October 3, 2008

USDAID/Armenia Comments and Recommendations on the White Paper on "Pension System Reform Program"

This document comments on the White Paper of the Pension Reforms Working Group (PWG) on "Pension system reform program: Main principles, strategic directions, tactical steps and actuarial forecasts for 2008-2080." We begin with a summary of the recommendations.

1. Summary of Recommendations

Unified Tax		
PRWG Proposal	**USAID Comments**	**USAID Recommendations**
Unified social tax of 26% will replace income tax and social contributions.	The tax rate of 26% (plus 5% employee contribution to the Second Pillar) is high, an increase of 5% from the current contribution level for most workers. Gender issues not examined.	To encourage job creation and formalization, the total burden on labor from taxes and pension contributions should go down from current levels, to the extent feasible given the need to also maintain long-term fiscal sustainability. (See Appendix 1).
Zero Pillar		
PRWG Proposal	**USAID Comments**	**USAID Recommendations**
Social Pension is 80% of Basic Pension.	This is an appropriate level of pension.	Adopt as proposed.
No mention regarding how Social Pensions will be paid.	Social Pensions should be paid through the banking system, either to bank accounts or by withdrawals using smart cards.	Develop business process for electronic payment.
First Pillar		
PRWG Proposal	**USAID Comments**	**USAID Recommendations**
First Pillar pensions for those with years of service prior to reform are a total of the flat Basic Pension plus an amount linked to length of service (LOS).	The cost of the overall system as proposed is affordable, at 0.5% of GDP (Appendix 1). With a lower rate of contributions, the initial annual cost would be higher, but future liabilities might be lower.	Further development of data to study the overall long term fiscal effects and labor market effects of the reform of proposal.
After initial years when the Basic Pension catches up to the minimal consumer budget, it will be indexed to wages; LOS will be indexed to CPI.	Different indexation approaches present tradeoffs. Indexing Basic Pension to wages rather than prices will increase pensions and cost more.	Incentive structures and fiscal implications under the two approaches require further analysis.

First Pillar pensions for those with no years of service prior to reform (new entrants) will consist only of the Basic Pension.	This is an appropriate model, which places income and length of service differentiation entirely into the Second Pillar.	Adopt First Pillar as proposed for new entrants.
Second Pillar		
PRWG Proposal	**USAID Comments**	**USAID Recommendations**
Second Pillar is to be funded by 5% employee contributions, and 5% from the unified tax that is to be paid by the Treasury (subject to a ceiling).	The Second Pillar collection process proposed is complex and carries a high level of risk due to separation of funds and data. The ceiling for those who are highly compensated will serve as a disincentive to formal workforce participation.	The full 10% should be sent directly to individual accounts, not through the Treasury, and in all cases individual data should travel with funds. Consider system in which data is sent first and verified before a payment order is issued.
Domestically chosen asset managers will manage assets abroad as well.	Domestic asset managers will charge higher fees than firms chosen through international competition; this will add to costs and affect returns.	It would be far less costly and less risky to choose a pool of international asset managers to offer portfolio choice in investments abroad.
No default portfolio for participants who do not choose asset managers, and unclear direction as to their portfolio.	More consideration should be given to defining the default asset managers and portfolios, since many will fall into this category.	Establish a default portfolio for the Second Pillar.
Overseas investment is limited to 30%.	There is insufficient domestic absorption capacity.	This cap should be eliminated or significantly raised.
TEE (Taxed-Exempt-Exempt) tax regime.	EET tax regime stimulates participation and results in more long term tax revenue.	Adopt EET (Exempt-Exempt-Taxed) regime.
Administrative fees and most maximums are not set in legislation. A maximum of 1% is set on unit redemptions.	Cap of 1% on unit redemptions is very high. Administrative costs should be estimated initially to make sure that reform proposals do not result in expensive systems requiring high fees.	Fees should be capped in legislation. Consider approaches to minimize asset management fees, such as use of a single investment pool in the early years, or international fund managers with lower fees.
Third Pillar		
PRWG Proposal	**USAID Comments**	**USAID Recommendations**
Individual voluntary pensions only, no employer sponsored pension schemes	Premise that employer sponsored funds require strong unions is incorrect. Also shortage of actuaries is not a barrier.	Include employer provided pensions on a defined contribution basis.
Providers can only be licensed to sell this product	Requiring specialized providers will limit the market, not allow economies of scale and therefore decrease competition.	Permit all licensed financial institutions – banks, insurance companies, asset managers – to provide this product.
Tax regime is not stated.		EET tax regime is appropriate.

Management of the System		
PRWG Proposal	**USAID Comments**	**USAID Recommendations**
Money flows to the Treasury while individual data is to be sent to the State Revenue Committee (SRC).	Flows of information and money are complex and unclear. Considerable attention is needed to make these flows simple, efficient and sufficiently detailed.	Particularly for the Second Pillar, individual-level data should be conveyed monthly, electronically, along with payments. This is critical to ensure competent reconciliation. Use of the social security card number is recommended.
No single agency is in charge of information to the public about asset management.	Responsibility for informing participants about asset management choice needs to be clear. This cannot be left only to the asset managers themselves.	Unified development of public information message and coordinated distribution through various agencies.
SRC is in charge of reconciliation.	If SRC will be the agency, it must create systems and train staff urgently.	
State Labor Inspectorate (SLI) checks documents for First Pillar Pensions	This should be done only at SSSS request and requires no new functions.	If it is the designated agency, the SRC should do all compliance related to Second Pillar. SLI has no role in Second Pillar Pensions. The employers' report to the SLI should be abolished when electronic recordkeeping is in place.
Streamlining of State Employment Service Agency and direct Treasury financing	This is an appropriate reform. However, it does not address the goal of one-stop-shop social services.	
Transferring responsibility for assistance benefits from local agencies to SSS	This could be an appropriate streamlining reorganization. The status of non-cash benefits is unclear.	Implementation requires planning for business process change, integration of information systems, and redundancy. The status of non-cash benefits needs to be clarified.

Implementation of the Reforms		
PRWG Proposal	**USAID Comments**	**USAID Recommendations**
No implementation plan or indication of responsibility for very difficult and complex tasks.	Successful implementation will be very difficult. Reforms in other countries indicate that having a single high level official responsible for pension reform overall is important, and that in spite of best	One high level person responsible for pension reform implementation, with authority to manage the reform and to direct agencies to draft legislation, design business

	efforts it is difficult to coordinate among agencies and that there are many delays.	processes, and design and oversee tenders for IT and other procurements. Proposed organization chart for reform is attached, Appendices 2 and 3.
No implementation budget.	Implementation budget is essential.	Adopt implementation budget with specific items (information technology, public information) itemized.
Issues for Future Discussion		
PRWG Proposal	**USAID Comments**	**USAID Recommendations**
Agricultural and informal sector coverage; early retirement for certain professions (privileged pensions); Second Pillar Pay-out (disability and annuity options).	These are very important issues that will require further policy consideration but need not be fully developed now.	Address these issues separately.

2. General Reform Design

The White Paper articulates a clear vision of the overall goals of the pension system, and the objectives and methodology of each pillar in the system. Overall pension reform objectives include:

- Social safety net for the vulnerable
- Sustainable pension system
- Reduction of informality – changing incentive structures for contributions

The PWG proposal for pension reform is as follows:

- for those with at least 10 years of social tax payment, some of which are prior to the effective date of the reform, an Employment Pension (First Pillar) financed by a unified tax of 21% of wages; the First Pillar consists of two parts: 1) a flat Basic Pension, this pension is the basis for all other benefits; and 2) an amount reflecting years of contributions prior to the reform;
- for those whose years of social tax payment are entirely after the effective date of reform, only the Basic Pension is to be paid to those with 10 years of social tax payment;
- a social pension (Zero Pillar) for those without 10 years of social tax payment, set to be 80% of the Basic Pension;
- individual funded pension accounts (Second Pillar) financed by contributions of 10% of wage, 5% paid by workers and 5% by the state, up to a ceiling; when the ceiling is reached high income workers will pay more than 5% in order to reach the full 10%;
- individual funded pension accounts will be administered in a Centralized Depository and invested by licensed asset managers;
- collection of the unified tax and Second Pillar contributions by the State Tax Service (now merged with the Customs Service into a combined State Revenue Committee, hereafter SRC);

- transfer of Second Pillar savings to asset managers chosen by workers; and
- a Third Pillar voluntary individual pension system.

The new Second Pillar system will be mandatory for those 40 years and under, while those over 40 can choose to participate. Those over 40 who choose to participate will not receive any contribution from the State. An additional amount based on length of service will be paid to those over 40.

The broad concepts of the reform are sensible and follow a number of recent international reforms. In particular, the reform provides a social safety net for the vulnerable and incentives for higher income individuals to return to or remain in the formal sector. It is also not overly expensive, coming to about one half of one percent of GDP. The SPSS modeling team, using a different statistical tool, but similar approaches, data and assumptions, has produced a broadly consistent model scenario. Both groups have concluded that the fiscal costs of reform are about half a percent of GDP in the near term, with savings emerging about 2050. See Appendix 1.

The overall tax burden in the proposed system is relatively high. The current system has an average combined employer rate of 26% (income tax and social insurance contribution) and an employee contribution of 3%. The proposed system would have 26% employer contributions and 5% employee contributions, an increase in the overall rate. While this resembles average OECD rates, as a regional comparison, the combined Georgian income and social tax is 25% without a Second Pillar contribution. It would be preferable to improve labor market incentives and lower the employer contribution rate, certainly not increase it. As an example, our calculations show that lowering the employer rate to 23% would increase the cost of the reform by 0.5% of GDP. See Appendix 1.

The draft White Paper is detailed and makes the case very clearly for reform. The description of the current situation, Chapter I, Section 1, is both eloquent and well founded. It describes pensions as a sector that lags behind growth in the country. Chapter II outlines the proposed reform, as summarized above it is to be a multi-pillar system following international practices. Chapter III, Sections 8 - 10, describe the pillars in some detail. Chapter IV addresses the institutional framework.

A surprising omission in the discussion is the issue of gender. The low wages leading to lower pensions for women, and the prevailing number of women retirees, makes this a critical issue. Due to shorter work histories on average, female workers tend to receive lower replacement rates from second pillar reforms.

Recommendations:

- Examine parameters of system and implications of burden on labor
- Reconsider tax increase and review feasibility of lowering tax
- Review implications for different groups of the population, in particular consider gender implications of the reform

3. Implementation Imperatives

While the White Paper describes a management structure for the new system, there is no discussion of the plan for putting it into place. It is imperative that there be an implementation plan and a senior level official (a manager) in charge of putting the plan into place, accountable to the GOAM and authorized to make requests to all affected agencies. In Poland such a person was called the “Plenipotentiary for Pension Reform.” We are not recommending a particular title, but we do believe it must be an individual with a rank equivalent to at least a Deputy Minister who is authorized to act with respect to several state institutions. Attached as Appendix 3 is an organization chart showing proposed working groups; Appendix 2 is a description of the positions on the chart. Appendix 3 also shows (through shading) that there are several working groups already acting at the periphery of the reform effort, but that the central management core is not active. We have been informed that there is a working group established for pension reform implementation, but that most members of the group have other full time tasks and are therefore not devoting a substantial amount of time to pension reform.

SPSS has received requests for assistance from several working groups addressing pension reform: on Information Technology, Legislative Drafting and Public Information. We have responded to assist all three requests and are pleased to do so. However, we believe that there is a grave risk that individual groups will work separately without overall coordination and strategy. We therefore suggest that a unified implementation plan be adopted with strong central management by a single responsible individual and not management by committee.

Another glaring omission is the absence of an implementation budget or even of a listing of the items that will be major expense items (information technology for the SRC, public information, regulation of asset managers, etc.) There is a discussion of the costs of reform in terms of benefit funding, but not in terms of the funding of administrative costs. The paper does not need to have a detailed implementation plan, but should identify who will be accountable for implementation, provide a high level timeline and a cost estimate for inclusion in the GOAM budget.

Recommendations:

- Appointment of one high-level manager of the reform implementation process
- Detailed implementation structure (proposal attached)
- Develop budget for implementation

4. The Design of the Unified Tax

The White Paper proposes a complex contribution and information collection process. Social insurance contributions and the income tax are to be replaced by a unified tax of 26% of wages paid by employers to the Treasury, with individual data reporting to the consolidated tax and customs agency (SRC). This is in principle positive as it will link the First Pillar Pensions to years of service for which a tax was actually paid. Persons who are required to participate in the Second Pillar, those under age 40, will also make a contribution of 5% to the Second Pillar, collected by employers. The total tax and contribution burden on labor will therefore be 31%. This is a tax increase, since the current rate of income plus social tax is an average of 26%.

In addition, the Treasury will transfer 5% (up to a ceiling) for those individuals who are required to be in the Second Pillar. The employers of individuals over age 40 will pay the same 26% tax, and those individuals may also opt to make 5% contributions for their own Second Pillar account, but will receive no 5% match from the Treasury. We have previously stated our concern about the tax rate being too high, and propose a reduced rate.

We are concerned that the process is complex and will lead to numerous errors and difficulty in reconciliation. This will have particular implications for Second Pillar contributions as noted below in Section 9.

We also have noted our concern about funds intended for individual pension accounts being collected as a tax and paid to the Treasury. Their legal status can be questionable. The additional transfer will not facilitate accuracy. It is not clear how the individual records will be maintained in the Treasury. No justification for this new arrangement has been provided, and few countries have such a tax. Particularly for the Second Pillar, individual recordkeeping and reconciliation is crucial, and accurate collection will not be easier through the proposed method.

The PWG has explained that this approach is necessary to demonstrate to participants that the state is contributing 5% to their Second Pillar savings. We think that this explanation could be given through public information and need not require an additional step for transmitting funds to asset managers.

Another rationale given is that the Treasury will hold funds until they are reconciled. Employers will pay to the Treasury and report individual data to the SRC. The SCR will check the information and confirm its accuracy, instructing the Treasury to make transfers for those individual records that are in order (correct identification number, correct amount of contributions). Records that are not reconciled will be corrected and only then will transfers be made. Unallocated funds will remain in a Treasury account.

While the White Paper specifies that the CDA will transfer amounts within 24 hours, there is no time limit specified for transfers from Treasury to CDA. This can be addressed in legislation, and needs to be thought through as part of the overall business process.

Finally, the White Paper notes that the unified tax will allow for flexibility of state pension policy, section 7.2.11. It is also mentioned there that the unified tax will be levied on incomes and salaries. It is not clear what is meant by flexibility. Furthermore, the imposition of a social tax on incomes that are not related to work (such as rental income for example) is not common practice. Usually such taxes are levied on salary income in order to create a length of service for which a pension is due.

Recommendations:

- Second pillar funds should not be sent through the Treasury
- Collection and reconciliation process is complex and can lead to implementation difficulties; consider simplification

5. Zero Pillar Design

The design of the Zero Pillar is generally appropriate, serving as a safety net to prevent extreme poverty. This is a social pension to be provided to all residents (whether or not they are citizens) of Armenia who do not have 10 years of social tax paid on their behalf, section 7.3.4.3. It will be 80% of the basic pension, and the basic pension will be comparable to the minimal consumer budget, section 7.2.3.

The White Paper notes that collection of information about income costs more that payment of social pensions, section 8.1.3. We agree that means testing should not be done except for verification that no First Pillar pension is paid. A means testing process could be adopted for persons who receive other income, such as pensions from other countries, but only when cost-effective access to appropriate records exist.

There needs to be clarification concerning residency and citizenship requirements for the social pension. It appears from the White Paper that the social pension will be provided to persons who move to Armenia at pension age, do not have a pension in Armenia, but may have pensions from other countries. Whether and how to require residency and citizenship is an important social choice and needs to be discussed further.

Payment of the social pension should be through the banking system to individual accounts or through a system like the ARCA Card. The SSSS has expressed its opinion that current law prohibits this. While we disagree, we note that this issue should be resolved definitively in the revised law.

Recommendations:

- Adopt as proposed
- Develop electronic payment system

6. First Pillar Design

The PAYG pension will require 10 and not 5 years of covered service. This is an appropriate change encouraging participation, section 8.2.1.3. However, there is some concern is that the Zero Pillar social pension is the same for persons with no tax paid on their behalf and for persons with some years of service when tax was paid. Some differentiation by length of service could be considered (for instance a 90% benefit with at least 5 years of service).

For persons who already have service credit at the time of reform, the PAYG pension will consist of two parts: 1) a flat basic pension, and 2) credit for length of service (LOS). Those who are under 40 and must join the Second Pillar, as well as voluntary participants in the Second Pillar, will receive LOS credit only for years prior to the reform. Those over 40, who do not join the Second Pillar, will receive credit for all years according to the current system. Those who enter the new system after its adoption will only receive a basic pension (they will receive no credit for LOS). There will be no link to income, section 7.1.4.5. A number of commentators have observed that this does not provide sufficient incentives for employees to work in the formal sector.

The pension system remains unattractive for highly compensated individuals generally, and is especially unattractive for highly compensated individuals over age 40. We recognize that the income-based differentiation of First Pillar pensions would either increase the cost of the entire system, or require reducing low-income pensions in order to increase high-income pensions, and we do not recommend it. Income differentiation should be addressed in the Second Pillar.

Indexation of the First Pillar Pension raises incentive issues. The White Paper proposes that the Basic Pension and the LOS credit be indexed separately. From 2008-2012 pensions are indexed in order to equal the minimum consumer budget as required by the projections of PRSP-II, appropriate as a poverty alleviation measure. After 2013 the year value for LOS is to be indexed by consumer price index. However, after 2022 the Basic Pension is to be indexed by the annual average wage growth rate, section 7.5.7.6, while the LOS accrual factor will remain linked to inflation, the consumer price index. The result of this indexation proposal is that the value of the LOS will gradually decrease and that the First Pillar pensions will over time become less differentiated. This is a reversal of the previously proposed indexation scheme and raises questions. One view is that this approach dilutes the main function of the Basic Pension, which is to prevent old-age poverty, and may act as a disincentive to labor force participation and membership in the pension system generally. As is demonstrated in Appendix 1, it is still possible to achieve the GOAM targets for the average pension through 2021 with an alternative indexation scheme. In the long run, indexing the Basic Pension to prices, as opposed to wages, generates substantial fiscal savings, albeit at the price of lower pensions (e.g., a total Pillar 1 plus Pillar 2 replacement rate of 17% in 2060 as opposed to 30%). The trade off between fiscal space and lower pensions, and the impact of different indexation schemes on incentives, deserve further analysis and discussion.

Recommendations:

- Further development of data to study long term effects
- Review incentive structures for participation, which are not strong
- Adopt First Pillar as proposed for new entrants

7. Second Pillar Design

The objective of the Second Pillar is to provide a higher income in pension age, reflecting income and contributions as well as investment return. The addition of a Second Pillar to the program is positive. It will serve as an incentive to higher participation. 10% is an appropriate level for second-pillar contributions in a pension system where the First Pillar is primarily for poverty reduction and the Second Pillar serves as the principal vehicle for accumulation reflecting income.

Incentives However, several aspects of the program deserve some further consideration since they may serve as disincentives. The GOAM will co-finance Second Pillar contributions in the amount of 5% of income, but not more than 25,000 AMD. As a result, persons with a salary at or above 500,000 AMD will have to contribute more than 5% of their income to reach a full 10% contribution. This approach discriminates against higher income individuals and could be discouraging, whereas the reform program specifies that state participation should be encouraging formalization of income, section 7.3.1.3, step 2. Persons with salaries at 500,000 AMD or more will already contribute disproportionately to the First Pillar system while receiving a flat benefit unrelated to income. To require them to contribute a greater proportion of salary to the Second Pillar as well will stimulate them to under-report income over 500,000 AMD.

> As an example, a person with 1,000,000 AMD per month wages: With a ceiling of 25,000 AMD from Treasury, he will receive only 2.5%. To reach 10%, the employee will have to contribute 7.5% and not 5%. Total burden is 33.5%.

Tax Regime A similar concern occurs with respect to the tax regime proposed for the Second Pillar. The regime is TEE (taxation of contributions, exemption of taxation for investment income and for pension payments), sections 10.2.5 and 10.5. This is not international best practice, for several reasons. An EET regime is recommended, with exemption of taxation for the individual's and employer's contribution. This stimulates individuals to participate. In addition, an EET regime in the long run brings more resources through taxation of final payments, which will include contributions and investment. The proposed regime obtains taxes sooner, but in smaller amounts, and discourages participation. We expect that if this tax regime is adopted there will be almost no voluntary participation in the Second Pillar by persons age 40 or older. It is interesting to note that a different regime is recommended for Third Pillar pensions, section 11.2.

