (CEB): COMMUNIQUÉ of 5 April 2009, Paris, France

[12]   op.cit.

[13]   DfID, July 2009, p. 25

Pension reform and the crisis

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Power Point Presentation

Agenda

A. Crisis and pensions
- Role pensions play in crisis as part of national social security systems
- Impact of crisis on pensions

B. Automatic stabilizers or de-stabilizers?

C. What has to be done?

D. Ten guiding principles for social security pensions

Responding with social security to the crisis

- **Responses:**
  - social security has been widely used as a means to combat the social and economic consequences of the crisis through prevention of poverty, individual consumption smoothing and stabilisation of aggregate demand
  - acceptance of stabilisation function of social transfers led to extending benefits.
  - But there are first signs of "consolidation measures" ...

Responding with social security to the crisis (2)

- Australia (increase in pension benefits)
- Bangladesh (old-age pension increased by 20 per cent)
- Brazil (increase of old-age pension in line with minimum wage)
- Chile (extension of social pensions to another 5% of the poor elderly, increase in benefit level)
- China (gradual extension of the old-age pensions to rural population)
- Costa Rica (15% increase in benefit level in non-contributory pensions)
- France (6.9% raise in old-age pensions)
- India (expansion of pension coverage)
- Kenya (cash transfers to the elderly)
- Russia (adjusted pensions to inflation forecast)
- South Africa (decreased retirement age for men)
- Spain (increase in minimum pension benefit)
- Tanzania (increased minimum pension benefit levels)
- Uruguay (shortened minimum contribution period for full pensions from 35 to 30 years)
- …

Responding with social security to the crisis (3)

- Pension levels protected in real terms or increased
  - to prevent poverty of the more vulnerable
  - to stimulate the economy
- Coverage extended to uncovered groups
  - to prevent poverty of the more vulnerable
  - to stimulate the economy
- Effective retirement age reduced
  - to ease the situation at the labour market

Impacts of the crisis on pensions

	Younger/prime-age workers	People near to retirement	Retirees
Strongly affected		Individuals in mature, private DC schemes (especially: *i)* where exposure to riskier assets is greater; and *ii)* where people are required to annuitise their balances at retirement)	Retirees who did not annuitise their DC balances at retirement (especially those with greater exposure to riskier assets)
Moderately affected		Individuals in mature, private DB schemes Public, PAYG systems with deficits	Retirees in plans with automatic benefit adjustments (*e.g.* conditional indexation, balancing mechanisms, sustainability adjustments)
Less affected	Most individuals in this group	Individuals with recently established private DC schemes	Retirees who annuitised DC balances before the crisis Most retirees with DB private pensions or public, PAYG benefits

Source: Pensions at Glance 2009, OECED

Impacts of the crisis on pensions (2)
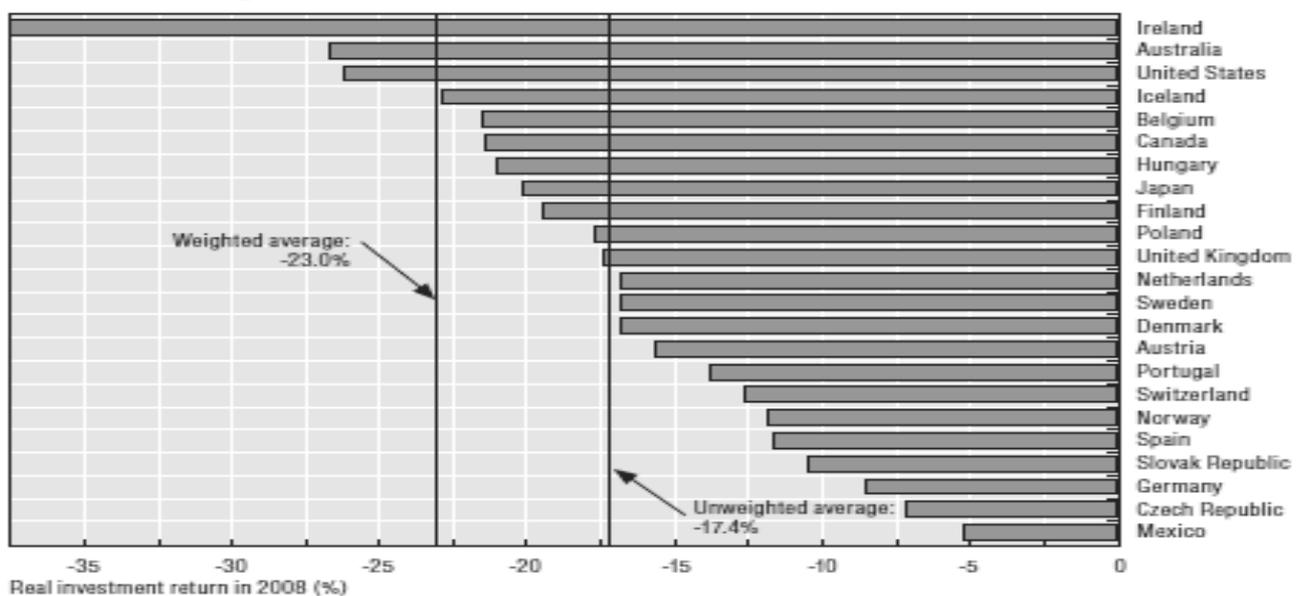
Source: Pensions at Glance 2009, OECED

Impacts of the crisis on pensions (3)

Net real assets per member of mandatory second pillar pension funds: Poland 2005-2009
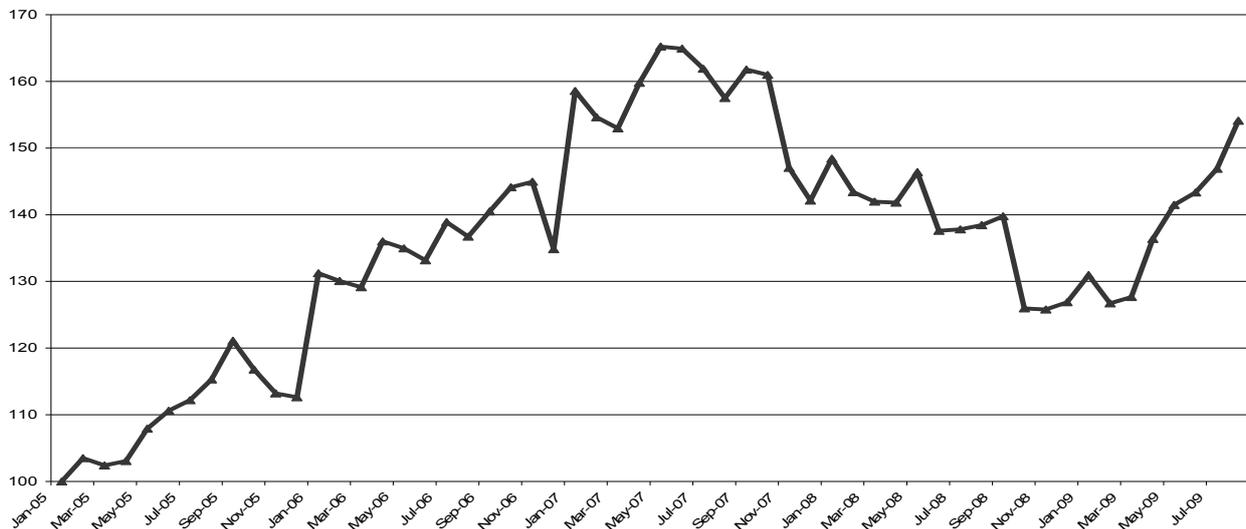
What was designed as long-term stabilizer may act as de-stabilizer during the cyclical downturn

- Many recent reforms focussed on ensuring long-term financial sustainability as a primary goal, sometimes at the cost of benefit adequacy
- Many recent reforms built-in automatic mechanisms linking levels and adjustments of both future and current benefits to economic and labour market situation
- In the current crisis many of these mechanisms proved to cause pro-cyclical changes in benefit levels, would thus decrease the benefit levels when economy and labour market is in recess.
- To prevent above, in some cases, these automatic mechanisms were suspended. These mechanisms have to be revised.
- One has to search for such designs which would balance financial concerns with benefit adequacy goals and also long-term objectives with the need to protect people during the downturns of the economic cycle.

Pension systems reformed over last decades have to be reviewed, fixed and strengthened

- Fix existing contributory pension schemes

- Introduce/strengthen minimum non-contributory guarantees - a social protection floor

- Combine the two into a rational long-term strategy

Fixing existing schemes

- *Stop undermining trust in public DB schemes* by pretending that DC schemes are immune to ageing
- *Enforce efficiency:* decrease administrative cost levels
- *Stop wasting public money* on providing tax breaks for voluntary private third tier pension schemes
- *Intelligent pension age rules* need to be used as stabilisers
- *Improve the* unemployment schemes to prevent pensions being used as a substitute
- *Intelligent funding levels* in DB pension schemes need to be developed to optimise the economic role of pension schemes
- *Reduce dependency of benefit levels in pension schemes on volatile market performance* through:
  - Shifting the balance in the systems back to DB schemes
  - Develop DB guarantees for DC schemes
  - Turn mandatory DC schemes into NDC schemes or guarantee rates of return otherwise

Putting a solid social protection floor in place

- Basic non-contributory pensions for everybody
- Non-contributory interventions into the contributory schemes:
  - Compensating lost-benefit entitlements or refunding contributions for periods of involuntary absence from the labour market
  - Subsidising contributions of those with lower incomes

Ten guiding principles (1)

1) Universal coverage:

   Everybody has a right to affordable retirement through pension systems that provide all residents with at least a minimum level of income protection in old age. Similarly, everybody has a right to income security in case of a loss of a breadwinner and disability.

2) Benefits as a right:

   Entitlements to pension benefits should be precisely specified as predictable rights.

3) Equity and fairness:

   There should be no discrimination and equal treatment of all, including equal treatment of national and non-national residents. Entitlement conditions and benefit provisions should be gender-fair.

Ten guiding principles (2)

4)   Protection against poverty:

>   Pension systems should provide a reliable minimum benefit guarantee that effectively protects people against poverty in old-age, loss of a breadwinner or disability

5)   Income replacement:

>   Contributory earnings-related systems should provide guaranteed replacement rates at least to those with earning lower than average

6)   Collective actuarial equivalence of contributions and pension levels:

>   Amounts of benefits for all contributors should adequately reflect the level of the contributions paid

7)   Guarantee of a minimum rate of return on savings:

>   The real value of contributions paid into savings schemes wherever these are part of the national pension systems should be protected and minim rate of return guaranteed.

Ten guiding principles (3)

8)   Sound financing and fiscal responsibility:

>   Schemes should be financed in such a way as to avoid uncertainty about their long-term viability. Pension schemes should not crowd out the fiscal space for other social benefits in the context of limited overall national social budgets.

9)   Policy coherence and coordination:

>   Pension policies should be inherent part of coherent and coordinated social security policies aimed at providing affordable access to essential health care and income security to all those in need.

10) State responsibility:

>   The State should remain the ultimate guarantor of the right to affordable retirement and access to adequate pensions.

3

Pension reforms in Central, Eastern and Southern Europe:

a comparative overview

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1. Introduction

In the early 1990s, all socialist and communist countries in Europe experienced sweeping changes – political, economic and social. Political – through the introduction of a multi-party parliamentary system; economic – through rapid privatization and movement toward a market economy: social – through large and at times dramatic "downsizing" of the state and state enterprises as the main providers of social welfare.

In terms of expenditures, the pension system has constituted the largest part of the social protection system. In most ex-communist countries of Europe, these systems were under extreme stress during the early 1990s, due to the fall in production, large decrease in employment (and particularly employment in the formal sector), large tax erosion – caused by enterprise restructuring and increase in informal employment. The social protection system responded mainly by diminishing social rights. For pension systems this was most visible through hap-hazard and ad hoc indexation, resulting in large decreases in the relative value of pensions.

2. Pension reforms

After achieving some breathing space and a satisfactory degree of political, economic and social stability, these "transition" countries of Europe started with a general and broad overhaul of their social protection systems, particularly their pension systems. Table 1 shows the years of legislated pension reform in the eight countries of Central, Eastern and Southern Europe (CESE) that will be subject to our analysis. Implementation follows legislation, so that the reforms were in most cases implemented with a one year lag, and in some cases this lag was even greater.

Table 1: Pension reforms in the 1990s and 2000s (year of legislation)

Bulgaria	2000 (first pillar), 2002 (second pillar)
Croatia	1998 (first pillar), 1999 (second pillar)
Czech Republic	1995, 2004, 2008
Hungary	1997, 2006 - 2008
Poland	1999
Romania	2000 (first pillar), 2006 (second pillar)
Slovakia	2003 (first pillar), 2004 (second pillar)
Slovenia	1999

Source: National reports on strategies for social protection and social inclusion 2008-2010, country reports; Holzmann and Guven (2009).

Not counting the Czech Republic, which legislated some parametric changes in its first pillar already in 1995, the "front-runners" were Hungary and Poland. Their pension reforms were widely publicized, also because of the very strong involvement of international organizations (particularly the World Bank) – not only in planning and designing the reform, but also in actual financial support. Most "transition" countries of CESE followed suit, emulating the "paradigmatic shift" initiated by Hungary and Poland. There are two exceptions, two countries that did not join "the pack" and were steering a somewhat independent course of greater gradualism. These two countries – the Czech Republic and Slovenia – also happen to be among the more developed countries of CESE, in terms of economic and social indicators. However, it must be noted that these two countries were strongly criticized by international institutions as laggards in structural reforms. Table 2 gives a snapshot of the pension reforms introduced in the eight CESE countries.

Table 2: Directions of pension reform

	1. pillar	2. pillar
Bulgaria	change to point system	mandatory
Croatia	change to point system	mandatory
Czech Republic	parametric reform	voluntary
Hungary	parametric reform	mandatory
Poland	change to NDC	mandatory
Romania	change to point system	mandatory
Slovakia	change to point system	mandatory
Slovenia	parametric reform	voluntary

Note: According to the World Bank terminology, the second pillar is a mandatory pillar; however we include in the second pillar all pension schemes (mostly occupational) which are strongly linked to the first pillar, i.e. only members of the first pillar can join these schemes.

As seen from Table 2, four countries introduced a point system in their first pension pillar, Poland opted for a more radical change to a NDC system, whereas three countries (Hungary, the Czech republic and Slovenia) introduced "only" parametric changes in the first pension pillar. Of the eight countries, six introduced a mandatory, private and fully funded second pillar. There are quite large differences in the organization and defining characteristics of both the reformed first pillar and the newly introduced mandatory second pillar. However, all the pension systems do share some common features, in that eligibility requirements for pensioning were tightened, actuarial fairness has been improved (there is a tighter link between paid contributions – or past wages – and pensions received) and financial sustainability has been improved. We shall deal with each of these three elements.

2.1   Changing eligibility conditions

By "changing eligibility conditions" we actually mean the tightening of eligibility conditions. Table 3 provides an indicator of this "tightening", i.e. the statutory retirement age, which has been increasing in all eight CESE countries.

Table 3: Legislated statutory retirement age

	Men	Women
Bulgaria	63	60
Croatia	65	60
Czech republic	65	65
Hungary	65	65
Poland	65	60
Romania	65	60
Slovakia	62	62
Slovenia	63	61

Source: National reports on strategies for social protection and social inclusion 2008-2010, country reports; Holzmann and Guven (2009), Kiss (2009).

Table 3 does not show from what levels these countries have been moving, nor when this legislated retirement age will be achieved. We provide a brief list, by country.

- Bulgaria: the statutory retirement age for men (63) was reached in 2005, for women (60) in 2009.
- Czech republic: the statutory retirement ages for men (65) and women (65) will be reached

between 2017 and 2030. However, women with 2 children will be able to retire at 64, with three children at 63, with four and more children at 62.

- Croatia: the statutory retirement ages for men (65) and women (60) were reached in 2008.
- Hungary: the statutory retirement ages for men (62) and women (62) was reached in 2009. Legislation passed in May 2009 will increase the retirement age to 65, by 2022.
- Poland: the statutory retirement ages for men (65) and women (60) were reached in 2007.
- Romania: the statutory retirement ages for men (65) and women (60) will be reached in 2014.
- Slovakia: the statutory retirement age for men (62) was reached in 2006, for women (62) will be reached between 2014 and 2023 (depending on number of children; women with more children will reach the retirement age of 62 later).
- Slovenia: the statutory retirement age for men (63) was reached in 2009, for women (61) will be reached in 2023. Persons with children will be able to retire at a lower age: the reduction (in 2014) will be 7.5 months for one child, 18.75 months for two children 33.75 months for three children and 18.75 months for each additional child.

Again, it must be stressed that the pace of increase – in countries which have not reached the final values yet – is very unequal. In Slovakia, which has abolished lower retirement ages for women with children, the pace is quite fast: increase of 9 months per year, in the Czech Republic the increase in retirement age proceeds at a more glacial pace, i.e. between 2 and 4 months each year. The increase in Slovenia is also slow, as the retirement age for women is increasing by 4 months every year.

Statutory retirement age is not necessarily strongly correlated with effective retirement age. A low effective retirement age might imply that there are numerous possibilities for early retirement – not only through various special schemes for certain occupations, but also through general early retirement provisions and disability schemes. As seen from Table 4, only one country (Bulgaria) offers "in principle" no possibility for early retirement, meaning that this option is not available within the general first pillar pension scheme. There are of course early retirement options for specific occupations – offered in all eight CESE countries. Bulgaria and Slovenia, for example, provide early retirement pensions for specific occupations within the second pillar.

Table 4: Possibilities for early retirement

	Early retirement possible	Early retirement possible without reductions
Bulgaria	No	No
Croatia	Yes	No
Czech Republic	Yes	No
Hungary	Yes	Yes
Poland	Yes	No
Romania	Yes	No
Slovakia	Yes	No
Slovenia	Yes	Yes

Source: National reports on strategies for social protection and social inclusion 2008-2010, country reports; Holzmann and Guven (2009), Kiss (2009).

The experience of Poland is instructive, showing how political pressure and forces can shape actual developments and seriously offset the intended effects of pension reform. Thus, in 2005 the parliament decided to exclude miners from the new pension system (in addition to farmers and the military service, which were excluded from the very start) and prolong the early retirement option till the end of 2007.

Before the parliamentary elections in 2007 this option was further postponed till the end of 2008. It seems that not even this will apply, as the Constitutional court decided that early retirement (for men 60 years old and with an insurance period of 35 years) should be allowed. In addition, even after the deadline, the early retirement pension will *de facto* remain – it will be renamed "bridge" pension. These benefits are to be temporary benefits, financed not from the social insurance fund but by the employer and state budget.

Only Slovenia and Hungary offer the possibility of early retirement without penalties; this is conditional on an insured person fulfilling the criterion of long period of service. Thus, in Slovenia early retirement without penalties is (at present) possible for men who have at least 40 years of work[1] and they can retire from age 58. In Hungary, the requirement is (at present) 40 years of service; men can retire by the age of 60 and women by the age of 59. However, in Hungary this "no penalty" option for early retirement will be abolished by 2013.

Six countries offer the option of early retirement with penalties, i.e. reduction in benefits. The reduction in benefits is permanent, as they remain in place even after a person reaches statutory retirement age. The values of reductions differ widely among countries, though the reduction schedule typically has a simple structure – mostly 1.2%, 1.8%, 3.6% or 6% per year of retirement prior to the statutory retirement age. Slovenia maintains a digressive structure (higher annual penalties for years further from the statutory retirement age). Croatia changed these penalties frequently: 1.33% (per year of early retirement) prior to the 1998 reform, followed by 3.6% up to 2008 and then decreased to 1.8%. The latter decrease was doubtlessly caused by strong pressure from the trade unions.

Most of the CESE countries also offer incentives for retirement past the statutory retirement age. Thus, in Bulgaria, the increase in pension for an additional year was 3%, increasing to 5% from January 2009. In the Czech Republic, Hungary (since 2004) and Slovakia, the increase is 6% per additional year. Slovenia has a quite peculiar – digressive – system, with increases varying from 3.6% to 0% (higher accruals for years closer to the statutory retirement age). In Romania, the increase is 3.6% per year, whereas the Croatian pension system does not offer any incentives. In Poland, the question of incentives is rather irrelevant, due to the fact that the public pension system is an NDC system.

2.2   A closer link between contributions (past wages) and pensions

Penalties for early retirement contribute toward actuarial fairness, and thus also provide a tighter link between past wages and pensions received during retirement. Though these penalties are not closely related to actuarial fairness – they are in most cases far too low, they must be viewed as a step in the right direction. There are other important elements of the improved link between contributions (or past wages) and benefits: Table 5 shows how the period relevant for the calculation of pension is being extended to include the whole active working years of the insured person. Typically, the gradual extension means that every calendar year an additional year is taken into account when calculating the pension assessment base. However, the extension for Croatia is more radical, as an additional three years are taken into account every calendar year.

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1 Years of work do not include non-contributory periods and periods for which insurance could be purchased *ex post.*

Table 5: Some legislated features of the public pension systems

	Minimum insurance period (years)	Period relevant for calculation of pension	Indexation mechanism
Bulgaria	15	Entire working period (gradually)	Swiss indexation
Croatia	15	Entire working period (gradually)	Swiss indexation
Czech Republic	35	Last 30 years	Price growth + 1/3 of wage growth
Hungary	15	Entire working period (gradually)	Indexation dependant on GDP growth
Poland	None	n.a.	80% price growth + 20% wage growth
Romania	15	Entire working period (gradually)	Not fixed
Slovakia	15	Entire working period (gradually)	Swiss indexation
Slovenia	15	Best 18 years	Wage growth

Source: National reports on strategies for social protection and social inclusion 2008-2010, country reports; Holzmann and Guven (2009).

2.3 Some other important features of pension systems

Without ambition to be exhaustive, we will briefly present two important features of pension systems. These are (1) the guarantee of minimum income for the elderly and (2) the rewarding of noncontributory periods. These two features provide at least a partial "glimpse" of the redistribution present in the general public pension system. There are other features which would provide elements for a more complete assessment of the redistributive nature of public pension systems, such as the significance of special schemes (for the military, farmers, groups of government officials, hazardous occupations etc), the maximum/minimum pension ratio etc. Just as an illustration of the importance of special schemes and provisions: Poland has a large special pension scheme for farmers, receiving massive subsidies from the state budget. Croatia has a large number of pensioners (mostly Homeland war veterans) who receive (high) pensions according to special provisions etc.

Clearly, the question of minimum income guarantees for the elderly is quite important, and national systems have come up with different solutions. One option is to offer no special minimum income guarantee for the elderly, but to apply the generalized minimum income scheme, available to the whole population. If special minimum income guarantee provisions for the elderly are introduced, these can take several forms: a minimum ("social") pension and a minimum social insurance pension or an old-age allowance, earmarked specifically for poor pensioners. The minimum pension is available to all persons who have in some way contributed to the pension system. The minimum social insurance pension is available to persons with a sufficient number of years of service. Yet further, the amount of this pension can vary according to the number of years of service.

- Bulgaria has a minimum pension (the so-called social pension) and a minimum social insurance pension. The minimum pension is income-tested and available to persons aged 70 and above.
- Croatia has a minimum social insurance pension, which varies according to years of service. However, this pension is available only for those active insured persons who have remained in the "old" social security system, i.e. do not divert part of their contributions to the mandatory

second pillar. Persons who have joined the mandatory second pillar are not eligible for this minimum social insurance pension. There is also a generalized social assistance scheme, available to all persons.

- The Czech republic does not have a specific scheme for the elderly: a generalized scheme for minimum income guarantee applies also to the elderly.
- Hungary has a minimum social insurance pension, available to persons with at least 20 years of insurance. An old-age allowance is also available to persons (and couples) aged 62 and above, whose total income falls below a given percentage of the minimum social insurance pension.
- Poland has a minimum social insurance pension, available to persons who have reached the statutory retirement age and have a minimum insurance period (20 years for women, 25 years for men). For those elderly who do not satisfy the above conditions, there is a generalized social assistance program.
- In Romania, a minimum social insurance pension is set indirectly, by stipulating that the minimum number of pension points in a given year cannot be less than 0.25. A minimum pension is introduced starting in April 2009 – most of the recipients will be agricultural retirees.
- There is no stipulated minimum social insurance pension in Slovakia. However, pensioners for whom the pension received is less than a given percentage of minimum subsistence, are entitled to an old-age allowance.
- Slovenia has a minimum pension, minimum social insurance pension and an old–age allowance ("pension income supplement"). The minimum pension is available mostly to farmers. The old-age allowance is available only to persons receiving a minimum social insurance pension. The minimum social insurance pension varies according to years of service, the minimum insurance period being 15 years. Finally, a means-tested state pension (quite similar in value to the minimum pension) is granted to persons who are not eligible for any pension (from the Slovene pension system or foreign pension system). Recipients must be at least 65 years old and must have spent at least 30 years in Slovenia.

Table 6 summarizes our findings:

Table 6: Minimum income guarantees for pensioners

	Minimum pension	**Minimum social insurance pension**	**Old-age allowance**
Bulgaria	Yes	Yes	no
Croatia	No	Yes	no
Czech republic	No	No	no
Hungary	No	Yes	yes
Poland	No	Yes	yes
Romania	Yes	No	no
Slovakia	No	No	yes
Slovenia	Yes	Yes	yes

Note: See text for additional explanations.

The treatment of non-contributory periods would merit a separate study, as there are quite large differences between these eight countries. As a rule, for non-contributory periods the government pays contributions out of the state budget, so that in fact a person is pension-insured during this period. However, in some countries (notably the Czech republic) the budget of the Social Security Administration takes the burden (and honours these periods). Yet further, several countries offer the option of purchase – *ex post* - of some non-contributory periods; this is done by the insured person.. In assessing one's entrance pension, years of service and non-contributory periods are taken into account.

● ● ○ ○

The granting of non-contributory periods was particularly generous in the Czech republic, with the inclusion of periods of child-care (for a child up to the age of 4), periods of university study, periods of care for a person who is dependent on the care of another person and period of compulsory military service. On the other end of the spectrum is Slovenia, which honours periods of university study and periods of compulsory military service only as fulfilling conditions for pensioning; these periods have accrual rates 0%, so that they do not increase one's entry pension. However, an insured person can purchase these years, i.e. pay (ex post) "notional" contributions for these periods, in which case these periods are treated as "normal" insurance periods. Even for periods of child care (and for persons who are not insured as workers or selfemployed) the insurance base (out of which the government pays contributions) is quite low in Slovenia.

Overall, there is a clear desire to reduce or limit the extent of non-contributory periods. For example, Croatia has disallowed the purchase of periods of university study. The Czech Republic has, starting in 2010, decided to strike-out periods of university study; however, it will still honor such periods accrued up to 2010.

2.4   Fiscal sustainability and pension adequacy

We shall not deal with the "meaning" of fiscal sustainability. We though do state the obvious, namely that a pension system which grants low values of pensions and generates low pension expenditures (measured as percentage of GDP) cannot be labeled as "successful" if the share of elderly living in poverty is high.

An important measure aimed at ensuring fiscal sustainability is an indexation mechanism which does not offer full wage indexation. The Swiss indexation (which is equal to 50% of price increase and 50% of wage growth) would therefore pass this test of "acceptability". As seen from Table 5, three countries – Bulgaria, Croatia and Slovakia - have Swiss indexation of pensions. Hungary applied the Swiss indexation rule up to 2009; starting from 2010, pension indexation will be less favourable, and Swiss indexation will apply only if GDP growth is greater than 5%. For lower GDP growth rates the relative weight of price increase will be greater: thus, for GDP growth less than 3% indexation will be based exclusively on price increase. In Poland the indexation "blend" consists of 80% of price increase and 20% of wage increase. The Czech Republic has a formula which maintains the real value of pensions and also allows pensioners to share in economic growth, thus somewhat increasing the real value of pensions. Romania has a rather unstable indexation mechanism, where pension increase is set within a band of "permissible" values of the pension point. Only Slovenia maintains an indexation mechanism where pensions are indexed to wage growth; however, it is not quite so, as the pension indexation would more correctly be described as wage growth minus 0.6 percentage points[2].

Pension adequacy is a similarly elusive term. One would be tempted to describe a pension system that offers high replacement rates as "satisfactory" in terms of adequacy. However, a comparison of replacement rates is fraught with difficulties. Using net values is generally more meaningful, as we are comparing purchasing power of pensions relative to wages. Even here serious difficulties arise. Are we including all pensions or only old-age pensions in this comparison? Are only social insurance pensions included in the comparison, or also pensions based on social assistance? That is why one ought to be very "circumspect" in these comparisons. Bearing in mind these caveats, a "tentative" comparison of the pension/wage ratio, using net values, shows that Slovenia still maintains relatively high values (greater than 60%), in spite of the 1999 pension reform; however, these values are clearly on a decreasing trend, as shown in Table 7. Among the eight countries, Slovenia and Hungary probably have the highest ratio - above 60%, the Czech republic and Poland have a ratio of about 55%, followed by Slovakia (about 50%), with Romania and Bulgaria on the lower end of the spectrum, with values of around 40% or even less.

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[2]   Due to the economic and financial crisis, pension indexation has been discontinued in 2009 in a number of countries.

Table 7: Replacement rates in Slovenia, 2000 – 2008

	Old age pension (as % of average net wage)	Pension (as % of average net wage)
2000	75.3	68.1
2001	73.2	66.3
2002	72.8	65.9
2003	71.1	64.5
2004	70.2	63.7
2005	69.1	62.7
2006	68.6	62.5
2007	67.1	61.3
2008	67.1	61.6

Source: Monthly statistical bulletin of the Institute for pension and disability insurance, May 2009.

Low values of the pension/wage ratio do not necessarily imply that pensioners live in poverty, as there are numerous coping strategies, such as working in agriculture or other means of gainful employment after retirement. Also, pensioners can live in extended families, sharing income with active members of the household, or they can live in pensioner households, relying only on pensions as a source of income. Table 8 provides a comparison of poverty rates for seven countries (Croatia is not included), showing poverty rates for the total population and for the elderly (60+), split by gender[3].

Table 8: Poverty rates (in %) for total population and for population 60+, 2007

	Poverty rates (in %) for total population			Poverty rates (in %) for population 60+		
	Total	M	F	Total	M	F
Bulgaria	14	11	17			
Czech Republic	10	9	10	5	2	7
EU15	17	15	17	20	17	22
Hungary	12	12	12	6	4	7
Poland	17	18	17	8	7	9
Romania	25	24	25	28	24	31
Slovenia	12	10	13	18	10	23
Slovakia	11	10	11	7	4	10

Source: Eurostat

Unlike the core EU countries (EU15), poverty rates among the elderly in the CESE countries are much lower than the poverty rates for the total population – the exceptions are Romania and Slovenia. Also, as a rule, poverty rates for elderly women are much higher than for men – this is mainly due to the fact that many women receive a small widows' pension and live in single person households.

3.   Some reflections on the reform of the public pension pillar (first pillar)

We have already observed that four of the CESE countries have moved to a point system. In the point system, the entry pension is computed as:

Pension = AVGP . YS . VPP

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[3]   Poverty rates are set at 60% of median equalized income.

Where:

AVGP = average number of pension points per year of service
YS = years of service
VPP = value of pension point.

The average number of pension points per year of service is typically computed using a given service period; we have seen that this period is gradually moving toward the complete working period. The number of pension points[4] for a given year (used in calculating this average) is capped, and in some cases a floor is also set (so that this number in a given year cannot be less than a given value). The four countries which adopted the point system have been quite resourceful in applying the point system, using variants of the basic formula described above. Romania uses different values of the pension point with regard to gender (the values for women are somewhat higher).