Asset Management As we have noted before, the asset management regime proposed for the Second Pillar will lead to higher administrative costs and consequently lower rates of return. The White Paper proposes that participants choose asset managers, each offering (initially) one to (later) three portfolios, from which participants can choose. Asset managers could be Armenian or foreign firms but would be licensed and operate in Armenia.

The White Paper indicates an assumed projected rate of return of 5%. For the sake of comparison, an OECD study concluded that Central and Eastern European country average real rates of return ranged from 1.5 to 9.6 per year, before payment of asset manager fees.[1] The assumed projection is in line with that experience. The issue of asset fees is very important, as noted below, and high fees can result in negative returns to participant accounts.

The asset management arrangement requires review, with particular attention to costs and how much choice should be provided. One view is that use of a single portfolio in the early years of reform has lead to a reduction in administrative costs and complexity, such as in the Kosovo Pension Savings Trust.

Another view is that the White Paper is too restrictive and that there should be more investment choice in general. Possibilities would include:

- allowing asset managers more flexibility in the number of portfolios provided (i.e. more or less than three);
- allowing more scope for inclusion of additional equities in each of the conservative, balanced and risky portfolios;

[1] See Antolin, P. (2008), "Pension Fund Performance", *OECD Working Papers on Insurance and Private Pensions,* No. 20, OECD publishing, © OECD. doi:10.1787/240401404057, Table 4.

- banking deposit option (similar to an Individual Retirement Account); and
- allowing employees to split contributions among options.

Section 10.8.2.4 provides that only 30% of assets can be in foreign currency denominated instruments. However, section 10.8.2.6 provides that this restriction can be eased at a time when asset managers offer only one portfolio, based on investment opportunities. We recommend that the 30% restriction be lifted or eased further, and that for investments made abroad, in the early years of the system, the Central Bank (or financial service regulator) select portfolios such as index funds provided by international financial institutions.

Asset management costs also require attention in order to improve rates of return. A recent IOPS study of fees and costs in private defined contribution systems concluded that voluntary systems tend to have higher charge ratios. Some (but not all) systems where there are a few providers show relatively lower fees. Thus, even with a few providers other issues need to be considered. Fees decline over time, making older pension systems generally less expensive. Regulations, particularly those limiting asset based fees, can reduce costs in pension systems – but opportunity costs (of potentially higher returns) may be sacrificed. Regulations imposing minimum guarantees imply higher costs. Higher contribution rates and higher wages deliver higher final balances and therefore lower costs.[2]

The White Paper proposes reconciliation of individual accounts and immediate investment in the chosen portfolio. In earlier versions a 15 day reconciliation time frame was proposed, and this is going to be difficult to acheieve. Assets should be invested immediately, however, in an interim portfolio, as is done for instance in Sweden. According to the proposed plan, assets will remain in a special Treasury account until transferred to CDA. We recommend that the issue of investment during the interim period be addressed.

The White Paper proposes that participants who do not select a portfolio or asset manager be randomly assigned, distributed in proportion according to choices already made by others. This risks the possibility that a large share of the population will be allocated to choices made by a very small segment of the population, which may or may not be prudent. The portfolio of participants who do not choose an asset manager or portfolio is unclear. Section 10.7.3.5 provides that those who do not choose will be randomly assigned to asset managers and their accounts invested into "balanced" portfolios, while section 16.1.1.3 provides that they will be randomly assigned to "conservative" portfolios. A default portfolio should be established (or at least default portfolio parameters specifying proportions in types of assets) in order to ensure prudent investment across asset types, including internationally.

Other Issues Several other important matters are not addressed sufficiently. The participation of foreign citizens in the Second Pillar is mandatory (section 10.3.2.3) with transfer of assets to a similar account in another country upon departure, if a legal basis for this exists. Otherwise, assets remain in Armenia until retirement. It will be difficult to find regimes with a similar legal basis for transfers, especially because most developed countries use an EET tax regime. A foreign citizen transferring assets to the US, for example, would have double taxation or TET.

[2] See Hernandez, Denise Gomez and Stewart, Fiona (2008) "Comparison of Costs and Fees in Countries with Private Defined Contribution Pension Systems" IOPS Working Paper Number 6 June 2008.

One possibility is that foreign citizens participate voluntarily in the Second Pillar; another possibility is a more lenient regime for withdrawal of savings (such as phased withdrawals over a term of years). The matter requires clarification.

Another legal issue to consider is whether assets on individual accounts will be joint spousal property in cases of divorce. We believe that they should be considered joint property at divorce and that this should be specified in the law governing the Second Pillar.

The White Paper proposes a guarantee fund for operational risks; a better option would be a bonding requirement. As noted above, guarantees tend to reduce rates of return.

Management of the Second Pillar system is discussed in part 9 below.

Recommendations:

- 10% is an appropriate level of contributions for Second Pillar pensions
- Streamline and simplify system for sending contributions to individual accounts
- Proposed asset management arrangements through domestic asset managers risk being costly
- Adopt simplified less costly arrangements for international asset management
- Cap asset management fees
- Default portfolio is needed
- Tax regime is inappropriate, adopt EET tax regime
- Ceiling will serve as a disincentive to participation to high income individuals
- Poor incentives for voluntary participation by individuals over age 40

8. Third Pillar Design

We have several comments with respect to the Third Pillar proposal. First, we believe that corporate pension schemes provided by employers should be included. The White Paper states in section 7.1.5 that this is untimely because there are no strong labor unions in Armenia. In international practice, corporate pension schemes are not only established by labor unions, but also by employers. A comprehensive funded pension law should provide for appropriate regulation of such schemes, even if at first there will only be several of them. The white paper appears to anticipate this as it refers to contributions by legal persons to the accounts of their employees, sections 11.2.4 and 11.4.2.

Second, while the White Paper correctly refers to the lack of actuarial expertise at present, such expertise is critical for defined benefit and not necessarily for defined contribution pensions. Corporate defined contribution pensions can be set up without actuaries. In any case, the absence of accurate data, rather than the absence of actuaries is the greater long term difficulty.

Third, we think that the definition of providers of Third Pillar pensions is too narrow. Section 11.4.1.2 indicates that providers of voluntary pension insurance must be licensed companies and cannot be involved in other business. This will prevent economies of scale and a development of the sector. We believe that licensed banks, asset managers and insurance companies should be able to provide this product and that the creation of separate companies should not be required.

Recommendations:

- Include employer provided pensions on a defined contribution basis
- Permit all licensed financial institutions to provide Third Pillar pension products
- EET is the appropriate tax regime

9. Management of the System

The management of the reformed pension system (as discussed in Chapter IV, Sections 14 and 15) is based on three principles:

1) reducing the intervention of the state;
2) using existing structures; and
3) delegation to NGOs and others.

The state solidarity and funded systems require separate management structures. The state solidarity component will have the following management structure:

Agency	0 Pillar	I Pillar
MLSI	Policy, legislation, monitoring supervision	Policy, legislation, monitoring supervision
SSSS	Pension awards and payment, financial management	Pension awards and payment, financial management
LI	Checking documents presented for pension awards	Checking documents presented for pension awards
MOF	Financing and budgeting	Financing and budgeting
SRC	Collection of unified tax, individual registry	Collection of unified tax, individual registry

It is noteworthy that the proposed system will transfer the individual registry responsibility from the SSSS to the SRC. The reasons for this have been explained in the White Paper, section 2.2.7 and Box 7; the system established in SSSS is not fully operational. The SPSS project has concluded that its operating system and functionality is not state of the art (separate reports on this were filed). The obligation imposed on SSSS by Article 65 of the law of the RA “On State Pensions” to provide information to participants concerning their individual accounts twice a year has not been met. In the new system the collection and reconciliation function will be performed by SRC and the CDA will provide annual statements to participants. However, SSSS will continue to make pension awards of First Pillar and Zero Pillar pensions.

It is important to assure that SSSS and SRC will exchange data as necessary. The following function should be explicitly added to the SRC functions listed in section 14.2.4.3.:

- Providing information necessary for assigning and calculations of Zero and First Pillar pensions to SSSS in electronic format on a regular basis (through access to required data in the SRC database)

Similarly, SSSS must transfer its database, in an appropriate format, to the SRC database, and needs to share its database with the State Labor Inspectorate.

The White Paper also grants a role to the State Labor Inspectorate (SLI) in validating documents presented for pension awards, section 14.2.3. SLI will inspect the accuracy of documents provided to SSSS by persons and organizations for assigning and paying pensions. It should be noted that this will be a function of decreasing necessity as adequate personified records replace these checks. However, for years prior to reform, such document checks will be critical. SLI will conduct inspections only based on SSSS requests if there are doubts or inconsistencies in documents. Since the SSSS does not have any inspection powers of its own, it seems rational that it should rely on SLI for investigating or verifying any pension related labor issue or fact at its own discretion. However, the White Paper also proposes "new functions" for SLI. If the SLI will be used only in cases requested by SSSS and limited to labor related documents, there is no need for any "new functions" for SLI. Under current law, SLI can check any document related to labor law. Additional functions - meaning additional regular inspections of businesses - contradict the principle of reduced inspection burden on businesses.

Cooperation between SSSS and SLI must include regular standard data exchanges. This will eliminate the need for the employers' annual report to the SLI and will help implement risk-based enforcement. SLI will be able to use SSSS data to analyze variations in the duration, costs and incidence rates of short-term work related disabilities. It will be able to track differences according to length of service, occupation and industry to determine where these disabilities are occurring more often, last longer and cost more than expected (based upon industry and number of employees) and include these businesses in the planned inspections. This will reduce unnecessary burdensome reporting for businesses and will also strengthen SLI capacities.

The private funded component will have the following management structure:

Agency	II Pillar	III Pillar
SRC	Collection of unified tax, individual registry	Monitoring tax deductions
Financial Regulator	Licensing, regulation and supervision of asset managers	Licensing, regulation and supervision of asset managers and other providers
CDA	Managing pension accounts, transferring assets to managers, implementing withdrawals and providing information, valuing assets	Managing pension accounts, transferring assets to managers, implementing withdrawals and providing information
Banks/Haypost	Transfer of asset manager choice to CDA and of information from CDA to participants	
Asset Managers	Asset management	Asset management and collection of voluntary pension contributions

We have previously identified a principal difficulty with this structure. There is no single strong Second Pillar governance structure to protect participants, issue information, receive complaints and select asset managers (the Swedish PPM is a good example of such a structure). The tasks are dispersed and some tasks are not adequately described.

Second Pillar contributions should be conveyed electronically with data on a monthly basis. The proposed collection structure which has assets going to Treasury, data to SRC, and then transmission to the CDA, presents many opportunities for mistakes and poor attribution of contributions to participants.

Sections 14.2.1 and 14.2.12 mention public awareness and education programs. Responsibility for these critical functions should be indicated. Related to this issue is the statement in 14.2.8 that “No state structure will provide direct financial advisory services for selection of investment portfolios and asset managers.” While the state should not provide advice, it should provide objective information on asset managers enabling participants to make comparisons. What will be the equivalent of the PPM website where rates of return are provided? This could be the CDA, but this is not indicated as one of its functions and is not currently an area of its expertise. Another option is for asset managers to provide this information by themselves, but then it needs to be regulated for accuracy and objectivity. The reform program could then indicate that asset managers will be regulated in how they provide information in order to protect consumers and be comparative, and identify a state agency responsible for monitoring such information and/or also providing impartial information on the asset managers.

The White Paper does not specify how the asset managers will be selected but mentions that there will be no more than 3 or 4, section 16.1.1.3. This presumes a tender process, or some other selection process. This needs to be clarified.

At Sec 10.7.2.1, the White Paper specifies that an individual must apply for an account with the CDA and that the CDA will notify the individual. We suggest that the social card number should be used as the account number for Second Pillar. Although the CDA may need to use an internal number within its system, we believe that introducing another account number to individuals who have only recently received a social card number would create unnecessary confusion. In addition, it is possible that using the social card number in conjunction with data already held at the NORK center, might be able to simplify the initial enrollment process for individuals.

Recommendations:

- A stronger governance structure is needed to protect participants
- Provide regular automatic structure for data exchange between SRC and SSSS, necessary for Zero and First Pillar pension awards
- Individual participant data and contributions should be conveyed monthly and electronically
- Implementation planning for business process change, integration of systems and redundancy needs to begin immediately
- The development of a system and training of personnel for individual recordkeeping is critical and should begin immediately; in most countries this process takes well over a year, and in some cases several years
- Unified public message on pension reform is needed

10. Reorganization of State Agencies Addressing Other Social Sector Needs

The White Paper proposes the reorganization of other social services as well (Chapter 14). This is very appropriate as a number of social services need to be integrated with provision of pensions. The GOAM has sought integration of social services previously as part of its commitment to European social insurance principles. The efforts have not been successful because services have been co-located without integration of information or business process. The changes now proposed require business process and information technology changes, and redundancy planning. A World Bank project has been scheduled to provide MLSI a corporate network. Without the information integration that this network will provide, integration will be impossible to realize. If the World Bank project will not provide the corporate network, the GOAM must acquire it and this should be part of implementation budgeting.

Employment Services Improved provision of employment services is integrally related to a sustainable pension system. Quality jobs in the formal economy must increase for the pension system to be robust. SESA provides cash benefits for the unemployed as well as non-cash employment related benefits. The non-cash active labor measures have been a particular focus of SPSS technical assistance. The current financing system of SESA requires SESA to obtain financing from SSSS which in turn obtains it from Treasury through the budget. The reform proposes direct financing of SESA through the budget, and this seems a streamlining and rational reform. SESA currently has 51 regional offices, and these will remain providing all employment services. We note that in the past the GOAM has indicated a plan to shift to one-stop-shop social services and that leaving SESA separate contradicts this. It is important for SESA and SSSS data exchanges to take place, and for there to be virtual integration of services even if the services are not physically integrated.

Social Assistance The current social assistance program similarly provides for cash benefits to the vulnerable and non-cash social services. Cash services are mandated by national law and paid from the national budget; they are administered by social assistance regional divisions located in various marz, municipality and local government agencies (38 at the marz level and 17 in communities). These social assistance regional divisions also provide non-cash social services, some funded by the national government and some voluntarily funded by local government.

The staff administering these benefits is funded by both national and local budgets. The reform proposes to merge the social assistance regional offices with the 51 SSSS offices. As written, the proposal raises several fundamental questions.

1. Will the merger of the regional offices include both cash and non-cash activities?
2. Will the Department of Social Assistance in the MLSI continue to provide policy direction for regional social assistance activities?
3. Will financing of non-cash benefits presently financed from the national budget change?

This could be a rational reform leading to streamlining and improved services. It is appropriate to make cash payments of a national cash assistance program through a single integrated process within SSSS. This will require integration of the social assistance and SSSS databases, which should be feasible with a corporate network. It will also require planning for staff reorganization and redundancies at the local level because staff at 55 regional offices may become partially redundant. The recent work on business process improvement at SSSS can be expanded to address the additional function of social assistance payments. Most significantly, the non-cash social services must be developed by local authorities to serve the vulnerable. Removing the cash benefit from these offices may result in focused attention to non-cash social services and development of the social worker function. Consideration can be given to whether some services ought to be mandated.

Recommendations:

- Clarify status of non-cash social assistance benefits – we do not recommend that they be moved to SSSS along with cash benefits
- Implementation and transition planning is required for business process change, integration of information systems, and redundancy

Appendix 1
SPSS Modeling Team Comments on PWG White paper

We have worked with the PWG modeling team in recent months to compare approaches, assumptions, and results. For the years 2008-2021, both teams have followed assumptions in the Government Programme. The most important of these from the pension point of view are those related to GDP growth, unemployment, informality, the wage rate, and the basic pension and annual accrual value according to which pensions are calculated. Having both employed Government assumptions, it is not surprising that the SPSS and PWG teams' baseline scenarios are reasonably close (see Table 1) through 2020. In the longer term, there is some divergence.

Table 1: No-reform baseline scenario comparisons

	2005	2010	2020	2030	2040	2050	2060
Total insurance pension beneficiaries (000)							
SPSS	460	473	559	675	698	766	812
PWG	459	467	561	666	661	651	641
Average insurance pension (AMD)							
SPSS	10,621	31,851	89,957	146,043	243,700	417,993	720,909
PWG	10,183	31,118	93,113	144,524	226,335	373,485	622,450
Insurance pensions expenditure (AMD mill)							
SPSS	58,680	180,839	603,090	1,182,211	2,040,323	3,840,936	7,024,184
PWG	56,139	174,451	626,513	1,154,088	1,9147,82	2,915,718	4,789,739
Number of contributors (000)							
SPSS	395	540	765	808	828	798	812
PWG	401	544	658	673	712	659	607
Total contributions (AMD mill)							
SPSS	63,107	184,307	588,305	1,103,453	2,044,121	3,568,318	6,553,489
PWG	63,811	192,005	501,428	945,070	1,008,417	1,806,496	5,015,501
Balance, all programmes (share of GDP							
SPSS	0.0%	-0.2%	-0.4%	-0.6%	-0.3%	-0.6%	-0.6%
PWG	0.2%	0.1%	-1.3%	-1.2%	-1.8%	-1.7%	-0.1%

The main source of divergence is uncertainty related to the number of pension system contributors and pension system beneficiaries. Specifically, the PROST model does not take explicit account of unemployment, informality, and the sectoral composition of output (especially agriculture vs. non-agriculture). In the longer term, the assumptions regarding these variables built into the SPSS scenario suggest that the PWG is being too pessimistic about social insurance coverage. Even in the absence of reform, structural trends will favour expansion of the contribution base. More contributors means, of course, more beneficiaries, as well, in the outer years. However, neither group has done structural modelling of how many persons will have accumulated the required 10 years of contributory service. Both scenarios regarding the number of old-age pension contributors and beneficiaries are reasonable, but judgmental.

One area deserving special note concerns indexation of pensions. Over the course of recent months, the Government has changed its Programme to include substantially more generous indexation of pensions. In view of the fact that pensions are currently very low, this is understandable. Near-term (2008-2021) pension targets that had previously been based on the poverty line were shifted to the significantly higher minimum consumption basket. In a switch, however, the Programme also calls for the basic pension to be indexed to the average wage rate while the annual accrual factor is indexed to inflation – a reversal of the previously proposed indexation scheme.

The choice of indexation mechanisms raises issues that need to be explored further. One argument is that it dilutes the main function of the basic pension, which is to prevent old-age poverty. If so, it may act as a disincentive to labour force participation and membership in the pension system. In Table 2, we illustrate a scheme in which, starting in 2008 in the SPSS scenario, the basic pension is indexed to inflation and the accrual factor is indexed to growth in the nominal wage (i.e., the reverse of what is in the PWG scenario). As is clear, it is still possible to hit the Government Programme's targets for the average pension through 2021 (compare the SPSS scenarios for average insurance pension in Table 2 and Table 1, where the latter follows the Government's proposed indexation scheme). In the long run (post-2021), we allow the basic pension to increase at the rate of inflation and the accrual factor to increase at the same rate as wages while the PWG does the opposite. As can be seen, we come reasonably close to the PWG's proposed path for the average insurance pension. The SPSS basic pension is lower, being indexed to prices instead of wages, but the accrual factor is higher, being indexed to wages instead of prices. The point is that it is possible to maintain a reasonable level of pensions through alternative approaches to indexation. Further analysis should explore the incentive impacts in the different approaches.

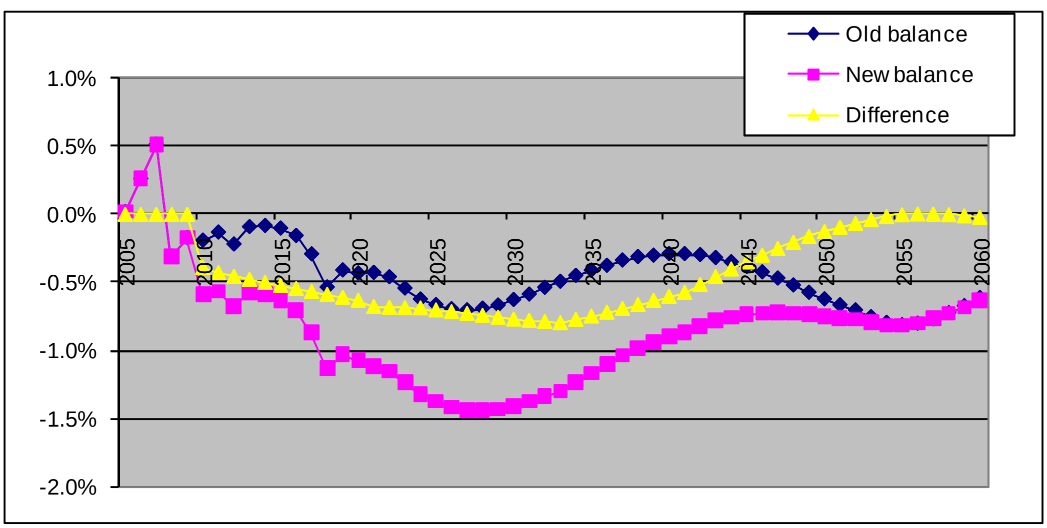
Table 2: A modified indexation scheme

	2005	2010	2020	2030	2040	2050	2060
Basic pansion(AMD)							
SPSS	4,000	11,316	58,698	98,738	132,695	178,331	239,662
PWG	4,000	9,290	57,972	110,252	198,855	362,346	649,425
Accrual factor value (AMD)							
SPSS	160	522	1,207	2,175	3,933	7,170	13,208
PWG	160	555	999	1,356	1,822	2,449	3,291
Average insurance pension (AMD)							
SPSS	10,621	31,396	94,951	161,717	246,900	391,597	636,381
PWG	10,183	31,188	93,113	144,524	226,335	373,485	622,450
All programmes balance, (share of GDP							
SPSS	0.0%	-0.1%	-0.7%	-1.2%	-0.3%	-0.3%	0.0%
PWG	0.2%	0.1%	-1.3%	-1.2%	-1.8%	-1.7%	-0.1%

Like the PWG modellers, we have implemented a hypothetical second pillar pension reform. This is assumed to begin in 2010 with all pension system participants aged 15-39, increasing to 15-40 in 2011, 15-41 in 2012, etc., until all persons who are participating in the pension system are participating in Pillar 2. We have implemented the proposed approach to financing the reform, namely a 31 percent combined employer-employee contribution rate, of which 5 percentage points go directly to Pillar 2 and 5 percentage points are channelled from the collection agency to Pillar 2. The rest remains to finance Pillar 1. We made no modification in the number of persons participating in the pension system. Upon retirement (the first cohort to have participated in Pillar 2 reaches retirement age in 2034), those who have spent some time in the pre-reform (pre-2010) Pillar 1 as well as in Pillar 2 are assumed to receive the basic pension plus the accrual value of their time in the pre-2010 Pillar 1. This represents a change in strategy over recent months; originally, the proposal was to pay such persons only the Pillar 1 basic pension. Everyone who has contributed to the pension system for ten years is assumed to qualify for the basic pension (if not, they qualify for the social pension equal to 80 percent of the basic pension). Thus, in the later years, persons who have never contributed to the pre-2010 pension system still receive the basic pension if they have 10 years of contributory service albeit, of course, no accrual value because all their years of service will be after the reform and they will have a higher pension from Pillar 2.

A comparison of results shows that the two modelling groups are reaching similar results in most respects. Figure 1 below corresponds to Figure 27 on page 90 of the White Paper (note, however, that the latter goes out to 2080). As is clear in Table 1, the two modelling groups present somewhat different baseline scenarios for the Pillar 1 balance under the no-reform case. When transition is imposed, however, both groups estimate that the cost of transition – change in the Pillar 1 balance relative to GDP – will be on the order of 0.5 percent of GDP out to ca. 2040 – a bit more than that, for SPSS; a bit less, for the PWG modellers. Thereafter, the savings from lower Pillar 1 pensions are a factor and there is a move towards positive fiscal territory. In the PWG scenario, savings from transition turn positive in 2050 and are about 0.4 percent in 2060; the SPSS scenario is a bit more pessimistic because, as mentioned above, we assume higher pension system coverage and thus higher Pillar 1 expenditure in the long term (consisting entirely of basic pensions).

Figure 1: Costs of transition in the SPSS scenario



In Table 3 below, we present in more detail the inflows to and outflows from Pillar 1 and Pillar 2. The two model simulations are reasonably consistent, except there is a divergence in the number of Pillar 2 annuity recipients (not shown), with the PWG modelling group showing many more Pillar 2 benefit recipients, and hence annuities paid out, in the early years of the simulation than the SPSS modelling group.

We return to the issue of indexation. Figure 30 in the White Paper illustrates the balance of the Pillar 1 pension system under baseline and reform conditions assuming that there is price indexation in both cases. This illustrates the costs of reform, not the impact of choosing prices instead of wages; it is irrelevant to the indexation question. The text notes that choosing prices instead of wages reduces the fiscal price of reform, but gives no quantitative estimate. In fact, the long-term impact is significant. In the SPSS model, as illustrated in Figure 1 and Table 3, the estimated balance of the reformed Pillar 1 system is estimated to be -0.6 percent of GDP in 2060. Under a modified indexation scheme (indexing the basic pension to prices and the accrual factor to wages) the balance in 2060 is estimated to be about +2 percent of GDP, a large difference. However, it may be pointed out, fairly, that the main goal of pension reform is not the accumulation of fiscal surpluses. As the White Paper points out, these savings come at the cost of a lower Pillar 1 pension. No PWG data are presented which would allow us to compare the total (Pillar 1 and 2 combined) ratio of the average pension to the average wage under different indexation scenarios. In the SPSS model, this ratio is equal to 30.5 percent in 2060 when the basic pension is indexed to wages, as opposed to 17.3 percent when it is indexed to prices, a significant difference. Judging from Figure 31 in the White Paper, the PWG has estimated that the total replacement rate under price indexation would be 24 percent, reasonably close to the SPSS estimate.

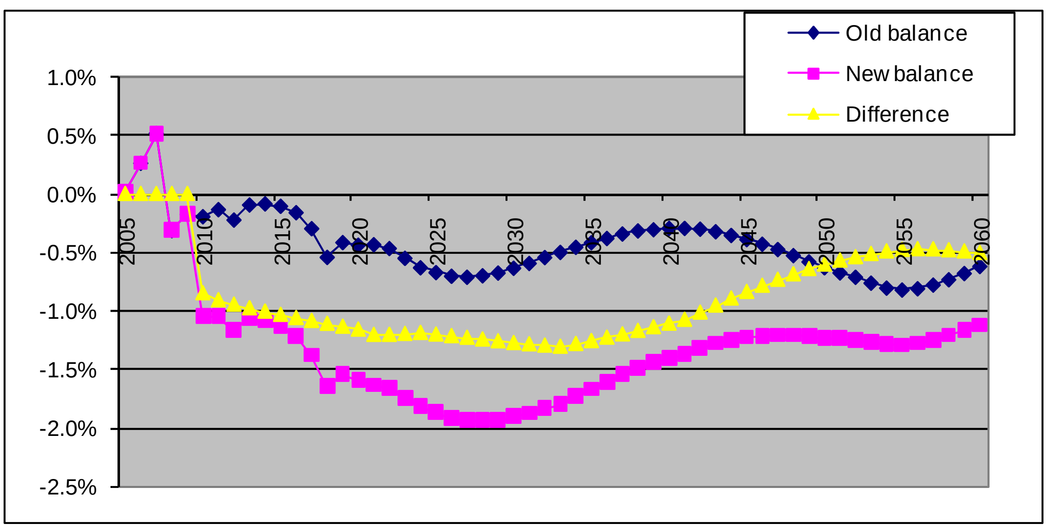
Table 3: Pillar 1 and 2 finances

	2005	2010	2020	2030	2040	2050	2060
Gross inflow to pension system (AMD mill.)							
SPSS	63,107	184,307	588,305	1,095,723	2,029,501	3,542,373	6,505,367
PWG	63,811	195,514	516,014	980,292	1,880,781	2,611,952	6,047,298
… of which, Pillar 1 revenues after transfer to Pollar 2 accounts							
SPSS	63,107	165,738	505,157	904,785	1,655,139	2,872,587	5,257,200
PWG	63,811	182,022	442,449	801,580	1,529,469	3,019,829	5,071,927
… of which, transferred to Pollar 2 FF accounts							
SPSS	-	18,569	83,148	190,939	374,362	669,787	1,248,167
PWG	-	13,492	73,565	178,712	351,311	592,123	975,371
Pillar 2 total contributions (direct and transfer from SSSS)							
SPSS	-	36,642	164,276	377,327	711,892	1,211,609	2,208,966
PWG	-	26,984	147,130	357,425	702,623	1,184,246	1,950,741
Pillar 2 investment income							
SPSS	-	2,565	84,871	312,290	872,639	1,837,016	3,372,903
PWG	-	26,984	147,130	292,692	848,282	1,744,879	2,979,553
Pillar 2 operating costs							
SPSS	-	1,099	18,187	52,048	145,440	306,169	565,151
PWG	-	3,238	17,656	42,891	84,315	142,110	234,089
Pillar 2 annuities paid out							
SPSS	-	-	-	-	93,849	461,331	1,100,119
PWG	-	-	-	-	318,572	1,090,223	2,029,465

	2005	2010	2020	2030	2040	2050	2060
Pillar 2 fund reserve							
SPSS	-	36,642	1,212,448	5,204,832	14,543,979	30,616,934	56,215,054
PWG	-	23,746	1,044,232	4,685,028	12,854,082	26,160,462	44,377,928
Pillar 1 insurance pensions (AMD mill.)							
SPSS	44,518	138,052	491,886	1,014,074	1,679,007	2,910,739	5,201,949
PWG	56,139	174,451	606,351	1,102,888	1,702,030	2,685,324	4,351,753
Balance, all programmes (share of GDP							
SPSS	0.0%	-0.6%	-1.1%	-1.4%	-0.9%	-0.8%	-0.6%
PWG	0.2%	0.2%	-1.1%	-0.8%	0.2%	1.0%	1.0%

In light of the high tax burden imposed by the proposal (26% employer contribution plus 5% employee), which is in fact an increase since the current regime is on average 23% employer plus 3% employee, we have modelled a contribution rate of 23% employer plus 5% percent employee. Figure 2 as compared to Figure 1, shows that the impact of the 3 percentage point reduction is to raise the costs of transition by about 0.5 percent of GDP.

Figure 2: Costs of transition in the SPSS scenario, contribution rate lower



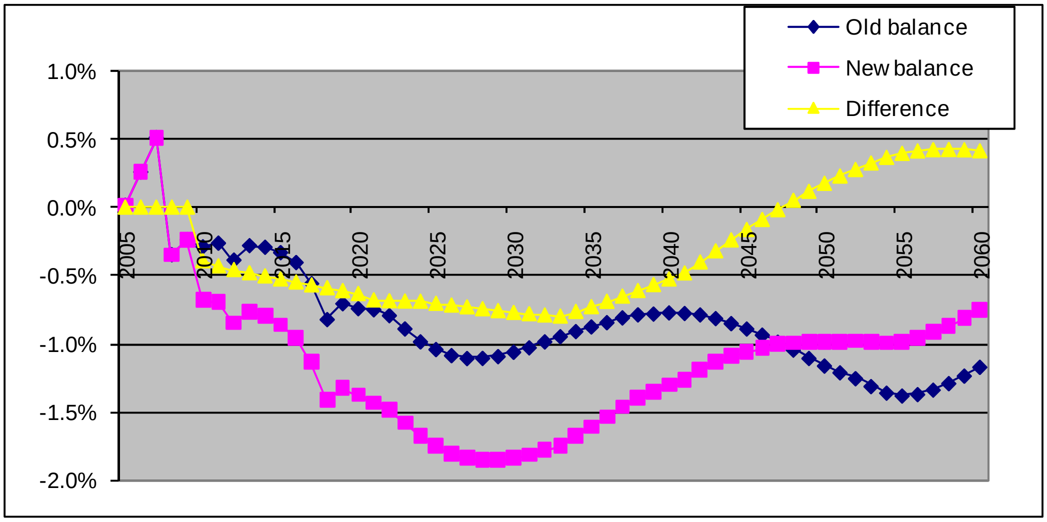
Finally, the issue of sensitivity to economic assumptions arises. We have already mentioned, above, that estimates of pension system contributors and beneficiaries represent a weak link in both sets of model simulations. Any proportional error in the estimated number of contributors will result in an equi-proportional error in estimated system revenues, and similarly for errors in the number of beneficiaries as regards estimated system expenditures.

Overly-optimistic or pessimistic economic assumptions are always possible. In Table 4, we illustrate the impact of reducing assumed GDP growth in the SPSS scenario by 1 percentage point per year over the entire simulation. The impact on all absolute figures is substantial. The impact on relative quantities and ratios, while significant, is modest (for example, compare the estimated reformed Pillar 1 system balances as a share of GDP in Tables 3 and 4) because both numerator and denominator are linked to GDP; through the wages-contributions and wages-pensions link in the first case. This can be seen by comparing the estimated costs of transition relative to GDP in Figures 1 and 2.

Table 4: Pillar 1 and 2 finances with slower GDP growth

	2005	2010	2020	2030	2040	2050	2060
Gross inflow to pension system (AMD mill.)							
SPSS	63,107	179,279	520,031	879,166	1,477,029	2,338,425	3,895,206
PWG	63,811	195,514	516,014	980,292	1,880,781	2,611,952	6,047,298
… of which, Pillar 1 revenues after transfer to Pollar 2 accounts							
SPSS	63,107	161,217	446,533	725,965	1,204,576	1,896,279	3,147,843
PWG	63,811	182,022	442,449	801,580	1,529,469	3,019,829	5,071,927
… of which, transferred to Pollar 2 FF accounts							
SPSS	-	18,062	73,498	153,202	272,453	442,146	747,362
PWG	-	13,492	73,565	178,712	351,311	592,123	975,371
Pillar 2 total contributions (direct and transfer from SSSS)							
SPSS	-	35,643	145,212	302,753	518,100	799,819	1,322,658
PWG	-	26,984	147,130	357,425	702,623	1,184,246	1,950,741
Pillar 2 investment income							
SPSS	-	2,495	78,021	270,847	713,708	1,407,836	2,383,742
PWG	-	26,984	147,130	292,692	848,282	1,744,879	2,979,553
Pillar 2 operating costs							
SPSS	-	1,069	16,719	45,141	118,951	234,639	397,290
PWG	-	3,238	17,656	42,891	84,315	142,110	234,089
Pillar 2 annuities paid out							
SPSS	-	-	-	-	80,171	378,479	861,205
PWG	-	-	-	-	318,572	1,090,223	2,029,465
Pillar 2 fund reserve							
SPSS	-	35,643	1,114,579	4,514,109	11,895,137	23,463,940	39,729,036
PWG	-	23,746	1,044,232	4,685,028	12,854,082	26,160,462	44,377,928
Pillar 1 insurance pensions (AMD mill.)							
SPSS	58,680	179,930	586,213	1,031,397	1,545,366	2,299,314	3,605,128
PWG	56,139	174,451	606,351	1,102,888	1,702,030	2,685,324	4,351,753
Balance, all programmes (share of GDP							
SPSS	0.0%	-0.7%	-1.4%	-1.8%	-1.3%	-1.0%	-0.8%
PWG	0.2%	0.2%	-1.1%	-0.8%	0.2%	1.0%	1.0%

Figure 3: Costs of transition in the SPSS scenario, GDP growth slower



In summary, the two groups, using similar approaches, data and assumptions, but working independently, have produced broadly consistent model scenarios. Both groups have concluded that the fiscal costs of reform are about half a percent of GDP in the near term. They have also reached similar conclusions about the inflows and outflows of the two components of the reformed pension system, with a remaining consistency issue regarding Pillar 2 annuity payments and beneficiaries. The main source of uncertainty is that both groups' estimates of the number of pension system contributors and beneficiaries are analytically weak. We continue to have open questions about the approach taken to indexation. Indexing to prices gives more fiscal space, especially in the long term, but at the price of lower Pillar 1 pensions. The impact of various choices on incentives, as well as fiscal impact, should be further analyzed.

Appendix 2

Pension Reform Organization Chart Description

Working Group on Implementation of Pension Reform - The Working Group members should represent all affected agencies and be able to direct their agency in response to the needs of the Pension Reform Manager. Their joint deliverables are contributions to the terms of reference of the other working groups, and the overall pension reform.

Pension Reform Manager – full time official, rank of at least Deputy Minister, to be appointed by Prime Minister, advised and assisted as necessary by the Pension Reform Implementation Working Group, responsible for terms of reference and deliverables of all working groups and for resolving issues among different agencies and working groups arising during implementation.

Project Manager – full time staff, and is responsible for maintaining contact with all aspects of implementation and in particular tracking meeting of benchmarks in a timely fashion. Project Manager should know who is doing what at all times. May be assisted by other full time staff and some of these may be technical experts provided by donors.

Legislative Drafting Groups for four laws: PAYG system, funded system, personified recordkeeping, and unified tax. Legislative drafting groups must include team members from relevant Ministries and can include technical advisors from donors. Legislative drafting groups report to the Pension Reform Manager and their deliverables are draft laws. Draft law on unified tax is already prepared by a working group and a Funded Pensions working group has initiated work.

Administrative Business Process Management Working Group is responsible for the administrative process changes necessary in the SSSS and SRC, and reports to the Pension Reform Manager. Its tasks and sub-groups include:

1. *Business Process for Pillar 0 and Pillar 1.* Developing business process changes required by the reform, including:

    - Process to be followed in using personified recordkeeping for First Pillar and Zero Pillar pension awards; the deliverable is a business process reform plan including identification of required data elements and standards for information exchange. These data elements will be used by subgroup 3 in system development.
    - SSSS and SCR data exchange for personified data collected by SRC and required by SSSS for First and Zero Pillar Pension awards.
    - A plan for transfer of responsibility for personified data from SSSS to SCR, including transfer of data current held in the PARNAS data base and a plan for collection of annual wage data for 2009 (assuming an effective data of 2010 for the new system.
    - Reorganization of other benefit programs; transferring social assistance payment to SSSS; the deliverable is a proposed restructuring plan including business process changes, information exchange, redundancy planning , and a timeframe for managing the transition of responsibility.

2. *Business Process for Pillar 2 and Pillar 3.* Developing a detailed description of the business process to be followed by SRC and Treasury for personified recordkeeping, including but not limited to the following processes:

   - Employer Submits records to SRC and Pays 26% + 5% to Treasury
   - SRC verifies data and notifies Treasury to transfer funds to CDA
   - SRC provides CDA data to correspond to payments coming from Treasury
   - CDA posts amounts to individual accounts
   - For records with errors, SRC contacts employers and makes corrections
   - When corrections are resolved, SRC instructs Treasury to make additional transfers to CDA to individual accounts
   - The deliverable should include a description of the proposed business processes, the data elements required to support the processes, a human resources plan for putting in place trained staff, and a timeframe for testing and implementing the new processes. This subgroup will provide data requirements to subgroup 3 for use in system development.

3. *Personified Recordkeeping Working Group*. Developing an Information Management system for SRC. The deliverables include:

   - Terms of Reference
   - Conducting tender
   - Selecting Provider
   - Monitoring Project
   - Conducting Pilots
   - Making changes and corrections
   - Accepting Information Management system for SRC
   - Establishing data sharing with other systems
   - This group will collect data requirements identified by other groups and assure that they are included in development of the system. They will work with other groups to define appropriate testing and implementation procedures.
   - Together with the Public Information Group, developing materials to communicate with employers concerning new tax collection processes and concerning pilot testing of data submission.