The value of the pension point is usually specified as a given percentage of average nationwide wage (frequently, in the year preceding the retirement year)[5]. These values are in the range between 1% and 1.25% of the average nationwide monthly wage, so that a person whose average number of pension points per year of service was 1 and with 40 years of service would receive a pension equal to 40%-50% of the average national wage. In effect, setting the value of the pension point equal to a fixed percent of average nationwide wage means that in forming the "pension assessment base", wages are valorized using the growth of average wages.

The switch to a point system from a "classical" Bismarckian pension system might not be straightforward in all cases. This is particularly valid if the inclusion of wages in the pension assessment base under the current public pension pillar is digressive, or if the accrual rates are digressive.

Example 1:

In forming the pension assessment base in the Czech Republic, 100% of income up to approximately 43.2% of average gross wage is included, only 30% of the income between 43.2% and 107% of average gross income and only 10% of income exceeding 107% of average gross income.

Example 2:

The accrual rates (for women) in the Slovene pension system are: 38% for first 15 years, followed by 1.5% per year for each additional year of insurance. This means that the accrual rate per year for the first 15 years is 2.53%, followed by 1.5%.

Example 3:

Hungary had both digressions: in the forming of the pension assessment base and in the accrual rates. The first digression is to be abolished by 2009, the second by 2013, when the accrual rate will be uniform, i.e. 1.65 percent (for those remaining only in the first public pillar).

From these examples, one might infer that a transformation from a "classical" Bismarckian first pillar

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[4]   A person who in a given year receives the average nationwide wage is granted 1 pension point for that year; if he receives twice the average nationwide wage, he receives two pension points etc.

5 However, there is variety! Romania specifies a value of the pension point for the full insurance period, giving a value of about 42 % of average nationwide gross wage for 34 (men) and 29 (women) years for service; this was valid in 2009. Croatia does not set the value of the pension point with regard to the nationwide wage, but has been uprating this value using the Swiss indexation. This in effect means that wages are valorised using the Swiss formula.

(based on pension assessment bases and accrual rates) to a point system would be the simplest for Hungary (by 2013), followed by Slovenia. The current public pension system in the Czech Republic does not allow for a smooth transformation to a point system. Namely, digressions in the formation of the pension assessment base and accrual rates are strong instruments of redistribution, and the point system eliminates these "avenues" of redistribution, though it does not eliminate redistribution altogether. Redistribution is possible by setting a ceiling and floor on the average value of pension points per year of service.

4.   Some reflections on the mandatory second pillar

We have seen that six countries of our CESE group have opted for a mandatory, private fully-funded second pillar. "The jury is still out" to pronounce a verdict on the overall success of the mandatory second pillar. Though the financial performance of pension funds has been improving, with greater diversification of their investment portfolio, the 2008-2009 financial and economic crisis has dealt a very severe blow. In some countries there were serious implementation flaws, as well as flaws in design.

The technical problems which Poland experienced, caused by the individualization of contribution payments and contribution records, are well documented. It took some time for the IT applications to become fully operational. Hungary sets a vivid example of what can go wrong if the reform is not well designed; being a front-runner, the followers were careful not to repeat some of the design faults and implementation rules. The wrong decisions taken concern mainly two issues:

1.   who will collect contributions for the 2. pillar?

2.   switching rules, i.e. who will be able to join the mixed system (i.e. enroll in a second pillar pension schemes and redirect part of the individual's pension contribution to the second pillar);

Hungary decided that the second pillar mandatory contributions would go directly to the pension funds, thus depriving the relevant state institutions of control of contribution collection for the second pillar. This – predictably – also caused serious record-keeping problems in the first years of implementation.

With regard to the second issue, i.e. possibilities of inclusion into the mixed system, Hungary offered the option wide open to all employees, who had 20 months time to decide whether to remain in the first pillar only or to join the mixed system[6]. For new entrants in the labour market there was no alternative and membership in the mixed system was mandatory. The massive enrolment into the mixed system by far exceeded expectations; consequent to this "stampede", Hungarian experts estimated that about 20% of the total membership had no rational financial reasons to join the mixed system, as they would loose much more by partially abandoning the first pillar (and thus surrendering pension rights from the first pillar) than by joining the mixed system (and thus receiving annuities based on pension contributions to this pillar). After such a large part of the active population made such a bad choice, there was intense pressure to allow at least those workers who voluntarily decided to join the mixed system to opt out and return fully to the first pension pillar, if they so wished. Since 2000, there were a number of specific "openings", enabling certain groups (and age cohorts) to move out of the mixed system.

Other countries took note and imposed (age) restrictions for joining the mixed system or anticipated in advance the possibility to switch back to the "old" system. For example, Croatia set the following rule for enrolment in the mixed system (first and second pillar): mandatory enrolment for employees below

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[6]   This option was open from January 1, 1998 to August 31, 1999.

age 40 (as of July 2000), voluntary enrolment for employees between age 40 and 50 (as of July 2000). The decision of the 40-50 age cohort had to be made by June 2002 and was irrevocable. Slovakia placed no restrictions on enrolment in the mixed system, but offered a temporary opt-out (and also opt-in!) possibility between January and June 2008: 6.6% of members left the mixed system and moved back to the "old" system. In order to increase flexibility, in Slovakia (starting from 2008) new entrants were offered six months in which to decide whether their mandatory participation will change to voluntary.

Part of the learning process was greater fairness in calculating first pillar pensions for persons moving to the mixed system[7]. Again, countries that introduced a mandatory second pillar did not copy a feature of the Hungarian reform, where persons joining the mixed system (i.e. diverting part of their contributions to the mandatory second pillar) were also forced to surrender some 26% of their accrued rights from the public pension system. In other words, countries which introduced a mandatory second pillar at a latter stage took care that the pension from the first (public) pillar would not entail lower accrued rights from this pillar, up to the point of entry in the mixed system. While avoiding this "error", some countries could not resist the temptation to introduce other inequities. Thus, Croatia introduced a fairly generous minimum social insurance pension, available only for insured persons that have remain in full social security, i.e. have not joined the mixed system.

Countries that introduced mandatory second pillar pension schemes did not repeat the "liberal" model of contribution collection for the second pillar, as practiced by Hungary. Most countries authorized their tax authorities for collection of these contributions. In Poland, the second pillar contributions are collected by the social insurance institution (ZUS), whereas in Croatia a new institution was formed (REGOS), to deal exclusively with collection of second pillar contributions, distribution of these contributions to pension funds and record-keeping. Tensions between the Tax administration and REGOS developed, so that REGOS had to cede the contribution collection function to the Tax administration. Even Hungary quickly abandoned the "liberal" model (already in 1999), so that second pillar contributions are collected by the Tax administration and then passed on to the accounts of pension funds.

As seen from Table 9, most countries with mandatory second pillar pension schemes now devote a sizeable share of total pension contributions to the second pillar. The only exception is Romania, which introduced its mandatory second pillar recently, with the contribution rate to be increased to 2.5% in 2009[8].

Table 9: Contribution rates for pension insurance (in %)

	1. pillar	2. pillar	Total
Bulgaria	18	5	23
Croatia	15	5	20
Czech Republic	28	-	28
Hungary	25.5	8	33.5
Poland	12.22	7.30	19.52
Romania	27.75	2	29.75
Slovakia	9	9	18
Slovenia	24.35	-	24.35

Source: National reports on strategies for social protection and social inclusion 2008-2010, country reports; Holzmann and Guven (2009).
Note: Poland and Slovakia have separate contribution rates for disability insurance

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[7]   In Hungary, the loss of first pillar pension rights for persons moving into the mixed system was considerable.
[8]   The contribution rates in Romania have experienced several changes in the past years, the most recent being in 2009, with the total pension contribution rate in 2009 being 31.3%.

In spite of various problems with regard to mandatory second pillar pensions schemes in CESE countries, the mandatory private pillar seems to be "here to stay". There are still some important issues which will have to be resolved, such as regulating the annuity phase, further decreasing the asset management costs of second pillar schemes and improving the regulatory framework.

How did the voluntary second pillar pension schemes[9] fare in the Czech Republic and Slovenia? Though these pension schemes have large coverage – they cover close to 60 percent of the workforce in the Czech Republic and in Slovenia, the contribution collected are small. In 2007, the assets of the pension fund amounted to 4.7% of GDP in the Czech Republic and 3.9% of GDP in Slovenia. This might appear surprising, considering that these schemes are strongly subsidized by the government in the Czech Republic, and that for some groups of employees in Slovenia (government employees, employees working in occupations that are granted special early retirement options) these schemes are mandatory. Even for these mandatory schemes the amount of pension wealth per employee is small. In the closed government employee pension fund the amount per member was some 1,500 EUR in 2008, whereas in the closed pension fund covering certain groups of occupations the amounts are somewhat larger – 5,300 EUR per member in 2008.

5. Has employment in the elderly age group increased?

An important rationale for pension reforms was to improve the fiscal sustainability of pension systems, not only through the direct negative impact on pensions – decreasing their relative value as compared to wages, but also through the positive impact of increasing activity of the elderly. Figure 1 shows activity rates of the "critical" 55-64 age group in the period 2000 to 2008.

Figure 1: Employment rates in the age group 55-64 years, 2000-2008

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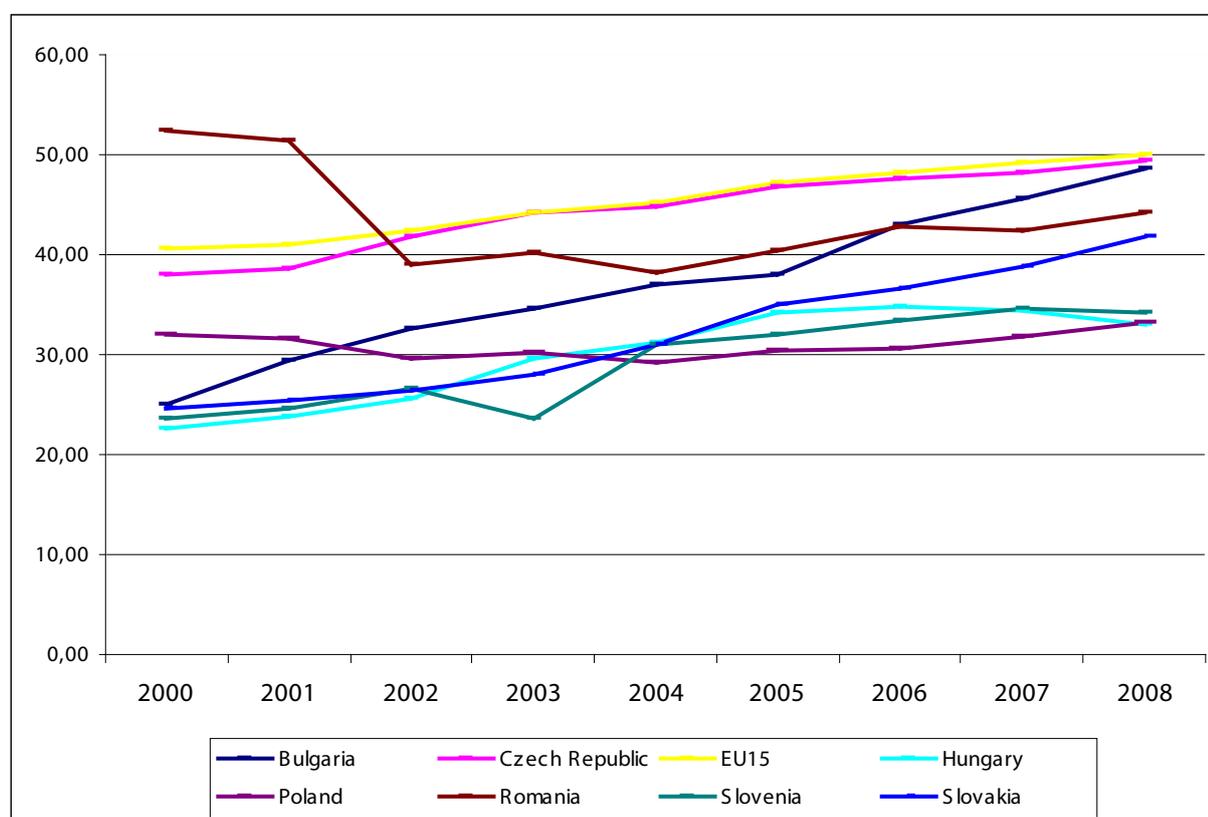
9   In the terminology of the World Bank, voluntary second pillar pension schemes would constitute the third pillar.

The dynamics of employment rates is quite different among countries, with the Czech republic, Slovakia and Bulgaria posting large increases in the 2000-2008 period. In spite of a "big-bang" pension reform in 1999, employment rates of the elderly population in Poland have hardly budged. Similarly low levels are also seen in Hungary and Slovenia. Clearly, there are a number of exit routes from the labour market, possibly also because of the functioning of the labour market, which discourages people to remain active. Increasing activity in this age group remains an important policy goal.

Acknowledgement

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Pension reforms in Central, Eastern and Southern Europe:

a comparative overview

Tine Stanovnik
Faculty of Economics and Institute for Economic Research

Power Point Presentation

Some reflections on the reform of the public pension pillar (first pillar)

- Introduction of a point system, which allows for less redistribution than the "classical" Bismarckian system
- Very diverse solutions even within the point system – some systems allow for a fairly rapid decrease in pensions for new entrants into the pension system (Croatia)

Some reflections on the mandatory private pension pillar (second pillar)

- Discriminating against persons who have opted for the mixed system (Hungary, Croatia)
- Problems of large inclusion of "voluntary" insured persons in the mandatory second pillar – and problems of opting out of the private mandatory pension schemes and moving back to full social security
- "Competition" and management costs
- The risk "exclusiveness" of the second pillar
- The contribution rate split between the first and second pillar

Do voluntary pension schemes fare better?

- Low amounts of contributions, in spite of very strong government incentives
- Complete exclusion of certain economic sectors

Did pension reforms

improve employment rates

among the "critical"

55-64 age group?

4

National Reports

Six questions to the countries in the region

1. If you have introduced the second pillar mandatory private pensions (Pillar II), please share your experiences. If you have not introduced the Pillar II pensions, please explain the reasons. In either case, how your pension system was affected by the current global financial crisis?

2. What are the major issues you face in the collection of pension contributions? Please share your experiences in law enforcement for unregistered establishments and under reporting of wages.

3. What method of indexation do you apply to the pensions in payment? If you changed the method of indexation, what are your experiences?

4. How to you administer the pensions for farmers? In particular, how do you collect contributions from farmers? Does the state subsidize farmers' pensions?

5. If you changed the retirement age in the past, what was the reason? If the retirement ages for men and women differ, what are the reasons?

6. Do you provide special additional pension credits (for example, workers in special job categories, service in the army, women with children)? If so, please describe the rules of increasing pension credits. How many workers are eligible for additional credits and for how many years/months credits on average? Who will finance the liability in respect of the additional pension credits?

Basic Pension Insurance in the Czech Republic

Jan Škorpík
Ministry of Labour and Social Affairs
Czech Republic

Basic Pension Insurance - General Information
(Pension Insurance Act No. 155/1995 Coll.)

• Pay-as-you-go scheme, financed from the state budget, contribution rate 28%

• Uniform for all economically active, no special schemes

• DB (flat rate + earnings related), old-age, disability and survivors pensions

• State administration

Basic Pension Insurance – Retirement Age

• Originally low retirement age of 60 years for men and 53-57 for women according to the number of brought up children

• Increasing pressure on the pension scheme due to improvements in mortality and longer life expectancy

=> Retirement age has been gradually increasing since 1996; according to the latest amendment law adopted in 2008 it should reach 65 years for men and 62 to 65 years for women (according to the number of brought up children) in 2027-2031

Increase in Retirement Age
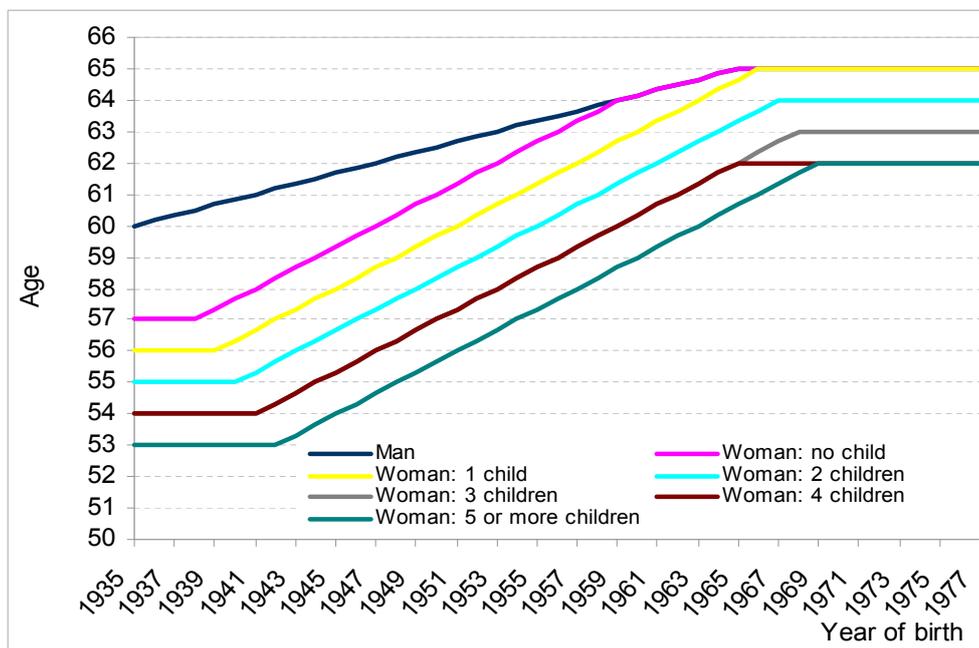
Basic Pension Insurance – Indexation of Pensions

- Regular indexation of pensions in payment

- Since 2003:
  - regular increase on an annual basis in January; this does not apply in cases of high inflation

  - increases in pensions are set so that minimum pension indexation corresponds to at least 100% of price increases + at least one third of the growth in real wages

Last change in legislation: 2008, protection of pensions from high inflation; pensions increased in an extraordinary term if prices increase by at least 5% (previously 10%)

Basic Pension Insurance – Non-Contributory Periods

• Non- contributory periods credited:

studies (max. 6 years, will be abolished from 2010), registered unemployment (period with benefits + 3 years without as max.), employment training of persons with reduced working capacity, former military/civilian service, care for child (up to the age of 4 years) or a dependant person, drawing of full invalidity pension

• For pension calculation credited as 80% of insurance period (exemptions - care for child or dependant person and military service)

• For pension entitlement credited as 100% of insurance period (gradual change to 80%)

• Cca ¼ of all periods taken into account; no special financing

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Basic Pension Insurance - Collection of Contributions

• Contributions collected mainly by the Czech Social Security Administration (CSSA)

• Employers have reporting and recording tasks and bear the responsibility for stipulating the correct amount of contributions that both them and their employees must pay and for sending the contributions on time

• Minimum contribution base for self-employed

• CSSA controls and enforces contribution payments

• Change under discussion: unification of tax and social insurance contributions collection

Impact of the Crisis on the Pension System

• Current global financial crisis has not led to additional changes in the pension provision in the Czech Republic

• Pensions secured mainly by the basic pension insurance scheme, mandatory private pension scheme does not exist (no political consensus)

• Lower employment and reduction in economic growth could accelerate the negative effects of demographic changes on the pay-as-you-go scheme; however, currently no need for fundamental change of strategic objectives in pension policy is expected

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Current Situation in the Hungarian Pension System

Krisztina Kiss
Department for Pension Insurance
Ministry of Social Affairs and Labour
Hungary

Pension reform in 1998

Before 1998

After the reform – mixed system
(Partly privatised)

I.   Mandatory social insurance pension system
Uniform PAYG
DB

1st p.   social insurance pension sys.
¾ of pension amount; DB, PAYG

2nd p.   private pension system
¼ of pension amount, fully funded, DC
privately owned individual accounts, life annuity service/, membership is compulsory for new entrants to the labour market

II.   Voluntary mutual pension funds (since 1993)

3rd p.   voluntary mutual pension funds
since 1993, voluntary savings, employer may supplement

Change in retirement age

Retirement age (as of 1997) (yrs)			
women		men	
Born before 1 Jan 1940	55	Born before 1 Jan 1938	60
Born in 1940	56	Born in 1938	61
1941	57	Born in and after 1939	62
1942	57		
1943	58		
1944	59		
1945	60		
1946	61		

62 in 2009

ACT 1997
Act 1997 introduces **increase of retirement age** for women by 1 year in every 2 years, men reaching 62 in 2001, linked to the year of birth, reaching **unisex** standard retirement age of **62 in 2009.**

ACT 2009
Act 2009 regulates the new rules on **unisex standard retirement age** in effect as of 1 Jan 2010. As of 2022 the standard unisex retirement age is **65** years of age. For the gradual increase see table below:

Born before 1952	62
Born in 1952	62,5
1953	63
1954	63,5
1955	64
1956	64,5
Born in 1957 and after	65

65 as of 2022

94% retire before standard retirement age.
Effective average retirement age is 58 yrs, including disabled persons is 55 yrs.

Advanced pension rules

in 2009

women from age **59**, **men** from age **60**,
attaining at least **40** yrs service time,
ceasing gainful activity.

Reduced amount: at least **37** years of service time
Reduction per month until reaching 62
          1-365 days 0,1%,   366-730 days 0,2%,   731- 1095 days 0,3%.

from 2010

rules are tightened along with increased standard retirement age. Eligibility is linked to the year of birth.

1.   **Men** reaching age 60, born in 1950 and **women** reaching age **59**, born in 1952 and 1953
      attaining at least **40** yrs service time and
      ceasing gainful activity.
      reduced amount: at least **37** years of service time
              Reduction per month until reaching 62 1-365 days 0,1%, 366-730 days 0,2%, 731- 1095 days 0,3%

2.   **2 years before reaching relevant retirement age advanced pension only with reduced sum!**
              eligible are: **men** born after 31 Dec 1950
                    women born after 31 Dec 1958
              attaining at least **37** years of service period and ceasing gainful activity
      Reduction: by 0,3% per missing month, if the claimant is 1 year younger than his/her relevant retirement age.
              if the claimant is more than 1 year younger than his/her relevant retirement age
              the amount is reduced with 3,6% plus 0,4% for every missing month

3. **Transitional rules apply:**
      - for **women** born in 1954 – 1958, **3 years before** reaching their relevant retirement age;
      - for **men** born in 1952, 1953 who have reached **age 60** and have at least **42** yrs service period;
      - for **men** born in 1954 at age **60,5** and having at least **42** yrs service period.
      The amount of pension this case is reduced, the maximum of reduction is 8,4%

Indexation rules

Since 1997 reform **Swiss indexation**
          (50% consumer prices, 50% net average wages)

Annual regular **pension increase** in January:
          Arithmetical proportion of consumer prices (4,5% in 2009) and
          net average wages (1,6% in 2009), the predicted increase is set in separate act.
          January 2009 increase: **3,1%**   (4,5% + 1,6%) : 2 = 3,1%
Further increase in November if calculated increase exceeds the predicted.

Changes in indexation as of 2010 – related to GDP growth

Further increase in November if the planned measures show at least 1% point difference from the real data. If the difference is less than 1% point, beneficiaries receive a lump sum payment.

GDP growth	Consumer price	Net average monthly earnings
X – 3%	100 %	-
3 - 4%	80 %	20 %
4 - 5%	60 %	40 %
5% - X	50 %	50 %

pension for certain jobs

EARLY RETIREMENT DUE TO HAZARDOUS WORKING CONDITIONS

included in the social insurance pension system

exposed to a work of **extreme intensity** / under **extreme exposure to risk of an occupational disease**

2 years shall be granted for
        Men 10 yrs, **women 8** years in such job
        any person – work in a job exposed to **higher than 100 kPa** air pressure for **at least 6 yrs**

1 extra year granted:
        men for every **extra 5**, **women** for every **extra 4** yrs in such a job
        3 yrs in a job exposed to higher than **100 kPa** air pressure.

extra contribution payment besides mandatory contributions: **13%** (employer's burden)
        in 2009 50% paid by the General Budget, 50% by the employer
        in 2010 75% paid by employer, 25% by general budget

Until the end of 2010 – job list
        e.g. underground jobs, work in pressurized (compressed air) environment, sewer tunnel
        maintenance work, occupations in hot environment, textile industry, baking industry, cold
        storage warehouses, occupations exposed to ionizing radiation, transport related work,
        civil aviation, occupations exposed to explosives, civil employees of the Hungarian Army

Working on further tightening this early retirement option.   **cca 20000 persons**

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pension for certain jobs

EARLY RETIREMENT, THE EMPLOYER PAYS IN ADVANCE THE PENSION UP TO RETIREMENT

The earliest date   5 years before the relevant retirement age
The employer pays the pension up to the age of advanced pension   **cca 10000 persons**
        With service time requirement of advanced pension and adv. pension with reduced sum

This option is not part of the social insurance pension system, it aims employment policy purposes.

ARMED FORCES - soldiers, policemen, firemen, customs and excise officers,
        prison service, national security officers   **cca 40000 persons**

5 years earlier then the relevant retirement age, service legal relationship should be ceased
Pension entitlement – at least 25 yrs service time
        if attaining 25 yrs, able to retire regardless of age, providing incapability of service

OCCUPATIONAL PENSIONS - persons performing artistic activities and miners
        artistic activities e.g. ballet dancer, opera singer, singer, wind (instrument) player, actor
        miners working in mines in the territory of Hungary
        cca 4000 persons

Regardless of age, 25 years of service time spent in this type of job
and receiving no pension of own right

Pension System in Poland

Zofia Czepulis-Rutkowska
Institute of Labour and Social Studies
Poland

The content

- Pension system design
- Recent experience
- Other issues
  - Contribution collection
  - Special credits
  - Indexation
  - Retirement age
  - Pension system for farmers

Pension system design

- Two obligatory pillars
- Mixed financing
- Public and private institutions

Pension system design
First Pillar

- Financing
  - PAYG
  - 12,52% contribution
- Benefit calculation
  - Notional Defined Contribution
- Administration (contribution collection and benefit payment)
  - Public institution (ZUS)

Pension system design
Second Pillar

- Financing
  - Funded
  - 7,3% contribution
- Benefit calculation
  - Defined contribution
- Administration
  - Private institution – accumulating capital
  - Payment institutions – not determined yet

Recent experience

- 2009 – first year of payment
  - Only for women - receiving transitory benefit
  - Payment made by public institution -ZUS
- Low amounts
- Small number of recipients
- Possibility to come back to public institution – many opted for that

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Recent experience

- The earlier discussion revisited
  - Arguments against funded scheme and private institutions
  - Arguments about different type of risk in different financing methods
- Some new proposals put forward
  - Lower fee for pension funds
  - Obligatory multifunds

Other issues
Pension contributions collection

- ZUS is efficient in collecting contributions from the employers because of ICT system
- Problems with unregistered employment; controlling institutions:
  - Work inspection
  - Labor offices
  - ZUS

Other issues
Special credits

- Many in the old system
- The new system – raising the child

Other issues
Indexation of benefits

- Early nineties – indexation according to earnings
- Later - changes towards price indexation
- Now – price indexation plus up to 20% of earnings increase

Other issues
Retirement age

- Different for men and women
- Many exceptions – lower retirement age for many professional groups
- Constant trials to change it with no success so far

Other issues
Pension system for farmers

- Separate system
- Separate institution
- Different financing

Other issues
Pension system for farmers

- Started late seventies
- Public, pay as you go
- Low contribution, low benefit
- Financed from state „subsidy" – always more than 90% of all expenditures and contributions
- Reforms difficult to introduce:
  - Structure of Polish farms; small land, low income
  - Political factor; farmers' party in the government

Conclusions

- Early experience of reformed pension system – mixed opinions
- Plans for further reforms
  - Increasing coverage of the reformed system including farmers and other groups
  - Modification in pension funds aiming at higher benefits
    - More investment abroad
    - Lower fees
    - Multifunds

Good and Bad Practices/Lessons in Slovak Pension Reforms

Miloslav Hetteš
International Labor and Social Affairs Director General
Ministry of Labor, Social Affairs and Family
Slovakia

Slovak Pension System

Mandatory pension system - universal
Pillar I
➢ Mandatory pension insurance, DB, PAYG *(administered by the Social Insurance Agency)*
Pillar II
➢ Mandatory old-age pension „saving" (*investment*), DC, Funded *(administered by the Pension Administrator Companies)*

Voluntary supplementary pensions - universal
Pillar III
➢ Supplementary pension saving, DC, Funded *(administered by the Supplementary Pension Companies) – mandatory only for special category of workers (workers in hazardous environment)*
➢ Special-purpose saving and the life insurance with tax incentive

➢ There is no special pension for farmers but
Armed forces have special mandatory pension system separated from universal mandatory system (like Chile?)

Mandatory Pension System 1.

First option

One-pillar system

➢ *Contributions at 18% of the assessment base payable solely to the PAYGO system*
➢ *Pension age = 62 for men and women*
➢ *Minimum 15 years of pension insurance*
➢ *(Early) old-age pension paid exclusively by the Social Insurance Agency (SIA)*
➢ *Recommended option particularly for people who will not be able to accumulate sufficient pension savings to purchase life annuity at the time of retirement*

Second option

Two-pillar system

➢ *Change to the contribution ratio - 9% DB : 9% DC*
➢ *Pension age = 62 for men and women*
➢ *Minimum 15 years of pension saving*
➢ *Contributions for old-age pension saving accrued in individual pension accounts*
➢ *Designed primarily for people who will be able to contribute to their pension accounts for at least 30 years*

These systems exist next to each other!

➢ Due to economic crisis - Pillar II. **was temporarily open** (2008, 2009)

Mandatory Pension System 2.

95

Retirement age

➢ Pension age <u>before</u> pension reform = **60** (men) and **53 – 57** (women depending how many children they have brought up)

   ➢ <u>After</u> reform = **62** for both men and women – gradually extension.

     (reasons = anti-discriminatory EU legislation, in 2024 full application of 62 pension age)

Indexation

➢ The pensions = <u>annuities from funded system are not indexed</u>

➢ The <u>pensions from PAYG</u> system are <u>indexed</u> at so called <u>Swiss mechanism</u>

  = ½ % inflation + ½ % average wage growth in the same year

   ➢ This mechanism since the reform – 2004

II. Pillar Savers Age Distribution

(December 31, 2007)
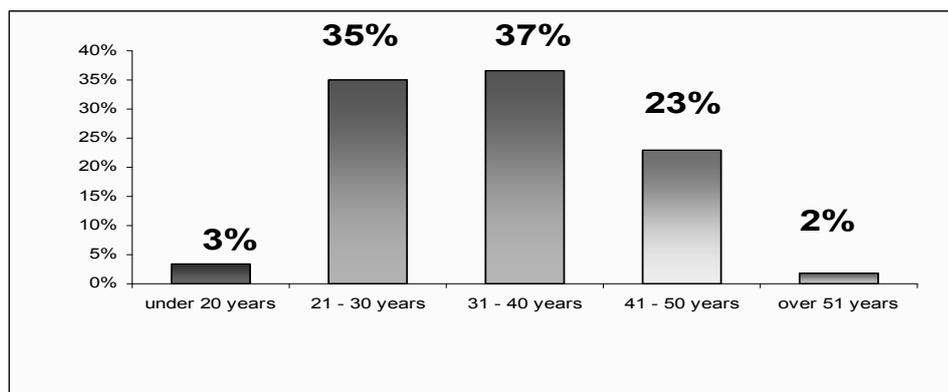
MOLSAF: *"Minimum recommended period for saving in the fully-funded pillar is 30 years!"*

Collecting the contributions

➢ Employers do not fulfil their obligation to register and deregister their employees for purpose of social security
➢ Employers do not notify correctly the assessment base which contributions should be calculated from
➢ Employers do not pay contributions on behalf of their employees or these contributions are not paid on time
➢ Employers do not fulfil their obligations in connection with EU regulations
➢ Self-employed persons register backwards – even some years after their mandatory participation in pension insurance originates
➢ Some self-employed persons do not cooperate with Social Insurance Agency
➢ Voluntary insured (social insurance) persons do not pay their contributions for all the time they are insured

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Additional Pension Credits – Non-Contributory Periods

The pension insurance fees and contributions to funded pension scheme for **non-contributory periods** are paid by:
➢ **The State** - on behalf of:
  ➢ mothers on maternal leave (with exemptions)
  ➢ persons who are taking care of children (to 6 or 18 years – if the child is seriously ill). This is not the same as parental leave!
  ➢ persons who get allowance for nursing someone
➢ **The Social Insurance Agency** – on behalf of:
  ➢ persons who get accident allowance
Contributions:
➢ Contributions at 18% of the assessment base payable solely to the PAYGO system => one pillar system
➢ Change to the contribution ratio - 9% DB + 9% DC => two pillar system

Non-contributory period = **also the period of service** as policeman, soldier and others, if these periods have not been used for pension for years for service and related pensions.