Asset Management Working Group is responsible for the following deliverables:

1. Licensing Asset Mangers – developing criteria, drafting appropriate regulations
2. CDA informational requirements – determining what CDA will be doing, what support it needs to have individual personified records
3. Developing standards for comparative informational materials about asset managers for the public

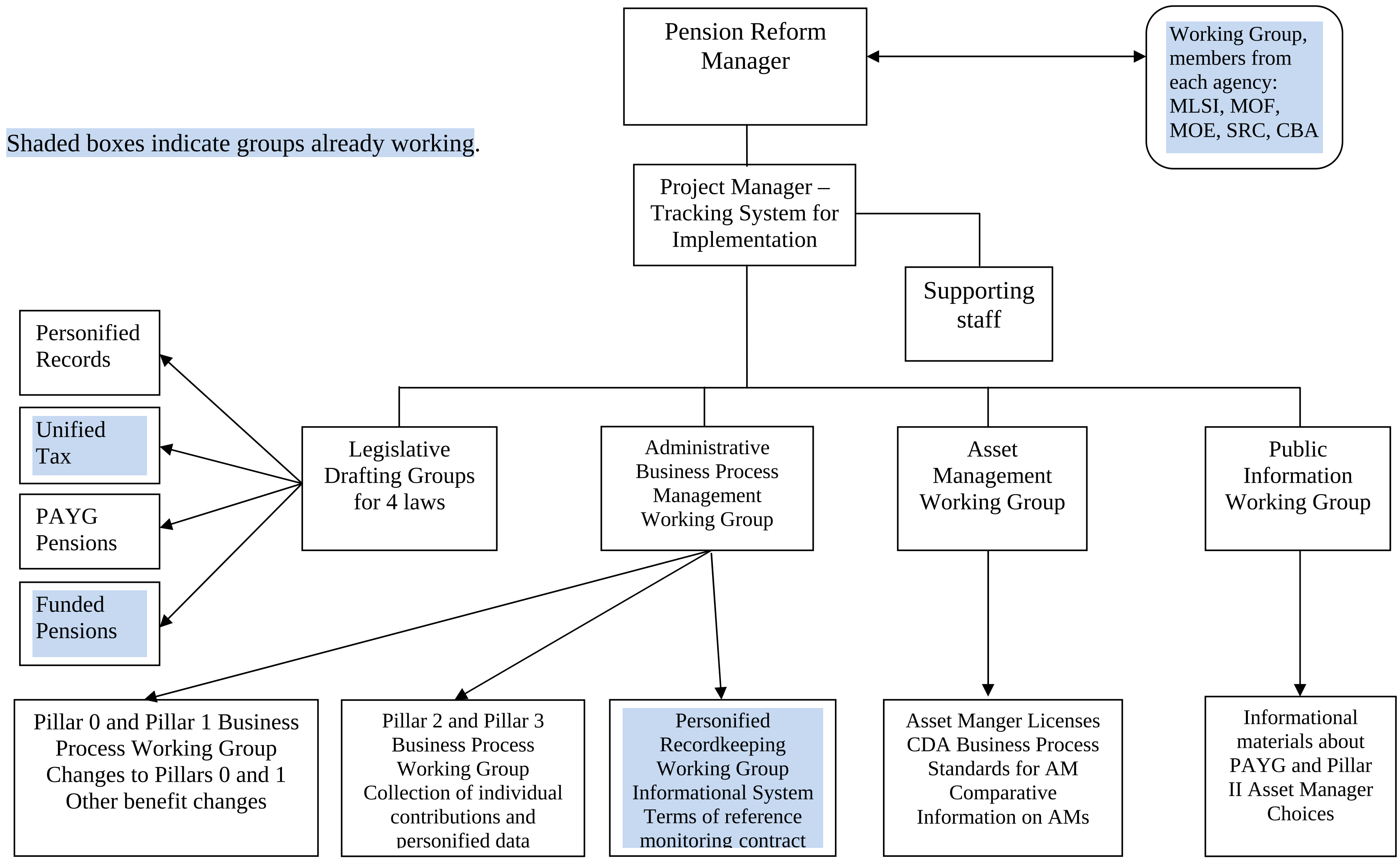
Public Information Working Group is responsible for the following deliverables:

1. Designing information program in general, including:

- drafting a short document concerning the program
- training the press
- preparing booklets
- providing speakers at events

2. Developing materials to inform the public of the new PAYG system rules
3. Developing materials to inform the public of asset manager Second Pillar choices in advance of the implementation
4. Together with the Personified Recordkeeping Group, developing materials to communicate with employers concerning new tax collection processes and concerning pilot testing of data submission.

Appendix 3. Proposed Organizational Chart for Pension Reform Implementation, Armenia 2008



DRAFT

Central Bank of the Republic of Armenia

Pension reform preparation group

Pension System Reform Program

Main principles, strategic directions, tactical steps and actuarial forecasts for 2008-2080

Yerevan
25 August 2008

“Pension system reform program” was drafted in accordance with the list of measures stipulated by Government Order No. 796 dated 26 May 2006 "Approving the conceptual framework of pension security system reform in the Republic of Armenia” (Annex 2, Item 3).The draft is based on strategic papers adopted by the Government of the Republic of Armenia in reference to the following Government Orders: “Conceptual approaches to pensions system reform” (No. 666-N dated 28 April 2005), “Conceptual framework of pensions system reform” (No. 796-N dated 26 May 2006) and “Program of the government of Republic of Armenia” (No. 695-A dated 21 June 2007).

This draft was prepared through joint efforts of specialists from the Central Bank of Armenia (CB), Ministry of Finance (MF), Ministry of Economy (ME), Ministry of Labor and Social Issues (MLSI), as well as State Social Security Service (SSSS) functioning under the MLSI supervision. They were formed into three thematic groups by the *Pensions system Reform* (PSR) working group of the GoA[1], in order to take into account the viewpoints and expert assessments of different agencies[2] in the drafting of the main provisions of the program.

The draft has received valuable support from international organizations, specially the World Bank and USAID.

The draft is a result of numerous discussions and consultations with experts and will form the basis for elaborating the Pensions system Act of the RoA and relevant regulations.

[1] Based on the Ordinance of the Prime Minister of the Republic of Armenia No. 599 dated August 4, 2006, the Pension System Reforms Working Group was established with the participation of experienced experts from the administration of the Government, Ministry of Finance and Economy, Ministry of Labor and Social Issues, Ministry of Trade and Economic Development, Central Bank and State Social Insurance Fund of the Republic of Armenia. Membership of the working group is presented in Annex 1.

[2] The membership of thematic groups, the group leaders and each group’s TOR are presented in Annex 2, Chart 1.

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CHAPTER I. THE NECESSITY FOR PENSION REFORM

The analysis of country's socio-economic situation reveals serious problems in the pension system resulting from both the pension policy and shortcomings in the pension system. Experts' demographic forecasts depict an unpromising picture with regard to the possibilities for resolving the problems of the pension system in the coming years as a result of the expected deterioration in the sex and age composition of the population and destruction of the system's financial sustainability.

1. Current situation (2000-2006)

1.1 GDP, wage and pension

1.1.1 The current socio-economic situation in the country is characterized by improving macroeconomic stability and unprecedented high rates of annual GDP growth. In 2000-2006, the real average annual GDP growth constituted **11.4%**, and the GDP per capita in 2006 amounted to **USD1,983**. Due to the improvement of this indicator, Armenia was reclassified from a "low income" to "middle income" country in 2004[3].

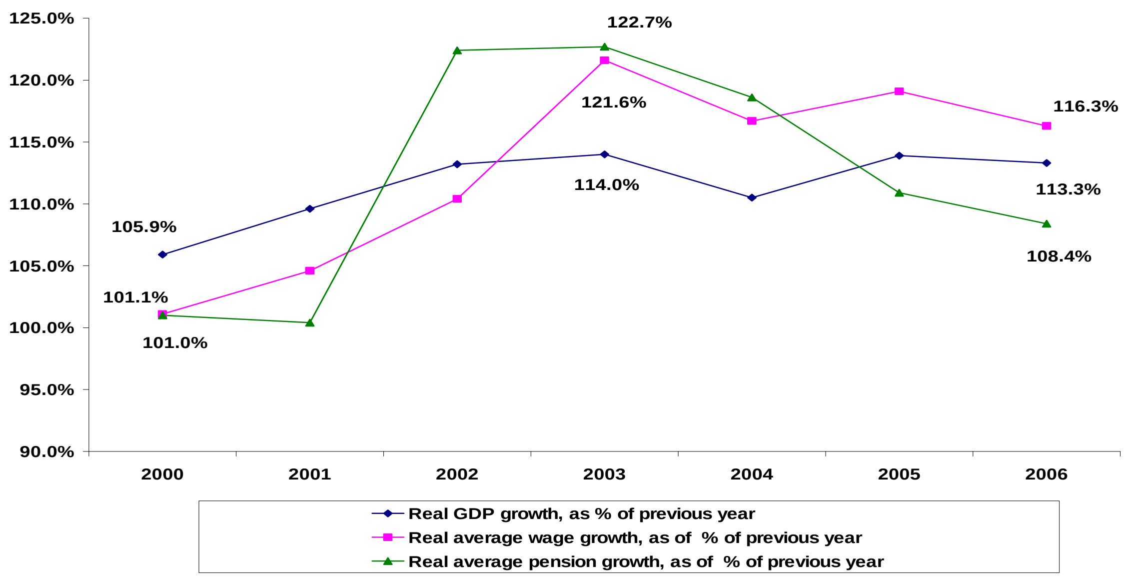
1.1.2 The share of wages in population's gross incomes is increasing again, after a sharp decline in 1990s (around 15% in 1996). Recent household surveys reveal that the share of wages in the total monetary incomes of Armenian families has increased 1.9 times, from 27-28% in 1999 to **51-52%** in 2006. Such increase in the share of wages is a result of the high rate of their annual growth, averaging at **13.4%** in 2000-2006.

1.1.3 The highest rate of wage growth was recorded in 2003-2006, when the nominal value of the average monthly wage almost doubled, reaching **AMD62,293** (or **USD150**). In the same period, wages were increasing at accelerated rates, exceeding the GDP growth rate by 1.5-1.6 times in some years (in 2003 and 2004). Moreover, considering the appreciation of the national currency since 2004, real wages, in U.S. dollars terms, increased by 2.5 times, i.e. faster than the real GDP per capita (2.3 times in 2003-2006).

[3] Such classification of countries is done by the World Bank using the Atlas method, which is based on the GNI per capita. The 185 countries registered in the WB database are classified into three groups: a) *low income countries*, whose GNI per capita was lower than USD 905 in 2006; b) *middle income countries*, who was indicator is USD 906-11,115; and c) *high income countries*, whose indicator exceeds USD11,116.
http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20420458~menuPK:64133156~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html

1.1.4 In the same period (2000-2006), average pension growth rates in the country did not coincide with those of the GDP and wages (see Figure 1). Remaining practically unchanged in 2000-2001 (only 2.7-0.4 percent increase), the average real pension growth rate increased dramatically in 2002-2003 (19.1-22.7%), and a steady decrease was recorded in the following three years, from 11.9% in 2004 8.4 percent in 2006. As a result, ***the 2.3 times increase in pensions in 2000-2006, lagged behind the per capita GDP and average real wage growth (3.0 and 2.7 times respectively).***

Figure 1. *Dynamics of real GDP, average wage and average pension, 2000-2006*



1.1.5 The unprecedented **122.7%** increase in pensions in **2003** (compared to the previous year), was linked to the parliamentary and presidential elections of that year. The issue of state pensions is an important part of election campaigns in any country, which aims to receive the votes of the most active group of the electorate, i.e. pensioners.Euro-barometer surveys conducted by Eurostat record that the group of 60-69 year-olds in the electorate of the European countries is two times larger than the group of 18-29 year-olds, which creates huge pressures, especially in western European countries, for policies of increasing pensions.[4]*.*

1.1.6 As a result of parliamentary elections held in Armenia in 2007 the newly appointed government increased the pensions for 60% effective as of 1 January 2008. The basic pension recorded increase from AMD4,250 to AMD **6,800** orfor 60% and the value of one year of contributory service increased from AMD 230 to AMD**395** or for 71.1%.

[4] See "Politics, Aging and Pensions" Vincenzo Galasso and Paola Profeta, 2004.

1.1.7 Thus, the comparison between annual growth rates of the GDP, wages and pensions brings us to the following conclusion:

Levels of pensions in Armenia are not objectively linked to the socio-economic development of the country, the GDP per capita and dynamics of wages. The level of pension is primarily determined by political decisions and changes considerably from one election to another.

1.2 Pension, living standard and poverty

1.2.1 The significant gap between the average growth of annual GDP and wage rates and pensions had a negative impact on the living standard of pensioners. Household and vulnerable groups' surveys reveal that pensioners are one of the most vulnerable groups of the population in the country (see Box 1). The Household Survey 2005 indicated that 14.7% of pensioners are poor, among whom 6.2% are extremely poor[5]. Exclusively elderly households are particularly vulnerable: every fifth such household is poor.

1.2.2 Pensioners' low level of living standard is a result of small pensions. Calculations reveal that in 2006 ***the average insurance pension amounted to 75.4% of the extreme poverty line and 50.0% of the poverty line*** (see Figure 2). Social pensioners' situation is even worse: their average pension does not reach even 1/3 of the extreme poverty line. Pensions are the main source of income for the elderly[6] and

Box 1. Social groups vulnerability assessment system

The Ministry of Labor and Social Issues has developed the vulnerability assessment system, which includes the most vulnerable social groups of the country.

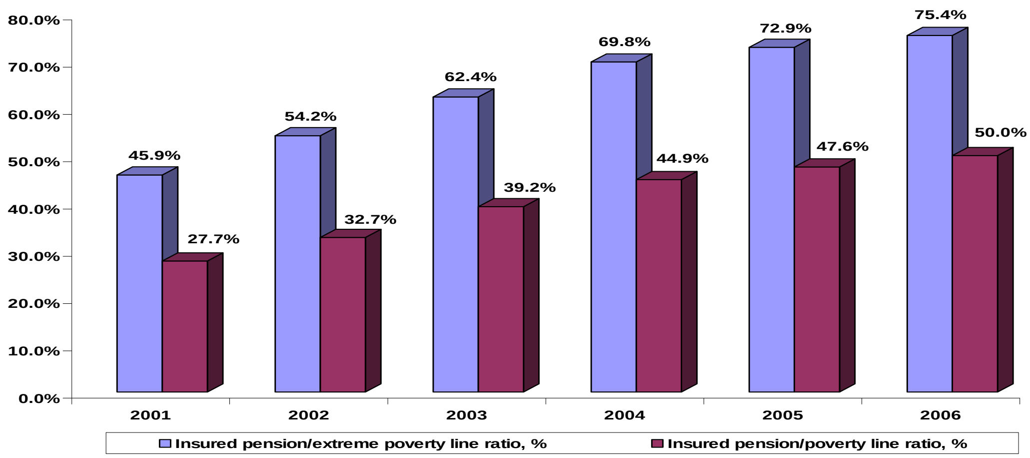
Based on the results of poverty and vulnerability surveys, social groups are classified by vulnerability criteria, which is used for determining families as for and allocating family benefits.

Social group	*Vulnerability rating*
Disabled, 1 category	**48**
Disabled, 2 category	**39**
Disabled, 3 category	**28**
Disabled-child	**45**
U2 children	**35**
2-18 children	**33**
Children without one parent	**43**
Children without both parent	**50**
Unemployed	**22**
Pensioner	**34**
Single unemployed pensioner	**36**
75+ pensioner	**39**

[5] Pensioners' poverty indicator would have been 2-3 times higher, if 28% of them were not included in the family poverty benefit system of the Ministry of Labor and Social Issues.
[6] According to census data (October 2001), pension is the main source of living for 80.4% of men and 85.7% of women in the age group of 65+. Household survey of 2005 recorded that the pension has the largest share in the total incomes of single elderly at 41.1%, followed by

undoubtedly their low levels are a matter of concern.

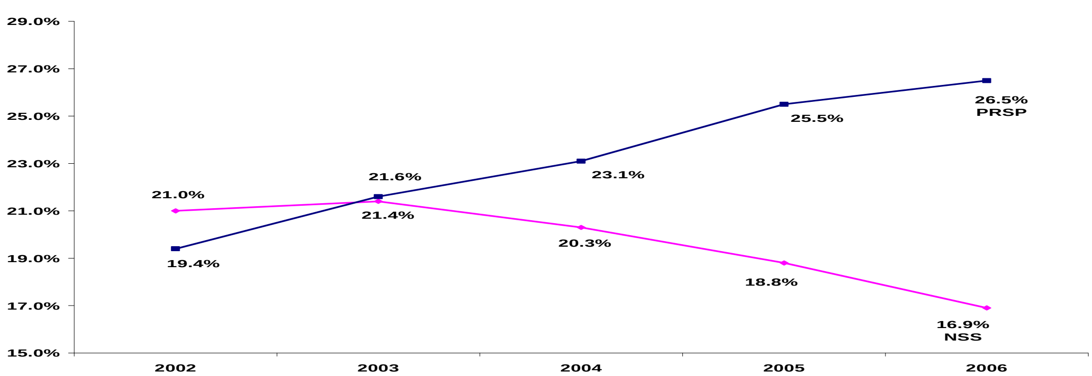
Figure 2. Ratio of insurance pension to the poverty line and extreme poverty line 2001-2006



1.2.3 Pension issues, as a matter of concern to the public, were discussed on numerous occasions during the drafting of the ***Poverty Reduction Strategy Paper***. According to PRSP forecasts, the average insurance pension should have exceeded the extreme poverty line by 2005-2006, and the poverty line by 2008[7]. The important precondition of maintaining the financial sustainability of the current pension system, however, makes it impossible to increase pensions.

1.2.4 Yet another PRSP forecast did not materialize as a result of small pensions: the ratio of ***average pension to average wage***, i.e. the replacement rate. In 2006 the latter amounted to **16.9%** instead of the forecasted 26.4% for all pensions (including social pensions) (see Figure 3).

Figure 3. Dynamics of overall replacement rate for 2002-2006,
actual (NSS data) and PRSP forecasts



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nonmonetary incomes at 18.2%, monetary assistance from relatives at 16.6% and state benefits at 8.4%.

[7] PRSP, Yerevan 2003, pp. 106-109.

1.2.5 In-countries comparisons reveal that in 2005 Armenia at the lower replacement rate than all other CIS countries (see Box 2), except Georgia. At the same time, Armenia's annual GDP growth rate was only second to Azerbaijan (2005-2006).

This means that:

The results of the double digit GDP growth rates for five years in a row (2002-2006) have not been accessible to around 600 thousand pensioners, or 20% of the population, whose pension level is still lower than the national extreme poverty line.

Box 2. GDP indexes and replacement rate in CIS countries, 2005-2006

	GDP index, 2006 % of 2005	Replacement rate, 2005 (overall)
Armenia	***114.0***	***18.68***
Azerbaijan	*126.4*	25.43
Belorussia	109.2	40.89
Kazakhstan	109.5	32.52
Kyrgyzstan	99.4	30.16
Moldova	107.1	29.03
Russia	106.4	29.67
Georgia	109.6	*17.98*
Tajikistan	106.7	31.99
Uzbekistan	107.0	37.54
Ukraine	102.6	30.69

Box 3. Transformations of the pension system of independent Armenia (1)

Due to wage restriction policy and generous social assistance, average pension vs. average wage ratio in the Soviet Armenia in 1987 had reached 35%.

Ending up in a deep economic crisis right from the first day of its independence, Armenia was not capable anymore to ensure the previous amount of pensions. During those years the average pension amounted to USD 5-6.

In order to somehow improve the deteriorated financial basis of the pension system the rate of social contributions was raised from the 26% in place in 1992 up to 30% (from the wage fund) without making any change in 1% paid from personal wages.

The Mandatory Social Contribution Payments Act 1997 to some extent "personalized" the social contributions and a regressive scale depending on the wage amount was defined for the employer. As a result, contribution burden became lighter for employers in 1998 amounting to 23% in average. At the same time, the ratio of contributions paid from individual wages was increased up to 3%.

2. Pension system

2.1 Current legal framework

2.1.1 Armenia currently has *PAYG pension system*[8], which is based on the principle of solidarity between generations. As in other countries, Armenia's solidarity system is based on financing from contributions of employed citizens. This means that the currently employed provide pensions for individuals who are passed working-age.

2.1.2 The current pension system of Armenia is financed from *mandatory social insurance contributions (see Box 3), which by 2008* were accumulated in an extra budgetary account by the State Social Insurance Fund (SSIF)[9], which was established for

[8] Experts also call it "distribution system" or "solidarity system". The system is known around the world as "pay-as-you-go" or "PAYG" system. Internationally recognized concepts are presented in Chapter II, Section 6.1 "Mian international concepts".

[9] By the RoA Government Decree the Republican Department of the USSR Pension Fund was restructured into RoA Pension Fund in 1991 thus becoming the fully successor of the

managing the accumulated contributions. The RoA SSIF was levying, recording and accumulating the contributions. Since 2004 the function of levying contributions was transferred to the RoA State Tax Service. From January 2008 contributions are directly paid to the state budget of Armenia.

2.1.3 During the transition years the legislation regulating the pension sector was undergoing improvement mainly in terms of clarifying the definitions of ***"state security"*** and ***"social insurance"*** and reducing the social groups supported from the financial resources of the SSIF directly related to it. The main goal of implemented legislative improvements was ***to ensure financial sustainability of the pension system through certain parametric reforms*** (see Boxes 4 and 5)***.***

2.1.4 However, in 90s it was possible to address ***financial sustainability of the pension system only with the condition of paying low pensions.*** As it was described in the previous section, the average amount of pensions was more than 2 times lower than the value of extreme poverty line, i.e. it was not sufficient even for food.

> ***Box 4. Transformations of the pension system of independent Armenia (2)***
>
> With the adoption of the RA Law on State Pension Security of RA citizens (1996) the retirement age of women was extended from 55 to 63, and that of men from 60 to 65. Certain schedules were defined for the retirement of different age and gender groups of the population. With the RA Law on State Pensions (2002) the retirement age was equalized for men and women and defined as 63.

2.1.5. Legislative changes, however, did not ensure the most essential principle characteristic to pension insurance, i.e. ***Guarantee for equivalent compensation of personal income depending on person's contributions*** in case of lost work capacity (due to age or other insurable cases). The foundation for the mentioned guarantee was laid in the ***State Pension Act*** (hereinafter the Act) effective from April 2003.. The following legislative innovations were noticeable achievements in terms of pension insurance:

- *Individual (personified) records system:* in order to established the database needed for pension insurance (chapter 9, articles 40-44);
- *Voluntary pension insurance:* stipulation of its legal basis (chapter 1, article 4);
- *Mandatory accumulation pension insurance:* creating needed preconditions (chapter 14, article 76).

> ***Box 5. Transformations of the pension system of independent Armenia (3)***
>
> Since 1992 a certificate on mandatory social contribution payment has been required to assign pension, while the amount of the pension was calculated based on the wages, in the 3 years preceding retirement.
>
> In 1996 the link between pension size and wages was removed as the idea of "length of service" was introduced. In fact, the value of one service year was to be regularly defined by the RA Government decision.

2.1.6 The Act also defined new pension entitlements: ***persons reaching 63 years of age with 25 years of insurance rate***[10] have the right to retirement, with

latter. *Starting from January 2008 the State Social Insurance Fund (SSIF) was reorganized into the State Social Security Service (SSSS) under the supervision of the MLSI.*

[10] In the availability of 25 years of contributory service (but not less than 5 years) the person has the right to insurance pension, but it is calculated by a reduced coefficient. Persons with

the exception of retirement with privileged conditions, for which ***55 and 59 years of age*** limits were defined. Entitlement of women to insurance pension, including to privileged pension was differentiated according to the scale approved by age groups. At the same time, the act defined the right to partial pension for those reaching 50 and 55 years of age, in cases where certain conditions are met and also for long-term services in special fields of activities[11].

2.1.7 The Government of Armenia issued a number of Orders in 2003 to ensure the enforcement of the Act. The Orders defined the values of the base pension and one year of contributory service; industries, jobs, specialties, positions, categories which create entitlement to pensions with privileged conditions and partial pensions; types of work and positions creating entitlement to long-term service pension (including partial) and the regulations for registering the length of such services; etc.

2.1.8 Developments of the legal framework regulating pensions undoubtedly aimed to transform pension <u>*security*</u> into pension <u>*insurance*</u>. In practice however:

Pension legislation in the country is not backed up by the necessary mechanisms, which in practice would ensure the operation of both state and private pension insurance industries in the country.

2.2 Description of the system

2.2.1 The pension policy is currently indispensable from the state social policy. Therefore it is developed, regulated and supervised by the state authorized body managing the policy, i.e. ***the Ministry of Labor and Social Issues***. This is the reason that the current pension programs, in essence, are included in the two most important areas of social policy:

- Pension (social) insurance;
- Pension (social) security.

2.2.2 Pension <u>*insurance*</u> pension programs guarantee the realization of every citizen's right to pension: when reaching retirement age, in case of the loss of breadwinner, disability and other defined cases. ***The insurance rate***[12] is the basis

---

less than five years of contributory service are not entitled to insurance pension, with the exception of persons with disabilities whose pension is calculated according to the scale of 2, 3, 4 and 5 years of contributory service. <u>*A special schedule of pension age is adopted for women until 2011, when eligible age for their retirement will be 63 years.*</u>

[11] Employees working in particularly difficult, particularly harmful, difficult and harmful conditions, as well as some categories of employees in the field of education, theater, stage arts became entitled to partial pensions.

[12] Contributory service at person's retirement is deemed: a) number of years worked by the person before 1992, b) duration of mandatory insurance contributions made by the person by years after 1992.

for calculations of insurance pensions. The insurance rate is a mandatory attribute for Armenian citizens who wish to participate in this program. The availability and length of the insurance rate is an attestation ***that mandatory social insurance contributions were made.*** Social insurance programs are financed from the budget formed by mandatory social insurance contributions. All types of insurance pensions are paid by the SSIF[13].

2.2.3 Pension security covers citizens who do not participate in insurance programs and are not entitled to insurance pension. For example those who have never worked and/or have not accumulated the defined contributory service and/or have not reached the defined age for insurance pension. They are entitled to ***social pension*** based on old age, disability, loss of breadwinner and other cases defined by the Act. Social pensions are financed from the state budget and are paid by the SSIF.

2.2.4 Special *pension security* program is implemented for the ***servicemen***, whose pension rights are stipulated and regulated by the Military Personnel and Their Families Social Security Act 1998. These programs are financed from the state budget. Pensions of military personnel are paid by the SSIF.

Box 6. Programs and beneficiaries of a current pension system, 2006

Pension programs by area	*Program beneficiaries, thousand People*	*Average pension, drams*
1. Pension insurance		
• Old-age	342.7	12,059
• Privileged	12.3	10,136
• Partially privileged	4.1	8,927
• Long-term service	11.9	10,441
• Disability	88.1	9,580
• Loss of breadwinner	14.6	8,827
Total	***473.6***	***11,381***
2. Pension security		
• Old-age	5.8	4,259
• Disability	31.9	5.228
• Loss of breadwinner	8.5	7,342
Total	***46.2***	***5.496***
• Military officers	35.6	23,500
• Military privates	16.8	12,200
Total	***52.4***	***19,800***
All programs	***572.2***	***10,045***

2.2.5 As at 1 January 2007, the total number of citizens included in all pension programs was nearly **570,000** or **18%** of Armenia's population. The majority, or **60%**, are old-age pensioners. The next largest group is the group of disability pensioners with around **120,000** citizens, or **21%** of all pensioners. The majority of disability pensioners, or **73%**, receive insurance pensions. The second important group of pensioners is the group of military personnel, with more than **52,000** persons, or **9%** of the total. The distribution of pensioners by pension programs and average pension is presented in Box 6.

[13] From January 1, 2008 as a result of SSIF's restructuring (see Footnote 9) the extra-budgetary account of the Fund was closed and financial resources from the mandatory contributions were combined with general revenues of the state budget.

2.2.6 Pension programs are implemented in all marzes of Armenia. The SSIF has 51 territorial centers and 3 payment centers providing services to beneficiaries, calculating and paying pensions. The centers are located almost in all cities of the country and 10 districts communities of Yerevan (see Chart 1).

Chart 1. Current pension system (as of January 2008)

Ministry of Labor and Social Issues
- Develop social policy
- Prepare legal framework
- Draft pension programs

↓

State Social Security Service (former SSIF)
- Implement pension programs
- Allocate and calculate pensions
- Manage individual accounts

↓

SSSS regional centers (51) and pension payment services (3)
- Pay pensions
- Provide consultancy

2.2.7 Analyses of the operations of the pension system reveal that ***individual (personified) registry institution***, which was the most important concept introduced by the Act (see paragraphs 2.1.5), is not fully operational yet (see Box 7). Accordingly, this infrastructure is not presented in Scheme 1. And if the regional registry mechanisms are not in place, it is impossible to enact the key principle of pension insurance, i.e. *establishing a direct link between individual's contributions and the amount of his pension*. Consequently, if the mentioned principle is not enacted, the "social insurance programs" component of the existing system, in effect, cannot be considered as full-fledged insurance. Thus, it can be concluded that:

The current pension system, which is based on the principle of solidarity, is financed by current payments and does not guarantee an equivalent compensation for individual's income, in practice it cannot be considered as proper insurance, since its attributes are predominantly of a classical social security system.

Box 7. The current situation of individual (personified) registration system

Based on the Order of the Government of Armenia No. 1143 dated 28 August 2003, a pilot project of individual registration system was implemented in two regional centers of Yerevan. The introduction of the system in all 51 regional centers of SSIF started in September 2005. The "Parnas" software is used for individual registration. The software is developed by Yerevan mathematical machines scientific research institute with the support of the USAID.

This system collects personified data on each individual registered at SSIF, creates and manages the database, compares data with other administrative data bases. Data entry is performed for 24 indicators, which are regularly provided by contributors (enterprises, organizations and other legal or natural persons) according to the report forms and regulations approved by the Ministry of Labor and Social Issues. Main data are collected on a monthly basis, for example the payroll, amount of calculated social contributions, social contributions paid, expenditures made at the expense of social contributions, etc. Data are summarized and tabulated annually.

As at 1 July 2007, 54,956 contributors have submitted 839,479 applications to SSIF for opening individual accounts, from which 827,671 or 98.6% have been set up. In the same period, 50,151 contributors have submitted 1,572,597 individual reports, from which 1,358,542 or 86% have been entered into the system.

On 1 July 2007, the deadline for completing the registration form for length of services in the period before registration in the mandatory social pension insurance system for persons included in the individual registration system by contributors and submitting it to SSIF expired. 34,944 contributors submitted completed forms for 351,857 persons, from which only 67.7% were on electronic media.

Source: State Social Security Service at the Ministry of Labour and Social Issues.

2.3 Types of pension

2.3.1 Pensions currently paid in Armenia are defined in two laws: ***Military Personnel and Their Families Social Security Act 1998*** and ***State Pension Act 2003***. The mentioned laws define the following types of *state* pensions:

1. Insurance pension, which includes[14]:
1) retirement
2) privileged conditions
3) long-term service
4) disability
5) loss of breadwinner
6) partial

2. Social pension, which includes[15]:
old-age
2) disability
3) loss of breadwinner

3. Military personnel pension, which includes[16]:

Box 8. Formula for calculating the insurance component.

Article 16 of Chapter 4 of the State Pensions Act defines the formula for calculating the insurance component of the old-age pension.

$$I = (n \times V) \times C + A/E$$

Where:
I –insurance component,
n – years of insurance rate,
V –value of one year of insurance rate before the introduction of personified registration,
C - the personal coefficient of the pensioner,
A –insurance amount reflected in individual accounts after the introduction of personified registration,
E –average life expectancy of men and women at the time of retirement in months.

Currently the A/E is not calculated since the individual registration system is not yet fully operational.

[14] State Pensions Act, Chapter 3, Article 11.
[15] State Pensions Act, Chapter 3, Article 11.

1) long-term service
2) disability
3) loss of breadwinner

2.3.2 <u>*The insurance pension*</u>, as already mentioned, is the most common type of pension paid to Armenian citizens (see Box 6). 89.8**%** of all Armenian pensioners receive insurance pension. It consists of: ***basic pension*** and b) ***insurance component***. <u>*The size of the basic pension*</u> is defined by the legislation and cannot be smaller than its previously defined size[17]. <u>*The insurance component*</u> is calculated by a formula which is described in detail in the Act (chapter 4, article 16).

2.3.3 For each component of the insurance component <u>*formula*</u> (see Box 8), the Act defines the rules for calculation and/or registration. Chapter 10 of the Act is devoted in its entirety to the insurance rate (n) and its calculation. Article 15 of the same chapter defines the calculation of personal coefficients for up to 25 years of insurance rate and the value of the coefficient for more than 25 years of insurance rate.

2.3.4 The key element of the insurance component is the <u>*insurance rate value (V).*</u> The value is defined by the legislation and, as in the case of basic pension, it cannot be smaller (naturally by its nominal value) than the previously defined one. Thus, the two elements of the insurance pension: basic pension and insurance component, are determined by the legislation. The main source of their financing is the extra budgetary fund formed by mandatory social contributions[18].

2.3.5 ***All types of insurance pension are interconnected and have the same elements***. They are different only by: **a)** eligibility criteria (age, length of service and other data of personal and investigative nature defined by the law); **b)** conditions for pensioner's registration; and **c)** methodology used for pension calculations. It must be noted that insurance pension calculations currently do not include all the elements defined by the Act (see Box 8).

2.3.6 ***The formula currently used for insurance pension calculations*** is the following:

$$\mathbf{MP = B + n \times V \times C} \text{ where:}$$

MP is the monthly pension;
B is the basic pension;
n is the years of insurance rate;
V is the value of one year of insurance rate;
C is the personal coefficient of the pensioner.

It is defined that the personal coefficient for 5-25 years of insurance rate is calculated by the following formula:

$$\mathbf{C = 0.04 \times n}$$

---

[16] Military Personnel and Their Families Social Security Act, Chapter 2, Article 6.
[17] State Pensions Act, Chapter 3, Article 4, Article 17.
[18] It must be noted that in cases defined by the Act (for example chapter 10, article 45, paragraphs 3, 4, 5), pension supplements foreseen for nonworking and non-insurance years included in the insurance rate are paid from the state budget.

The personal coefficient varies between 0.2 (for five years of contributory service) and 1 (for 25 years of contributory service).

The formula for calculating a personal coefficient of individuals with 25 years and more years of insurance rate is somewhat different:

$$\mathbf{C = 1 + [0.02\,(n - 25)]}$$

In this case, the personal coefficient varies between 1.02 (for 26 years of contributory service) and 1.5 (for 50 years of contributory service) and more.

2.3.7 *Social pensions* are also regulated by the State Pension Act, but the principles are different from the insurance pension in two main aspects. *First*, it does not have an insurance component and *second*, which results from the first, is that it is totally covered by the state budget. Thus, ***specialists prefer to call it social benefit***. A 65 year old individual whose insurance rate is less than five years is *entitled to old-age social pension.* *Disability and loss of breadwinner social pensions* are also allocated based on the same principle. The amount of old-age social pension is equal to the basic pension (see paragraph 3.3.2), which is defined by the legislation. The disability pension is also linked to the value of the basic pension. It amounts to 140% of the basic pension for disabilities of the first category, 120% for disabilities of the second category and 100% for disabilities of the third category. In case of loss of breadwinner, social pension to the amount of the basic pension is allocated to members of the family who do not have insurance rate. *The social pension of parentless children is five times with the basic pension.*

2.3.8 As already mentioned, social security, including pensions, of *military personnel* and their family members, is regulated by a separate law. ***Individuals of at least 50 years of age at the time of discharge from military service, who have 25 or more years of length of service (insurance), including at least 8 years in military service, are entitled to military personnel pension.*** Conditions for allocating pension in case of long-term military service, sizes of pension, regulations for calculating length of service, as well as the legal basis for pension security allocation to family members in case of disability or death of military servicemen, are defined in the Military Personnel and Their Family Members Social Security Act. Pensions of military personnel are financed from the state budget.

2.3.9 The most common type of military personnel pension is the long-term service pension. The principles for its calculation are different for *officers and privates*. In case of officers, the pension has two components: ***a) monthly monetary allowance*** and ***b) food compensation.*** For privates, the ***basic pension*** is the basis for calculation of long-term service pension. All the mentioned components of military personnel pensions are defined by the legislation. According to legislation, the size of those pensions cannot be smaller than **150%** of the basic pension.

2.3.10 Analysis of the types of pension allows us to conclude that:

The current pension system in Armenia includes diverse pensions of various natures, which are differentiated not only by the essence of the social program, but also by beneficiaries, their area of activity, professional specificities, nature of employment of family member, source of financing, etc. Such diversity of factors and the resulting diffusion of types of pension into social programs makes the current pension system very difficult to manage.

2.4 Expenditures and revenues

2.4.1 By January 2008 expenditures on pension programs in Armenia were financed from two main sources. ***directly from the state budget (funding of pension security programs) and budget of contributory resources of the pension fund (Funding of pension insurance programs).***[19] The latter was mainly formed from ***mandatory contributions*** (see *Box 9*). As a result of SSIF restructuring the pension fund budget was dissolved and starting from January 2008 the funding of the pension system was provided only from the state budget. In fact, as a result of system modifications contributions were also added to the state budget revenues. The Ministry of Labor and Social Issues is in charge of developing pension programs and their annual budgets.

Box 9. Mandatory insurance budget 2007, million drams

Revenues		***Expenditures***	
1. Mandatory contributions	*85.0*	*1. Insurance pensions*	*76.9*
2. State budget allocations	*21.7*	*2. Social pensions*	*3.2*
		3. Military personnel pensions	*13.5*
		4. Other	*13.1*
Total	***106.7***	***Total***	***106.7***

2.4.2 Major part of the revenues of the pension budget, nearly **80%** in 2007, comes from mandatory social insurance contributions. Rates and payment procedures, as well as the legal, financial and organizational bases for their collection are regulated by Mandatory Social Insurance Contributions Act 1998.

Box 10. Mandatory social contribution rates for employers

Monthly wage subject to social contribution	***Amount of social contribution***
1. Up to AMD25,000	7,000 drams
2. From 25,000 to 100,000 drams	7000 drams + 15% of the amount over 25,000 drams
3. 100,000 and more	18,250 drams + 5% of the amount over 100,000 drams

2.4.3 According to the mentioned law, social contributions are made by:

- Employers;
- Employees;
- Individual entrepreneurs and notaries public (chapter 1, article 3, paragraph 4)

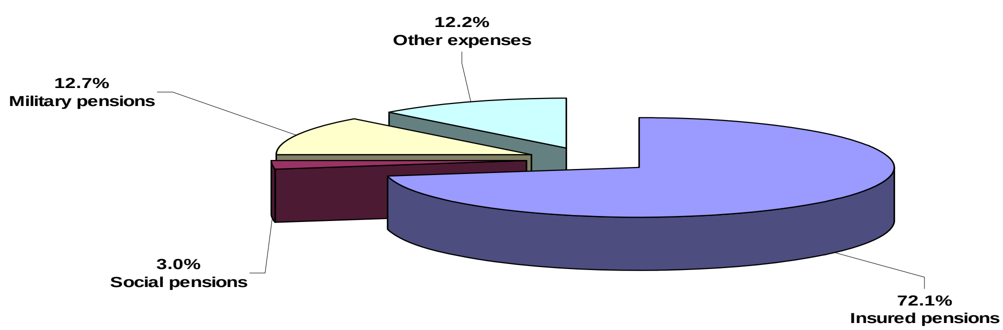
Social contributions of employees amounts to 3% of their wages and other tax-deductible incomes. *Individual entrepreneurs* should make a minimum social contribution of AMD5000 every month. *Employers* make social contributions for each employee according to the defined rates (see Box 10) from the payroll fund and other tax-deductible income. Employer's social contribution rates are *regressive* and diminish as wages increase. For wages up to AMD20,000 it amounts to **28%** vs. the wage fund and 20.1% - in case of a wage amounting to AMD250,000 (see Annex 3, Table 1).

[19] By 2008 in compliance with the Republic of Armenia Law on State Budget the Mandatory Social Insurance Budget of Armenia was being approved annually which was conceptually defining trends of incomes and expenditures for the pension fund.

2.4.4 The other source of revenue for the pension fund is allotments from the state budget. In 2007 they constitute more than **20%** of total revenues. Usually, possibilities for financing pension programs are determined based on the size of income tax collected from employees. Rates and payments of income tax are regulated by the ***Income Tax Act 1998***. The defined income tax rates are *progressive* and increase from **0%** for AMD20,000 monthly income, to **13% and more** for AMD250,000 and more incomes per month. Calculations of social contributions and income taxes for some levels of wages, including the average nominal wage in the country, are also presented in *Annex 3, Table 1* of this document.

2.4.5 The structure of expenditures for implementing pension programs in much more divers. According to the approved budget of mandatory social insurance for 2007, there are, in general, 27 expenditure items. The largest item is the allocation to pension insurance, amounting to **72.1%** of total expenditures (see Figure 4).

Figure 4. Structure of mandatory social insurance expenditures in 2007



2.4.6 In order to study the dynamics of the annual budget for pension programs in 2000-2005, certain expenditure and revenue items were grouped together. Analysis of the summary data (see Table 1) reveals the following interesting trends:

- All pension programs are included in one comprehensive budget program titled “The mandatory social insurance budget”. But the budget also includes pension security programs.
- Expenditures on pension insurance do not exceed the revenues from mandatory social contributions.
- Pension security expenditures increase 1.5 times faster than pension insurance expenditures.
- The volume of social contribution made by employers increases 1.5 times lower than that of the employees, and 4.3 times slower than contributions made by individual entrepreneurs.

- The positive balance of the budget is a result of restraining expenditures on insurance pensions in consideration for revenues received.
- Part of pension security programs are, either directly or indirectly, financed through savings in expenditures on pension insurance programs.