Pension Reform Great Swindle

➢ Population aging was **misused for „privatization"** of great deal of citizens income. Mandatory regularly passing of the fortune to privileged lobby without any possibility to influence its utilization is more typical for feudalism, it is pure racketing

➢ Estimations how much this will burden generations, were never a subject of research (120 billions or more?) and all questions from foreign financial institutions in this field were „dealt" such as it **will be decided magically later** (sources from another privatization, bonds, loans, rationalization - so national debt)

➢ Introduction of funded pension system **will not stop** the aging of population and **neither solve** it

➢ Ageing is not an unlimited process

Pension Crises Illiteracy

➢ There was/is **no real chance to distribute fair information**. The media are financially dependant not on readers but on advertising. The pension money were/are used to buy an independent experts (comprador intelligentsia), specialists for public opinion, media, politicians. National government tries to deal with this problem. Its work has strong rival with money and the public opinion, which is manipulated.

➢ **Nobody has heard:**

➢ *Joseph E. Stiglitz, the recipient of the Nobel Memorial Prize in Economic Sciences (2001) „The private pension system is in many cases combination of bad accounting, greediness and faint governmental control. The private pension system, not the public, is facing immediate problems.".*

➢ *Franco Modigliani, the winner of the Nobel Memorial Prize in Economics in 1985 for his work on the dynamics of financial markets „In many cases the reforms accentuating the three pillar system with mandatory funded defined contribution (DC) second pillar leaded to the wasting of sources and brought savers to poverty along with enriching of the fund managers".*

1. Funded Pension System for Dummies

➢ Business **investing** not insurance against the risk of old age

➢ Business **without** any **guaranties** and **no solidarity**

➢ The current financial crisis is extending the number of people who will **not** be **able to accommodate** sources for decent retirement

➢ Due to crisis the **value of assets** in pension funds is **declining** (from cca. 20 % to 4,2% in May 2009), which means further losses towards pensions from funded pension system

➢ New = bigger problem (**poverty of population**) which will on a large scale burden the future public finances and future generations

---

2. Funded Pension System for Dummies

➢ **Alternative is a system which retains the principle of solidarity**, so large groups of population will not be endangered by poverty in the old age

➢ Matured **funded pension** system behaves as a **typical PAYG**

➢ The real value of annuity **depends on assets created by** economically **active population** = PAYG

➢ **Gender discrimination** *(different earnings = different contributions, different actuarial calculations = different level of annuities)*

How to Master Ageing?

- ➢ Higher employment rate *(70% EU Lisbon targets 2010)*
- ➢ Employment of older people *(50%)* and women *(60%)*
- ➢ Extension of retirement age
- ➢ Abolition of early old-age pension

- ➢ **Universally**: Establishment/Implementation of social schemes (also pensions) which would <u>protect those who need this protection</u> and which would be sufficiently flexible and <u>motivating for those who want to stay active</u> or who want to come back into the productive process

---

H.E. VIERA TOMANOVÁ
Minister of Labour, Social Affairs and Family

„Population ageing is a gift not a curse and we should treat it like a chance to be longer with our beloved"

Thank you!

Pension System in Slovenia

Jelena Krčmar
Ministry of Labour, Family and Social Affairs
Slovenia

STRUCTURE OF PENSION SYSTEM IN SLOVENIA

```
                    ┌──────────────────────┐
                    │   PENSION SYSTEM     │
                    └──────────────────────┘
            ┌────────────────┴────────────────┐
  ┌──────────────────┐          ┌──────────────────────┐
  │    MANDATORY     │          │   SUPPLEMENTARY      │
  │     PENSION      │          │      PENSION         │
  │     SYSTEM       │          │      SYSTEM          │
  └──────────────────┘          └──────────────────────┘
                              ┌────────────┴────────────┐
                    ┌──────────────────┐     ┌──────────────────┐
                    │   COMPULSORY     │     │    VOLUNTARY     │
                    └──────────────────┘     └──────────────────┘
```
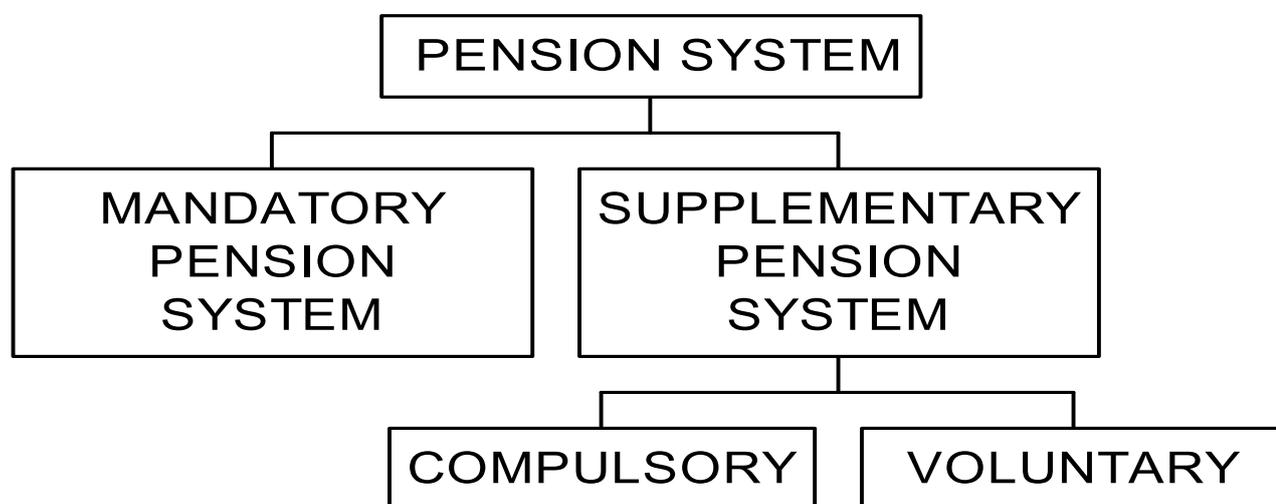
KEY FACTS

- **Slovenia is getting old!**

Leto	Skupaj	0 - 14	15 - 59	60+	80+
2008	2.022.644	280.865	1.314.228	427.551	71.176
2020	2.058.003	291.580	1.200.415	566.008	111.320
2030	2.022.872	258.508	1.110.151	654.213	135.110
2040	1.957.942	235.960	1.005.948	716.034	193.333
2050	1.878.003	239.902	898.509	739.592	224.641
2060	1.778.573	227.648	857.263	693.662	246.372

Source: Stability programme, 2008.

- *insured person (904.084 in 2008) /pensioner (527.933 in 2008) ratio: **2,3 (1990), 1,7 (2008).***

KEY FACTS

- **Public spending on pensions will significantly rise!**

SHARE OF ZPIZ´S EXPENSES IN BDP, by years			
year	total expenses	expenses without contributions for pensioners´ health insurance	pension expenses
2000	13,27%	12,28%	11,08%
2001	13,24%	12,25%	11,00%
2002	13,22%	12,20%	10,84%
2003	12,98%	11,98%	10,64%
2004	12,77%	11,78%	10,44%
2005	12,75%	11,69%	10,38%
2006	12,42%	11,47%	10,18%
2007	11,79%	10,88%	9,73%
2008	12,07%	11,16%	9,91%

Source: ZPIZ,2008.

Future outlook: 14,8% (2035), 18,7 % (2060)

KEY FACTS

- **Supplementary pension insurance is not fulfilling its mission to compensate for a loss of over 10% in calculations of old-age pensions!**

First supplementary old-age pensions will be paid out 2011.

I. PILLAR – GENERAL PRINCIPLES

- ➢ **PAYG, DB**

- ➢ **MINIMUM ELIGIBILITY CRITERIA**
  MEN :   A 58, Y 40   **WOMEN** :   A 58 (53), Y 38 (35)
               A 63, Y 20   A 61 (58), Y 20
               A 65, Y 15   A 63 (60), Y 15

- ➢ **MAX. PENSION RATING BASIS** 72,5% (2023), 85 % (until 2000)

- ➢ **BONUS - MALUS SYSTEM** (max. bonus 7,2 %, max. malus 18 %)

- ➢ **SALARY/PENSION RATIO:** 61,6 % (2008), 68,1 % (2000)

I. PILLAR - MAIN CHALLENGES

1. FINANCIAL SUSTAINABILITY
2. ADEQUATE PENSIONS

HOW?
- ➢ PROLONGING WORKING CONTINUUM (increasing labour participation of elderly),
- ➢ POSTPONING RETIREMENT
- ➢ INTRODUCING FUNDAMENTAL PENSION REFORM.

Employment rate of elderly (55-64): **SI** : 22,3% (2000), 32,8% (2008)
                                   EU-27: 36,8% (2000), 45,6% (2008))

POSSIBLE WAYS

I.   **Raising the effective retirement age**

II. **Achieving better link between paid-in and gains (replacement rate, solidarity ?)**

III. **Adjustment of indexation formula**

IV. **Make system more transparent**

V.   **Establishing new reserve demographic fund**

Figure: Projections of the share of public pension expenditure in GDP
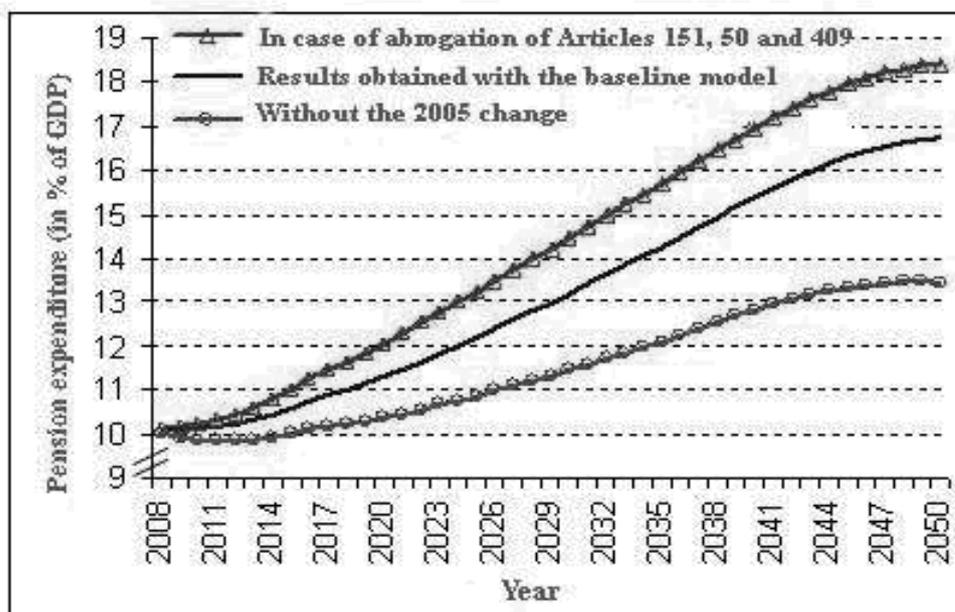
Source: National report,2008

II. PILLAR – GENERAL PRINCIPLES

➢   TWO TYPES OF SUPPLEMENTARY INSURANCE

> 1.   ***Occupational pension insurance*** – *only for people working demanding and hazardous jobs;*
> 2.   ***Voluntary supplementary pension insurance*** – *individual and voluntary;*

➢   FULLY FUNDED DC SYSTEM

➢   INVESTMENT RISK WITH MINIMUM YIELD GUARANTEE

➢   PRINCIPLE OF EQUALITY

II. PILLAR - MAIN CHALLENGE

FURTHER PROMOTION OF THE SUPPLEMENTARY PENSION INSURANCE

HOW?

> ➢ PROMOTING HIGHER INCLUSION
> ➢ RAISING LEVEL OF PREMIUMS
> ➢ ACHIEVING FLEXIBLE INVESTMENT POLICY

POSSIBLE WAYS

I. Introducing system of matching contributions (for low wage earners)

II. Introduction of EEE system (tax heaven)

III. Establishment of life-cycle funds with possibility of choosing investment policy

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FINANCIAL CRISIS - I. PILLAR

I. Due to rise in unemployment lower flow-in of payment contributions

II. Higher expenditures for pensions from state budget (125 mio. EUR) to cover the deficit

III. ? indexation of pensions

FINANCIAL CRISES - II. PILLAR

I. Lower impact of financial crisis due to the investments into bonds;

II. Up to now pension providers are covering loses from reserve funds and own capital;

III. Adoption of measures for pension and insurance companies (state intervention);

IV. Yearly yield of mutual pension funds varies from -3% to -11%

CONCLUSIONS

I. pillar should remain the main pillar with parallel increase of private pillar(s)!

"*The relevant question for intergenerational equity is not to achieve an equal burden sharing across generations, but rather a burden sharing, which is perceived as fair.*"

(Oksanen 2001, Sinn 2000).

Pension Reform in Serbia:

Challenges and Directions for Reform

Kenichi Hirose
ILO Subregional Office for Central and Eastern Europe

1 Problem analysis of the Serbian pension system

This Chapter will review the current pension systems in Serbia and analyse their major deficiencies.

1.1 Legislative framework

In Serbia, the Law on Pension and Disability Insurance (RS Official Gazette No. 34/2003), promulgated in April 2003, provides the basic legal framework for the current pension system.

The main provisions of this Law, compared with the former pension system, are as follows:

- The basis of pension indexation was changed from the increase in wages to the average of the increases in wages and in prices (Swiss formula).
- The normal retirement age was increased by three years to 63 years for men and 58 years for women (with at least 20 years pensionable period).
- The reference wage for the calculation of the pension was taken as the career average based on the point system instead of the average of the ten highest years.
- A uniform minimum pension was set at 20% of the average gross wage, regardless of the length of pensionable period.
- The qualifying conditions for invalidity pensions were tightened.
- The contribution rate has been fixed at 22% since July 2004.

The Law on Pension and Disability Insurance was amended in 2005. The main amendments are as follows:

- The normal retirement age was further increased to 65 years for men and 60 years for women by 2011 (with at least 15 years contribution period)
- The pension indexation will be gradually changed from the Swiss formula to price indexation over the period from 2005 to 2008. In 2009 and after, the pensions will be indexed in line with price increase only.
- During the period 2006-2008, if the average pension falls below the level of 60% of the average net wage, then the state will provide an extraordinary pension indexation at the end of the year[1].
- The minimum pension for employees and self-employed was increased to 25% of the average gross wage. The minimum pension will be indexed as other pensions. However, during 2006-2010, the state will guarantee the level of 20% of the average gross wage.
- Since 1 January 2008, the administration of the three pension insurance funds (employees, self-employed and farmers) has been merged into a single fund (Republički fond za penzijsko i invalidsko osiguranje), hereafter referred as the PIO fund. The financial consolidation of these insurance funds will be completed by 1 January 2011.

Amendment of the Law on Pension and Disability Insurance was one of the major political issues during the general election in 2008. There was a debate to increase the state guarantee pension level from 60% of the average net wage to 70%. Concerning the pension indexation, some parties claimed to change the indexation method back to the wage indexation.

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[1] An extraordinary indexation based on this clause was made in January 2008, as the average pension in 2007 was 53% of the average net wage in 2006

1.2   Pension system coverage of the employed population

The number of registered workers in the pension system in March 2009 is 2,767 thousand comprising 2,205 thousand employees, 329 thousand self-employed, and 233 thousand farmers2.

In comparison, the Labour Force Survey in October 2007 presents the following statistics:

- There were 1,940,831 employees;
- There were 534,824 self-employed workers, of which 423,733 had no employee; and,
- There were 521,420 workers employed in the agricultural sector, of which 176,121 were family workers in agriculture.

Concerning the coverage and the compliance, the following observations are made.

- From the above data, it follows that while nearly all employees in the formal sector are covered by the pension system, about one-third of self-employed and farmers are not covered by the pension system. However, it should be noted that the absence of accurate data on the covered workers and contributors of the PIO fund is a major obstacle in analysing the coverage and the compliance with the legislation. There is a lack of coordination in data exchange between PIO fund and the tax authority which has been responsible for contribution collection since January 2003.
- Although almost all workers in the formal employment sector are registered with the PIO fund, the percentage of the employees in the working age population has been decreasing since the 1990s (See Figure 1 later). The main reason for this is a growing number of workers in the informal economy. Furthermore, under-reporting of the contributory wages at the enterprise level is reported to be wide-spread.
- As is the case with other countries, the Serbian pension system is facing a challenge to cover farmer households in particular in rural areas. Weak contributory capacity (low, irregular and non-cash income) of the farmers is a major challenge for extending the mandatory coverage and sustaining the collection of contributions. Concerning farmers, the law provides that one member of the household (usually the husband) is compulsorily insured and the other family members may join the system voluntarily. From the data of total contributions, assuming that all contributors paid at the minimum contributory wage, the estimated number of contributors is around 50,000 which is only 16% of the covered workers.
- In Europe, international migration of labour is becoming an important and enduring phenomenon, and Serbia is not an exception. Migrant workers face multiple challenges including the lack of social security coverage. Ensuring the right of social security for migrant workers is important in securing the equality of treatment. The large number of migrant workers and the anticipated continuing increase make it critical and urgent for the countries to consider the coordination of social security policy though bilateral or multilateral agreements.

1.3   Benefit level

This section will analyse the benefit level of the Serbian pension system. Table 1 summarises the key parameters in the benefit design.

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2   In addition, army officers are covered by a separate army pension fund financed by the budget of the Ministry of Defence.

Table 1: Old-age pension formula and minimum and maximum pensions, 2008

	Amount (in RSD)	Percentage of the average net wage	Percentage of the average gross wage
Model old-age pension (30 years period)	18,135.30	55.4	39.7
(Cf.) General point (Oct.-Dec 2008)	604.51	1.846	1.323
Minimum old-age pension	11,088.23	33.9	24.3
Minimum old-age pension (Farmers)	8,384.51	25.6	18.4
Maximum old-age pension (42.5 years period)	102,766.10	313.8	225.0

Note: The average gross wage in 2008 was RSD 45,674 per month. The average net wage in 2008 was RSD 32,746.

(1) Old-age pension formula

The Law of 2003 stipulates that the old-age pension is calculated as a product of (i) the personal coefficient, (ii) the number of pensionable years, and (iii) the general point. The personal coefficient is equal to the average annual personal coefficients over the whole contribution period. The annual personal coefficient of a year is the ratio of the individual worker's earnings and the average salary in the same calendar year. The general point is adjusted according to the indexation method.

For the period from October 2008 to December 2009, the value of general point is RSD 604.51, which is equivalent to 1.846% of the average net wage in 2008 and 1.323% of the average gross wage in 2008. Therefore, for a representative worker who retires in 2009 after having paid 30 years contribution at the average salary, the above pension formula will result in a pension of 18,135 which is 55.4% of the average net wage in 2008 or 39.7% of the average gross wage in 2008.

(2) Minimum and maximum pensions

In 2003, the minimum pension was set at 20% of the average gross wage of the previous year. In the amendments in 2005, the level of the minimum pension from January 2006 was increased to 25% of the average gross wage in 2005 (RSD 6,378.50)[3]. This minimum pension follows the same indexation method as other pensions, with a guarantee of 20% of the average gross wage of the previous year until 2010. The amount of the monthly minimum pension from October 2008 to December 2009 is RSD 11,088.23, which represents 33.9% of the average net wage or 24.3% of the average gross wage in 2008.

It should be noted that the increased minimum pension since 2006 has been applicable to employees and self-employed, while the minimum pension for farmers has been kept at the previous level which is currently RSD 8,384.51, which is 25.6% of the average net wage or 18.4% of the average gross wage in 2008. The amount of the minimum pension for the farmers is critical as more than 80% of all pensioners (94% of old-age pensioners) in the farmers insurance receive the minimum pension.

Prior to 2003, there were several levels of minimum pension. Depending on the length of pensionable period, the minimum pension ranged between 20% and 40% of the average gross wage of the previous year[4]. Those pensioners who were entitled to these minimum pensions continue to receive these indexed

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[3]   The average gross wage in 2005 was RSD 25,514 per month.
[4]   To be precise, the former minimum pension level is defined as between 40% and 80% of the average net contributory base. The value of the average net contributory base (currently RSD 22,391.27) is equivalent to 49% of the average gross wage.

pensions.

The maximum personal coefficient is fixed at four. Thus the current maximum pension with 42.5 years pensionable period is RSD 102,766.10, which represents 314% of the average net wage or 225% of the average gross wage in 2008. The maximum pension for those retired before 2003[5] is currently RSD 72,321.71, which is 221% of the average net wage or 158% of the average gross wage in 2008.

(3) Pensions in payment

Table 2 below presents the number of pensioners and their average pensions by different insured groups. Tables A-3 to A-8 in Statistical Annex present more detailed data.

Table 2: The number of pensioners and average pensions by type of pension and by insured groups, December 2008

	Total	Employees	Self-employed	Farmers
Pensioners				
Total	1,580,339	1,306,394	50,959	222,986
Old-age	868,534	660,221	21,459	186,854
Invalidity	362,180	334,282	15,772	12,126
Survivors	349,625	311,891	13,728	24,006
Average pension (RSD)				
All pensions	19,781	21,713	21,248	8,126
Old-age	21,624	25,283	24,659	8,348
Invalidity	19,750	20,057	21,603	8,878
Survivors	15,234	15,932	15,508	6,018
Average pension (as a % of net wage)				
All pensions	51.2%	56.2%	55.0%	21.0%
Old-age	56.0%	65.5%	63.8%	21.6%
Invalidity	51.1%	51.9%	55.9%	23.0%
Survivors	39.4%	41.2%	40.2%	15.6%
Average pension (as a % of gross wage)				
All pensions	36.7%	40.3%	39.4%	15.1%
Old-age	40.1%	46.9%	45.8%	15.5%
Invalidity	36.7%	37.2%	40.1%	16.5%
Survivors	28.3%	29.6%	28.8%	11.2%

Concerning the distribution of the pensions, the following observations are made:

- The average old-age pension was RSD 21,624 in December 2008. This average amount represents 56.0% of the average net wage or 40.1% of the average gross wage in December 2008.
- The distribution of old-age pensions for employees is quite similar to that for self-employed. Concerning employees and self-employed, about 45% of old-age pensioners receive less than RSD 21,715, more than 60% receive up to RSD 26,000, about 75% receive up to RSD 30,000, and more than 80% receive up to RSD 34,000.
- For farmers, 97.2% of the old-age pensioners receive the minimum pension (RSD 8,384.51) or less.

(4) Additional credits

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[5]   The maximum pension was set at 85% of the maximum pension base.

Considering the fact that the average contribution period is 30.1 years for male workers at age 63 and 25.4 years for female workers at age 58, the actual average pension appears to be higher than the amount expected by the pension formula. The difference can be ascribed to the pensioners who continue to receive the higher pensions based on the former rules and to the several mechanisms to grant credits in addition to the actual contribution periods.

(i) Additional pensionable period credits for women

The Law of 2003 provides 15% increase of contribution periods in the calculation of old-age pensions for female workers. In addition, the state subsidises two years of additional pensionable period for every woman who has three or more children[6].

(ii) Additional pensionable period credits for selected occupations

The Law of 2003 provides extended contribution periods for workers in difficult, dangerous and hazardous jobs, workers in age restricted posts, and workers with disability. Depending on the severity, every 12 months contribution period is regarded as 14, 15, 16 or 18 months of pensionable period.

The additional contributions in respect of the increment of contribution periods for this category of workers are paid by their employers.

The average pensionable period of the old-age pensioners of the employees insurance who have additional periods is 37.4 years, of which 23.1 years (62%) are contribution period and the remaining 14.3 years (38%) consists of additional periods and special periods (Table A-10 in Statistical Annex presents the composition of the average pensionable periods.). Without these increments, the average pensions of these groups would be a much lower level. By sex, men represent 80% of the pensioners of this category.

(iii) Pensioners with special rights

As a remnant of the former Yugoslav pension system, several groups with privileged rights receive special pensions (Table A-11 in Statistical Annex presents the category of special groups and their average pensions.). Under the current Law, the workers with privileged rights are limited to police officers, security agency members and diplomats.

This category of workers benefit from a number of favourable conditions. First, the retirement age is 53 years of age with at least 20 years contribution period. Second, the pension benefit rate is 55% for men and 57.5% for women with 20 years of contribution period. The pension benefit rate will be increased by 2.5% for each year between 20 years and 30 years of contribution period, and by 0.5% for each year in excess of 30 years of contribution period. The maximum pension benefit rate is 85%. Third, the reference salary for the pension is the average net income earned over one year before the retirement. If the pension calculated by this rule is lower than 1.2 times the pension under the current pension formula, then the latter pension will be paid.

From 2010 onwards, the pension of these categories will be calculated according to the current pension formula with 20% increment.

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[6]   For example, for a woman with 30 years contribution period, her pensionable period including 15% increase is 33 years. If she has three or more children, she will get 2 extra years, which results in the total pensionable period of 35 years.

1.4   Pension expenditure and its financing

Serbia's pension expenditure in recent years is at the level of 14% of GDP, which is comparable to highest spenders in OECD countries (e.g. Italy). Tables A-1 to A-3 in Statistical Annex presents the income and expenditure of the PIO fund (consolidated accounts of the three insurance funds) from 1999 to 2008 in nominal amounts as well as in terms of GDP and the total contributory base7.

The main source of the PIO fund is contributions from the insured workers and employers. The contribution rate for pension is 22% of the gross salary8. For employees, the contribution is shared equally by employers and employees, while the whole amount is levied to self-employed and farmers.

On the other hand, the percentage of the total PIO fund expenditure in the total contributory base is estimated at 38.4% which largely exceeds the contribution rate of 22%. In recent years, the contributions cover less than 60% of the total expenditure and the difference is mainly financed by the transfer from the general budget. The level of the current pension deficit is in the order of 4-5% of GDP every year.

To analyze the cause of high percentage of the pension expenditure in the total contributory base (the pension cost rate), we decompose this rate into the system demographic dependency rate (the ratio of the pensioners to the insured workers) and the system replacement rate (the ratio of the average pension to the average gross wage). In the case of the PIO fund, the pension cost rate 32.1% is a product of the system demographic dependency rate 74.3%, and the system replacement rate 43.2%. By adding the cost rates of other benefits, health insurance contributions and administrative expenses, the total cost rate is 38.4%. The following Table 3 presents further factorization of the cost structure of the expenditure of the PIO fund based on the method described in Box 1.

Table 3: Cost structure of the PIO fund (consolidated fund), 2008

	Indicator	Remarks	Value
(a)	Population 20-64 years old (Oct 2007)	In thousands	4,481
(b)	Population 65 years and over (Oct 2007)	In thousands	1,448
(c)	Pensioners	In thousands	1,580
(d)	Contributors	In thousands	2,126
(e)	Average pension	Monthly	RSD 17,567
(f)	Average contributory wage	Monthly	RSD 40,647
(g)	National average net wage	Monthly	RSD 32,746
(h)	National average gross wage	Monthly	RSD 45,674
(A)	National demographic dependency rate	= (b)/(a)	32.3%
(B)	Pensioners coverage rate	= (c)/(b)	109.1%
(C)	Contributors coverage rate	= (d)/(a)	47.4%
(D)	System demographic dependency rate	= (A)*(B)/(C)	74.3%
(E)	Effective system replacement rate	= (e)/(g)	53.6%
(F)	Income capture rate	= (f)/(h)	89.0%
(G)	Net/gross wage rate	= (g)/(h)	71.7%
(H)	System replacement rate	= (E)/(F)*(G)	43.2%

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7   The contributory wages were estimated by dividing the total contributions by the contribution rate 22%, without taking into account the higher contribution with respect to special periods for workers in hazardous jobs.

8   The Law on Contributions for Compulsory Social Insurance stipulates the following types of social security contributions for regular employees:

   1) Pension and invalidity insurance: 22% (11% employer, 11% employee)
   2) Health insurance: 12.3% (6.15% employer, 6.15% employee)
   3) Unemployment: 1.5% (0.75% employer, 0.75% employee)

(1)	Pension cost rates	= (D)*(H)	32.1%
(2)	Other benefits		1.4%
(3)	Health insurance contributions		4.0%
(4)	Admin and other expenditure		0.8%
	Total cost rate	Sum of (1)-(4)	38.4%

Source: Statistical Office of the Republic of Serbia, PIO fund.

The significantly high system demographic dependency rate contributes to the high cost rate of the pension expenditure. Table 4 compares the system demographic dependency rates of the employees insurance from 1980 to 2008. Figure 1 compares the historical trends of the contributors coverage rates (the ratio of contributors to the population aged 20-59) and the pensioners coverage rates (the ratio of pensioners to the population aged 60 and over) of the employees insurance from 1952 to 20089. Due to data limitation, the time series data of contributors and pensioners of the other two insured groups were not available.

Table 4: System demographic dependency rates (employees insurance), 1980-2008

Indicator	1980	1990	2000	2008
National demographic dependency rate	22.4%	28.4%	35.3%	34.3%
Pensioners coverage rate	70.6%	86.1%	85.8%	89.7%
Contributors coverage rate	55.8%	62.4%	45.1%	43.1%
System demographic dependency rate	28.3%	39.1%	67.1%	71.5%
System replacement rate	(43.2%)	(43.2%)	(43.2%)	43.2%
Pension cost rate	(12.5%)	(17.3%)	(29.7%)	31.6%
Total cost rate	(18.8%)	(23.6%)	(35.9%)	37.9%

Figure 1: Contributors and pensioners coverage rates (employees insurance), 1952-2008

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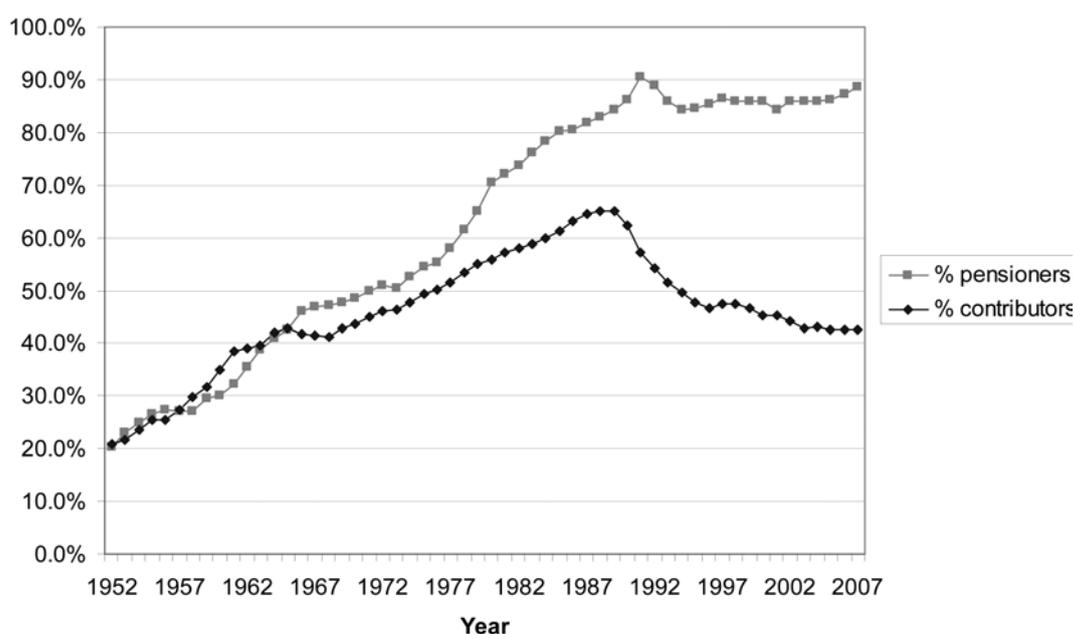
9   In order to make a more consistent comparison of the past trends, the age thresholds in the population have been set at 20 and 60 years.