Table 1. Performance of mandatory social insurance budget, 2000-2005

	2000	2001	2002	2003	2004	2005	2005/2000
Revenues, mil. AMD Including:	***37,404.4***	***42,469.6***	***46,262.9***	***56,243.6***	***66,116.1***	***83,109.2***	***2.2 times***
Mandatory social contributions	*31,488.4*	*34,989.0*	*37,932.5*	*44,710.9*	*50,828.2*	*63,881.2*	***2.0 times***
From employers	28,293.2	31,886.4	33,669.6	39,571.2	43,279.3	--	***1.5 times****
From employees	2,766.0	2,565.0	3,622.3	4,355.7	6,410.4	--	***2.3 times****
From individual entrepreneurs	170.3	330.7	451.9	757.1	1,125.4	--	***6.6 times****
From agricultural employment **	258.9	206.9	188.8	26.9	13.1	--	----
2. Allocations from the state budget	*5,892.0*	*7,244.3*	*8,304.1*	*11,339.3*	*15,155.2*	*19,212.7*	***3.3 times***
3. Other incomes	24.0	236.3	26.2	193.4	132.8	15.3	----
Expenditures, mil. AMD Including:	***37,444.3***	***41,338.3***	***45,932.0***	***55,722.9***	***64,837.1***	***78,860.1***	***2.1 times***
1. Social insurance programs	*31,492.3*	*34,013.1*	*37,628.2*	*44,363.6*	*49,842.3*	*59,699.3*	***1.9 times***
Pensioners	28,794.8	31,192.7	34,158.9	40,583.1	44,821.9	56,810.6	***1.9 times***
2. Social Security programs of	*5,952.0*	*7,325.2*	*8,308.8*	*11,359.3*	*14,994.8*	*19,160.8*	***3.2 times***
Balance	***61.3***	***1,192.6***	***1,523.5***	***2,044.2***	***1,279.0***	***4,249.1***	----
Revenues/expenditures, %	***99.9***	***102.7***	***100.7***	***100.9***	***102.0***	***105.4***	----

* *The growth rate is calculated for 2000-2004.*

** *Those employed and self-employed in agriculture are exempted from making social contributions since 2003.*

2.4.7 The mandatory social insurance budget of 2007 does not plan any significant changes in the trends described above (see Table 2). ***Mandatory social contributions will continue to surpass state budget allocations at higher rates, but the ratios of pension insurance and other indicators will remain unchanged.***

Table 2. Comparative analysis of mandatory social insurance budgets 2005 (actual) and 2007 (approved).

times

Indicators	**2005**	**2007**
1. Mandatory social contributions / allocations from the state budget	**3.32**	**3.92**
2. Social insurance / social security	**2.58**	**2.58**
3. Mandatory social contributions / insurance pensions	**1.12**	**1.11**
4. Total expenditures/ insurance pensions	**1.39**	**1.39**

2.4.8 Analysis of the finances of current pension programs allows us to conclude:

Mandatory social insurance contributions finance pension security programs . This shows that insurance pension is not yet separated from the context of the overall state policy on social security. In effect, social contributions transform into social taxes by being redistributed to various social programs for the vulnerable population.

3. Population and labor market

3.1 Perspectives of the demographic situation

3.1.1 The policy of restraining insurance pensions it basically predicated on the unfavorable perspectives of the demographic situation. ***The population of Armenia has had a declining trend since 1990.*** The reasons were changes in the natural growth of the population and also its migratory movements. At the beginning of 2004, for the first time, an increase in the number of population was recorded. This trend is still continuing. As at 1 January 2006, Armenia's population was **3219.2 thousand.** This is an increase of 0.2% compared to 2001, but still **8.4%** lower than the figure for 1990 (see Annex 3, Table 2)[20].

3.1.2 Changes in the age composition of the population are much more important from the viewpoint of pension system reforms. ***Those changes in Armenia indicate the rapid aging of the population.*** Between 1990 and the beginning of 2006, the proportion of children <u>*up to 14 years of age decreased*</u> by 10 percentage points (from 30.6% to 20.6 percent) and the proportion of <u>*65+ population – for 1.7 times*</u> (from 5.6% to 9.7%) (see Annex 3, Table 3).

3.1.3 According to actuarial calculations

Box 11. Population statistics issues

NSS statistics on actual population is maintained on the basis of the natural growth of population and migration balance.

<u>*The natural growth indicator*</u>, which is the difference of the officially registered births and deaths, is calculated based on certifications on births and deaths received from regional departments of the Civil Status Registration Agency of the Ministry of Justice. According to experts, birth and death registration is almost 100%.

<u>*Migration balance*</u> is calculated based on data regarding registration and removal of the population received from regional passport departments of the Police. It must be noted that there are serious problems in recording migratory movements because of the shortcomings of the current migration administration system. According to experts, the real volume of migration is 10 times larger than the data presented by official statistics.

[20] Armenia's population is recorded based on the results of censuses (see Box 11). According to the census of October 2001, Armenia's registered population is 3213.0 thousand, and the actual population is 3002.6 thousand.

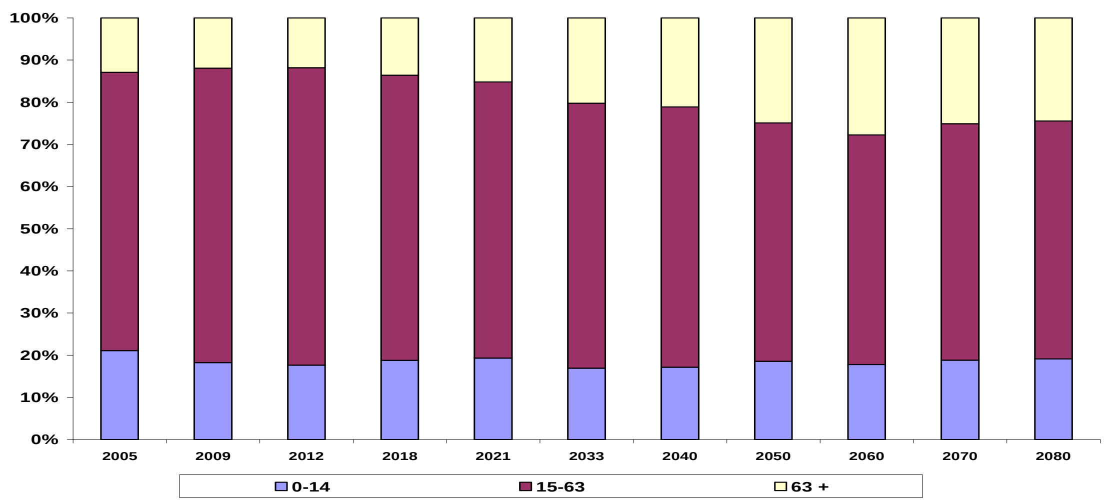
made by using the World Bank pension forecast computer model (PROST), the indicator for aging of the population, i.e. ***The proportion of the 63+ group in the entire population will amount to 15.6% in 2021 and will reach 26.7% in 2080*** (see Figure 5).

Rates of aging of the population in Armenia are impacted by:

- Higher life expectancy, particularly starting from the retirement age;
- Rapid decline of birthrate;
- Emigration of working-age population from the country (see Annex 3, Table 4).

3.1.4 ***In 1990-2005, increases of average life expectancy were recorded among both women and men.*** In 2005, they amounted to **76.5** and **70.3** years respectively, compared to **73.4** and **67.9** years in 1990 (see Annex 3, Figure 1 and 2). The difference between average life expectancies of women and men is a result of <u>*higher mortality rate among men*</u> (see Annex 3, Figure 3).

Figure 5. Forecast of population's distribution by age groups
(percentage of the total population)



	2005	2009	2012	2018	2021	2033	2040	2050	2060	2070	2080
0-14	21.1%	18.2%	17.7%	18.8%	19.3%	16.9%	17.2%	18.5%	17.8%	18.8%	19.1%
15-63	66.0%	69.9%	70.5%	67.6%	65.5%	62.9%	61.7%	56.5%	54.4%	56.1%	56.4%
63 +	12.9%	11.9%	11.8%	13.6%	15.2%	20.2%	21.1%	24.9%	27.7%	25.1%	24.4%

3.1.5 ***The average life expectancy starting from the retirement age***, which is important from the viewpoint of pension system reforms, ***is increasing steadily.*** According to forecasts using PROST, by **2021** this indicator will amount to **19.7** for women and **16.0** for men, and **24.1** and **19.6** respectively by **2080** (see Figure 6).

3.1.6 ***A declining trend of the birthrate***, as another factor influencing the aging of the population, ***is recorded since early 1980s*** (see Box 12). The trend slightly slowed down after the 1989 earthquake as a result of the compensation phenomenon. From early 1990s, however, the birthrate started to decline again. In 2005, the total coefficient of birthrate (fertility) amounted to **1.37**, compared to **2.62** in 1990, not ensuring even the simple reproduction of the population. According to forecasts using PROST, ***although the total coefficient of the birthrate is on the rise, it will reach the level of simple reproduction (2.15) only starting from the mid of 2030s*** (Figure 7).

Figure 6. Forecast of average life expectancy after retirement 2005-2080, years

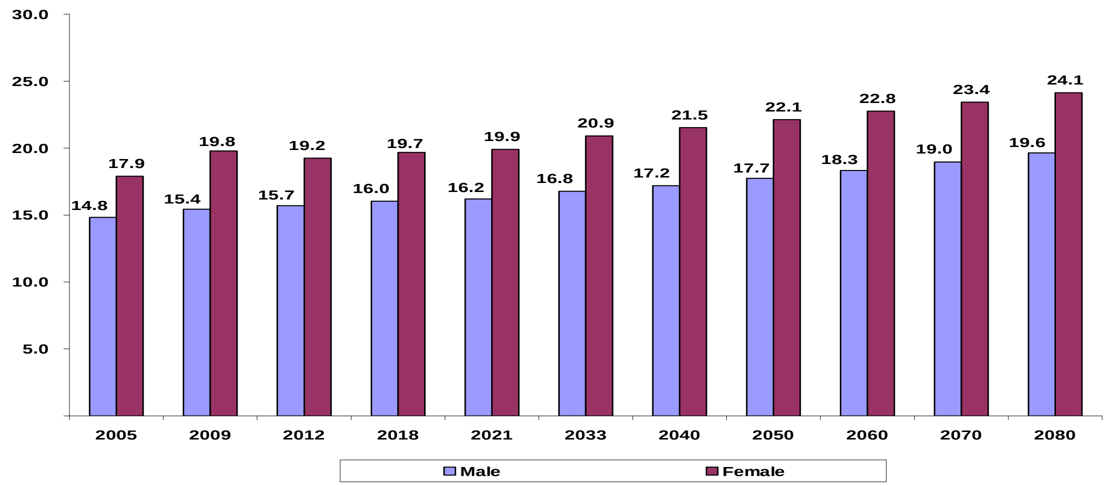
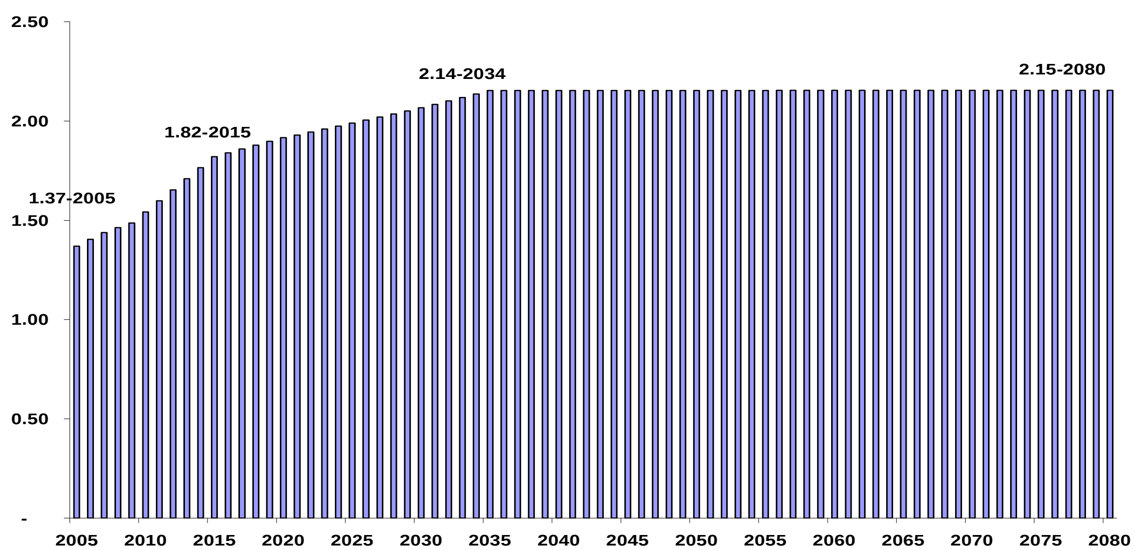


Figure 7. Forecast of total coefficient of birthrate, 2005-2080



3.1.7 The third important factor with an impact of the number of population and its sex-age composition is _migration_. ***Since 1990s, the external migration balance of the country is negative (emigration exceeds immigration).*** This is a result of the political and socio-economic situation in the country. The current procedures for administrative registration of migration (see Box 14) does not allow for assessing the real size and composition of emigration. According to official statistics, the negative balance in 2005 was -7.8 thousand people, which is a 25% reduction compared to 2001.

3.1.8 Although the state registration of migratory movements does not have the capacity to report their real sizes, the analysis of its data enables us to describe the essence of the migration structure. In 2000-2005, there was an increase in the proportion of men among citizens who left the country and were removed from the registry. In 2005, the majority of people who left the country and were removed from the registry were **20-49 year old**, among both men (**50%**) and women (**67%**). An increase in the proportion of men has also been recorded in the mentioned age group (see Annex 4, Table 3).

Box 12. Specific aspects of birthrate

From the middle to the end of 1950s, Armenia had a high birth rate characteristic to post war periods. A decline of birthrate was recorded in 1980s.

According to forecasts by experts of The *USAID project "Strengthening the Social Protection System" (SPSS)*, low birth rate will obviously result in the decline of the number of population and higher proportion of elderly with their corresponding demands from the social insurance system. At the same time, as a result, the number of new entrants into the labor market also decline, causing a decline in the number of people who make contributions to the social insurance system. This process is mitigated by the fact that the labor market is quite flexible and the decline in the number of workers can be compensated by high wages which will enlarge the contribution base.

3.1.9 Some improvement of the demographic situation in 2003-2004 due to a small increase in birthrate coefficient, is not yet adequate for a sustainable demographic development. From the viewpoint of simple reproduction of the population, ***the quite low level of birthrate coefficient continues to deteriorate the age composition of Armenia's population*** (see Box 13).

Box 13. Impact of birthrate on the pension system

According to forecasts by experts of The *USAID project "Strengthening the Social Protection System"*, the rapid decline of birthrate has not yet been reflected in the dependency ratio of the population. Demographic "responses" in 1950-1980s have become quite beneficial to the current pension system. The ratio of pension-age population to working-age population has declined from 22.8% in 1991 to 19.7% in 2006. A significant share of post-war children is still in the labor force and those born in the years of war have retired. But starting from 2015, The relatively low number of children born in 1990s will enter the labor force and new pensioners will be the larger number of children born in the postwar period.

3.1.10 From the viewpoint of pension reforms, the deterioration of population's composition is primarily reflected in **population's dependency ratio**. Increase in the ratio shows how much more retired citizens are dependent on the number of the working-age population. The declining trend of this indicator recorded in 1990-2005 will come to a halt in 2012. Thereafter, ***in the entire forecast period (with the exception of a few years in 2008-2015), the dependency ratio will steadily increase. In 2080 it will exceed by 2.5 times the projected level of 2009.***

3.1.11 Current and forecasted trends of Armenians demographic situation indicate that:

Low fertility rate (birth rate), increasing life expectancy and negative balance of migration are continuously "aging" our society rising the dependency ratio of the "army" of pension age population over the "limited" number of the working age population.

Box 14. Migration

The number of actual population recorded by 2001census was 590,000 less than the figure based on regular records at the beginning of 2001 (based on registration data maintained after the 1979 census). This difference in the numbers of population accumulated during the period in between the censuses was basically caused by the large volume of migratory movements due to the difficult political and socio-economic situation of the country in 1990s. Data on migratory movements was not recorded by official statistics because of the shortcomings of the existing administrative registration system for migration.

The integrated survey of households' living standards conducted in 2004 revealed that about 20% of respondent households had an absent member of 15 years of age or older, almost half of whom had emigrated to Russia.

Household-member migrants of 15 years of age or older by destination and reasons for migration, *percentages*

Destination	15+ migrant members	Reasons			
		Seeking jobs	Work	Study	Other family circumstances
Yerevan	9.5	5.5	9.6	45.9	39.0
Other city in Armenia	14.6	1.9	4.2	7.0	86.9
Other village in Armenia	9.3	0.0	9.0	0.0	91.0
Russian federation	53.3	32.4	50.4	2.2	15.0
Other CIS countries	3.0	16.9	29.1	6.3	47.7
European countries	3.3	47.5	29.1	10.1	13.4
U.S. and Canada	1.7	29.1	26.2	10.0	34.7
Other	5.3	4.2	8.6	3.1	84.1
Total	**20.0**	**20.9**	**32.0**	**7.4**	**39.8**

Source: NSS, ISHLS, 2004

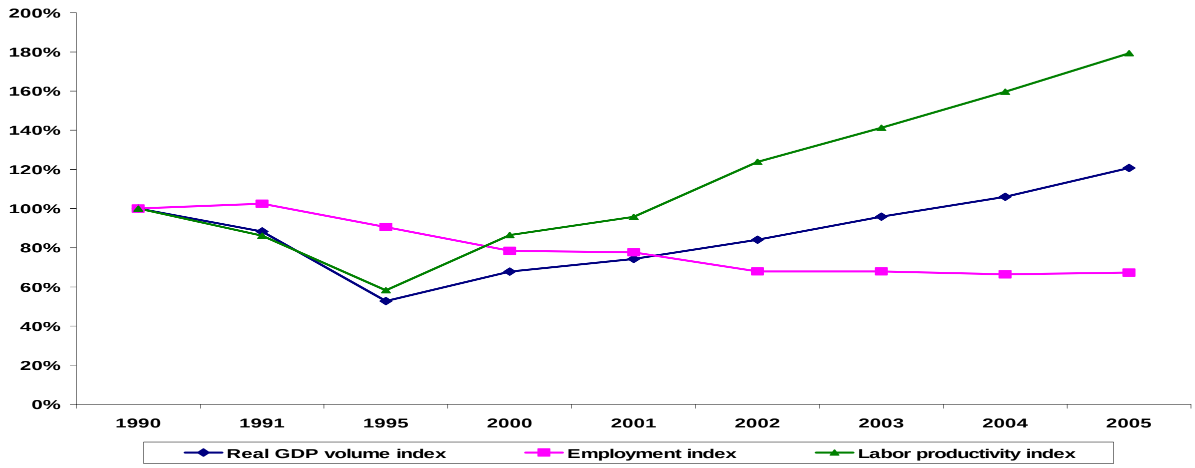
Recent improvements in the labor market of Armenia have had a positive impact on migratory trends. About 10% of households who had migrant members have mentioned that their migrant members are returning, including 4.4% from abroad and 5.4% from other settlements in Armenia. Reasons for returning from migration have not been studied.

3.2 Employment and unemployment trends

`3.2.1 Official statistics record ***development trends in Armenia's labor market with their own particular logic, which are characteristic to transition countries***. As a result of the economic decline in 1990s, the country had negative GDP growth rates up to 1993 (see Figure 8). In spite of that, a rise in employment was recorded in 1991. And in 1993, with the start of the economic recovery, employment rates started to decline. The light does such a if if and In the following years (1994-2004), the link between GDP growth and overall employment rate was negative, since the GDP grew steadily[21].

[21] The mentioned trends become understandable when the socio-economic transition environment of those years are described: serious issues but recording the shadow economy, employment and unemployment, unresolved methodological issues of labor market statistics, shortcomings of tax legislation and administration, etc. See "Labour Market in Armenia: Analysis and Policy", Astghik Mirzakhanyan, ILO/UNDP, Yerevan, 1999

Figure 8. Dynamics of the GDP, overall employment rate and labor productivity (percentage, 1990=100)



	1990	*1991*	*1995*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*
Real GDP volume index	100	88.3	52.8	67.8	74.3	84.1	95.9	106.0	120.7
Employment index	100	102.5	90.6	78.4	77.6	67.9	67.9	66.4	67.3
Labor productivity index*	1.0	0.86	0.58	0.87	0.86	1.24	1.41	1.59	1.79

** Calculated as the ratio of GDP and employment indexes.*

3.2.2 Comparison of GDP and employment trends reveals that ***economic growth in Armenia was accompanied not by employment, but by increase in productivity***. Productivity started to grow in 1995 and in 2002 already exceeded its level of 1990.

3.2.3 With regard to structural changes of employment in the same period, ***a significant flow of the employed from the public sector to the private sector of the economy was recorded***. In 2005, the proportion of those employed in the private sector of the economy amounted to **79.9%**, compared to **18.4%** in 1990. As a result, proportion of those employed in the public sector reduced by nearly four times. In 2005 it constituted **19.8%**, compared to **79.1%** in 1990. ***Changes in the employment structure of the population by fields of economic activity are also significant.*** In the mentioned period, the number of employed in manufacturing and construction reduced by **500 thousand**. In 2005, those two sectors accounted for **15.5%** of the total employment (compared to **41.7%** in 1990). At the same time, the number of employed in agriculture almost doubled. In 2005, 507.6 thousand people, or **46.1%** of all the employed, were employed in agriculture[22].

3.2.4 From the viewpoint of pension reforms, it is extremely important to <u>analyze the structural changes of the employed population by employment status.</u> Waged employees in 2005 constituted 48.2% of the employed, which is nearly half the level of 1995. ***On the contrary, the proportions of the self-employed and***

[22] Agriculture currently has the highest rate of employment in Armenia due to land privatization in 1991 which became a factor mitigating the shocks of the transition period, as well as the absence of policies for creating nonagricultural jobs.

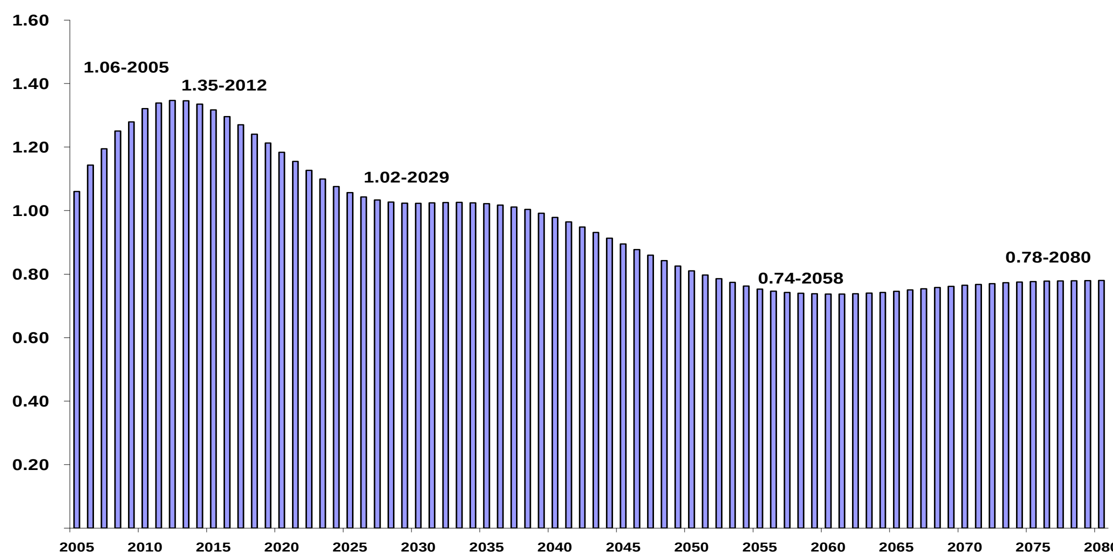
those employed in agriculture have increased significantly, respectively 6.0% and 45.8% in 2005 (see Annex 4, Figure 8).

3.2.5 The other important indicator from the viewpoint of pension reforms is the *economic activity of the population or labor force participation* indicator. This indicator is impacted by demographic trends in the country. The rate of economic activity of the population in Armenia (calculated as the ratio of the numbers of economically active population and labor resources) constituted **57.7%** in 2005, compared to **80.3%** in 1990. ***This 1.4 times decline of the indicator is a result of the following factors impacting the labor force supply:***

- ***low birth rate***
- ***population outflow***
- ***informal employment.***

3.2.6 *Birthrate* has a direct impact on the ratio of numbers of employed to the working-age population. Growth of the birthrate until early 1980s was reflected in the increase of the absolute number of working-age population in 2000s (see Annex 3, Table 2). At the same time, the decline of birthrates in 1980-2003 relatively increased the proportion of working-age population (see Annex 3, Table 3) from **63.9%** in 1990 to **69.7%** in 2006. In this demographic situation (when a labor force surplus was recorded due to high birthrates of 1960s-70s), the demand for labor force reduced in the labor market and the proportion of the employed in the working-age population declined to **53.5%** in 2005 (compared to **83%** in 1990). Of course, the decline of the overall employment rate had a negative impact on the indicator as well. However, ***the employment rate in 1990-2005 declined by 32.7% (see Figure 8), while the ratio of the employed to working-age population dropped by 64.8%.***

Figure 9. Non-working-age populations support rates, 1990-2080



3.2.7 The ratio of the employed to working-age population would have been much lower if there was no *laborforce outflow* to other countries. As described in paragraphs 3.1.7-3.1.8 and box 14, ***the migration of the working-age population, which had the highest proportion in the total outflow of the population, somewhat mitigated the tension in the labor market***. Population's labor migration, having a positive impact on labor market tension, nonetheless, worsened another important socio-economic indicator, i.e. the dependency ratio of the employed to non-working-age population (0-14 ¨ 65+), the so-called ***overall support rate of the population***.

3.2.8 <u>*The overall support rate of the population*</u> characterizes the social "load" of the country and is the basis for drafting state social policy. Higher values of the indicator reflect larger capacities of the population for social support. This rate was lower in 2005 compared to 1990, respectively **1.06** and **1.28** (see Figure 9). Although a small improvement of the indicator has been recorded in the last 4-5 years, but, according to forecasts, it will start to drop again from 2012. ***Unfavorable labor market and demographic trends limit not only the pension policy, but also the possibilities of the entire social policy, despite current economic growth rates.***

3.2.9 Part of the economic growth has been achieved in the informal sector. The size of this sector, according to NSS assessment, is around **27%**. Informal or unregistered employment, amounting to 140-180 thousand people according to various sources.[23] If we also take into account the hidden or so called "discouraged" unemployed, who do not refer to the employment centers, since they do not believe in their real support for finding jobs[24], then the ***gaps between survey data and official statistics regarding employment and unemployment rates and trends***, as described in Box 15, ***will become understandable.***

3.2.10 Within the context of pension reforms, there are certain problems related to the registration of those <u>*employed and self-employed in agriculture*</u>. They are exempted from taxes and conditionally can be included in the informal segment of the economy. According to the current legislation, they are not included in the list of entities

Box 15. Employment and unemployment trends 1998-2004

The results of the integrated survey of households' living standards conducted by the NSS record a decline of 2.7 percentage points in the economic activity of the population in 1998-2004. But at the same time improvements in both employment and unemployment figures have been recorded (see table below).

ISHLS results	
Economic activity, %	
1998/99Ã.	63.0
2004Ã.	60.3
Employment, %	
1998/99Ã.	46.0
2004Ã.	48.7
Unemployment, %	
1998/99Ã.	27.0
2004Ã.	19.3

Nevertheless, according to the indicators presented, the labor market of Armenia is characterized by low levels of economic activity and employment and high level of unemployment. The main reason for the low employment rate is below employment rate among women and young people aged 15-24 years. In 2004, the employment rate among women was 40% and among 15-24 year-olds 22.6%.

"Social snapshot and poverty in Armenia", statistical-analytical report 2006, pp. 77-78

[23] According to the results of the sample labor force survey conducted by NSS, 22.9% of the employed in 2005 were in hidden employment, 25.4% of hired employees (of the total number of hired employees) worked based on verbal agreements, 69.1% of the self-employed and employers were conducting unregistered activities (in the total number of employers and self-employed).

[24] Periodical labor force surveys conducted by the NSS allow us to assess the proportion of such unemployed persons in the total number of economically active population at 10-12%.

subject to mandatory social contribution payments.

3.2.11 According to the assessment of the Central Bank[25], nearly 53% of the employed are currently left out of the pension system registry, since they are employed in agriculture and/or have hidden employment and/or are self-employed. These are citizens who, by the "permission" of the legislation or due to the situation in the labor market, refrain from making income tax and social contribution payments.[26] But recording to State Pension Act, the citizens currently receive and in the future will also receive either insurance or social pension. Naturally, this is an obstacle to ensuring the sustainability of the current pension system.

Box 16. Approaches to definition of unemployment

According to Employment and Unemployment Social Protection Act 2005, an unemployed person is a working-age and able-bodied job seeker of 16 years of age or above who is unemployed and

- does not receive pensions defined by the law (except pensions for loss of breadwinner),
- are registered as job seekers at the state employment service
- are ready to take up appropriate employment
- have received unemployment status.

Sample labor force surveys of the NSS are based on standards defined by ILO, according to which an unemployed person is a person of 16 years of age and above (the age is defined in accordance be a national legislation) who during the survey period:

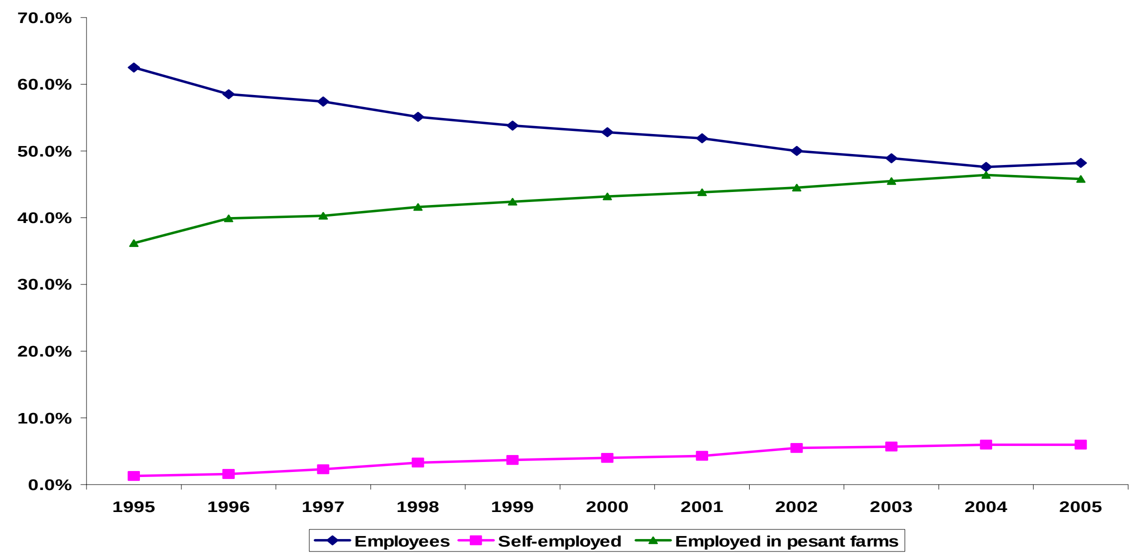
- did not have employment or income generating activity
- used every means to find jobs: applied to state employment service, acquaintances, relatives, followed announcements, etc.
- were ready to take up employment immediately.

3.2.12 There are registration issues also related to the assessment of the *unemployment rate*. For 2005 only, depending on the methodology for defining unemployment, its level fluctuated between 8.2% (officially registered unemployment) and 31.2% (unemployment calculated based on data from labor force sample survey according to ILO methodology) (see box 16). Unemployment was officially registered in the country for the first time in 1992[27] at **1.8%**. The official unemployment rate reached its peak in 1999 at **11.2%**. Later it gradually declined amounting to **7.5%** in 2006.

3.2.13 Such disproportions linked with informal, including agricultural employment, and hidden employment, are characteristic to labor market in Armenia (see Figure 10). As a result, it has become impossible to forecast and take fully into account their data in labor market indicators. Thus, ***the actuarial calculations by PROST for forecasting employment rates were based on application of the pattern of the above mentioned trends.***

[25] Calculations, analyses and assessments were made by the pension reforms preparation group of the Central Bank of Armenia.
[26] The State Tax Service of Armenia informs that after the transfer of contribution-collection function from the SSIF to them decreased the grey economy for 12%, as about 50 thousand contributors were discovered and covered by the tax system.
[27] By the adoption of the Employment Act 1991, the legal framework for defining and recording unemployment was established.

Figure 10. Dynamics of the number of employed by employment status 1995-2005
(proportion of the total number of employed)



3.2.14 Analysis of the employment and unemployment trends in 1990-2005 allows us to conclude that:

The overall employment rate's decline in economic growth conditions combined with the rapid decline of the number of wage-earners and rapid growth of non-formal employment (including those employed in agriculture and self-employed persons) shake the financial foundations of the pension

4. Financial sustainability of the system

4.1 Social and pension expenditures

4.1.1 The Constitution[28] declares that "The Republic of Armenia is a sovereign, democratic state, based on <u>*social*</u> justice and the rule of law", which obliges the Government of Armenia to pay particular attention to expenditures on the social sector. In 2000-2006, the <u>*physical volume of social expenditures*</u> in the consolidated budget increased by 2.6 times, amounting to **42.2%** of total expenditures in 2006[29] (see Figure 11). The ratio of social expenditures to the GDP,

[28] The first Constitution of the Republic of Armenia was adopted by the referendum of 5 July 1995, with further amendments adopted on 27 November 2005.

[29] The <u>*consolidated budget*</u> of Armenia is formed by funds from the state budget and mandatory social contribution payments (after January 2008 the concept of consolidated budget was eliminated as a result of SSIF restructuring). <u>*Social sector expenditures*</u> include expenditures on healthcare, education, social insurance and social security, including pensions.

however, is still under 9%, with some decline in 2006 compared the previous year (see Figure 12). The ratio of social expenditures to GDP in Armenia is a fraction of that of the European Union countries and two times smaller compared to the three Baltic republics (see Figure 17).

Figure 11. The proportion of social expenditures in the consolidated budget, 2000-2006

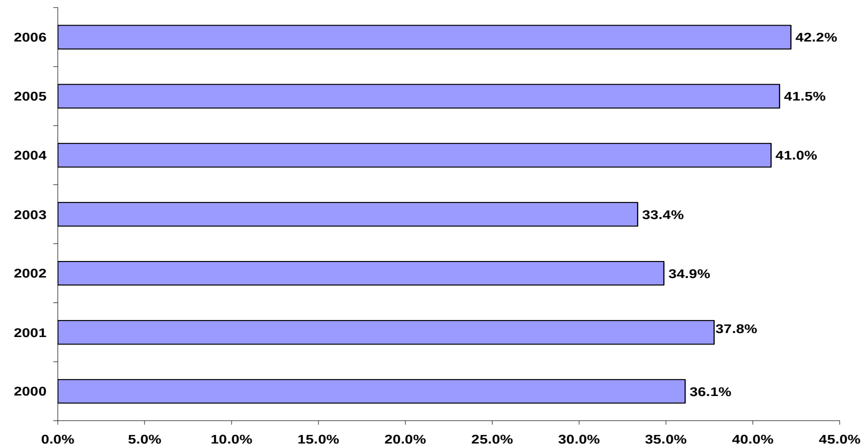
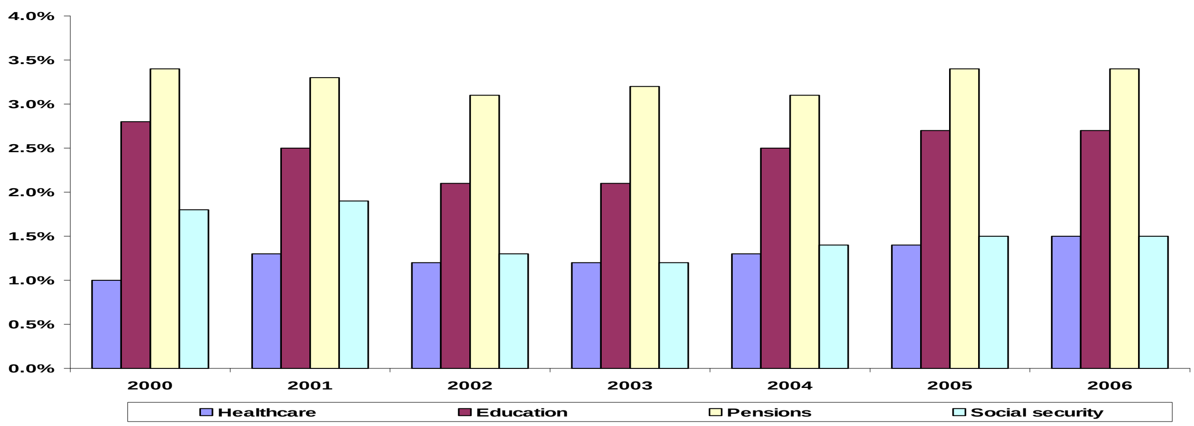


Figure 12. Ratio of social expenditures to GDP[30], 2000-2006

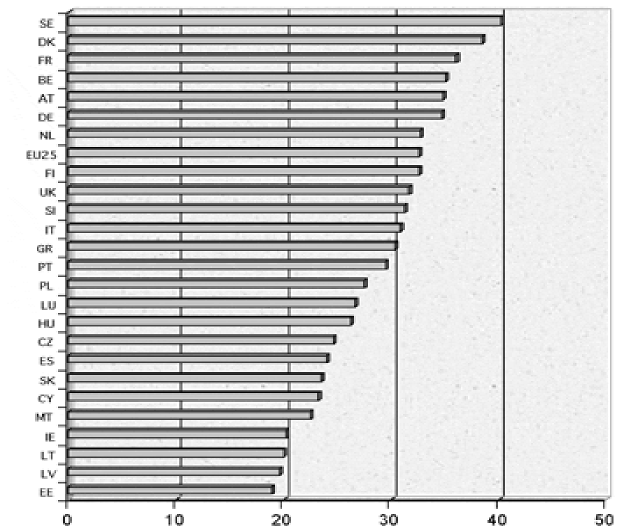


	2000	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***
Healthcare	1.0	1.3	1.2	1.2	1.3	1.4	1.5
Education	2.8	2.5	2.1	2.1	2.5	2.7	2.7
Pensions	***3.4***	***3.3***	***3.1***	***3.2***	***3.1***	***3.4***	***3.4***
Social security	1.8	1.9	1.3	1.2	1.4	1.5	1.5
Total	***9.0***	***9.0***	***7.7***	***7.7***	***8.3***	***9.0***	***9.1***

[30] In the calculations presented, pensions are separated from total social insurance and social security expenditures and *include all types of insurance, social and military personnel pensions.*

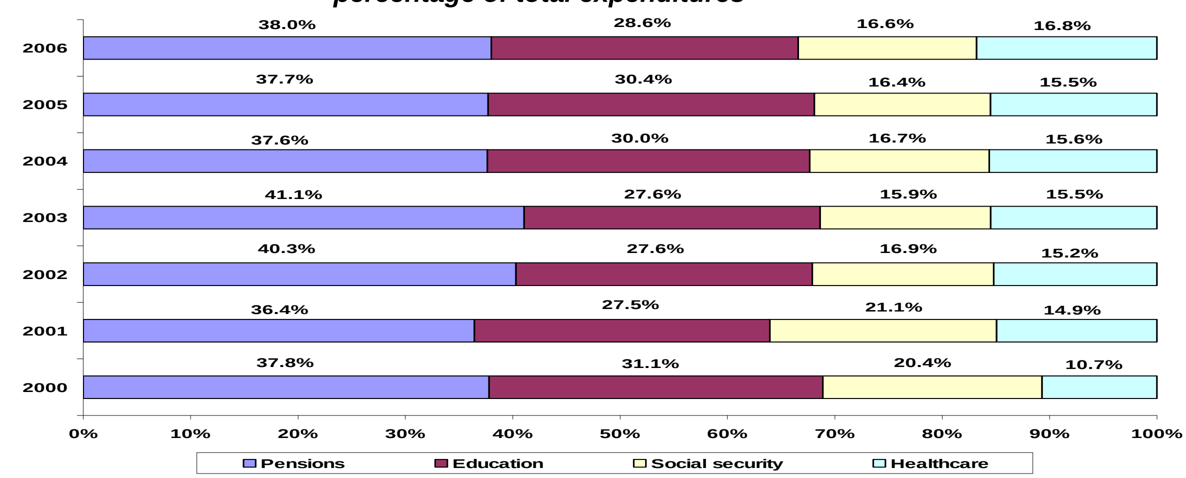
4.1.2 *Expenditures on pensions* constitute the largest component of total social expenditures. In 2000-2006, the proportion of pension expenditures was in the range of **36-41%**. In 2006, it amounted to **38%** (see Figure 13). It must be noted also that pensions constitute more than 2/3 of the total social insurance and social security expenditures: **72.5%** in 2005 and **69.6%** in 2006.