116

These data reveal that the rapid increase in the system demographic dependency rate has been attributed to the following reasons. First, due to the ageing of the Serbian population, the national demographic dependency rate has increased. Second, during the transition period in the 1990s the pension system was used to absorb massive redundant workers. This explains the decrease in the contributors coverage rate and the simultaneous increase in the pensioners coverage rate. As a combined effect of these changes, the system demographic dependency rate has increased significantly from 28.3% in 1980 to 39.1% in 1990, 67.1% in 2000 and 71.5% in 2008. Assuming the 2008-level system replacement rate and other cost rates, the estimated total cost rate of the employees insurance is 18.8% in 1980, 23.6% in 1990, 35.9% in 2000 and 37.9% in 2008, respectively.

It should be also noted that a relatively large share of invalidity pensioners (i.e. 23% of the total pensioners) in particular at higher ages (see Figure 4) suggests that those who were not eligible for old-age pensions applied for invalidity pensions and managed to get the pensions[10]. According to the authorities in the Ministry of Labour and Social Policy of Serbia, the main reasons for the large share of invalidity pensions were a broad definition of invalidity (incapacity for performing work) and a tendency of medical doctors, often linked with corruption, for generous assessment of invalidity.

If such qualifying conditions are rectified, then the declining trend of contributors coverage will result in a reduction of pensioners coverage in the long run. This will raise a concern on the growing number of elderly without the right to receive pensions, which may affect the social assistance programme.

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[10] The qualifying contribution periods for invalidity pensions are: 1 years for those aged less than 20, 2 years for age 20-24, 3 years for ages 25-29, and 5 years for age 30 and above.

Box 1: Analysis of the pension cost rate

The cost rate of the pension expenditure as a percentage of the total contributory base of workers, called the pension cost rate, can be expressed as follows.

(Pension expenditure) / (Total contributory base) = (Population aged 65 years and over) / (Population aged 20-64 years)

- (The number of pensioners) / (Population aged 65 years and over)
- (Population aged 20-64 years) / (The number of contributors)
- (Average pension) / (National average net wage)
- (National average net wage) / (National average gross wage)
- (National average gross wage) / (Average contributory wage).

The meaning of each factor in the right-hand side of the above formula is as follows:

The first factor, the ratio of the population aged 65 years and over to the population aged 20-64 years, can be called the national demographic dependency rate, which measures the level of ageing at the national level.

The second factor, the ratio of the number of pensioners to the population aged 65 years and over, is called the pensioners coverage rate.

The inverse of the third factor, the ratio of the number of contributors to the population aged 20-64 years, is called the contributors coverage rate.

The forth factor measures the level of average pension in terms of the national average net wage, and is called the effective system replacement rate.

The fifth factor is a ratio of net and gross national average wages, and is called the net/gross wage rate.

The inverse of the last factor measures the percentage of the ratio of average contributory wage of the national average gross wage, which can be called the income capture rate.

In the above formula, the product of the first three factors is equal to the ratio of the pensioners to the contributors, namely the system demographic dependency rate, and the product of the last three factors is the ratio of the average pension to the average gross wage, which is the system replacement rate.

The pension cost rate is positively correlated with the national demographic dependency rate, the pensioners coverage rate, the net/gross wage rate, and the system replacement rate, while it is negatively correlated with the contributors coverage rate and the income capture rate.

In this report, the age thresholds in the definition of the national demographic dependency rate are set at 20 and 65 years. However, there are also old-age, invalid and survivors pensioners in the age group 20-64, and that there are contributors in the age group 65 and over.

Figure 2 compares the national demographic dependency rates (defined as the ratio of the population aged 60 years and above to that aged between 20 and 59 years) and the system demographic dependency rate of the employees insurance from 1952 to 2007. In the 1950s-70s, the system demographic dependency rates followed a similar trend of the national demographic dependency rates. The discrepancy started to emerge in the 1980s due probably to the increase in pensioners with longer contribution periods. However, after 1990 the system demographic dependency rate increased dramatically and currently attained a level higher than 70%, which is more than double the national demographic dependency rate.

Figure 2: The national demographic dependency rates and the system demographic dependency rates (employees insurance), 1952-2008
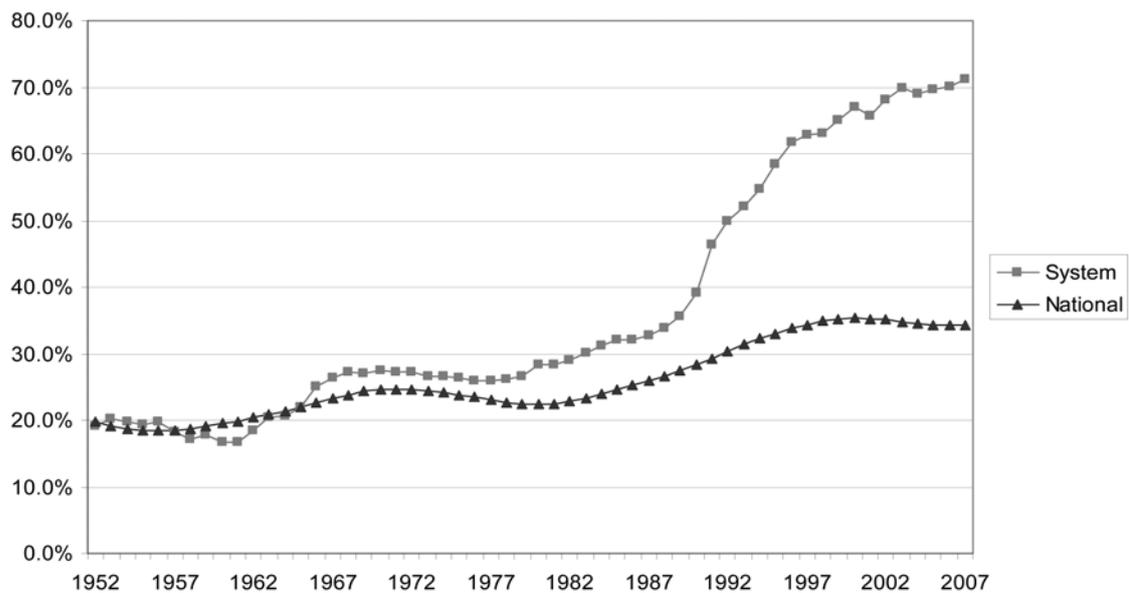
Although the benefits provided from the pension system met the immediate need of income for the redundant workers in the process of privatization, the rapid deterioration of the system demographic dependency has pushed up the cost rates significantly. Unless any step is taken on adjusting the contribution and benefit structure and on improving the efficiency of the administration of the pension system, further progress of population ageing, continuous increase in pensioners, continuous stagnation of the contributors, as well as decline in the income capture rate due to growing informal work will lead to a higher pension cost rate than the current level, which in turn will result in a growing deficit in the PIO fund.

1.5 Normal retirement age and the age pattern of retirement

To analyse the in-flow of the pensioners, we look into the qualifying conditions for old-age pensions and the actual age pattern of receiving old-age pensions.

According to Article 19 of the Law, a man can retire

- at age 63 with at least 20 years of pensionable period;
- at age 65 with at least 15 years of contribution period;
- at age 53 with at least 40 years of contribution period; or,
- at any age, provided he has 45 years of contribution period.

Similarly, a woman can retire

- at age 58 with at least 20 years of pensionable period;
- at age 60 with at least 15 years of contribution period;
- at age 53 with at least 35 years of contribution period; or,
- at any age, provided she has 45 years of contribution period.

However, as a result of the 2005 amendment, the first condition will be phased out by 2011 with the schedule presented in the following Table 5.

Table 5: Qualifying conditions for the old-age pension, 2008-2010

Year	2008	2009	2010
Retirement age for men (years of age)	63.5	64	64.5
Retirement age for women (years of age)	58.5	59	59.5
Required pensionable period (years)	19	18	17

The following Figure 3 shows the number of newly retired workers and their average pensions by age in 2008 (employees insurance only). From these data concerning the age pattern of retirement, we can first observe a sharp peak of retirement at 63 years for men (31%) and at 58 years for women (45%). This suggests that a large portion of workers receive old-age pensions on grounds of the first eligibility condition in the above. Therefore, the gradual increase in the normal retirement age as set out in the above table is expected to affect these groups of workers. Nevertheless, still 59% of men retire at 62 years or younger, and 41% of women retire at 57 years or younger, with higher average pensions.

Figure 3: Newly retired workers and the average pensions by age and sex (employees insurance), 2008
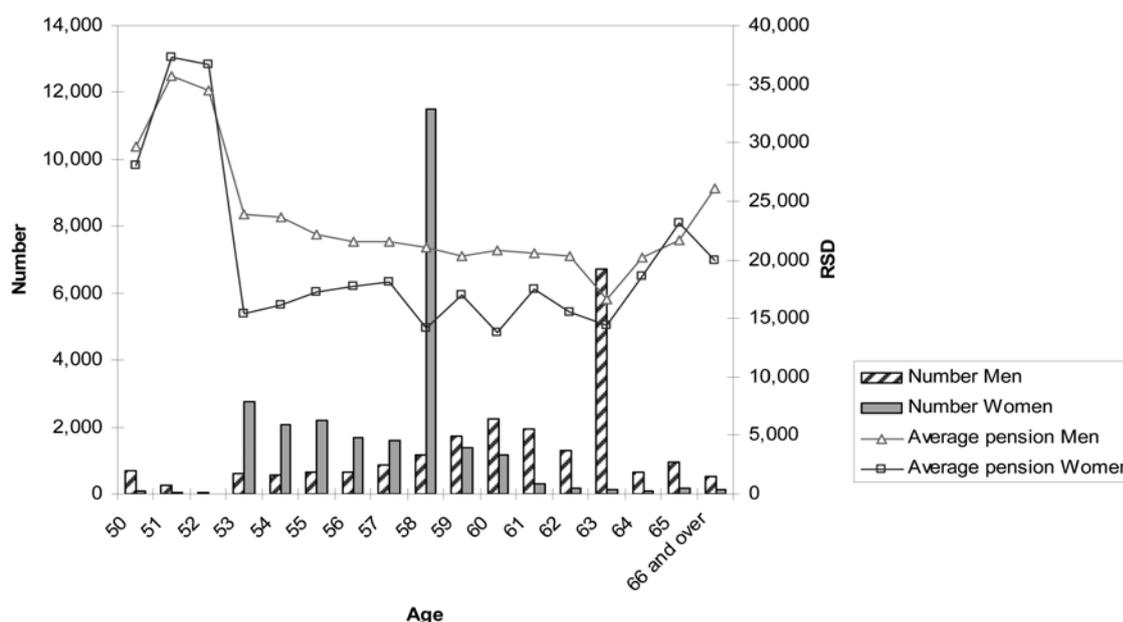
The following Figure 4 presents the sex- and age-specific coverage rates of contributors and three types of pensioners (except orphans) in terms of the population. The data refer to the employees insurance in 2008.

Figure 4: Age-specific coverage rates of contributors and pensioners by sex (employees insurance), 2008
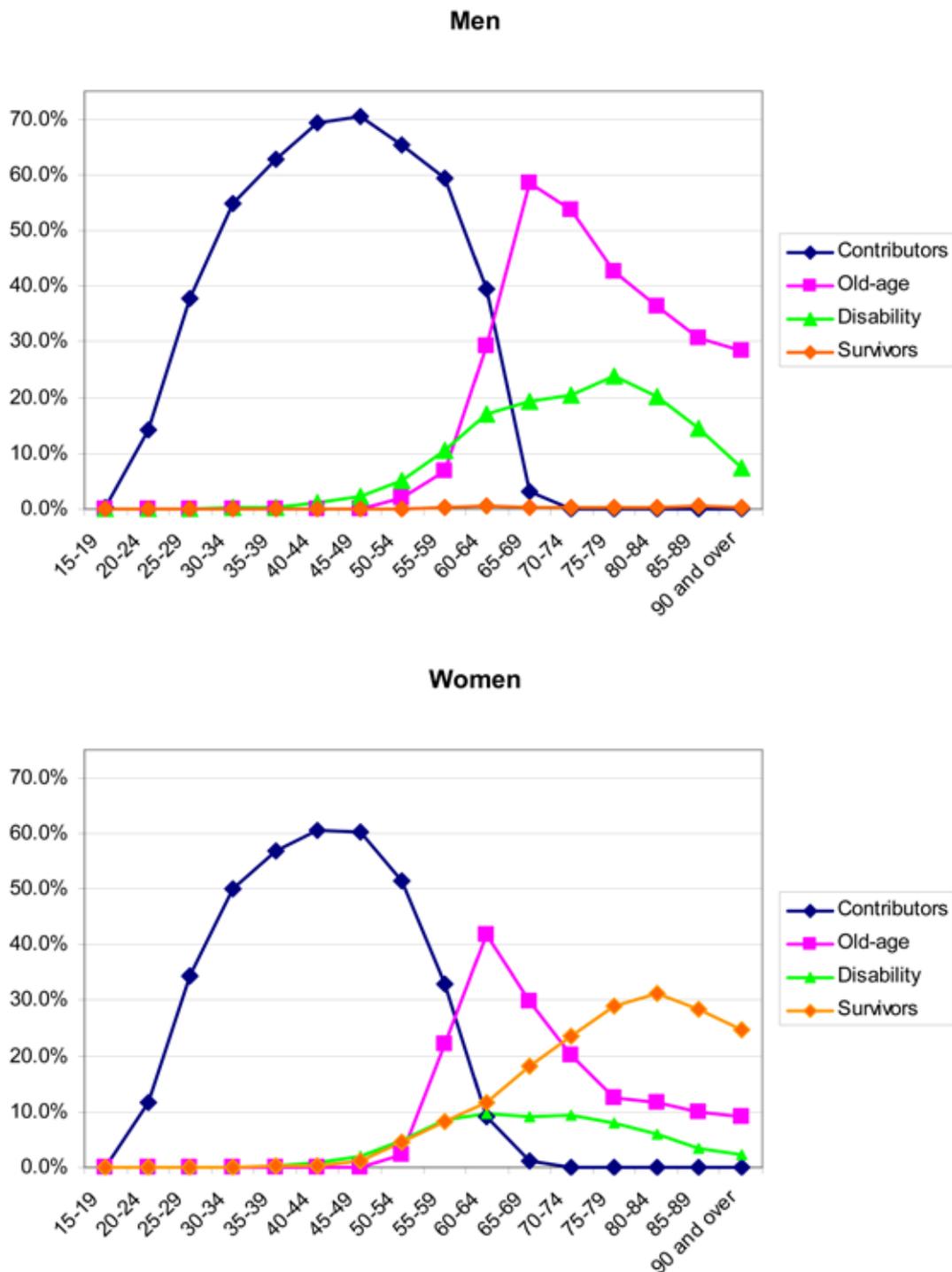
These cross-section data tell the following observations on the different age patterns of coverage by the pension system by male and female workers.

- For men, the contributor coverage rates are higher than women at all ages. The old-age pensions emerge from 60-64 age-group and peaks at 65-69 age-group then gradually decrease towards the higher ages. As mentioned earlier, the percentage of invalidity pensioners is high at age-groups around 65-79. The rate of survivors' (widowers) pensions is very low at all ages.
- For women, reflecting the lower retirement age, the old-age pensions appear from 55-59 age-group and peaks at 60-64 age-group. Similar age pattern is observed for the invalidity pensions.

In contrast to men, the survivors' (widows) pensions increase from 55-59 age-group and exceed the old-age pensioner by 70-74 age-group and over.

1.6   Indexation of pensions

Since 2002, Serbian pension system has made a series of amendments on the indexation policy. The main changes are summarised as follows.

- Prior to 2002, pensions were indexed when the cumulative increase in the average wage since the last adjustment exceeded 5%.
- From 2002, pension indexation is made quarterly in line with the 50-50 average of the increases in wages and in the cost-of-living (so-called the Swiss formula).
- From 2006, pension indexation is made twice a year (in April and October). More importantly, the basis of indexation is gradually replaced by the increase in prices. This is done by increasing the weight of the cost-of-living index in calculating the weighted average of the wage and cost-of-living indices from 50% to 62.5% in 2006, 75% in 2007 and 87.5% in 2008. In 2009 and after, the pensions will be indexed in line with cost-of-living increase only.
- As a transition measure for 2005-2009, in case the average pension falls below the level of 60% of the average net wage, then the state will provide an extraordinary pension indexation at the end of the year, which will be financed from the budget. This clause of the extraordinary indexation was invoked in January 2008, as the average pension in 2007 fell below 60% of the average net wage in the same year.
- The level of pension was made a political issue during the general election in 2008. To fulfil the promise made during the election campaign, an extraordinary 10% increase was carried out in October 2008 in addition to the regular indexation. At the same time, it was decided that the pension indexation will be frozen during 2009. The next indexation is due in April 2010.
- Between 2003 and 2008, the average rate of increase in the average wage was 23.5% per year and that in the cost-of-living was 10.6% per year. The average rate of pension indexation for the same period was 19.4% but would be 17.6% without 10% increase in October 2008. It follows that the pension indexation has exceeded the cost-of-living increase but caught up with about 80% of the wage increase.

Changing the basis of indexation is a widely adopted measure in many countries to restore long-term financial solvency. The following Figure 5 compares the cumulative increase of pension indexation with those of the average gross wage and the cost-of-living. According to the above pension indexation method, the pension index has constantly been above the cost-of-living index but has become 19% lower than the average wage index by 2008. The relatively steep increase in the pension index from 2007 to 2008 is due to the extraordinary increase in October 2008.

Figure 5: Cumulative increase of the average gross wage, cost-of-living and pensions (Year 2002 = 100), 2002-2008
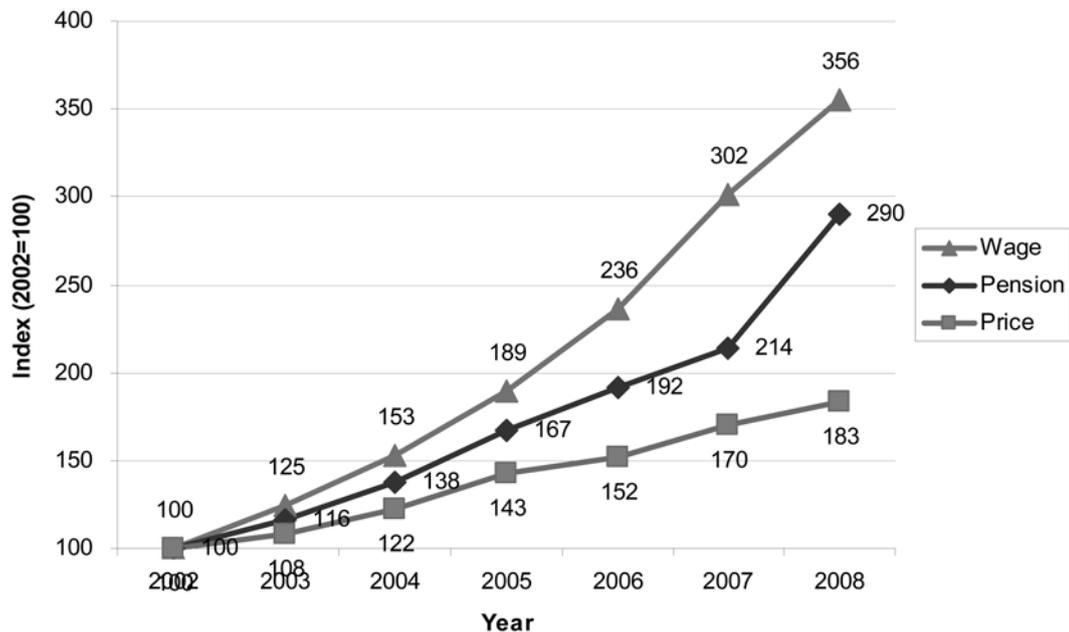
The past experiences suggest that the attempt to contain the increase in the pension expenditure faced an opposition and was led to a compromise as a result of political interferences. A large number of pensioners relative to contributors have made the pension system vulnerable for becoming a political issue. Such frequent, *ad hoc* amendments, motivated by a short-term interest, will ultimately affect the pensioners and contributors by making the pension system unpredictable and inconsistent.

It should be noted that the indexation is applied to the general point in the pension formula. Therefore, the effect of Swiss or cost-of-living indexation arises not only on the replacement rate of the already awarded pensions but also on that of the newly awarded pensions.

1.7   Financial status of different insured groups

In addition to covering the current deficit, the state has statutory obligation to subsidise some specific portion of pension expenditure, which currently represents around 7% of the total pension expenditure.

The statutory state subsidy for the employees is paid in respect of pensions for extra rights provided by the law to some special categories. It also includes the part of pensions in respect of two years of additional pensionable period for women who have borne three or more children.

The statutory state subsidy for farmers involves the pensions in respect of the pensionable period of past services (so-called "solidarity period") as well as the pensionable period during the period of the World War II. The solidarity periods means that when the compulsory farmers pension insurance fund was established in 1986, the Government granted the farmers 15 years contribution periods (less any contributory periods made before) so that all farmers could fulfil the condition for the old-age pensions.

In contrast to the employees insurance which is dominant of the former three pension insurance funds (its share in covered workers is 80% and its share in contributions is more than 90%), the other two insured groups have quite different financial status, as shown in Figure 6.

Figure 6: Revenue and expenditure of three different insured groups

(expenditure = 100), 2007
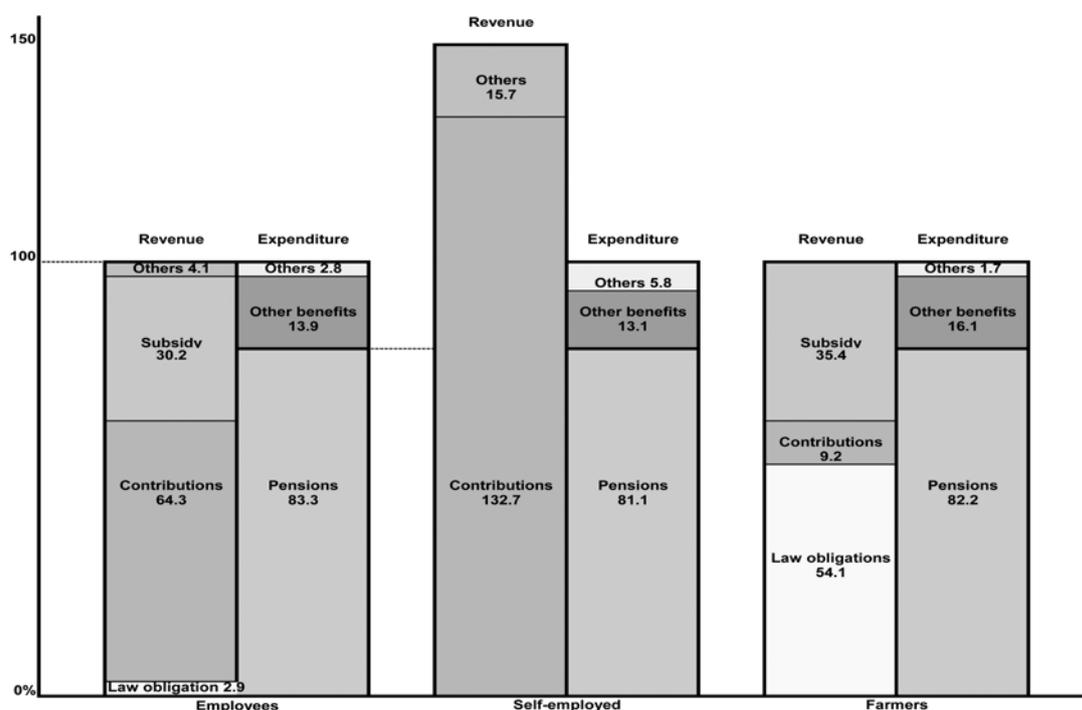
The self-employed insurance has a comfortable surplus due to its favourable demographic structure. This is why the former self-employed pension insurance fund was reluctant to be financially consolidated with the other two funds which are in deficit. However, analysis shows that the exceptional status of the self-employed insurance is mainly due to relatively less liabilities due to the later establishment of the fund, and the shift of certain workers formerly employed in socially-owned enterprises into self-employed as a result of privatization.

The farmers insurance is failed to be self-financing by its contributions. In 2008, the contributions from the farmers covered less than 10% of the expenditure of the farmers pensions. The remaining 90% is financed by the transfer from the state budget, of which 54% of expenditure is the statutory state subsidy and 35% is the covering of the deficit.

2 Directions of the pension reform in Serbia

Based on the analysis made in Chapter 1, this Chapter will discuss the key issues related to the future direction of the pension reform in Serbia.

2.1 Objective of the reform

Generally, the basic issue in the pension reform is to making pension systems sustainable in the long run and credible for the future generations, while ensuring its main objective of providing adequate income security for the elderly population.

For any pension system, securing its long-term sustainability is a basic requirement whether the system is pay-as-you-go or funded. As presented in Box 2, there are in principle two options to restore the financial balance of the pension system:

(i)   Reducing the benefit expenditure by modifying the pension formula, raising the retirement age, and changing the indexation method, whilst minimising the administrative expenses;

(ii)   Increasing revenues by increasing the contribution rate, or by extending the contributory base through improved compliance of the Law and efficient contribution collection. Economic growth will help increase the size of the contributory base.

There is a firm opposition by both employers and trade unions against raising the contribution rates, in particular at the time of the current economic crisis. Likewise, there is an opposition by trade unions and the pensioners to the proposals of reducing the pension level or increasing the retirement age.

2.2 Strategies for the pension reform in Serbia

The strategy for pension reform in Serbia would envisage the following steps.

First, it should be stressed that extending the coverage of pension system is crucial not only from a point of view of ensuring workers' basic right, but also from a point of view of sustaining the system in the long run. Improved law compliance through tacking the problems of informal work would result in an increase in the employment coverage rate, which would mitigate the upward pressure of the system demographic dependency ratio. In addition, enhanced enforcement of contribution collections through effective inspection and fraud control increases the income capture rate, which would have the impact on the system replacement rate.

In the context of the current economic crisis, it is more urgent to increase the labour force participation of the youth population and to increase the actual retirement age by increasing the labour force participation of older population.

Box 2: Dynamics of the pensions transfer

The percentage of the pension expenditure in the total economic output (or in the total contributory base) is an indicator to measure the magnitude of pension transfer in the national economy. Recently, Serbia's pension expenditure has been at the level of 14% of GDP, or 37% of the contributory base.

Regarding the change in this indicator, the following formula holds:

$$\Delta(P/Y) = (N - D)/Y + (i - g)\, P/Y$$

where

Y : GDP (or total contributory base)
P : Pension expenditure
N : Pensions for the newly retired
D : Pensions for the deceased retired
g : Rate of growth of output (or total contributory base)
i : Rate of indexation of pensions

From the above analysis, it follows that in order to avoid further increase in the percentage of pension expenditure in GDP one should either

- reduce the amount of the newly awarded pensions (through lower pension formula, or tighter qualifying conditions and pension age),
- apply lower rates of indexation of pensions in payment, or
- achieve higher economic growth (through, for example, higher savings and investment).

Second, the stakeholders should agree on the future level of benefits and the mechanism to safeguard its value through the guarantees for the minimum pension and the indexation method that would maintain the value of pensions in payment against inflation or cost-of-living increase.

For instance, given the current pension level, and in view of the International Labour Standard, as embodied in the ILO Social Security Minimum Standard Convention No. 102, the future benefit level for a newly retired average worker with 30 years contributions should not be less than 40-50% of the average net wage, which is equivalent to 1.33-1.67% of the average net wage in terms of the general point[11].

Third, keeping in mind these basic requirements, steps should be taken to reduce the total volume of the benefit expenditure. Based on the problem analysis, the following possible measures are suggested.

- Better targeted provision of additional pension credits for women and other specific groups;
- More rigorous application of invalidity criteria;
- Phased-in equalization of the retirement age of women to 65 years of age;
- In the longer-term, there may be a need for further increases of retirement ages for both sexes in line with increase in the life expectancy of the Serbian population; and,

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[11]   The current pension formula assumes a uniform accrual rate. One can also consider setting higher general point for shorter pensionable periods and lower general points for longer pensionable periods.

- Modifications of the indexation methods that would however safeguard at least the purchasing power of pensions in payment.

Fourth, after implementing all these measures, if there still exist any gaps in the financial balance, one needs to consider increasing the contribution rate.

Table 6 attempts to estimate the financial effects of the above reform measures by changing the factors comprising the pension cost rates in 2008.

Table 6: Financial implication of the reform options, 2008

Indicator	Base	Case 1	Case 2	Case 3	Case 4
National demographic dependency rate	32.3%	--	--	--	--
Pensioners coverage rate	109.1%	--	--	--	--
Contributors coverage rate	47.4%	70.0%	--		60.0%
System demographic dependency rate	74.3%	50.4%	--	--	58.8%
Effective system replacement rate	53.6%	--	40.0%	--	45.0%
Income capture rate	89.0%	--	--	100%	95.0%
Net/gross wage rate	71.7%	--	--	--	--
System replacement rate	43.2%	--	32.2%	38.5%	34.0%
Pension cost rates	32.1%	21.8%	24.0%	28.6%	20.0%
Total cost rate	38.4%	28.0%	30.2%	34.8%	26.2%
Difference from the baseline	--	10.3%	8.2%	3.5%	12.2%
Need for contribution increase	16.4%	6.0%	8.2%	12.8%	4.2%

Source: ILO calculations.

The following observations are made:

- Case1: If the contributors coverage rate increases to a pre-1990 level at 70%, the system demographic rate is reduced to 50.4% (almost two workers supporting one pensioner). As a result the pension cost rate will decrease by 10.3%-points, which reduces the deficit to 6.0% in terms of the contributory base.
- Case 2: If the pension level is reduced by 25% from the current level, the system replacement rate will decrease accordingly. The resulting effect is 8.2%-points decrease in the pension cost rate, which leaves a deficit of 8.2%.
- Case 3: If the income capture rate increases to 100% by eliminating the under-reporting of wages, the cost rate will decrease by 3.5%-points and the resulting deficit is 12.8%.
- Case 4: By combining these effects partially, the cost rate would be reduced by 12.2%-points, which will contain the deficit at the level of 4.2%.

In interpreting these observations, the following remarks are in order:

- The above calculations did not take into account the cost to implement the measures in question. For instance, coverage extension will require more administrative costs. Moreover, the above calculations did not take into account the fact that the implementation of these measures requires a sufficiently long transition period to avoid abrupt changes.
- The above calculation reflects the conditions in 2008. In the future, the national demographic dependency rate is likely to increase due to the ageing population.
- Likewise, if the contributors coverage rates continue to stay at the current low level, it will result in low pensioners coverage in the future. Such cohort dynamics was not taken into consideration in the above calculation.

Certainly, a more comprehensive forecast will require more elaborate actuarial analyses. However, notwithstanding these limitations, the above quantitative analysis provides some insights in approximate magnitude of financial impacts of different policy options.

2.3 The reform process and the link with other policies

The policy making process is an important aspect of pension reform. The pension reform inevitably affects the conflicting interests of the tripartite stakeholders. Therefore, the reform process should seek for building national consensus on the package of measures which are acceptable by all the stakeholders.

Although no pension system can be completely immune from political influences, the governance of the pension reform policy making can be improved through a transparent, well-informed and participatory policy making process.

The excess liability of the Serbian pension system, which is an inevitable consequence of the economic transition, must be financed by means of an intergenerational income transfer. Therefore, the pension reform should be supported not only by the current workers and pensioners but also the future working generations who will be asked to pay contributions for their elderly generations.

To assist the decision making on the reform package, each measure should be presented together with the assessment of its financial implications. Projections of expenditure and revenue of the pension system will provide crucial information in the debate on the choice of reform measures.

A national pension system does not operate in isolation from its country's economy. Instead, it is an important socio-economic subsystem which interacts with other actors in the national and global economy. Therefore, for an effective implementation of the reform, it is important that the pension policy should be consistent with the policies on the relevant areas, and that the relevant policies should foster the enabling environment for pension reform. Specific examples of such coordination include:

- Labour market policy which promotes employment at all ages and allows for flexible retirement;
- Tax collection policy for efficient collection of social security contributions in compliance with the legislations;
- Macroeconomic policy which promotes sustainable economic growth; and,
- Social protection policy which safeguards all citizens including pensioners against poverty.

2.4 Comments on the possible introduction of a mandatory private pension tier

Since the mid-1990s, many countries in Central and Eastern Europe have carried out the pension system reform which introduced a mandatory, privately-managed pension tier (so-called Pillar II pension system). As these countries had pre-existing public pension systems, the reform resulted in scaling down the public schemes and replacing them partially with privately managed individual savings account schemes. These regional experiences of pension reform created interest and concern amongst the stakeholders in Serbia.

Two key questions should be addressed regarding the rationales and feasibility of this reform strategy. The first question is whether it is appropriate for the pension reform strategy to aim at bolster economic growth through increased savings, in addition to the provision of adequate income protection to the

elderly, the disabled and the survivors. The second question is whether Serbia meets initial conditions in order for this type of pension reform to be effective in the national context.

An evaluation carried out by an independent evaluation group[12] presents evidences that many countries in Central and Eastern Europe and in Latin America which introduced the mandatory private pension tier had not met the initial conditions, and have failed to achieve the intended macroeconomic impact or to expand the coverage to the population outside the formal pension system. In addition, due to the transition costs, fiscal deficits have grown in those countries. A recent study on the introduction of the mandatory private pension system in Serbia[13] concludes that the shift of various risks to the workers and the significant transition costs[14] are major caveats for the introduction of such a system in Serbia. The same study also conducts a detailed analysis of various investment instruments in the capital market in Serbia.

Moreover, this type of pension system has the following problems with its design:

- One of the most critical limitations is the unpredictability of the future benefit level as the workers will be exposed to the investment risk and management risk.
- The individual account system will result in more limited income redistribution. Therefore the inequalities between the high income earners and low income earners, and between men and women, are likely to increase.
- There is an inherent difficulty for the private market to provide life annuities and full indexation of annuities.
- The structure of administrative charges by private funds should be made clear and be properly informed to the members.

Thus, in view of the above analysis, careful consideration should be made whether the introduction of mandatory private pension tier will be adopted as a central issue in the current pension reform debate in Serbia. It should be noted however that the voluntary savings play a role to complement the public pensions and to respond to various needs of the elderly persons.

2.5 Issues on farmers pension insurance

As an insured group, farmers expose serious difficulties in registering with the system and paying contributions regularly. As a result, almost all pensioners receive the minimum pension (which is set at 24.4% lower than the minimum pension for employees and the self-employed), and 90% of the pension expenditure is subsidised by the state budget. Thus, the current farmers insurance is *de facto* a tax-financed, flat-rate pension system.

In reforming the farmers pensions insurance, the following remarks are made. First, within the framework of the contributory social insurance, the administration of the programme should be improved through specific interventions for farmers. In view of low and irregular income of the farmers, the level and collection methods of contributions should be made flexible. Organized groups (such as communities,

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[12]   World Bank, "Pension Reform and the Development of Pension Systems - An Evaluation of World Bank Assistance", 2006.
[13]   Matković G. et al. "Challenges of introduction of the mandatory private pension system in Serbia", Center for Liberal-Democratic Studies/USAID, 2009.
[14]   According to this study, if 7% of contributions are diverted to the mandatory private pensions, the estimated transition costs would be in the order of 47.8 of GDP.

cooperatives) at the local level are avenues to expand the coverage. It should also be noted that the pension policy can create an incentive for inheritance of farmland to the next generation who can utilize the land more productively thereby supporting the agrarian structural change. Alternatively, the current flat-rate, tax-financed pension can be extended to a non-contributory universal pension for all citizens. Securing adequate fiscal space for this universal pension is a critical question for implementing this policy.

2.6 The way forward: further ILO technical assistance

In order to support the process to develop policy and strategy for pension reform, the ILO has provided technical assistance to the Serbian government, workers' and employers' organizations.

- The ILO organized a pension modelling training from 21 to 26 June 2009 in Belgrade. The objective of the training course is to introduce the basic ideas and methods in a comprehensive social protection expenditure forecast model and to enable the participants to conduct financial analysis of a pension system using the projection models developed by the ILO.

- The International Training Centre of the ILO conducted a tripartite workshop on pension system in Serbia from 15 to 17 July 2009 in Belgrade. The workshop focused on the key issues related to pension schemes, including the relationship between public and private pension provision, the structure of benefits, sustainable financing and governance of pension schemes.

- The ILO will host a Conference on Pension Reform in Serbia on 24 and 25 September 2009 in Belgrade. The Conference aims to share good practices and lessons in pension reforms and their implementation based on regional and international experiences, and to provide a forum to discuss the key issues in the future pension system in Serbia through dialogue with a wide range of stakeholders.

The ILO is prepared to carry out further analytical work on the pension system and provide support to its tripartite constituents in Serbia. In particular, the ILO stands ready to provide technical assistance in designing more detailed reform options, in building capacity to estimate long-term financial effects of the reform options, and in promoting the policy dialogue amongst key tripartite stakeholders.

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Statistical Annex

Table A-1. Revenue and expenditure of the PIO fund (in RSD millions), 1999-2008

Table A-2. Revenue and expenditure of the PIO fund (as a percentage of GDP), 1999-2008

Table A-3. Revenue and expenditure of the PIO fund (as a percentage of the total contribution base), 1999-2008

Table A-4. Number of employees by gross salaries, March and September, 2008

Table A-5. Number of old-age pensioners and average pensions by sex, age and insured groups, December 2008

Table A-6. Number of invalidity pensioners and average pensions by sex, age and insured groups, December 2008

Table A-7. Number of survivors pensioners and average pensions by sex, age and insured groups, December 2008

Table A-8. Number of pensioners by pension amount, types and insured groups, December 2008

Table A-9. Number and average pensions of newly retired workers by sex and age (employees insurance), 2008

Table A-10. Number of pensioners who have extended periods of insurance by insured groups, December 2008

Table A-11. Number of pensioners with privileged rights, December 2008

Table A-1. Revenue and expenditure of the PIO fund (in RSD millions), 1999–2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
TOTAL REVENUE (A+B+C)	**20,645**	**37,935**	**79,044**	**130,436**	**159,450**	**202,141**	**241,967**	**294,229**	**320,326**	**388,527**
A Current revenue	20,641	37,890	78,998	127,299	147,464	197,750	236,006	291,272	316,070	375,540
A1 Contributions	16,648	29,516	53,613	71,291	84,292	116,169	135,687	171,237	196,888	228,131
- Employees	15,712	28,181	50,454	66,265	78,621	107,678	125,875	156,597	180,458	209,612
- Self-employed	543	733	1,789	3,793	4,697	7,273	8,063	12,417	14,648	16,814
- Farmers	394	602	1,371	1,233	973	1,219	1,749	2,223	1,783	1,705
A2 Transfers from the budget (A2a + A2b)	3,756	7,907	24,097	54,263	58,985	75,601	92,403	111,182	110,061	137,790
A2a - Subsidies	3,321	7,141	22,343	51,124	50,458	68,340	83,370	93,066	91,494	114,180
- Employees	3,279	6,763	21,338	47,762	48,778	62,675	76,836	88,919	84,669	103,900
- Self-employed	0	0	0	0	0	0	0	0	0	0
- Farmers	43	377	1,004	3,362	1,680	5,665	6,534	4,147	6,825	10,280
A2b - Law obligations	434	766	1,754	3,139	8,272	7,236	9,034	18,116	18,567	23,611
- Employees	423	752	1,701	3,043	6,342	4,676	6,068	7,141	8,127	11,251
- Self-employed	11	15	53	96	115	108	0	0	0	0
- Farmers	0	0	0	0	1,815	2,452	2,966	10,975	10,440	12,360
A3 Other revenue (from property)	108	145	397	551	1,343	627	684	1,395	2,121	1,692
A4 Reversal of expenses	129	322	891	1,193	1,787	1,906	2,727	2,305	928	1,075
A5 Transfers from other budget users	0	0	0	0	1,058	3,446	4,504	5,153	6,073	6,852
B Revenue from sale of non-financial property	0	0	0	0	0	30	49	45	1	44
C Borrowing and revenues from sale of financial property	4	45	46	3,138	11,960	4,362	5,912	2,913	4,255	12,943
TOTAL EXPENDITURE (D+E+F)	**20,128**	**37,798**	**80,426**	**128,788**	**156,703**	**199,681**	**240,625**	**285,471**	**310,931**	**398,032**
D Current expenditure	20,039	37,415	80,120	128,624	156,285	196,255	239,497	283,931	308,193	395,576
D1 Wages and other personnel expenditure	126	263	485	829	1,202	1,633	2,075	2,441	3,063	3,524
D2 Expenditure of goods and services	479	797	1,521	2,186	2,182	1,827	1,831	2,268	2,424	2,373
D3 Interest payments and other cost of borrowing	629	937	2,254	1,454	171	7,574	5,255	8,903	392	132
D4 Benefit expenditure (D4a+D4b+D4c)	18,427	35,348	75,721	124,062	152,643	185,170	230,236	270,198	302,071	389,447
D4a - Net pensions	17,418	33,440	66,195	107,192	131,591	157,169	194,983	229,838	258,486	333,136
- Employees	14,922	29,479	61,988	99,924	122,947	144,137	179,224	208,016	233,669	301,486
- Self-employed	543	971	2,349	3,542	4,772	5,299	6,288	7,564	8,951	11,899
- Farmers	327	674	1,858	3,727	3,872	7,732	9,471	14,259	15,866	19,751
D4b - Other benefits	872	1,488	3,122	5,370	7,440	9,457	11,820	12,033	11,774	14,745
- Employees	788	1,322	2,764	4,925	6,941	8,760	10,452	10,326	10,271	12,719
- Self-employed	30	56	118	109	161	179	688	728	344	449
- Farmers	55	110	240	336	337	519	680	979	1,159	1,577
D4c Health insurance contributions	1,762	2,736	6,405	11,500	13,612	18,543	23,433	28,326	31,811	41,566
- Employees	1,708	2,639	5,980	10,765	12,744	17,122	21,743	25,663	28,773	37,677
- Self-employed	54	97	233	351	470	572	772	929	1,097	1,464
- Farmers	0	0	192	384	399	849	918	1,734	1,941	2,425
D5 Other expenditure	379	71	137	92	88	51	100	120	242	100
E Expenditure on non-financial assets	90	383	251	107	115	342	380	387	514	432
F Repayment of loans	0	0	55	57	303	3,084	748	1,153	2,224	2,024

Table A-2. Revenue and expenditure of the PIO fund (as a percentage of GDP), 1999–2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
TOTAL REVENUE (A+B+C)	**10.04**	**9.87**	**10.37**	**13.41**	**14.07**	**14.60**	**14.34**	**14.86**	**13.56**	**13.72**
A Current revenue	10.04	9.86	10.36	13.08	13.02	14.29	13.98	14.71	13.38	13.27
A1 Contributions	8.10	7.68	7.03	7.33	7.44	8.39	8.04	8.65	8.33	8.06
- Employees	7.64	7.33	6.62	6.81	6.94	7.78	7.46	7.91	7.64	7.40
- Self-employed	0.26	0.19	0.23	0.39	0.41	0.53	0.48	0.63	0.62	0.59
- Farmers	0.19	0.16	0.18	0.13	0.09	0.09	0.10	0.11	0.08	0.06
A2 Transfers from the budget (A2a + A2b)	1.83	2.06	3.16	5.58	5.21	5.46	5.47	5.61	4.66	4.87
A2a - Subsidies	1.62	1.86	2.93	5.25	4.45	4.94	4.94	4.70	3.87	4.03
- Employees	1.59	1.76	2.80	4.91	4.31	4.53	4.55	4.49	3.58	3.67
- Self-employed	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Farmers	0.02	0.10	0.13	0.35	0.15	0.41	0.39	0.21	0.29	0.36
A2b - Law obligations	0.21	0.20	0.23	0.32	0.73	0.52	0.54	0.91	0.79	0.83
- Employees	0.21	0.20	0.22	0.31	0.56	0.34	0.36	0.36	0.34	0.40
- Self-employed	0.01	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
- Farmers	0.00	0.00	0.00	0.00	0.16	0.18	0.18	0.55	0.44	0.44
A3 Other revenue (from property)	0.05	0.04	0.05	0.06	0.12	0.05	0.04	0.07	0.09	0.06
A4 Reversal of expenses	0.06	0.08	0.12	0.12	0.16	0.14	0.16	0.12	0.04	0.04
A5 Transfers from other budget users	0.00	0.00	0.00	0.00	0.09	0.25	0.27	0.26	0.26	0.24
B Revenue from sale of non-financial property	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C Borrowing and revenues from sale of financial property	0.00	0.01	0.01	0.32	1.06	0.32	0.35	0.15	0.18	0.46
TOTAL EXPENDITURE (D+E+F)	**9.79**	**9.84**	**10.55**	**13.24**	**13.83**	**14.43**	**14.26**	**14.42**	**13.16**	**14.06**
D Current expenditure	9.75	9.74	10.51	13.22	13.79	14.18	14.19	14.34	13.04	13.97
D1 Wages and other personnel expenditure	0.06	0.07	0.06	0.09	0.11	0.12	0.12	0.12	0.13	0.12
D2 Expenditure of goods and services	0.23	0.21	0.20	0.22	0.19	0.13	0.11	0.11	0.10	0.08
D3 Interest payments and other cost of borrowing	0.31	0.24	0.30	0.15	0.02	0.55	0.31	0.45	0.02	0.00
D4 Benefit expenditure (D4a+D4b+D4c)	8.96	9.20	9.93	12.75	13.47	13.38	13.64	13.64	12.78	13.76
D4a - Net pensions	8.47	8.70	8.68	11.02	11.61	11.35	11.55	11.61	10.94	11.77
- Employees	7.26	7.67	8.13	10.27	10.85	10.41	10.62	10.50	9.89	10.65
- Self-employed	0.26	0.25	0.31	0.36	0.42	0.38	0.37	0.38	0.38	0.42
- Farmers	0.16	0.18	0.24	0.38	0.34	0.56	0.56	0.72	0.67	0.70
D4b - Other benefits	0.42	0.39	0.41	0.55	0.66	0.68	0.70	0.61	0.50	0.52
- Employees	0.38	0.34	0.36	0.51	0.61	0.63	0.62	0.52	0.43	0.45
- Self-employed	0.01	0.01	0.02	0.01	0.01	0.01	0.04	0.04	0.01	0.02
- Farmers	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.06
D4c Health insurance contributions	0.86	0.71	0.84	1.18	1.20	1.34	1.39	1.43	1.35	1.47
- Employees	0.83	0.69	0.78	1.11	1.12	1.24	1.29	1.30	1.22	1.33
- Self-employed	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.05
- Farmers	0.00	0.00	0.03	0.04	0.04	0.06	0.05	0.09	0.08	0.09
D5 Other expenditure	0.18	0.02	0.02	0.01	0.01	0.00	0.01	0.01	0.01	0.00
E Expenditure on non-financial assets	0.04	0.10	0.03	0.01	0.01	0.02	0.02	0.02	0.02	0.02
F Repaymet of loans	0.00	0.00	0.01	0.01	0.03	0.22	0.04	0.06	0.09	0.07

Table A–3. Revenue and expenditure of the PIO fund (as a percentage of the total contribution base), 1999–2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
TOTAL REVENUE (A+B+C)	**27.28**	**28.28**	**32.44**	**40.25**	**41.62**	**38.28**	**39.23**	**37.80**	**35.79**	**37.47**
A Current revenue	27.28	28.24	32.42	39.28	38.49	37.45	38.27	37.42	35.32	36.22
A1 Contributions	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00
- Employees	20.76	21.00	20.70	20.45	20.52	20.39	20.41	20.12	20.16	20.21
- Self-employed	0.72	0.55	0.73	1.17	1.23	1.38	1.31	1.60	1.64	1.62
- Farmers	0.52	0.45	0.56	0.38	0.25	0.23	0.28	0.29	0.20	0.16
A2 Transfers from the budget (A2a + A2b)	4.96	5.89	9.89	16.75	15.39	14.32	14.98	14.28	12.30	13.29
A2a - Subsidies	4.39	5.32	9.17	15.78	13.17	12.94	13.52	11.96	10.22	11.01
- Employees	4.33	5.04	8.76	14.74	12.73	11.87	12.46	11.42	9.46	10.02
- Self-employed	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Farmers	0.06	0.28	0.41	1.04	0.44	1.07	1.06	0.53	0.76	0.99
A2b - Law obligations	0.57	0.57	0.72	0.97	2.16	1.37	1.46	2.33	2.07	2.28
- Employees	0.56	0.56	0.70	0.94	1.66	0.89	0.98	0.92	0.91	1.09
- Self-employed	0.01	0.01	0.02	0.03	0.03	0.02	0.00	0.00	0.00	0.00
- Farmers	0.00	0.00	0.00	0.00	0.47	0.46	0.48	1.41	1.17	1.19
A3 Other revenue (from property)	0.14	0.11	0.16	0.17	0.35	0.12	0.11	0.18	0.24	0.16
A4 Reversal of expenses	0.17	0.24	0.37	0.37	0.47	0.36	0.44	0.30	0.10	0.10
A5 Transfers from other budget users	0.00	0.00	0.00	0.00	0.28	0.65	0.73	0.66	0.68	0.66
B Revenue from sale of non-financial property	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00
C Borrowing and revenues from sale of financial property	0.01	0.03	0.02	0.97	3.12	0.83	0.96	0.37	0.48	1.25
TOTAL EXPENDITURE (D+E+F)	**26.60**	**28.17**	**33.00**	**39.74**	**40.90**	**37.82**	**39.01**	**36.68**	**34.74**	**38.38**
D Current expenditure	26.48	27.89	32.88	39.69	40.79	37.17	38.83	36.48	34.44	38.15
D1 Wages and other personnel expenditure	0.17	0.20	0.20	0.26	0.31	0.31	0.34	0.31	0.34	0.34
D2 Expenditure of goods and services	0.63	0.59	0.62	0.67	0.57	0.35	0.30	0.29	0.27	0.23
D3 Interest payments and other cost of borrowing	0.83	0.70	0.93	0.45	0.04	1.43	0.85	1.14	0.04	0.01
D4 Benefit expenditure (D4a+D4b+D4c)	24.35	26.35	31.07	38.28	39.84	35.07	37.33	34.71	33.75	37.56
D4a - Net pensions	23.02	24.92	27.16	33.08	34.35	29.76	31.61	29.53	28.88	32.13
- Employees	19.72	21.97	25.44	30.84	32.09	27.30	29.06	26.73	26.11	29.07
- Self-employed	0.72	0.72	0.96	1.09	1.25	1.00	1.02	0.97	1.00	1.15
- Farmers	0.43	0.50	0.76	1.15	1.01	1.46	1.54	1.83	1.77	1.90
D4b - Other benefits	1.15	1.11	1.28	1.66	1.94	1.79	1.92	1.55	1.32	1.42
- Employees	1.04	0.99	1.13	1.52	1.81	1.66	1.69	1.33	1.15	1.23
- Self-employed	0.04	0.04	0.05	0.03	0.04	0.03	0.11	0.09	0.04	0.04
- Farmers	0.07	0.08	0.10	0.10	0.09	0.10	0.11	0.13	0.13	0.15
D4c Health insurance contributions	2.33	2.04	2.63	3.55	3.55	3.51	3.80	3.64	3.55	4.01
- Employees	2.26	1.97	2.45	3.32	3.33	3.24	3.53	3.30	3.22	3.63
- Self-employed	0.07	0.07	0.10	0.11	0.12	0.11	0.13	0.12	0.12	0.14
- Farmers	0.00	0.00	0.08	0.12	0.10	0.16	0.15	0.22	0.22	0.23
D5 Other expenditure	0.50	0.05	0.06	0.03	0.02	0.01	0.02	0.02	0.03	0.01
E Expenditure on non-financial assets	0.12	0.29	0.10	0.03	0.03	0.06	0.06	0.05	0.06	0.04
F Repayment of loans	0.00	0.00	0.02	0.02	0.08	0.58	0.12	0.15	0.25	0.20

Table A-4. Number of emplyees by gross salaries, March and September, 2008

	March 2008		September 2008	
	Employees	%	Employees	%
No salary	83,779	7.5%	74,561	6.8%
up to RSD 9000	13,132	1.2%	11,043	1.0%
RSD 9001-15000	34,821	3.1%	28,669	2.6%
RSD 15001-20000	93,074	8.4%	71,435	6.5%
RSD 20001-25000	115,518	10.4%	112,698	10.2%
RSD 25001-35000	196,364	17.7%	191,611	17.4%
RSD 35001-45000	183,480	16.5%	183,056	16.6%
RSD 45001-65000	245,303	22.1%	256,029	23.3%
RSD 65001-85000	79,110	7.1%	89,631	8.1%
RSD 85001 and more	65,607	5.9%	82,142	7.5%
Total	**1,110,188**	**100.0%**	**1,100,875**	**100.0%**
Men	603,714	54.4%	597,042	54.2%
Women	506,474	45.6%	503,833	45.8%
Average salary	RSD 42,551		RSD 45,406	
Men	RSD 42,984		RSD 44,503	
Women	RSD 42,035		RSD 46,476	

Note: No salary means that those workers did not receive any salary in the month indicated
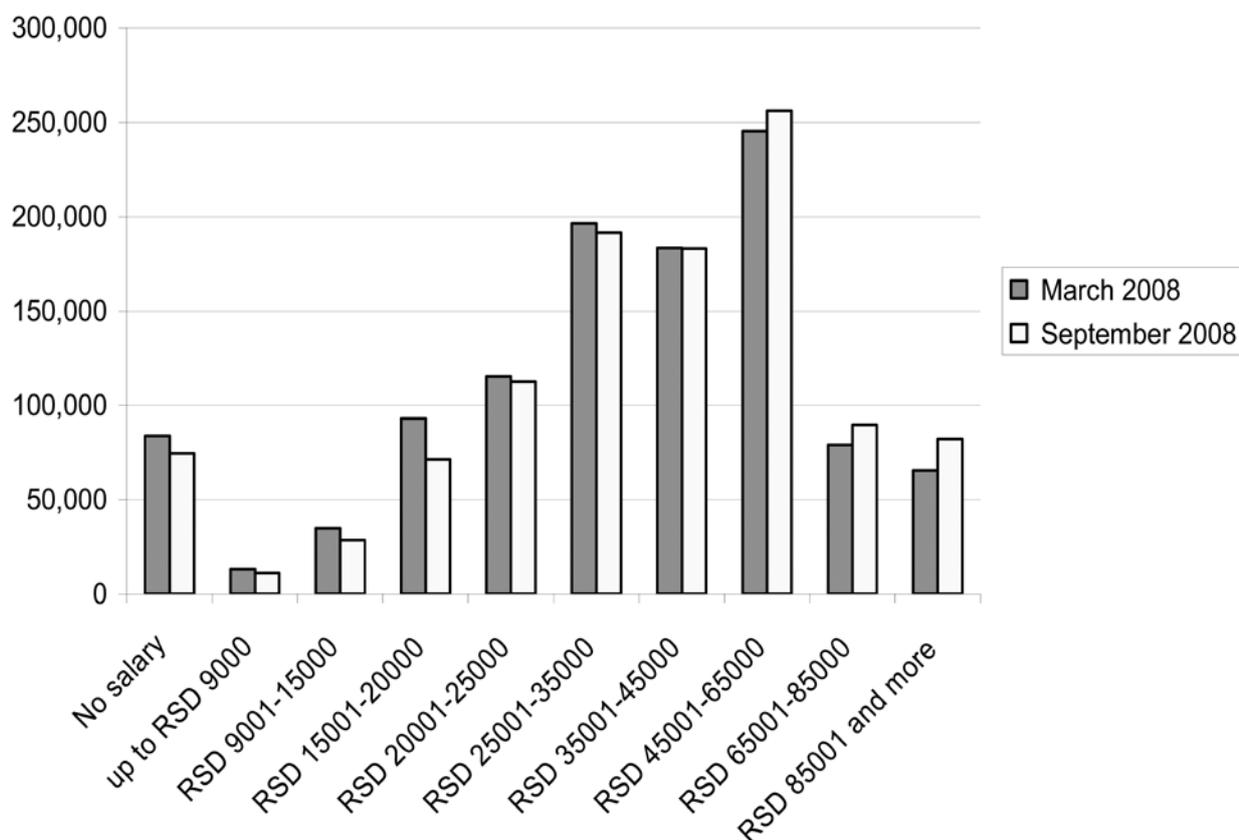
Table A-5. Number of old-age pensioners and average pensions by sex, age and insured groups, December 2008

Total PIO fund

Age group	Both sexes			Men			Women		
	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension
50-54	12,195	1.4%	30,149	5,401	1.3%	40,912	6,794	1.6%	21,594
55-59	89,497	10.5%	24,063	19,409	4.5%	32,095	70,088	16.5%	21,839
60-64	167,939	19.7%	22,959	59,858	14.0%	27,649	108,081	25.4%	20,361
65-69	203,414	23.8%	21,603	113,596	26.5%	24,257	89,818	21.1%	18,247
70-74	193,319	22.7%	20,095	109,582	25.6%	23,244	83,737	19.7%	15,974
75-79	125,996	14.8%	18,811	77,444	18.1%	21,123	48,552	11.4%	15,122
80-84	45,555	5.3%	22,816	32,533	7.6%	22,804	13,022	3.1%	22,846
85-89	13,040	1.5%	25,249	8,618	2.0%	26,197	4,422	1.0%	23,400
90 and over	2,147	0.3%	25,070	1,416	0.3%	25,859	731	0.2%	23,544
Total	853,102	100.0%	21,625	427,857	100.0%	24,404	425,245	100.0%	18,829

Employees

Age group	Both sexes			Men			Women		
	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension
50-54	11,920	1.8%	30,332	5,379	1.6%	40,949	6,541	2.2%	21,601
55-59	84,641	13.1%	24,440	19,000	5.5%	32,162	65,641	21.7%	22,204
60-64	146,405	22.7%	24,500	55,984	16.3%	28,078	90,421	30.0%	22,284
65-69	154,923	24.0%	25,114	95,471	27.9%	26,360	59,452	19.7%	23,113
70-74	126,845	19.7%	25,770	85,089	24.8%	26,866	41,756	13.8%	23,536
75-79	72,641	11.3%	26,066	51,116	14.9%	27,149	21,525	7.1%	23,493
80-84	33,840	5.3%	27,277	22,175	6.5%	28,871	11,665	3.9%	24,247
85-89	11,235	1.7%	27,175	7,066	2.1%	29,028	4,169	1.4%	24,035
90 and over	1,926	0.3%	26,217	1,224	0.4%	27,537	702	0.2%	23,916
Total	644,376	100.0%	25,372	342,504	100.0%	27,657	301,872	100.0%	22,778

Self-employed

Age group	Both sexes			Men			Women		
	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension
50-54	212	1.0%	23,827	20	0.1%	33,488	192	2.9%	22,820
55-59	2,508	11.5%	25,112	353	2.3%	30,160	2,155	33.1%	24,285
60-64	4,832	22.2%	26,291	2,361	15.4%	28,884	2,471	37.9%	23,814
65-69	6,062	27.8%	24,797	5,165	33.8%	25,210	897	13.8%	22,422
70-74	4,170	19.1%	23,961	3,743	24.5%	24,031	427	6.6%	23,352
75-79	2,395	11.0%	22,948	2,177	14.2%	22,821	218	3.3%	24,210
80-84	1,047	4.8%	23,625	935	6.1%	23,507	112	1.7%	24,608
85-89	478	2.2%	23,558	443	2.9%	23,662	35	0.5%	22,243
90 and over	99	0.5%	23,018	89	0.6%	22,942	10	0.2%	23,696
Total	21,803	100.0%	24,700	15,286	100.0%	25,111	6,517	100.0%	23,737

Farmers

| Age group	Both sexes			Men			Women		
	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension
50-54	63	0.0%	16,907	2	0.0%	14,329	61	0.1%	16,992
55-59	2,348	1.3%	9,365	56	0.1%	21,233	2,292	2.0%	9,075
60-64	16,702	8.9%	8,488	1,513	2.2%	9,840	15,189	13.0%	8,353
65-69	42,429	22.7%	8,328	12,960	18.5%	8,386	29,469	25.2%	8,303
70-74	62,304	33.3%	8,283	20,750	29.6%	8,251	41,554	35.6%	8,299
75-79	50,960	27.3%	8,274	24,151	34.5%	8,216	26,809	22.9%	8,327
80-84	10,668	5.7%	8,584	9,423	13.4%	8,456	1,245	1.1%	9,558
85-89	1,327	0.7%	9,547	1,109	1.6%	9,174	218	0.2%	11,445
90 and over	122	0.1%	8,631	103	0.1%	8,433	19	0.0%	9,709
Total	186,923	100.0%	8,352	70,067	100.0%	8,351	116,856	100.0%	8,353

Table A-6. Number of invalidity pensioners and average pensions by sex, age and insured groups, December 2008

Total PIO fund

Age group	Both sexes			Men			Women		
	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension
15-19	12	0.0%	21,064	8	0.0%	22,109	4	0.0%	18,976
20-24	62	0.0%	14,880	45	0.0%	15,173	17	0.0%	14,105
25-29	239	0.1%	13,526	164	0.1%	13,568	75	0.1%	13,434
30-34	823	0.3%	14,456	525	0.3%	15,117	298	0.2%	13,289
35-39	1,909	0.6%	14,814	1,144	0.6%	15,563	765	0.6%	13,695
40-44	4,943	1.5%	15,088	2,816	1.4%	15,683	2,127	1.7%	14,300
45-49	12,034	3.7%	16,306	6,239	3.1%	17,040	5,795	4.6%	15,515
50-54	31,704	9.6%	18,414	16,275	8.0%	19,606	15,429	12.2%	17,156
55-59	60,939	18.5%	20,329	33,041	16.3%	21,697	27,898	22.0%	18,708
60-64	59,679	18.1%	21,270	36,503	18.1%	22,767	23,176	18.3%	18,912
65-69	54,291	16.5%	20,537	35,098	17.4%	22,163	19,193	15.1%	17,562
70-74	54,300	16.5%	19,859	34,649	17.1%	21,170	19,651	15.5%	17,547
75-79	43,888	13.3%	19,456	29,968	14.8%	20,490	13,920	11.0%	17,229
80-84	18,848	5.7%	19,556	12,836	6.3%	20,263	6,012	4.7%	18,045
85-89	4,970	1.5%	19,407	3,491	1.7%	20,337	1,479	1.2%	17,212
90 and over	508	0.2%	19,316	323	0.2%	20,478	185	0.1%	17,286
Total	329,127	100.0%	21,054	202,184	100.0%	22,304	126,943	100.0%	19,063

Employees

Age group	Both sexes			Men			Women		
	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension
15-19	9	0.0%	22,805	6	0.0%	24,463	3	0.0%	19,490
20-24	54	0.0%	14,997	37	0.0%	15,406	17	0.0%	14,105
25-29	210	0.1%	13,278	145	0.1%	13,347	65	0.1%	13,125
30-34	716	0.2%	14,283	455	0.2%	15,017	261	0.2%	13,003
35-39	1,631	0.5%	14,966	971	0.5%	15,742	660	0.6%	13,824
40-44	4,254	1.4%	15,442	2,406	1.3%	16,102	1,848	1.5%	14,581
45-49	10,667	3.5%	16,572	5,456	3.0%	17,338	5,211	4.4%	15,770
50-54	28,392	9.3%	18,720	14,365	7.8%	19,928	14,027	11.8%	17,482
55-59	54,763	18.0%	20,730	29,303	15.9%	22,068	25,460	21.3%	19,190
60-64	53,620	17.7%	21,815	32,572	17.7%	23,239	21,048	17.6%	19,612
65-69	49,351	16.2%	21,059	31,402	17.0%	22,775	17,949	15.0%	18,056
70-74	51,642	17.0%	20,065	32,274	17.5%	21,539	19,368	16.2%	17,607
75-79	42,351	13.9%	19,537	28,528	15.5%	20,656	13,823	11.6%	17,228
80-84	18,304	6.0%	19,594	12,322	6.7%	20,347	5,982	5.0%	18,043
85-89	4,830	1.6%	19,422	3,359	1.8%	20,386	1,471	1.2%	17,221
90 and over	502	0.2%	19,376	318	0.2%	20,597	184	0.2%	17,264
Total	303,755	100.0%	21,341	184,443	100.0%	22,627	119,312	100.0%	19,353

Self-employed

Age group	Both sexes			Men			Women		
	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension
15-19	1	0.0%	21,707	1	0.0%	21,707	0	0.0%	0
20-24	7	0.0%	14,909	7	0.1%	14,909	0	0.0%	0
25-29	22	0.2%	16,517	14	0.1%	17,082	8	0.3%	15,527
30-34	60	0.4%	18,741	42	0.4%	18,281	18	0.7%	19,815
35-39	141	1.0%	17,678	92	0.8%	18,252	49	2.0%	16,599
40-44	273	1.9%	17,754	189	1.6%	17,334	84	3.3%	18,699
45-49	707	4.9%	18,869	468	3.9%	18,899	239	9.5%	18,808
50-54	1,951	13.5%	20,302	1,310	11.0%	20,662	641	25.5%	19,566
55-59	3,740	25.9%	21,863	2,809	23.5%	21,915	931	37.1%	21,707
60-64	3,202	22.2%	23,240	2,689	22.5%	23,373	513	20.4%	22,543
65-69	2,297	15.9%	23,129	2,097	17.6%	23,365	200	8.0%	20,653
70-74	1,534	10.6%	21,239	1,402	11.7%	21,347	132	5.3%	20,096
75-79	1,123	7.8%	20,524	1,063	8.9%	20,366	60	2.4%	23,337
80-84	470	3.3%	19,661	445	3.7%	19,694	25	1.0%	19,082
85-89	130	0.9%	19,401	124	1.0%	19,608	6	0.2%	15,133
90 and over	5	0.0%	15,484	4	0.0%	13,994	1	0.0%	21,446
Total	14,452	100.0%	23,435	11,943	100.0%	23,297	2,509	100.0%	24,093

Farmers

Age group	Both sexes			Men			Women		
	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension
15-19	2	0.0%	12,908	1	0.0%	8,385	1	0.0%	17,431
20-24	1	0.0%	8,384	1	0.0%	8,384	0	0.0%	0
25-29	7	0.1%	11,553	5	0.1%	10,127	2	0.0%	15,118
30-34	47	0.4%	11,614	28	0.5%	12,006	19	0.4%	11,037
35-39	137	1.3%	10,061	81	1.4%	10,354	56	1.1%	9,636
40-44	416	3.8%	9,720	221	3.8%	9,703	195	3.8%	9,739
45-49	660	6.0%	9,260	315	5.4%	9,125	345	6.7%	9,383
50-54	1,361	12.5%	9,323	600	10.3%	9,581	761	14.9%	9,119
55-59	2,436	22.3%	8,950	929	16.0%	9,341	1,507	29.4%	8,709
60-64	2,857	26.2%	8,833	1,242	21.4%	9,084	1,615	31.5%	8,639
65-69	2,643	24.2%	8,538	1,599	27.6%	8,578	1,044	20.4%	8,475
70-74	1,124	10.3%	8,529	973	16.8%	8,666	151	2.9%	7,647
75-79	414	3.8%	8,286	377	6.5%	8,351	37	0.7%	7,628
80-84	74	0.7%	9,374	69	1.2%	8,989	5	0.1%	14,689
85-89	10	0.1%	12,274	8	0.1%	11,232	2	0.0%	16,443
90 and over	1	0.0%	8,384	1	0.0%	8,384	0	0.0%	0
Total	10,920	100.0%	9,920	5,798	100.0%	10,001	5,122	100.0%	9,828

Table A-7. Number of survivors pensioners and average pensions by sex, age and insured groups, December 2008

Total PIO fund

Age	Both sexes			Men			Women			Children		
	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension
0-4	105	0.0%	12,860	0	0.0%	0	0	0.0%	0	105	0.2%	12,860
5-9	2,327	0.7%	13,057	0	0.0%	0	5	0.0%	17,809	2,322	4.9%	13,046
10-14	6,985	2.0%	13,189	2	0.0%	0	50	0.0%	12,615	6,933	14.7%	13,197
15-19	12,877	3.7%	13,675	3	0.1%	0	35	0.0%	17,816	12,839	27.3%	13,667
20-24	11,824	3.4%	16,316	0	0.0%	0	47	0.0%	17,581	11,777	25.1%	16,311
25-29	2,690	0.8%	17,134	2	0.0%	21,322	101	0.0%	12,651	2,587	5.5%	17,305
30-34	1,508	0.4%	15,365	5	0.1%	0	296	0.1%	13,309	1,207	2.6%	15,933
35-39	1,988	0.6%	16,815	21	0.4%	12,572	626	0.2%	17,371	1,341	2.9%	16,622
40-44	2,646	0.8%	15,037	41	0.7%	11,494	1,107	0.4%	13,777	1,498	3.2%	16,065
45-49	4,629	1.3%	14,882	64	1.1%	8,755	3,004	1.1%	14,477	1,561	3.3%	15,911
50-54	16,531	4.8%	14,270	223	3.8%	12,648	14,827	5.3%	14,166	1,481	3.2%	15,556
55-59	29,740	8.6%	15,255	1,136	19.2%	12,731	27,152	9.7%	15,359	1,452	3.1%	15,293
60-64	30,231	8.8%	15,993	1,253	21.2%	12,487	28,235	10.1%	16,188	743	1.6%	14,481
65-69	41,829	12.2%	15,652	902	15.2%	10,284	40,452	14.5%	15,786	475	1.0%	14,453
70-74	54,622	15.9%	15,691	1,087	18.3%	9,387	53,190	19.1%	15,835	345	0.7%	13,456
75-79	57,099	16.6%	15,055	624	10.5%	10,962	56,257	20.2%	15,104	218	0.5%	14,123
80-84	38,122	11.1%	14,747	354	6.0%	11,098	37,681	13.5%	14,783	87	0.2%	14,187
85-89	13,609	4.0%	15,454	183	3.1%	11,371	13,395	4.8%	15,510	31	0.1%	15,530
90 and over	2,147	0.6%	15,920	24	0.4%	15,926	2,114	0.8%	15,919	9	0.0%	16,193
Unknown	12,737	3.7%	15,127	65	1.1%	15,194	10,603	3.8%	15,093	2,069	4.4%	15,299
Total	344,246	100.0%	14,734	5,924	100.0%	11,337	278,574	100.0%	15,402	47,011	100.0%	15,199

Note: Average pensions are calculated for pensioners receiving only one survivors pension.

Employees

Age	Both sexes			Men			Women			Children		
	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension
0-4	91	0.0%	13,252	0	0.0%	0	0	0.0%	0	91	0.2%	13,252
5-9	2,003	0.7%	13,087	0	0.0%	0	3	0.0%	18,020	2,000	4.8%	13,080
10-14	6,108	2.0%	13,264	2	0.1%	0	46	0.0%	12,602	6,060	14.5%	13,273
15-19	11,480	3.8%	13,714	3	0.1%	0	27	0.0%	17,548	11,450	27.3%	13,708
20-24	10,614	3.5%	16,340	0	0.0%	0	38	0.0%	16,715	10,576	25.3%	16,339
25-29	2,173	0.7%	17,269	2	0.1%	21,322	90	0.0%	12,831	2,081	5.0%	17,457
30-34	1,184	0.4%	15,377	5	0.1%	0	248	0.1%	13,309	931	2.2%	16,011
35-39	1,759	0.6%	17,014	20	0.6%	12,572	535	0.2%	17,592	1,204	2.9%	16,831
40-44	2,418	0.8%	15,167	39	1.1%	11,494	961	0.4%	13,549	1,418	3.4%	16,364
45-49	4,234	1.4%	15,205	59	1.6%	8,755	2,715	1.1%	14,720	1,460	3.5%	16,368
50-54	14,938	4.9%	14,560	206	5.7%	12,846	13,322	5.4%	14,451	1,410	3.4%	15,842
55-59	26,656	8.7%	15,784	989	27.5%	13,499	24,301	9.8%	15,896	1,366	3.3%	15,452
60-64	26,751	8.7%	16,803	916	25.4%	14,614	25,130	10.1%	16,943	705	1.7%	14,646
65-69	37,202	12.2%	16,489	347	9.6%	17,410	36,397	14.7%	16,504	458	1.1%	14,540
70-74	49,770	16.3%	16,339	379	10.5%	16,243	49,060	19.8%	16,359	331	0.8%	13,517
75-79	50,203	16.4%	15,996	306	8.5%	16,016	49,685	20.1%	16,004	212	0.5%	14,102
80-84	31,552	10.3%	16,209	211	5.9%	14,310	31,256	12.6%	16,227	85	0.2%	14,330
85-89	11,986	3.9%	16,265	100	2.8%	14,777	11,856	4.8%	16,279	30	0.1%	15,603
90 and over	1,969	0.6%	16,377	18	0.5%	15,663	1,942	0.8%	16,385	9	0.0%	16,193
Unknown	12,672	4.1%	15,130	65	1.8%	15,194	10,603	4.3%	15,093	2,004	4.8%	15,324
Total	305,763	100.0%	15,349	3,602	100.0%	14,848	247,612	100.0%	16,147	41,877	100.0%	15,315

Note: Average pensions are calculated for pensioners receiving only one survivors pension.

Self-employed

Age	Both sexes			Men			Women			Children		
	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension
0-4	10	0.1%	9,512	0	0.0%	0	0	0.0%	0	10	0.3%	9,512
5-9	259	1.8%	14,020	0	0.0%	0	2	0.0%	17,175	257	6.8%	13,995
10-14	661	4.6%	14,074	0	0.0%	0	4	0.0%	12,746	657	17.3%	14,082
15-19	1,095	7.6%	14,439	0	0.0%	0	8	0.1%	19,693	1,087	28.6%	14,400
20-24	978	6.8%	16,787	0	0.0%	0	5	0.0%	24,800	973	25.6%	16,745
25-29	349	2.4%	16,653	0	0.0%	0	6	0.1%	9,763	343	9.0%	16,773
30-34	207	1.4%	16,410	0	0.0%	0	23	0.2%	0	184	4.8%	18,461
35-39	153	1.1%	13,702	1	0.9%	0	58	0.6%	10,747	94	2.5%	15,671
40-44	132	0.9%	25,586	2	1.8%	0	91	0.9%	30,731	39	1.0%	14,893
45-49	250	1.7%	14,170	1	0.9%	0	214	2.1%	13,909	35	0.9%	16,167
50-54	918	6.4%	15,534	5	4.5%	24,411	884	8.5%	15,449	29	0.8%	16,578
55-59	1,352	9.4%	16,496	31	27.9%	14,563	1,278	12.3%	16,443	43	1.1%	19,456
60-64	1,207	8.4%	16,837	23	20.7%	17,753	1,161	11.2%	16,928	23	0.6%	11,347
65-69	1,368	9.5%	16,235	8	7.2%	10,597	1,347	13.0%	16,297	13	0.3%	13,325
70-74	1,642	11.4%	15,366	13	11.7%	12,079	1,617	15.6%	15,409	12	0.3%	13,029
75-79	1,713	11.9%	15,368	9	8.1%	18,362	1,699	16.4%	15,354	5	0.1%	14,661
80-84	1,295	9.0%	15,195	11	9.9%	16,826	1,283	12.4%	15,183	1	0.0%	13,305
85-89	615	4.3%	14,601	6	5.4%	24,796	608	5.9%	14,501	1	0.0%	13,784
90 and over	99	0.7%	14,354	1	0.9%	27,953	98	0.9%	14,216	0	0.0%	0
Unknown	54	0.4%	12,933	0	0.0%	0	0	0.0%	0	54	1.4%	12,933
Total	14,357	100.0%	15,596	111	100.0%	16,322	10,386	100.0%	15,716	3,806	100.0%	15,471

Note: Average pensions are calculated for pensioners receiving only one survivors pension.

Farmers

Age group	Both sexes			Men			Women			Children		
	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension	Pensioners	Percentage	Average pension
0-4	4	0.0%	6,814	0	0.0%	0	0	0.0%	0	4	0.3%	6,814
5-9	65	0.3%	7,485	0	0.0%	0	0	0.0%	0	65	4.9%	7,485
10-14	216	0.9%	6,847	0	0.0%	0	0	0.0%	0	216	16.3%	6,847
15-19	302	1.3%	6,659	0	0.0%	0	0	0.0%	0	302	22.7%	6,659
20-24	232	1.0%	6,025	0	0.0%	0	4	0.0%	0	228	17.2%	6,131
25-29	168	0.7%	6,549	0	0.0%	0	5	0.0%	0	163	12.3%	6,749
30-34	117	0.5%	4,820	0	0.0%	0	25	0.1%	0	92	6.9%	6,129
35-39	76	0.3%	3,203	0	0.0%	0	33	0.2%	0	43	3.2%	5,662
40-44	96	0.4%	6,360	0	0.0%	0	55	0.3%	6,614	41	3.1%	6,019
45-49	145	0.6%	6,303	4	0.2%	0	75	0.4%	6,622	66	5.0%	6,321
50-54	675	2.8%	6,180	12	0.5%	6,088	621	3.0%	6,189	42	3.2%	6,070
55-59	1,732	7.2%	6,050	116	5.2%	6,042	1,573	7.6%	6,044	43	3.2%	6,267
60-64	2,273	9.4%	5,933	314	14.2%	5,928	1,944	9.4%	5,913	15	1.1%	8,627
65-69	3,259	13.5%	5,845	547	24.7%	5,875	2,708	13.2%	5,835	4	0.3%	8,519
70-74	3,210	13.3%	5,899	695	31.4%	5,833	2,513	12.2%	5,918	2	0.2%	5,869
75-79	5,183	21.5%	5,919	309	14.0%	6,071	4,873	23.7%	5,907	1	0.1%	17,088
80-84	5,275	21.9%	5,997	132	6.0%	6,282	5,142	25.0%	5,989	1	0.1%	5,869
85-89	1,008	4.2%	6,409	77	3.5%	6,955	931	4.5%	6,364	0	0.0%	0
90 and over	79	0.3%	6,628	5	0.2%	11,490	74	0.4%	6,299	0	0.0%	0
Unknown	11	0.0%	9,562	0	0.0%	0	0	0.0%	0	11	0.8%	9,562
Total	24,126	100.0%	5,991	2,211	100.0%	5,971	20,576	100.0%	5,961	1,328	100.0%	6,531

Note: Average pensions are calculated for pensioners receiving only one survivors pension.

Table A-8. Number of pensioners by pension amount, types and insured groups, December 2008

(1) Employees

Number of pensioners

Pension amount	Old-age	Invalidity	Survivors	Total
11,088.22 or less	22,184	10,841	90,896	123,921
11,088.23 (25%)	23,053	31,195	144	54,392
11,088.24 - 11,195.63	18,665	13,566	1,440	33,671
11,195.64 - 13,434.76	28,788	32,059	48,891	109,738
13,434.77 - 15,673.89	41,638	37,267	39,715	118,620
15,673.90 - 17,913.02	65,994	42,532	35,248	143,774
17,913.03 - 21,715.00	94,356	55,236	41,716	191,308
21,715.01 - 26,000.00	104,583	42,725	22,984	170,292
26,000.01 - 30,000.00	83,444	27,675	12,282	123,401
30,000.01 - 34,000.00	54,470	15,841	7,363	77,674
34,000.01 - 38,626.00	40,620	10,388	4,901	55,909
38,626.01 - 45,000.00	35,530	7,925	3,549	47,004
45,000.01 - 53,876.00	25,426	4,419	2,474	32,319
53,876.01 - 72,321.70	18,028	2,426	260	20,714
72,321.71	1,931	144	14	2,075
72,321.72 - 76,575.91	462	15	14	491
76,575.92	0	0	0	0
76,575.93 - 96,721.59	896	26	11	933
96,721.60	1	0	0	1
96,721.61 - 102,766.69	102	1	2	105
102,766.70	44	1	0	45
102,766.71 or more	6	1	0	7
Total	680,221	334,282	311,891	1,306,394
Average pension	25,283	20,057	15,932	21,713

Percentage

Pension amount	Old-age	Invalidity	Survivors	Total
11,088.22 or less	3.4%	3.2%	29.1%	9.5%
11,088.23 (25%)	3.5%	9.3%	0.0%	4.2%
11,088.24 - 11,195.63	2.8%	4.1%	0.5%	2.6%
11,195.64 - 13,434.76	4.4%	9.6%	15.7%	8.4%
13,434.77 - 15,673.89	6.3%	11.1%	12.7%	9.1%
15,673.90 - 17,913.02	10.0%	12.7%	11.3%	11.0%
17,913.03 - 21,715.00	14.3%	16.5%	13.4%	14.6%
21,715.01 - 26,000.00	15.8%	12.8%	7.4%	13.0%
26,000.01 - 30,000.00	12.6%	8.3%	3.9%	9.4%
30,000.01 - 34,000.00	8.3%	4.7%	2.4%	5.9%
34,000.01 - 38,626.00	6.2%	3.1%	1.6%	4.3%
38,626.01 - 45,000.00	5.4%	2.4%	1.1%	3.6%
45,000.01 - 53,876.00	3.9%	1.3%	0.8%	2.5%
53,876.01 - 72,321.70	2.7%	0.7%	0.1%	1.6%
72,321.71	0.3%	0.0%	0.0%	0.2%
72,321.72 - 76,575.91	0.1%	0.0%	0.0%	0.0%
76,575.92	0.0%	0.0%	0.0%	0.0%
76,575.93 - 96,721.59	0.1%	0.0%	0.0%	0.1%
96,721.60	0.0%	0.0%	0.0%	0.0%
96,721.61 - 102,766.69	0.0%	0.0%	0.0%	0.0%
102,766.70	0.0%	0.0%	0.0%	0.0%
102,766.71 or more	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%

(2) Self-employed

Number of pensioners

Pension amount	Old-age	Invalidity	Survivors	Total
11,088.22 or less	1,039	514	5,535	7,088
11,088.23 (25%)	750	381	3	1,134
11,088.24 - 11,195.63	24	17	65	106
11,195.64 - 13,434.76	2,792	2,938	2,005	7,735
13,434.77 - 15,673.89	1,495	1,716	1,329	4,540
15,673.90 - 17,913.02	1,922	1,735	1,022	4,679
17,913.03 - 21,715.00	2,084	2,047	1,260	5,391
21,715.01 - 26,000.00	3,190	2,517	1,018	6,725
26,000.01 - 30,000.00	2,241	1,425	539	4,205
30,000.01 - 34,000.00	1,754	775	366	2,895
34,000.01 - 38,626.00	1,379	584	226	2,189
38,626.01 - 45,000.00	1,240	504	166	1,910
45,000.01 - 53,876.00	976	386	188	1,550
53,876.01 - 72,321.70	484	197	6	687
72,321.71	0	0	0	0
72,321.72 - 76,575.91	38	17	0	55
76,575.92	25	17	0	42
76,575.93 - 96,721.59	19	2	0	21
96,721.60	0	0	0	0
96,721.61 - 102,766.69	7	0	0	7
102,766.70	0	0	0	0
102,766.71 or more	7	0	0	7
Total	21,459	15,772	13,728	50,959
Average pension	24,659	21,603	15,508	21,248

Percentage

Pension amount	Old-age	Invalidity	Survivors	Total
11,088.22 or less	4.8%	3.3%	40.3%	13.9%
11,088.23 (25%)	3.5%	2.4%	0.0%	2.2%
11,088.24 - 11,195.63	0.1%	0.1%	0.5%	0.2%
11,195.64 - 13,434.76	13.0%	18.6%	14.6%	15.2%
13,434.77 - 15,673.89	7.0%	10.9%	9.7%	8.9%
15,673.90 - 17,913.02	9.0%	11.0%	7.4%	9.2%
17,913.03 - 21,715.00	9.7%	13.0%	9.2%	10.6%
21,715.01 - 26,000.00	14.9%	16.0%	7.4%	13.2%
26,000.01 - 30,000.00	10.4%	9.0%	3.9%	8.3%
30,000.01 - 34,000.00	8.2%	4.9%	2.7%	5.7%
34,000.01 - 38,626.00	6.4%	3.7%	1.6%	4.3%
38,626.01 - 45,000.00	5.8%	3.2%	1.2%	3.7%
45,000.01 - 53,876.00	4.5%	2.4%	1.4%	3.0%
53,876.01 - 72,321.70	2.3%	1.2%	0.0%	1.3%
72,321.71	0.0%	0.0%	0.0%	0.0%
72,321.72 - 76,575.91	0.2%	0.1%	0.0%	0.1%
76,575.92	0.1%	0.1%	0.0%	0.1%
76,575.93 - 96,721.59	0.1%	0.0%	0.0%	0.0%
96,721.60	0.0%	0.0%	0.0%	0.0%
96,721.61 - 102,766.69	0.0%	0.0%	0.0%	0.0%
102,766.70	0.0%	0.0%	0.0%	0.0%
102,766.71 or more	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%

(3) Farmers

Number of pensioners

Pension amount	Old-age	Invalidity	Survivors	Total
less than 3,000.00	1,349	268	372	1,989
3,000.01-4,000.00	837	118	229	1,184
4,000.01-5,142.00	1,056	115	207	1,378
5,142.01-8,122.00	2,348	301	22,463	25,112
8,122.01-8,384.50	48	18	29	95
8,384.51 (20%)	175,939	6,067	10	182,016
8,384.52-8,901.63	1,623	2,060	62	3,745
8,901.64-10,681.96	2,432	1,754	267	4,453
10,681.97-12,462.28	295	504	86	885
12,462.29-14,242.61	170	514	45	729
14,242.62-22,000.00	376	277	229	882
22,000.01-38,626.00	378	104	6	488
38,626.01-53,876.00	3	23	0	26
53,876.01-72,321.70	0	3	1	4
72,321.71	0	0	0	0
72,321.72-76,575.91	0	0	0	0
76,575.92	0	0	0	0
76,575.93-96,721.59	0	0	0	0
96,721.60	0	0	0	0
96,721.61-102,766.69	0	0	0	0
102,766.70	0	0	0	0
102,766.71 and more	0	0	0	0
Total	186,854	12,126	24,006	222,986
Average pension	8,348	8,878	6,018	8,126

Percentage

Pension amount	Old-age	Invalidity	Survivors	Total
less than 3,000.00	0.7%	2.2%	1.5%	0.9%
3,000.01-4,000.00	0.4%	1.0%	1.0%	0.5%
4,000.01-5,142.00	0.6%	0.9%	0.9%	0.6%
5,142.01-8,122.00	1.3%	2.5%	93.6%	11.3%
8,122.01-8,384.50	0.0%	0.1%	0.1%	0.0%
8,384.51 (20%)	94.2%	50.0%	0.0%	81.6%
8,384.52-8,901.63	0.9%	17.0%	0.3%	1.7%
8,901.64-10,681.96	1.3%	14.5%	1.1%	2.0%
10,681.97-12,462.28	0.2%	4.2%	0.4%	0.4%
12,462.29-14,242.61	0.1%	4.2%	0.2%	0.3%
14,242.62-22,000.00	0.2%	2.3%	1.0%	0.4%
22,000.01-38,626.00	0.2%	0.9%	0.0%	0.2%
38,626.01-53,876.00	0.0%	0.2%	0.0%	0.0%
53,876.01-72,321.70	0.0%	0.0%	0.0%	0.0%
72,321.71	0.0%	0.0%	0.0%	0.0%
72,321.72-76,575.91	0.0%	0.0%	0.0%	0.0%
76,575.92	0.0%	0.0%	0.0%	0.0%
76,575.93-96,721.59	0.0%	0.0%	0.0%	0.0%
96,721.60	0.0%	0.0%	0.0%	0.0%
96,721.61-102,766.69	0.0%	0.0%	0.0%	0.0%
102,766.70	0.0%	0.0%	0.0%	0.0%
102,766.71 and more	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%

Distribution of pensions by types and insured groups, December 2008
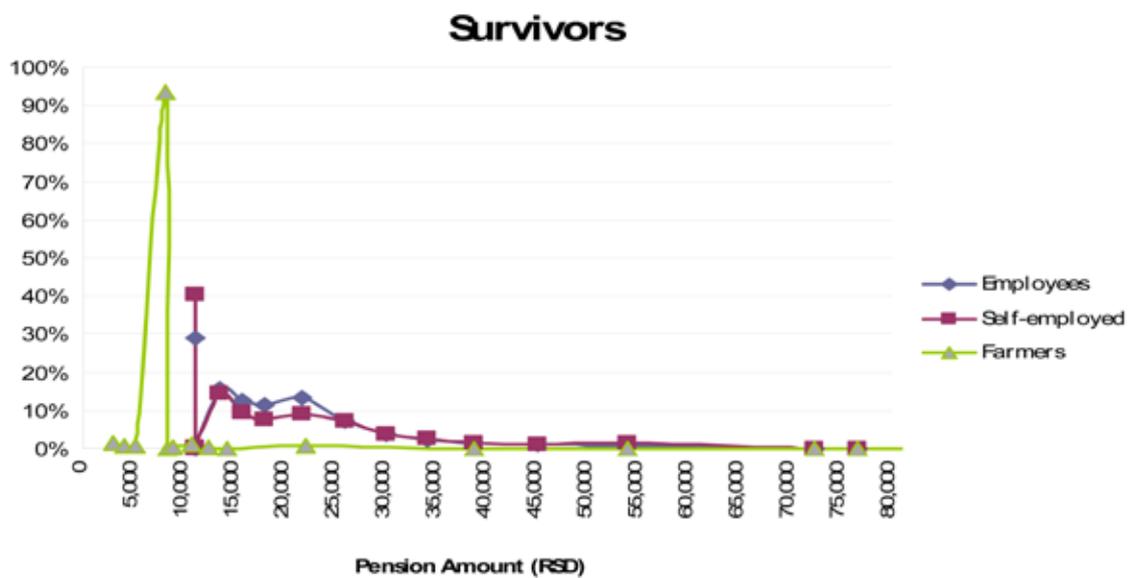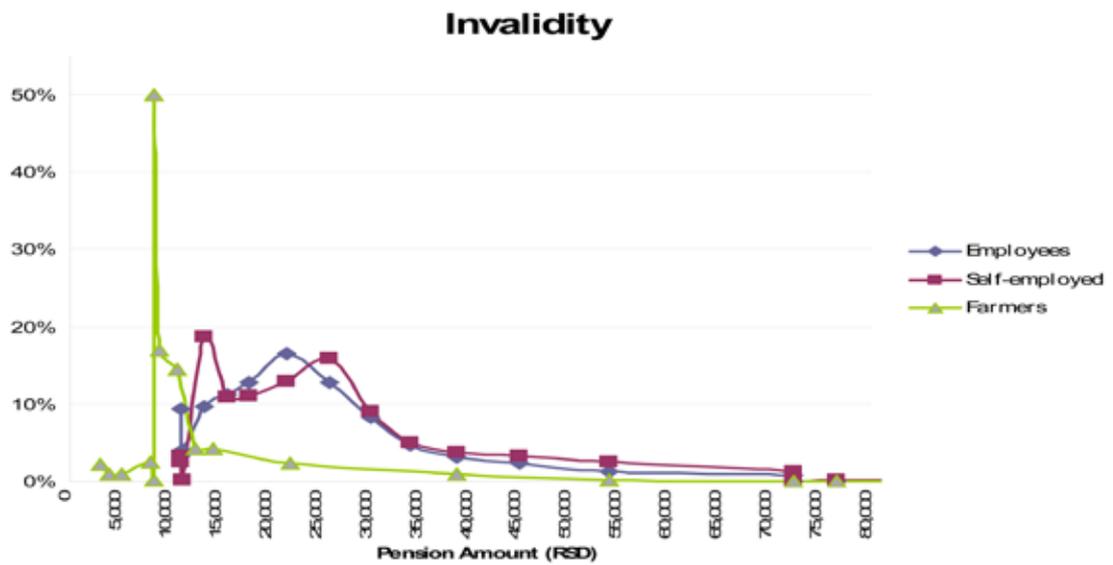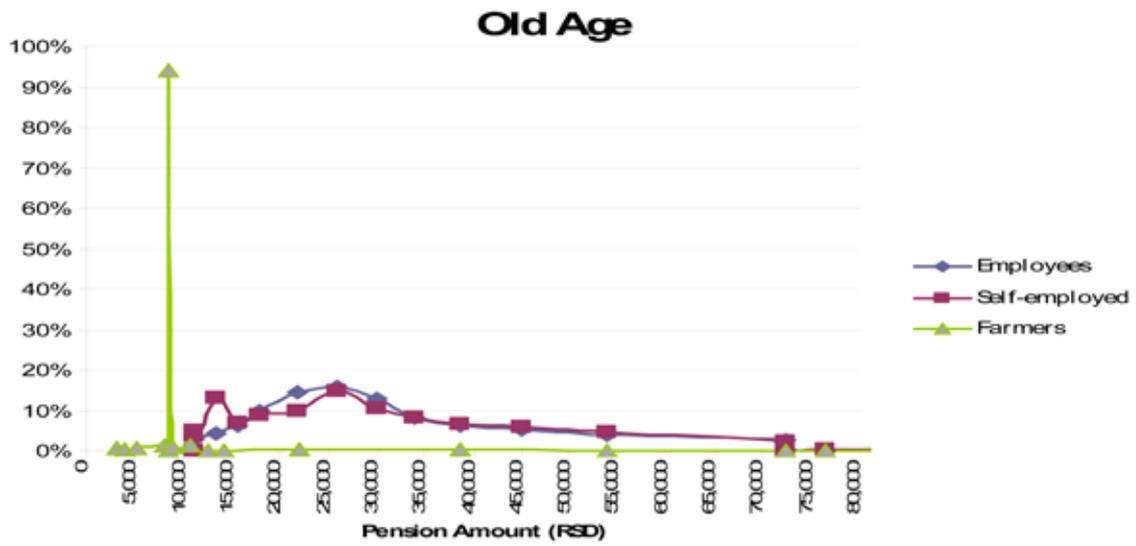
Old Age

Invalidity

Survivors

Table A-9. Number and average pensions of newly retired workers by sex and age (employees insurance), 2008

Age	Men					Women				
	Number of pensioners	Percentage	Cumulative percentage	Average pensionable period (year)	Average pension (RSD)	Number of pensioners	Percentage	Cumulative percentage	Average pensionable period (year)	Average pension (RSD)
50	668	3.1%	3.1%	35.4	29,602	74	0.3%	0.3%	31.3	28,055
51	262	1.2%	4.3%	35.0	35,721	36	0.1%	0.4%	31.5	37,315
52	61	0.3%	4.6%	35.3	34,492	16	0.1%	0.5%	32.2	36,700
53	601	2.8%	7.4%	38.3	23,911	2,742	10.8%	11.3%	34.3	15,330
54	567	2.6%	10.0%	37.4	23,590	2,081	8.2%	19.4%	34.3	16,175
55	662	3.1%	13.1%	37.2	22,143	2,197	8.6%	28.1%	34.2	17,220
56	665	3.1%	16.2%	37.4	21,491	1,696	6.7%	34.7%	34.3	17,782
57	846	3.9%	20.1%	37.6	21,524	1,586	6.2%	40.9%	34.3	18,117
58	1,154	5.4%	25.5%	38.5	21,050	11,506	45.2%	86.1%	28.1	14,157
59	1,728	8.0%	33.5%	39.2	20,329	1,360	5.3%	91.5%	29.3	16,950
60	2,244	10.4%	43.9%	39.2	20,809	1,144	4.5%	96.0%	24.9	13,827
61	1,940	9.0%	52.9%	39.2	20,493	311	1.2%	97.2%	28.3	17,487
62	1,287	6.0%	58.9%	39.2	20,304	158	0.6%	97.8%	28.5	15,509
63	6,740	31.3%	90.2%	33.0	16,581	127	0.5%	98.3%	29.1	14,403
64	652	3.0%	93.2%	35.4	20,189	100	0.4%	98.7%	30.2	18,623
65	937	4.4%	97.6%	33.6	21,706	187	0.7%	99.4%	33.2	23,083
66 and over	520	2.4%	100.0%	33.6	26,084	147	0.6%	100.0%	29.4	19,910
TOTAL	21,534	100.0%		36.3	20,292	25,468	100.0%		30.6	15,589

Table A-10. Number of pensioners who have extended periods of insurance by insured groups, December 2008

Employees

Rate of increase		Number of pensioners	Average pensionable period (in years)				Average pension
			Total	Effective period spent on work	Additional insurance period	Special periods	
Total	Men	119,699	45.4	30.4	14.8	0.2	29,460
	Women	26,536	39.4	26.9	12.4	0.2	20,729
	Total	**146,235**	**44.3**	**29.8**	**14.4**	**0.2**	**27,876**
12/14	Men	34,033	46.7	32.3	14.2	0.1	26,878
	Women	17,939	39.5	27.3	12.1	0.2	17,774
	Total	51,972	44.2	30.6	13.5	0.1	23,736
12/15	Men	28,861	43.1	30.7	12.2	0.2	27,187
	Women	4,788	38.6	25.7	12.8	0.1	23,033
	Total	33,649	42.5	30.0	12.3	0.2	26,596
12/16	Men	25,753	44.5	27.8	16.5	0.3	37,544
	Women	2,779	39.8	27.0	12.6	0.2	35,629
	Total	28,532	44.1	27.7	16.1	0.3	37,358
12/17	Men	5,414	39.4	26.4	12.9	0.1	25,725
	Women	100	42.2	23.7	18.5	-	27,192
	Total	5,514	39.5	26.4	13.0	0.1	25,751
12/18	Men	25,638	48.2	30.9	17.2	0.1	28,121
	Women	930	40.8	26.1	14.5	0.2	20,637
	Total	26,568	48.0	30.8	17.1	0.1	27,859
Two or more rates of increase	Men	24,943	41.7	24.6	17.0	0.1	19,848
	Women	828	35.4	21.4	13.8	0.2	14,718
	Total	25,771	41.5	24.5	16.9	0.1	19,683

Self-employed

Rate of increase		Number of pensioners	Average pensionable period (in years)				Average pension
			Total	Effective period spent on work	Additional insurance period	Special periods	
Total	Men	1,811	38.9	29.8	8.6	0.5	26,999
	Women	161	35.5	26.3	8.9	0.4	22,454
	Total	**1,972**	**38.6**	**29.5**	**8.6**	**0.5**	**26,628**
12/14	Men	423	40.6	30.7	9.6	0.2	25,741
	Women	86	35.5	26.5	9.1	0.0	18,446
	Total	509	39.7	30.0	9.5	0.2	24,508
12/15	Men	909	37.9	29.9	7.3	0.7	27,812
	Women	52	34.7	25.3	8.4	1.0	26,002
	Total	961	37.7	29.6	7.4	0.7	27,714
12/16	Men	156	38.6	29.5	8.9	0.2	30,225
	Women	15	36.5	27.5	8.7	0.3	33,042
	Total	171	38.4	29.3	8.9	0.2	30,472
12/17	Men	-	-	-	-	-	-
	Women	-	-	-	-	-	-
	Total	-	-	-	-	-	-
12/18	Men	61	25.7	23.1	2.7	-	17,203
	Women	2	40.0	28.5	11.5	-	28,463
	Total	63	26.2	23.2	2.9	-	17,561
Two or more rates of increase	Men	262	42.9	29.9	12.5	0.5	26,608
	Women	6	37.0	28.2	8.8	-	20,663
	Total	268	42.7	29.8	12.4	0.5	26,475

Farmers

Rate of increase		Number of pensioners	Average pensionable period (in years)				Average pension
			Total	Effective period spent on work	Additional insurance period	Special periods	
Total	Men	491	23.9	19.8	3.8	0.3	10,896
	Women	43	25.0	20.8	3.7	0.4	11,353
	Total	**534**	**24.0**	**19.9**	**3.8**	**0.3**	**10,935**
12/14	Men	61	32.0	25.0	6.9	0.2	13,759
	Women	27	27.0	22.1	4.5	0.4	11,510
	Total	88	30.5	24.1	6.1	0.3	13,069
12/15	Men	125	25.4	21.3	3.8	0.3	12,149
	Women	13	21.2	18.2	2.5	0.5	10,624
	Total	138	25.1	21.0	3.7	0.4	12,005
12/16	Men	79	21.8	18.6	2.9	0.4	10,510
	Women	2	24.0	20.5	3.5	-	16,934
	Total	81	21.9	18.6	2.9	0.4	10,668
12/17	Men	-	-	-	-	-	-
	Women	-	-	-	-	-	-
	Total	-	-	-	-	-	-
12/18	Men	173	19.1	16.9	2.1	0.1	8,621
	Women	-	-	-	-	-	-
	Total	173	19.1	16.9	2.1	0.1	8,621
Two or more rates of increase	Men	53	29.4	21.6	7.3	0.5	12,636
	Women	1	20.0	19.0	1.0	-	8,385
	Total	54	29.2	21.5	7.2	0.5	12,557

Note: In the first columns, for example, 12/14 means every 12 months is regarded as 14 months.

Table A-11. Number of pensioners with privileged rights, December 2008

Category	Number of pensioners		Average pension	Pensions as % of net average wage
	December 2007	December 2008	December 2008	December 2008
Members of WW2 resistence movement (NOR) - prior to 9/9/1943	19,772	17,964	26,264	68.0%
1941 Veterans	1,890	1,752	43,140	111.7%
Federal police	215	216	42,013	108.8%
Federal ministry of foreign affairs	1,500	1,442	37,279	96.5%
Administrative pensions	1,180	1,155	28,891	74.8%
Members of WW2 resistence movement (NOR) - after 9/9/1943	70,475	63,961	20,111	52.1%
Veterans with functions in state administration	814	740	29,055	75.2%
State police	22,247	22,808	37,522	97.1%
Special pensions	383	342	28,897	74.8%
Members of Serbian Academy of Sciences and Arts	71	65	44,311	114.7%
Miners	2,729	2,626	21,889	56.7%
TOTAL	**121,276**	**113,071**	**25,448**	**65.9%**

Direction of the Pension Reform in Serbia

Challenges and Options

Kenichi Hirose
ILO Subregional Office for Central and Eastern Europe

Power Point Presentation

Objectives of pensions

- Provide adequate income security for the elderly

- Basic requirements

  – Sustainable in the long run

  – Credible for the commitment of future generations

- Pension reform addresses these issues while ensuring the main objective of the retirement income provision

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Key Data on the Serbian Pension System, 2008

-	Population aged 20-64:	4.481 million
-	Population aged 65 over:	1.448 million
-	Members of PIO Fund:	2.767 million
	- Employed	2.205 million
	- Self-employed	329 thousand
	- Farmers	233 thousand
-	Number of pensioners:	1.580 million
	- Old-age	869 thousand
	- Invalidity	362 thousand
	- Survivors	350 thousand
-	Average old-age pensions (% of average net wage)	
	- Employed	RSD 25,283 (66%)
	- Self-employed	RSD 24,659 (64%)
	- Farmers	RSD 8,348 (22%)

Issues in Serbian Pension System

- Coverage and compliance, in particular workers in the informal economy

- Level of pension benefits and indexation method

- Sustainability of pension system in the context of ageing population

- Administrative capacity and governance

## Revenue and expenditure of PIO fund, 2008 (as a % of total contributory base)

Analysis of the pension cost rate

Pension cost rate 32.1%

- System demographic dependency 74.3%
  - National demographic dependency 32.3%
  - Pensioners coverage 109.1%
  - Contributors coverage 47.4%
- System replacement 43.2%
  - Effective replacement 53.6%
  - Income capture 89.0%
  - Net/gross wage 71.7%
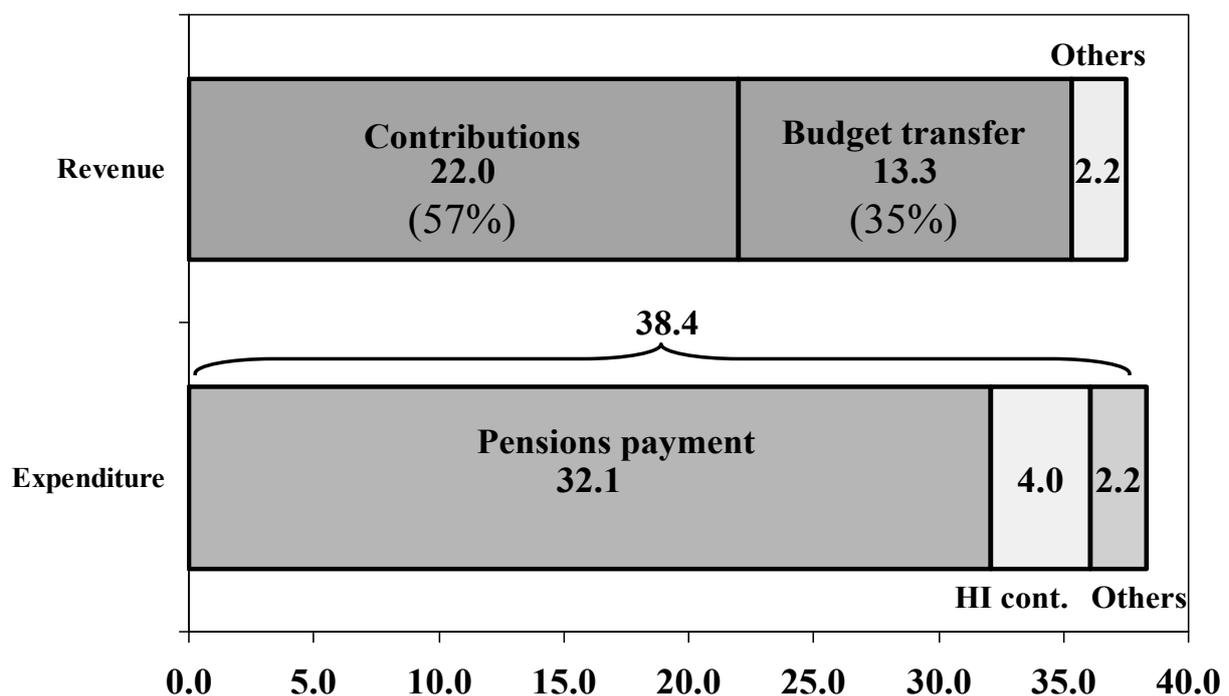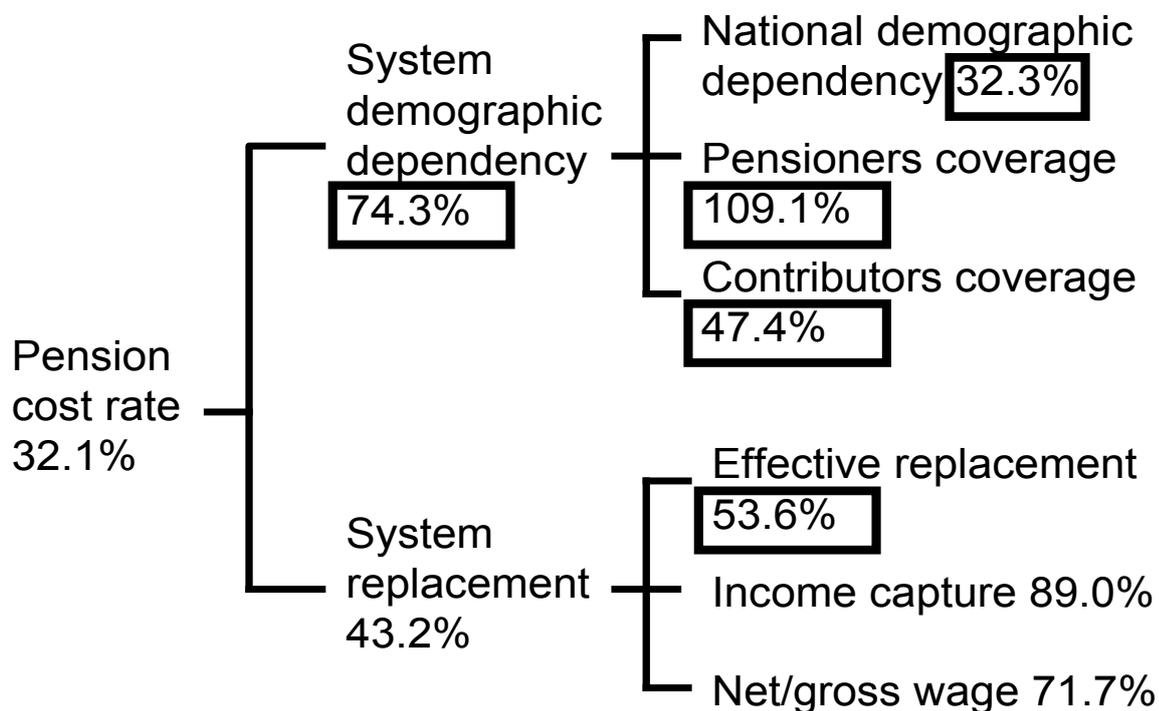
National and system demographic dependency rates (employees), 1952-2007
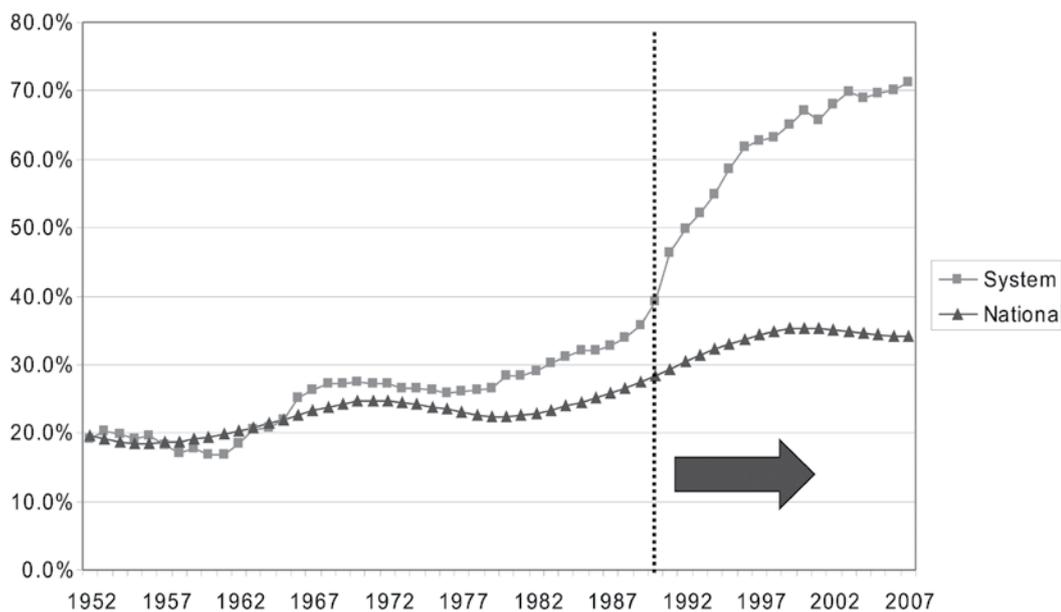
# Contributors and pensioners coverage rates, (employees), 1952-2007
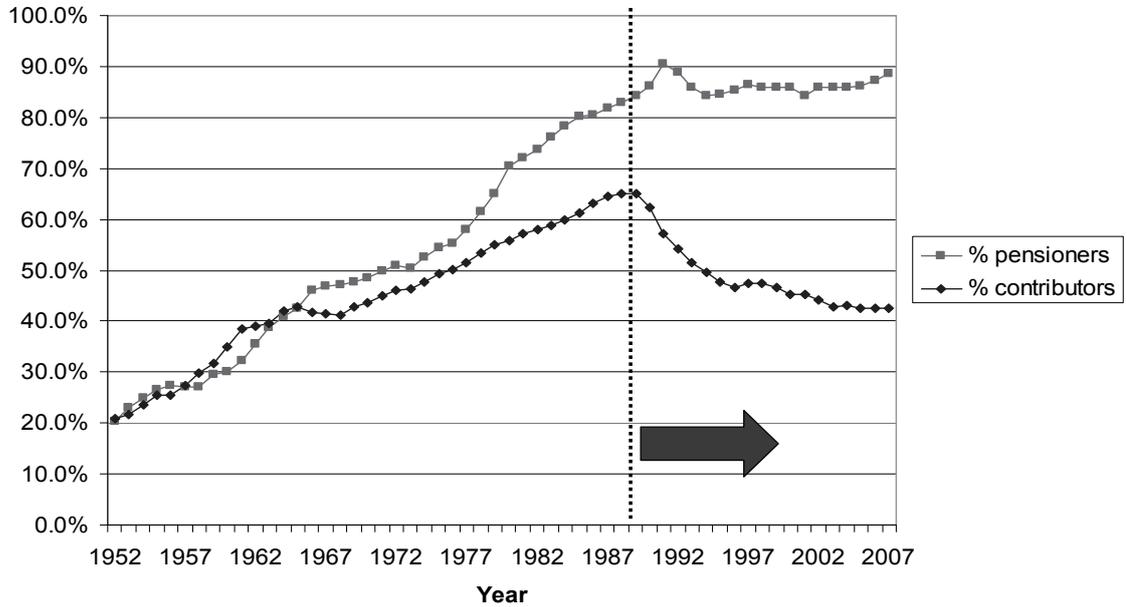
Age specific coverage rates by sex, (employees), 2008
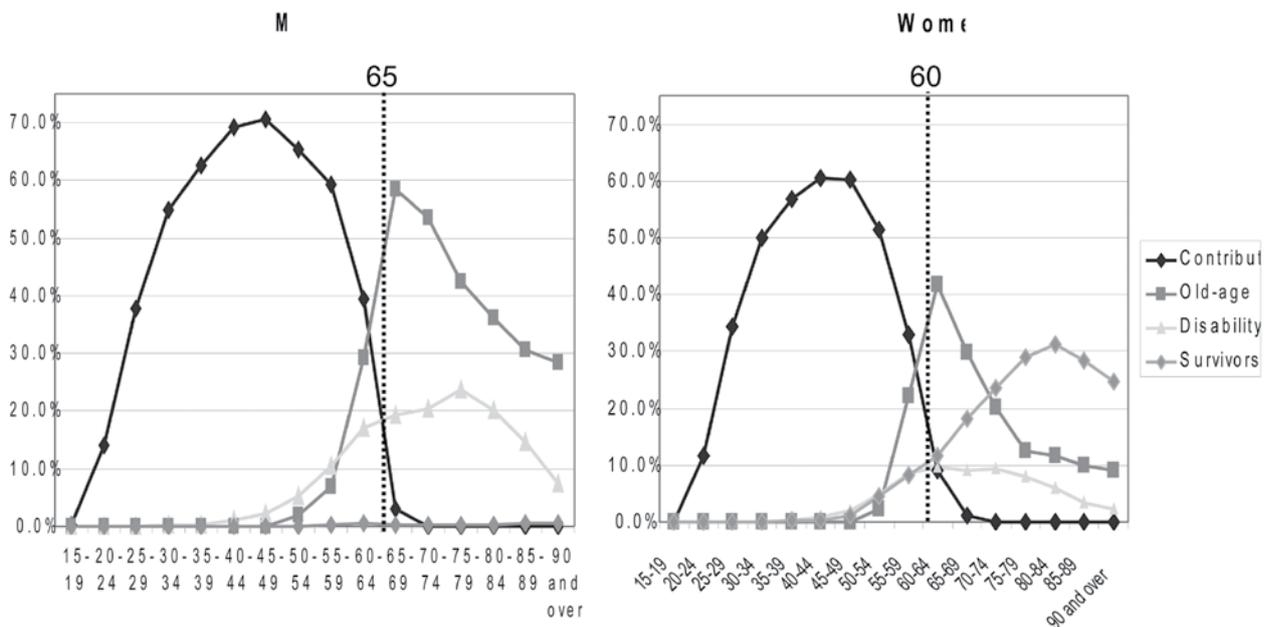
Comparison of wage, price and pension indexation, 2002-2008 (2002=100)
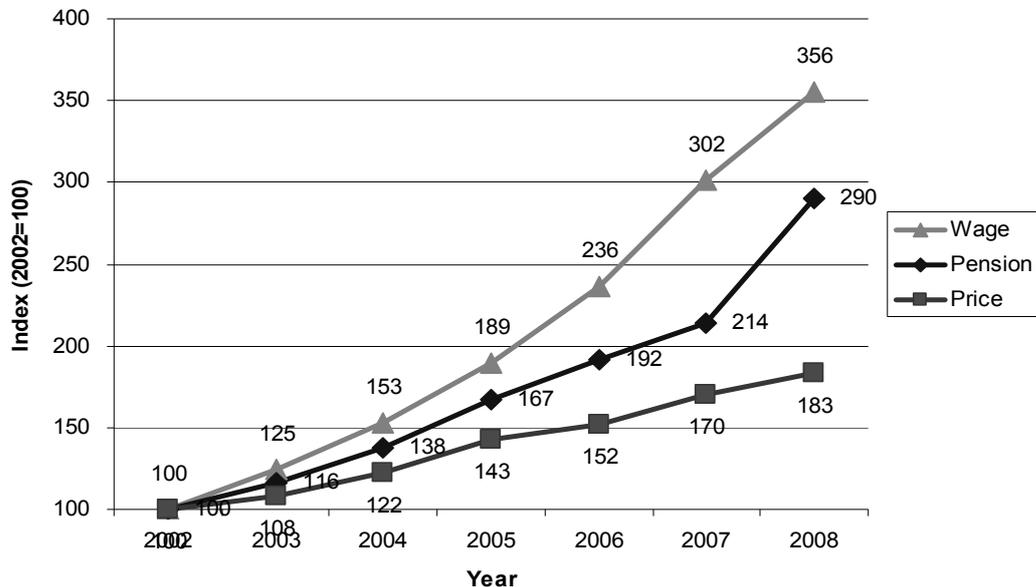
Dynamic conditions for the increase in pensions transfer relative to output/payroll

The following formula holds:

$$\Delta(P/Y) = (N - D)/Y + (i - g)\ P/Y$$

where

Y : Output (or total payroll)
P : Pensions payment
N : Pensions for the newly retired
D : Pensions for the deceased retired
g : Rate of growth of output (or total payroll)
i : Rate of indexation of pensions

Hence, the condition for non-increasing P/Y is

$$\Delta(P/Y) \leq 0 \quad \Leftrightarrow \quad (N - D)/P \leq g - i$$

Options to restore financial balance and views of the stakeholders

- Reinforce the income to the fund
  - Increase the contributory base
    (wage increase, compliance, collection)
  - Increase the contribution rate
  - Increase income other than contributions
    - Government subsidy
    - Earnings from investment of the reserve

- Reduce the expenditure
  - Reduce the benefit level
  - Raise the pension age
  - Change the indexation method

Effects of reform options

Indicator	Base	Case 1	Case 2	Case 3	Case 4
National demographic dependency rate	32.3%	--	--	--	--
Pensioners coverage rate	109.1%	--	--	--	--
Contributors coverage rate	47.4%	70.0%	--		60.0%
System demographic dependency rate	74.3%	50.4%	--	--	58.8%
Effective system replacement rate	53.6%	--	40.0%	--	45.0%
Income capture rate	89.0%	--	--	100%	95.0%
Net/gross wage rate	71.7%	--	--	--	--
System replacement rate	43.2%	--	32.2%	38.5%	34.0%
Pension cost rates	32.1%	21.8%	24.0%	28.6%	20.0%
Total cost rate	38.4%	28.0%	30.2%	34.8%	26.2%
Difference from the baseline	--	10.3%	8.2%	3.5%	12.2%
Need for contribution increase	16.4%	6.0%	8.2%	12.8%	4.2%

Policy to extend contributors coverage

Pensioners

Population 65 and over

65

Contributors

Population 20-64

20

National Demographic Dependency

Pop 65+ : Pop 20-64
= 1 : 3.1

Pension System Dependency

Pensioners : Contributors
= 1 : 1.3

Less demographic burden
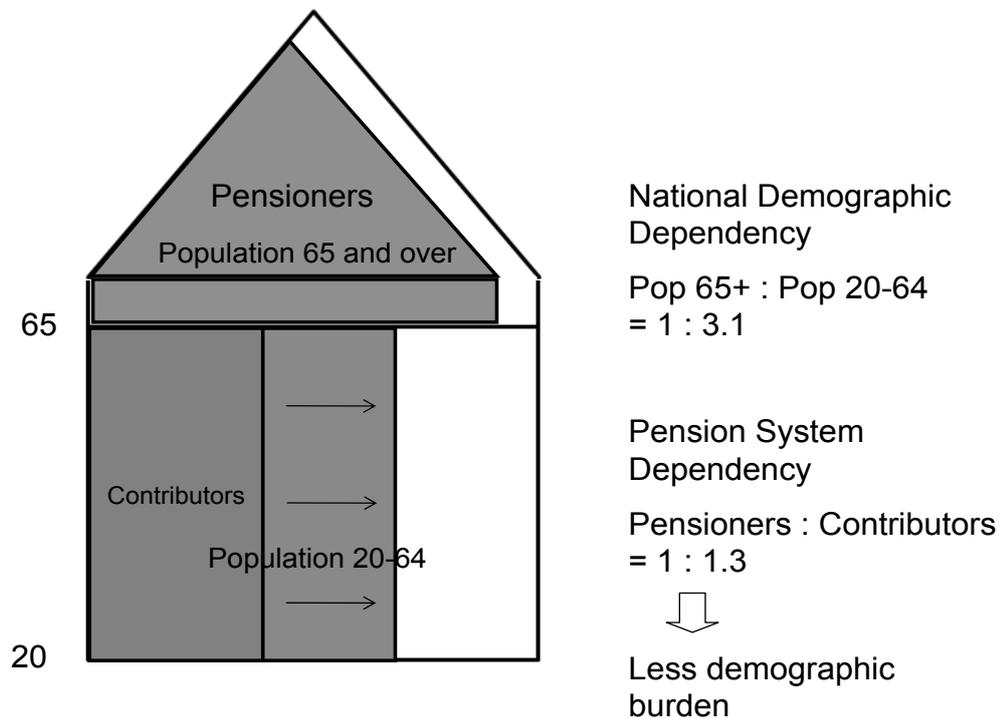
Directions in Pension Reform in Serbia (1)

- Objective of the reform is to ensure the long-term sustainability of the pension system, while meeting the minimum standards, such as the ILO Convention 102, to ensure adequate level of income to the protected workers and their families.

- First, extending the coverage of pension system through improved law compliance and efficient contribution collections is crucial for sustaining the system in the long run.

- Second, the stakeholders should agree on the future level of benefits and the mechanism to safeguard its value through the guarantees for the minimum pension and the indexation method.

- Given the current pension level, and in view of the ILO minimum standard, the future benefit level for a newly retired average worker with 30 years contributions should not be less than 40-50% of the average net wage, which is equivalent to 1.33-1.67% of the average net wage in terms of the general point.

Directions in Pension Reform in Serbia (2)

▪ Third, steps should be taken to reduce the total volume of the benefit expenditure. The following possible measures are suggested.

- Pension design which promotes employment of the older workers and allows for flexible retirement;

- Better targeted provision of additional pension credits for women and other specific groups;

- More rigorous application of invalidity criteria;

- Gradual equalization of the retirement age of women to 65 years of age;

- In the longer-term, there may be a need for further increases of retirement ages for both sexes in line with increase in the life expectancy; and,

- Modifications of the indexation methods that would safeguard at least the purchasing power of pensions in payment.

▪ Fourth, after implementing all these measures, if there still exist any gaps in the financial balance, one needs to consider increasing the contribution rate.

▪ Finally, the policy making process is an important aspect of pension reform. The pension reform inevitably affects the conflicting interests of the tripartite stakeholders. Therefore, the reform process should seek for building national consensus on the package of measures which are acceptable by all the stakeholders.

6

Policy and Process Aspects

John Woodall
Social Security Department
ILO Geneva

Sustainability - I

- *If*, in the long term, costs will exceed income, then the balance can *only* be re-established by:
  - **increasing income**
    - contributions – *already high in Serbia*
    - subsidies – *national budget under pressure*
    - make investments work harder
  - **reducing costs**
    - reduce amount of pensions - *problematical*
    - start paying pensions at later age(s) – *already done*

Sustainability - II

- Pensions – *adequacy* is critical*,*
  and relates to:
  - coverage of those of working age
  - coverage of those who should receive benefits
  - Amount of benefit
- Long-term focus:
  - financial balance *may* be established over a period of years, *provided that*
  - cash flow is assured year by year

Ways forward

- "Universal" pensions
  - basic element in multi-pillar framework
  - implementable, and can be tailored to cost considerations
- Earnings-related
  - meets considerations of "fairness" (benefits received in return for contributions paid)
  - efficient and effective (proven over the years), particularly in the context of social insurance framework
- The choices for Serbia
  - is there a need to adjust the balance, placing less weight on the earnings-related component?

Guiding framework - I

- **Universal access**
  - to be interpreted according to country's own conditions
  - in Serbia, particular considerations relate to the inclusion of farmers, women, …..
- **Progressive structure**
  - is there a need to re-think the long-term framework, to combine a "basic" pension benefit with a reduced element of earnings-related, insurance-based, pension entitlements?

Guiding framework - II

- **Pluralistic approach**
  - may include elements which are
    - mandatory/voluntary
    - public/private
    - funded/PAYG
    - and more..
- **Outcome focus**
  - too much discussion in the past of technical issues? Important questions include:
    - how to share national income?
    - who bears risks?
    - what can we learn from the economic & financial crisis?

Process Governance

- Social Dialogue
  - tripartite
  - continuing

- Accountability

- Transparency
  - Accessibility of technical reports etc.

7

Pension System

Challenges and Reforms

Snežana Lakičević-Stojačić
Ministry of Labour and Social Policy
Serbia

Structure of the pension system*

PILLAR I
Mandatory Pension and Disability Insurance
     Pension and Disability Insurance Law

PILLAR III
Voluntary Pension Funds
     Voluntary Pension Funds and Plans Law

*According to the methodology used by the World Bank

Mandatory Insurance

➢ Public PAYG system

➢ Covers Old age, invalidity and survivorship

➢ Involves Employees, Self-Employed and Farmers

Objectives of the reform

➢ Long-term self-sustainability of mandatory insurance system
➢ Protection of the living standard of present and future pensioners
➢ Efficient pension administration
➢ Efficient contribution collection
➢ Important role of the voluntary pension funds

Reform Process

➢ Launched in 2001, continued in 2003, 2005 and 2008
➢ Main reform actions involve:
  ➢ Calculation of benefits
  ➢ Indexation of benefits
  ➢ Pension age
  ➢ Invalidity rights
  ➢ Contribution coverage, bases and rates
  ➢ Solving problems with payments

Current problems and challenges

➢ Low Dependency Ratio and System Dependency Ratio

➢ Problems in economic development

➢ High deficit in financing pensions

➢ High share of "young pensioners"

➢ Problems in Farmers Insurance

Reforms in progress

➢ Pension Administration reform – higher efficiency, lower costs

➢ Improvement of contribution collection (Central Registry of Contributors and Beneficiaries established)

➢ Strengthening of the Pillar III

Main issues to be addressed by the forthcoming reform steps

➢ Pension age

➢ Insurance of farmers

➢ Adequate level of pensions

➢ Contribution collection

➢ Privileged service groups

➢ Inclusion of the Military Fund into the integrated Pension System

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Support to the Reform

Serbia Consolidated Collection and Pension Administration Reform Project

Support to the reform – cont'd

➢Implemented since 2005 with the World Bank support

➢Budget: $25.4

➢Managed by the Pension Reform Council

Support to the Reform – cont'd

Three Project Components:

1. Consolidation of Collection and Reporting

2. Consolidation and Institutional Strengthening of PAYGO Funds

3. Pension Policy Analysis and Development

# Voluntary Pension Fund in Serbia

Kristian Vukojčić
National Bank of Serbia

Financial sector in Serbia and structure of financial property of population

June 2009

|	**Banks**	**Leasing**	**Insurance**	**Voluntary Pension Funds**
Property (RSD billions)	1860	120	97	6
Number of institutions	34	17	24	10

- Financial property of population (RSD billions)
  - Bank savings - 500
  - Securities in the capital market - 100
  - Life insurances - 16
  - Voluntary pension funds - 6

Pension System Pillar III in Serbia

Народна банка Србије

Кастоди банке

DDOR Penzija plus

Dunav

Garant

HYPO

Nova penzija

Soc. Gen. Ekvilibrio

Soc. Gen. Štednja

Raiffeisen Future

Triglav penzija

Delta Generali

Тржиште
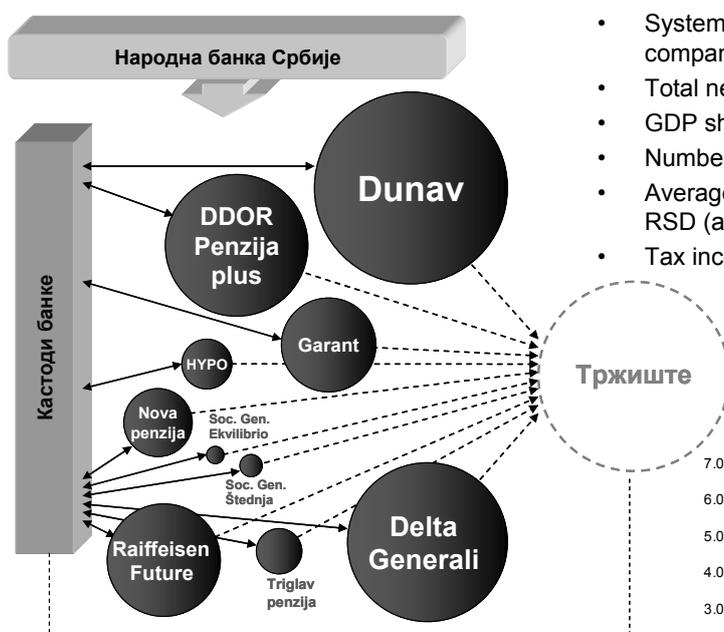
- System of voluntary pension funds – 9 management companies manage the property of 10 funds
- Total net property of funds - 6,5 billion RSD
- GDP share – 0,2% (European average 15%)
- Number of users – 163.000 (40% are women)
- Average amount of assets per user is about 39.000 RSD (average payment 3200 RSD)
- Tax incentive - 3528 RSD per month

- Return in the past year – 11,3%
- Return since the beginning of work – 7,5%

|	0-9	10-19	20-29	30-39	40-49	50-59	60+
Удео корисника	0,02%	0,10%	8,75%	27,87%	33,52%	25,91%	3,82%
Удео средстава	0,01%	0,04%	5,78%	28,89%	36,89%	25,46%	2,93%
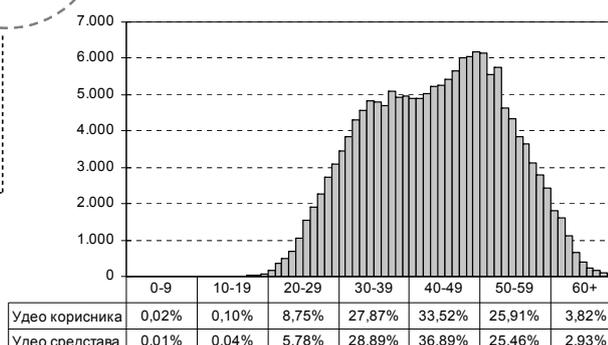
Property of voluntary pension funds is continuously increasing despite the oscillations in the investment units flow...

- Net property in the voluntary pension funds sector is continuously increasing
    - 6.5 billion RSD (September 09) – increase of 63% in the past year
    - growth generated by net payments , and also by increase of investment units value
- Return of FONDex
    - **7,5%** since the beginning of voluntary pension funds' work (August 09/November 06, annually)
    - **11,3%** in the past year (August 09/August 08)

1 – Transformation of three insurance companies into voluntary pension funds

2,4 – Periods of price growth in the Belgrade stock market

3 – Period of price downturn in the Belgrade stock market

5 – Period of dinar depreciation

6 – Period of reference interest rate growth

7 – Period of the most significant assets withdrawal

8 – Periods with the highest amounts of assets transfers
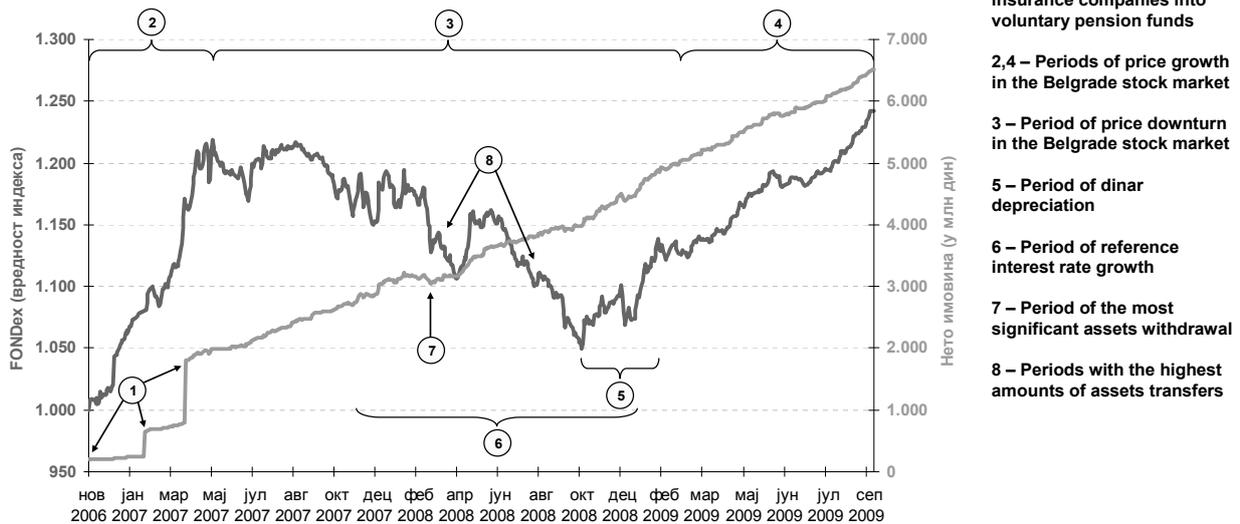
...due to changes in the investments structure...

- The funds have adjusted their investment policies in the changed circumstances – orientation towards less risky forms of investment
   - reduced stock share; presence of a new instrument in the market…

- Потраживања (00%)
- Средства на кастоди рн. (31%)
- Орочени депозити (05%)
- Некретнине (01%)
- Државне ХоВ - Трезорски записи (30%)
- Државне ХоВ - Обвезнице (25%)
- Акције - Ван Листинга А (03%)
- Акције - Листинг А Београдске берзе (05%)
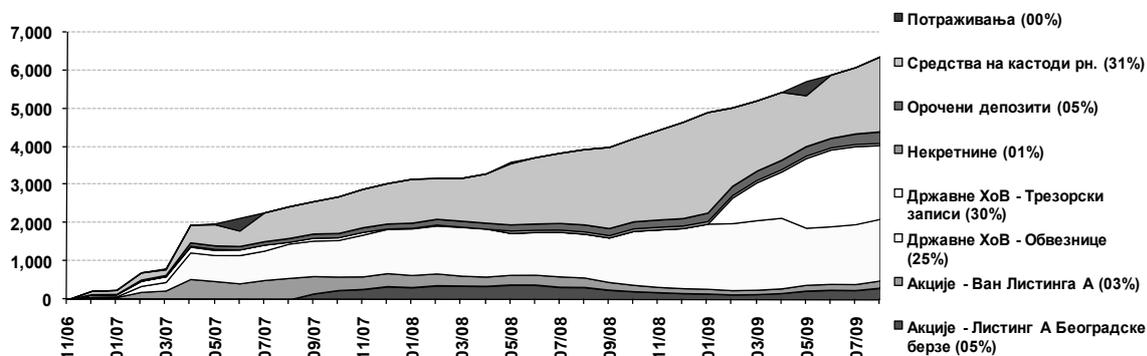
*NOTE: the changes shown refer to the same period last year*

167

...which is why the value of voluntary pension funds' property had more stability than the capital market...

- Return of BELEX15 index, the most solvent stocks of the Belgrade stock market, has decreased by **48,0%** in the past year (August 09/ August08)
  – 03.05.2007: **3.335,20** – historical maximum; 11.03.2009: **347,46** – historical minimum
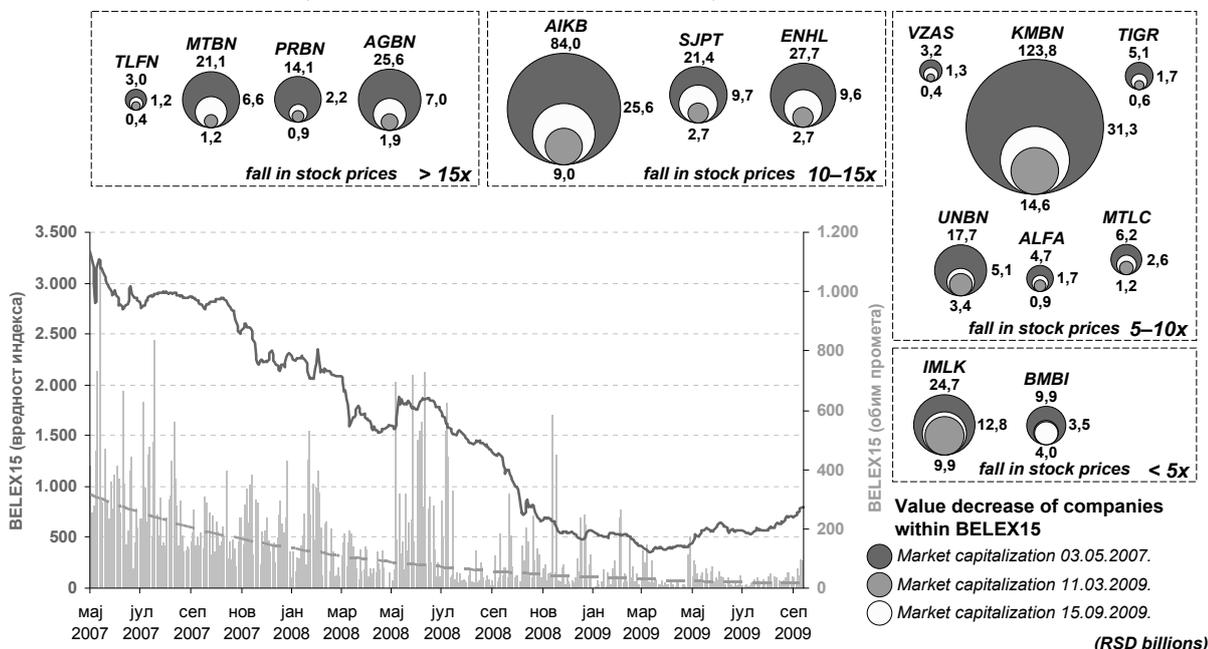
... so today more than 90% of users have a positive return on their individual accounts

- In spite of all the challenges, the number of users is increasing
  – 163 thousands users (August 09) – growth by 7% in one year
- Returns on individual accounts show that the voluntary pension funds have recovered in less than a year
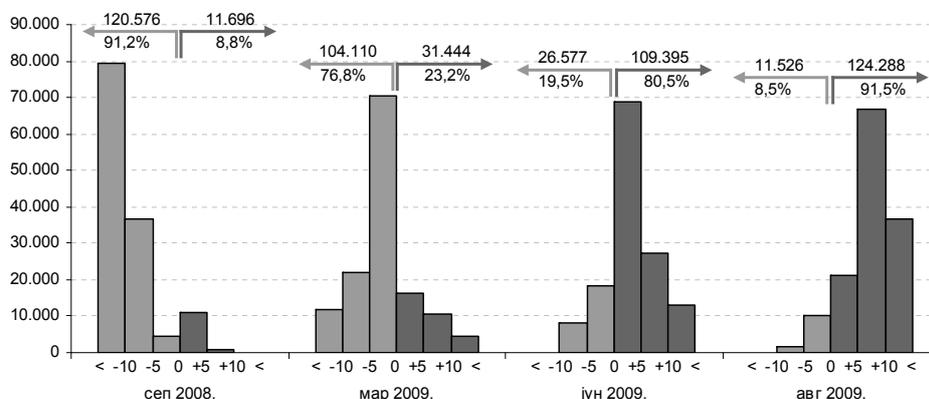
# Reasons for Changes, Options and Dilemmas

Gordana Matković
Center for Liberal Democratic Studies

WHY DO WE NEED FURTHER CHANGES?

DEMOGRAPHIC REASONS

■ With a share of 16,8% of elderly in its population, Serbia belongs to countries with pronounced ageing.

Ratio of number of working age (15 to 64 years) inhabitants and persons over 65 years of age

Year	Ratio
1981	6.6
1991	5.4
2002	4.1
2032	3.0
2052	2.4
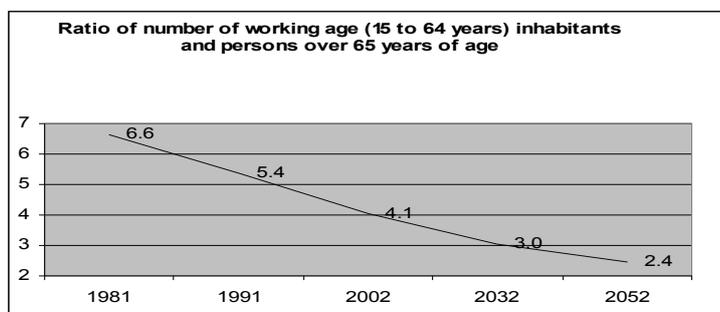
Unfavorable system features

■ System support ratio (number of insured/pensioners) is unfavorable - only 1,6 (1,4 in the employees insurance)

■ Mid-term – opportunity in "internal reserves", increase of employment and reduction of informal economy

---

Unfavorable system features

■ The share of disability pensioners is still rather high – 23%

■ The share of pensioners older than 65 is only 62.3% even among the old-age pensioners in the employees` insurance

■ There is less than 20% of pensioners within the employees` insurance with "full" years of service

■ Almost 20% of pensioners within the employees` insurance were retired with accelerated years of service

Indicators of pensioners' living standard and its maintenance

- In 2008, pensions in the employees insurance stood at 59.2 % of average wages
- In 2008, pensions of those pensioners within the employees` insurance who had "full" years of service and more stood at over 80% of average wages
- A significant share of pensioners receive pensions below average (over 60%)
- However, according to the Living Standard Survey, the poverty rate among pensioners is lower than that of the general population average (in 2007 it was 5.3, compared to 6.6%)
- The hypothetical net replacement rate for a average earner with 40 years of service is approximately 73% in 2008 (which is at the level of EU-8+2 countries, slightly lower than EU-15)
- In the long run, the hypothetical replacement rate is declining to an unacceptably low level (43% in 2020)


Financial indicators

- In 2008, the expenditures for net pensions were 333,1 billion RSD, or 11,9% of GDP

- According to data for 2006, these expenditures are :
    - Slightly lower than the EU average
    - Among the highest in transition countries that have joined the EU
    - Among the lowest compared to EU-15 countries

Share of pension expenditure in GDP, EU-15 and Serbia, 2006

Share of pension expenditure in GDP, EU - 8 + 2 and Serbia, 2006
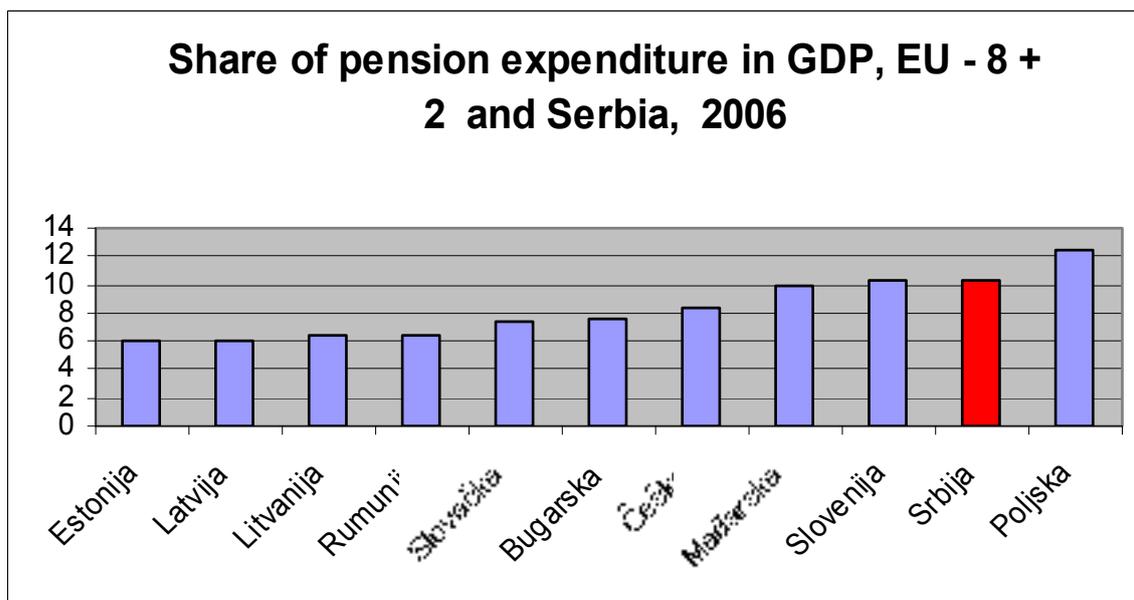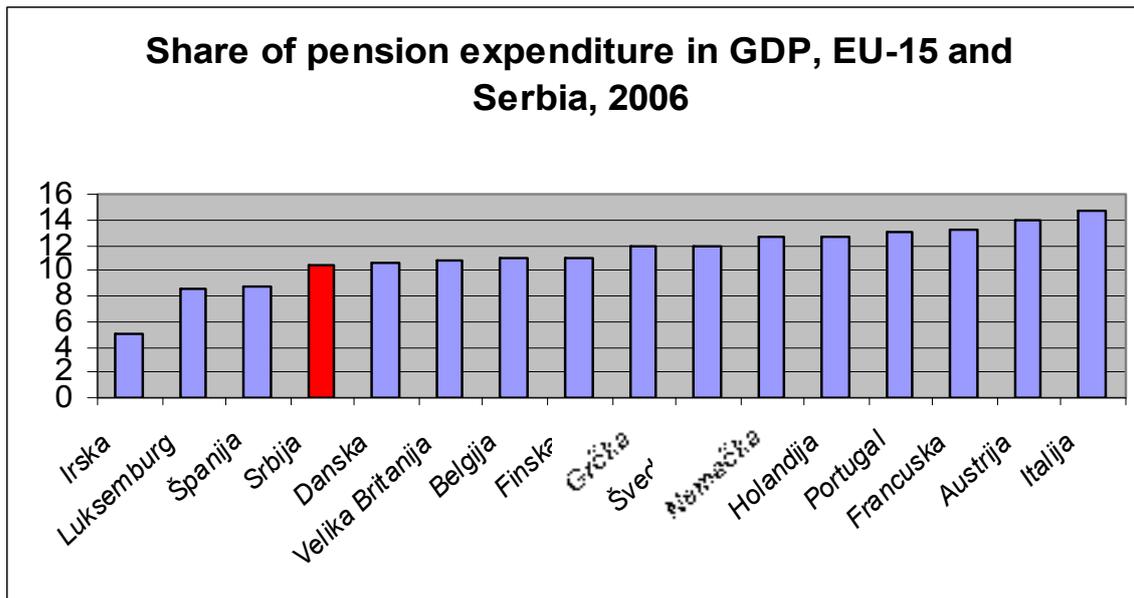
Some comparisons with transition countries that have joined the EU

- Contribution rates in Serbia are lower
- Retirement age for men in Serbia is higher
- Differences between men and women in Serbia are not decreasing
- Pension in payment indexation and past earnings valorization based only on costs of living are unusual
- Net replacement rate is at EU average
- In the long run, sustaining the pensioners' living standard in Serbia is very unfavorable (net replacement rates are low)
- Pension expenditures in Serbia are among the highest compared to EU8+2, but they are still below average for EU

OPTIONS AND DILEMMAS

Further changes in the Ist pillar

- Dilemmas about the pension and disability insurance for farmers
- Dilemmas about the introduction of NDC
- Change of rules for rights to accelerated years of service, including the adequacy of contribution level
- Short term/mid-term
  - reexamination of adequacy of pension in payment and general point indexation based only on costs of living
  - adequate inclusion of military pensioners into the system
- Mid-term
  - dilemmas about the general point indexation
  - reduction of retirement age gap between men and women
- Improvement of control mechanisms and administration in order to increase revenues and reduce the informal economy

---

IInd pillar

- Experiences of other countries, especially in the light of the current global economic crisis, do not speak in favor of an uncritical acceptance of the IInd pillar

- Implicit (gross) transitional costs of introducing the IInd pillar in Serbia would be between 0.6% and 1.7% annually, for 40 years

- It is a large investment with uncertain results, and there is no clear evidence that it would create conditions for safer and sufficiently high pensions for today's generations of workers

- In Serbia, the financial market is still underdeveloped and the administrative capacities are not sufficient to regulate it

# Instead of a Conclusion – The Most Common Misconceptions

■ The pension funds were destroyed in the 1990s

■ Pension expenditures are extremely high, among the highest in Europe

■ The Pension and Disability Insurance Fund's deficit is great and growing, and it is the most important indicator for the overly high pension expenditures burden

■ There is a large number of pensioners in relation to the general population

■ Pensioners are among the most vulnerable groups

■ Pensions in Serbia are low in comparison with wages

Macro-Financial Analysis of 2nd Pension Pillar in Emerging Europe: Lessons for Serbia

Nikola Altiparmakov
USAID SEGA Project

Introducing 2nd Pension Pillar in Serbia:
<u>Expected Performance</u>
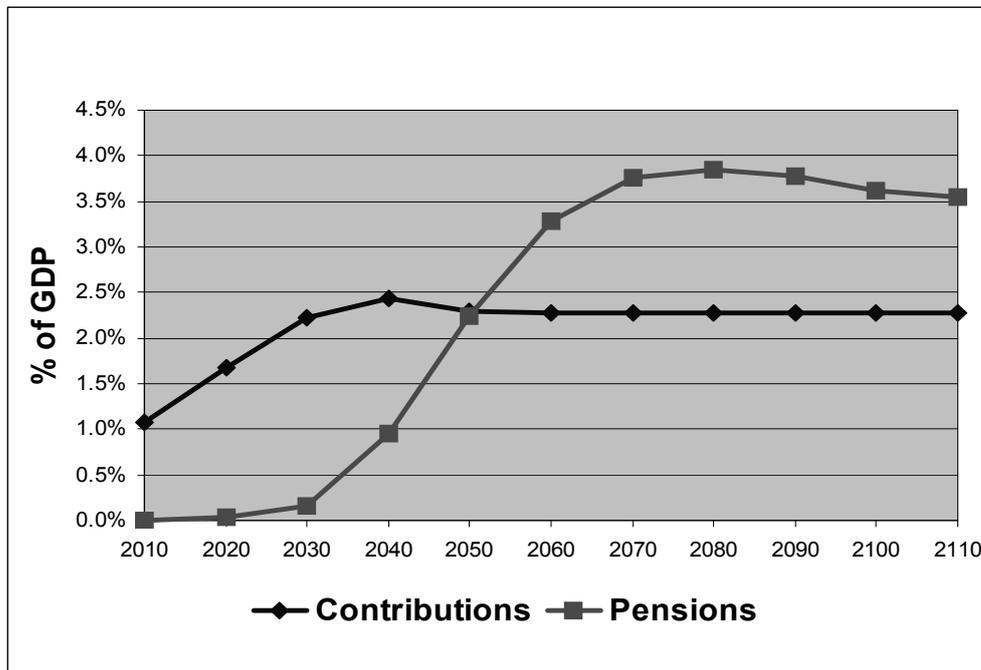
Key Observations

- It takes 70 years for *Pillar 2* to fully mature and pay full expected benefits

- The nation bears *transition costs* for 40 years!
  - If 1/3 of PAYG contributions is devoted to *Pillar 2*, transition costs average 1.2% of GDP per year
  - These funds could finance 20 *Corridor X* highways

- Expected performance vitally relies on *Pillar 2* returns being significantly higher than GDP growth

Key Risks

■ Financial markets are inherently risky, volatile and unpredictable

■ "Equity Premium <u>Puzzle</u>"
  □ Why high equity returns were experienced in the past?
  □ Can this trend persist in the foreseeable future?

■ Implementation and Operational Risks
  □ Are developed economies appropriate benchmarks for emerging economies' policies?


Empirical Performance of *Pillar 2* in Emerging Europe

Country	Pillar 2 Inception	From inception to 2007			2008 data		
		P2	GDP	diff.	P2	GDP	diff.
Hungary	Jan 1998	2.6%	4.4%	-1.8%	-22.7%	0.6%	-23.3%
Poland	Jan 1999	8.3%	4.1%	4.2%	-16.9%	4.8%	-21.7%
Latvia	July 2001	-2.3%	9.1%	-11.4%	-19.8%	-4.6%	-15.2%
Bulgaria	Apr 2002	4.3%	5.9%	-1.5%	-25.5%	6.0%	-31.5%
Croatia	May 2002	4.5%	4.8%	-0.3%	-17.3%	2.4%	-19.7%
Estonia	July 2002	3.5%	8.1%	-4.6%	-29.2%	-3.6%	-25.6%
Lithuania	Jan 2004	5.7%	8.0%	-2.3%	-28.0%	3.0%	-31.0%
Slovakia	Apr 2005	0.9%	8.7%	-7.7%	-9.9%	6.4%	-16.3%
Macedonia	Feb 2006	2.7%	4.9%	-2.3%	-13.4%	5.0%	-18.4%

Key Empirical Observations

■ Performance of Funded *Pillar 2* is bellow PAYG performance in Emerging Europe!!

   ☐ Samuelson-Aaron "Social Insurance Paradox"

■ Global Financial Crisis caused significant losses of retirement savings world-wide

   ☐ Emerging European countries especially adversely affected due to <u>mandatory</u> nature of *Pillar 2*

Introducing 2ⁿᵈ Pension Pillar in Serbia:
<u>Empirical Performance</u> from Emerging Europe
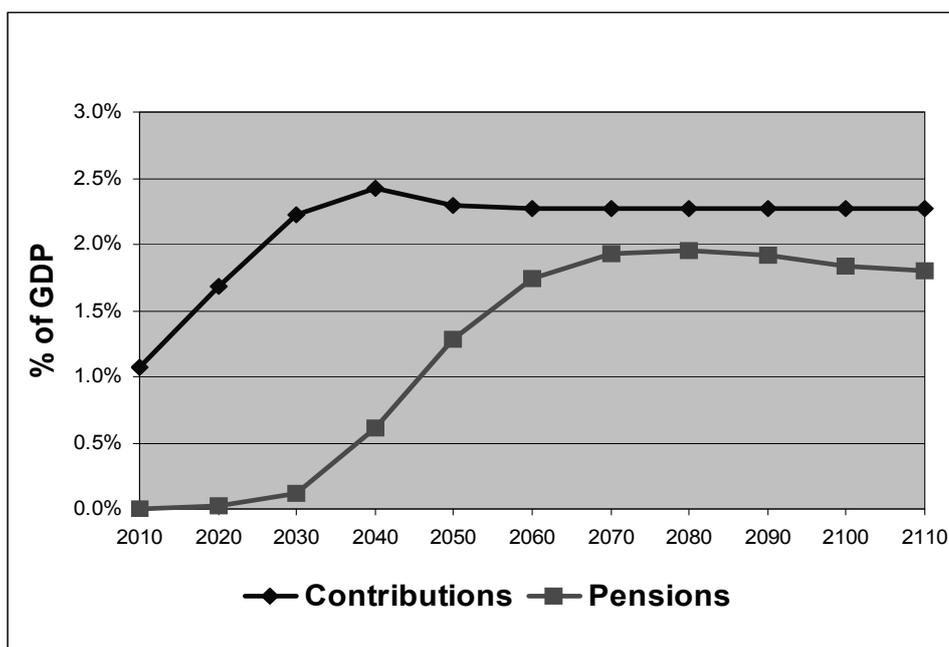
Other Observations from Emerging Europe

■ Undeveloped capital markets
  ☐ ~ 60% of Pillar 2 assets invested in Gov't bonds

■ Non-existent annuity markets
  ☐ Impossible to efficiently convert retirement savings into pension payments

■ High-operating costs
  ☐ ~ 1/3 of retirement savings

■ Political risks

Lessons for Serbia

■ Introducing *Pillar 2* is extremely risky venture

■ Empirical evidence suggests that *Pillar 2* is proving to be an unfeasible venture

■ Serbia is advised to follow Developed European countries and focus on PAYG reforms