Box 17. Social expenditures to GDP in EU countries, 2002, %



4.1.3 Comparison of the dynamics of pension expenditures in 2000-2006 with replacement rates reveals the following important trend: ***Volumes of pension expenditures increased by 2.6 times, while their ratios to the GDP (3.4%) and total social expenditures (39%) remained unchanged. The replacement rate, however, declined by 22% in the same period: amounting to 16.9% in 2006 compared to 20.6% in the previous year.***

Figure 13. Composition of social expenditures 2000-2006, percentage of total expenditures



4.1.4 The above-mentioned analysis of social and pension expenditures reveals that:

Making up the largest component of the social sector expenditures and being the most hefty focus of the social protection policy, pension expenditures , however, are not enough for preventing the decline of

4.2 Financial sustainability and pension adequacy advocacy

4.2.1 Financial sustainability of the pension system is a crucial issue in any country. It became even more important in 1980s, when demographers all around the world recorded serious changes in demographic trends and *warned about the steady trend of population aging in the world*. In those years, governments became concerned about the financial sustainability of their pension systems. Academics and experts faced the challenge of assessing financial sustainability based on forecasts of demographic trends. *The formula* currently used for calculating the financial sustainability of pension systems is the following:

AP x NP = AW x NC x CT

Where:

AP – average pension
NP –number of pensioners (insurance)
AW – average wage, from which contributions are paid
NC – number of actual contributors
CR – current contribution rate.

4.2.2 The average insurance pension for 2005 was calculated by the mentioned formula:

AP = {AW x NC x CR}. NP = {AMD52.1 thousand x 435.5 thousand people x 25.8%}: 476.5 thousand people = AMD12,285

Comparing the calculated result (AMD12,285) with the actual average insurance pension (AMD 11,863) presented in Box 6 of section 2.2, we can state that we have reached the "limit" of the financial sustainability of the pension system[31].

4.2.3 Financial sustainability of the pension system, naturally, depends on the behavior of its components (see the formula above). From this point of view, it is very important to analyze the dynamics of those components and factors impacting them. This analysis will be the basis for future forecasts.

4.2.3.1 Number of pensioners (insurance) (**NP**) largely depends on the perspectives of the demographic situation the country, which are described in detail in section 3.1. Forecasts based on demographic trends in the country reveal that the gap between the numbers of retirement age (63+) and working age (15-63) populations will become wider. Experts call this the "pipeline effect" and forecast a dangerous decline in "pipeline conductivity" by **3.3 times** (see Figure 14). In calculations of the financial sustainability of the pension system the purely demographic indicator "retirement age (63+) population" is replaced by the "number

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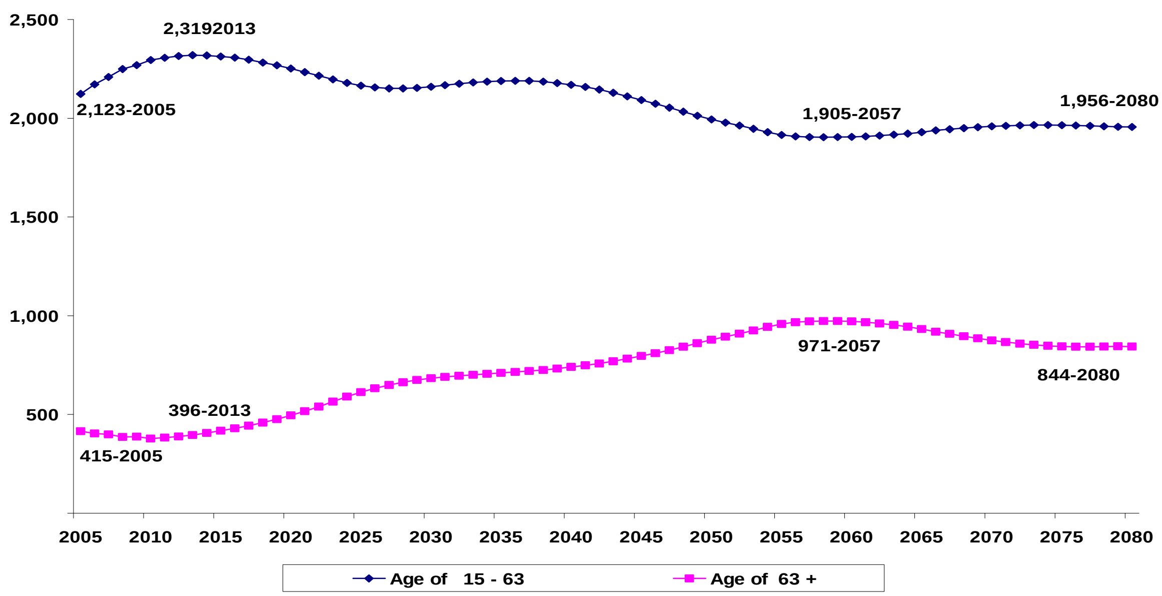
[31] The calculations do not include diverse administrative expenditures, which amounts to 1.2-1.5% of pensions paid, as well as other expenditure items of the social insurance budget (pregnancy, temporary loss of capacity to work, etc.), which amount to about 2.0-2.7% of pensions paid.

of pensioners” which currently has a higher value. In 2005, the difference between the mentioned indicators was more than 165 thousand people. The higher number of actual pensioners is a result of the following factors:

- Until 2002, 55+ retired women and 60+ retired man were included in the actual number of pensioners,
- Inclusion of pensioners who retired with privileged conditions,
- Inclusion of those who received pensions due to disability or loss of breadwinner.

In effect, the “pension load” of the system was larger and consequently the “pipeline conductivity” was lower.

Figure 14. The “pipeline affect” of Armenia’s demographic composition, 2005-2080



4.2.3.2 The next important element of financial sustainability of the pension system is the *number of actual contributors* (**NC**), which is a derivative of the “working-age (15-63) population” demographic indicator. Analysis of the specific manifestations of the labor market and its trends presented in section 3.2 reveals that the differences between the mentioned two indicators are more tangible. In 2005, according to official statistics, labor resources amounted to **2072.4** thousand people, while according to the state social insurance fund information, social contributions were made by **435.5** thousand people, or **4.8** times less (see Annex 3, Table 5). This difference is a result of the following factors:

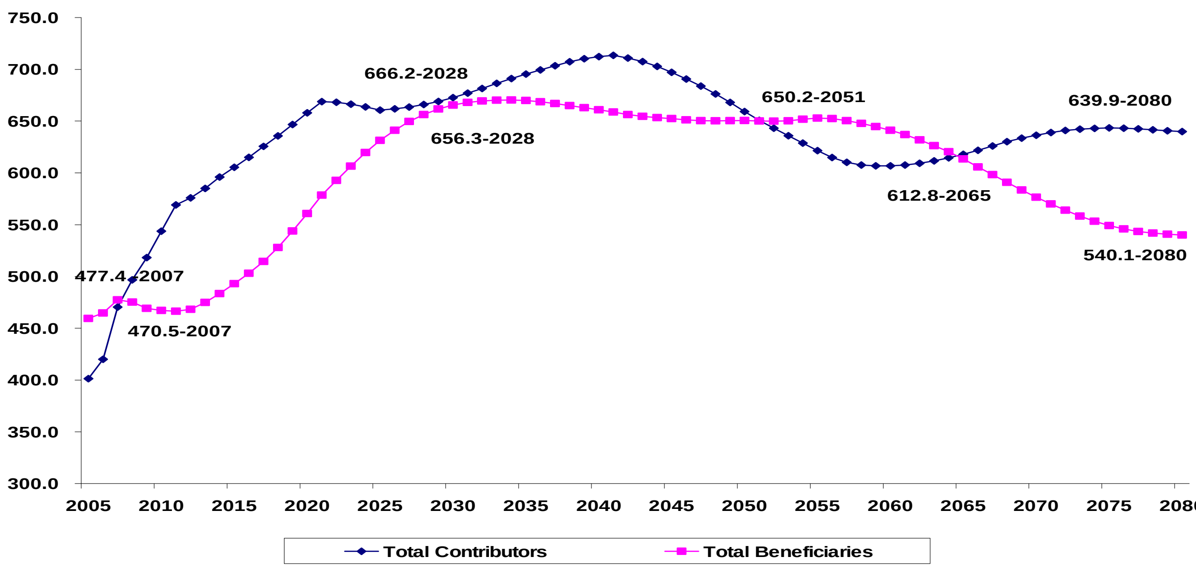
- In the total number of the working resources, **1175.8**thousand people or **56.7%** were employed. The figure includes employment in the informal sector and agricultural employment.
- Only **44.2%** or **519.3** thousand of the employed were working in the formal sector of the economy[32]

[32] Those employed in farms have also been considered as “employed in informal economy”, since they are exempted from mandatory social contributions.

- Only **83.9%** or **435.5** thousand people employed in the formal economy made social contributions.

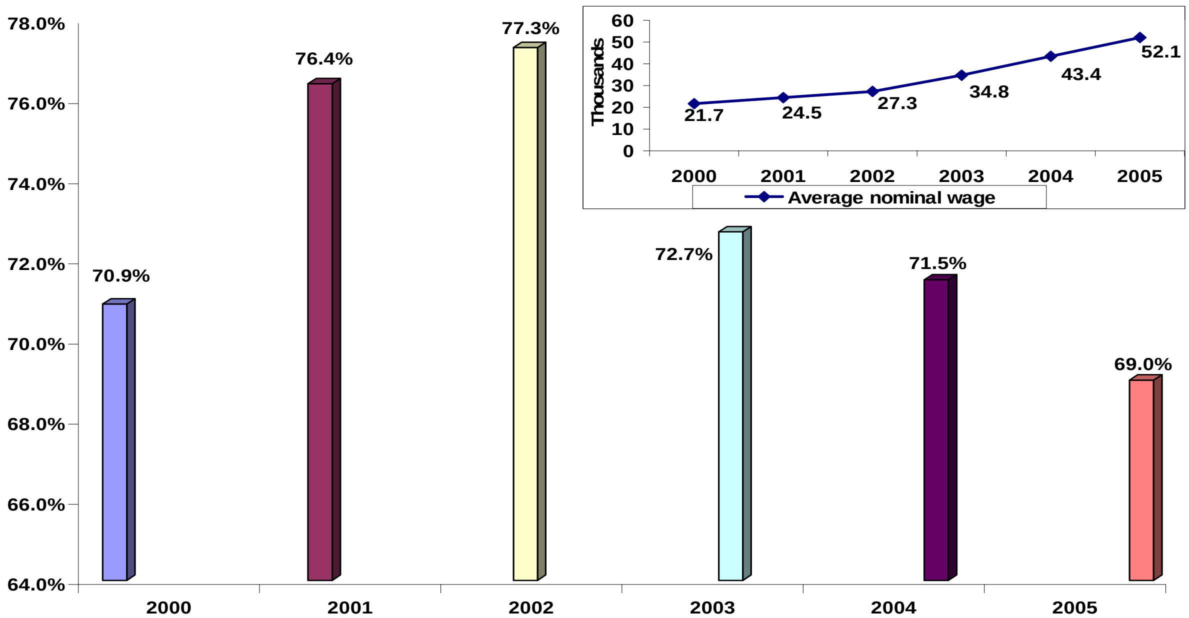
As a result, the pension load is redistributed over a lower number of working-age population. Forecasts of the pension insurance system presented in Figure 15 reveal that curves in Figure 14 switched places. This means that it already makes no sense to talk about the “pipeline effect”, since the ratio of the actual numbers of pensioners and contributors has deteriorated irreversibly.

Figure 15. Pension Insurance System, pensioners and contributors, 2005-2080



4.2.3.3 Financial sustainability of the pension system is directly linked to the *average wage, from which social contributions are made* (**AW**). The higher the average wage, the larger are the possibilities for financing the system. At the same time, the groups of wages from which social contributions are basically made are also important. Analysis reveals that in 2000-2005, from **69% to 77%** (by various years) of those who made social contributions were from the group of population receiving wages lower than the average wage (see Figure 16). Interestingly enough, according to official statistics for 2005 from the NSS, **17.4%** received wages up to AMD20 thousand and **51.6%** received wages from 20 to 50 thousand drams. At the same time, according to administrative data from SSIF, the mentioned indicators were **24.7%** and **49.8%** respectively. This means that besides the lower than average wages of the majority of those who make social contributions, this is an indication that employers hide part of the wages paid to employees. ***It is well known that hiding wages is a widespread practice even in the formal sector of the labor market.***

Figure 16. Average nominal wage and percentage of contributors who receive that wage, 2000-2005



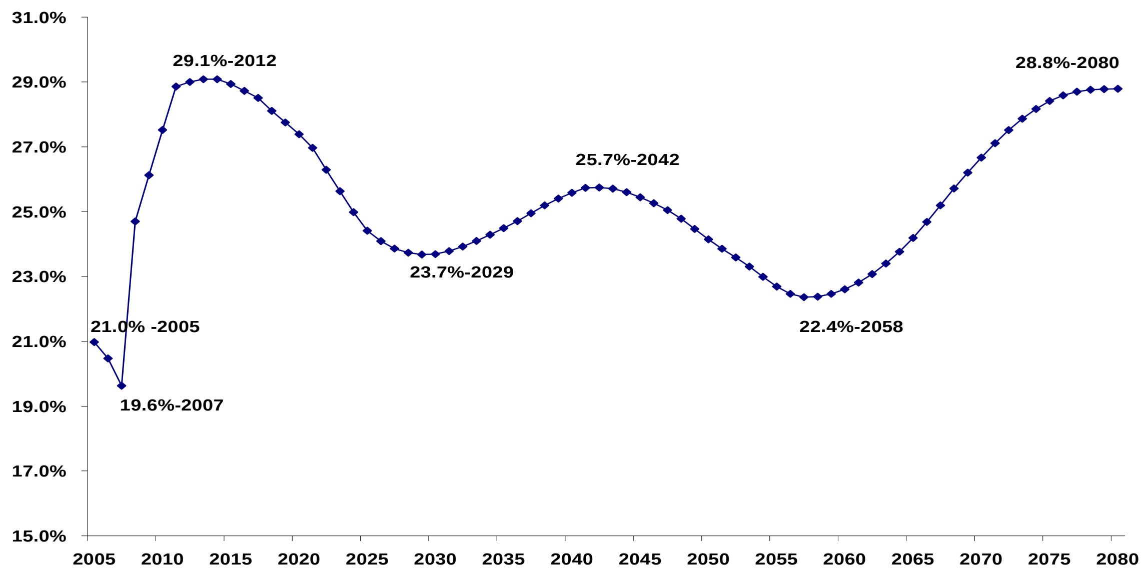
4.2.3.4 *Current social contributions rate* (**CT**) is defined by **Mandatory Social Insurance Payments Act** and amounts to **26.0%** of the average nominal wage (see Annex 3, Table 1). Details of social contributions, such as the list of contributors, procedures for payment, regressive tariff scale, etc, are presented in section 2.4.

4.2.3.5 Thus, the income part of the formula for financial sustainability of the pension system is directly linked to the number of contributors and levels of their incomes/wages, which expresses, in essence, the *contribution base* (**NC x AW**), and the monetary value of that "volume" (**CR**). The expenditure part of the formula depends on the number of pensioners and the average pension they receive, which, in essence, is the *expenditure base* (**NP x AP**). ***The pension system is financially sustainable if the two part of the formula are balanced.***

4.2.4 Financial sustainability of the pension system faces a no less important (if not more important) social issue, i.e. ***ensuring the adequacy of pensions in relation to the levels of income***. This adequacy, in essence, is expressed by the *replacement rate* (**RR**) of the pension.

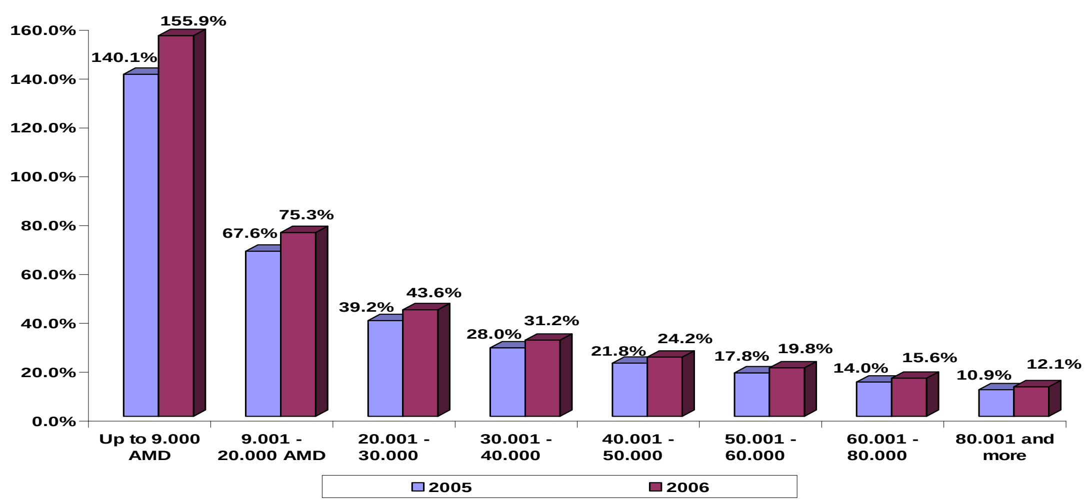
4.2.5 Optimal solution of the two reversely correlated issues, i.e. *financial sustainability and ensuring pension adequacy*, is that the basis of the pension policy of any country. Calculations of the World Bank experts using PROST show that ***the current pension system in Armenia is not able to ensure high replacement rates without disrupting the current financial balance of the system***. Without disrupting the financial balance, the system is capable (in the conditions of sharp increase of formality) of providing a maximum replacement rate of **29.1% in 2012**. While in the years with the worst demographic perspectives (2029-2058) the replacement rate will be **22-26%** (see Figure 17).

Figure 17. Possible replacement rates while maintaining the financial balance of the current pension system, 2005-2080



4.2.6 The average replacement rate varies significantly by wage groups. The specific feature of Armenia's solidarity pension system is the fact that lower wages have higher replacement rates. This means that the ***current system has a pro-poor nature***. This is an important criterion for evaluation of social insurance and social support programs financed by the state budget, but not with regard to indicators characteristic to classical pension insurance. The social criterion for evaluating the latter, as already mentioned, is the adequacy of pensions, which for those receiving wages are higher than AMD80 thousand barely reaches 10-12% (see Figure 18).

Figure 18. Replacement rates for various wage groups, 2005-2006



Wage group	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*
Up to AMD9,000	63.9%	65.3%	82.1%	106%	126.3%	140.1%	155.9%
9,001-20,000	30.8%	31.5%	39.6%	51%	61.0%	67.6%	75.3%
20 ,001 - 30 ,000	17.9%	18.3%	23.0%	30%	35.4%	39.2%	43.6%
30 ,001 - 40 ,000	12.8%	13.1%	16.4%	21%	25.3%	28.0%	31.2%
40 ,001 - 50 ,000	9.9%	10.2%	12.8%	17%	19.6%	21.8%	24.2%
50 ,001 - 60 ,000	8.1%	8.3%	10.5%	14%	16.1%	17.8%	19.8%
60 ,001 - 80 ,000	6.4%	6.5%	8.2%	11%	12.6%	14.0%	15.6%
80 ,001 and more	5.0%	5.1%	6.4%	8%	9.8%	10.9%	12.1%

4.2.7 The description above allows us to conclude that:

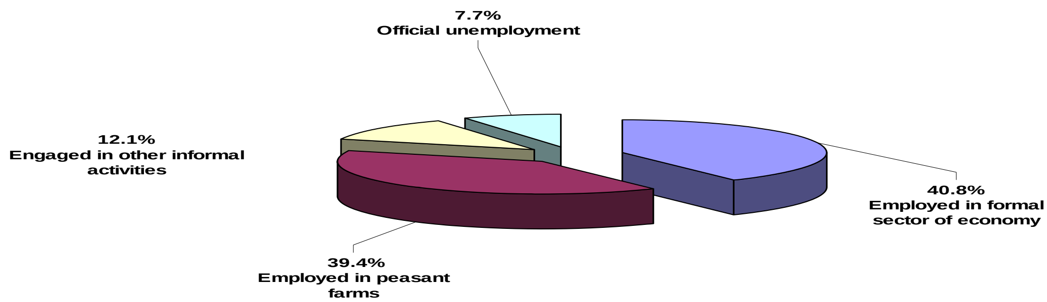
The need to ensure the financial sustainability of the pension system does not allow for resolving the issue of pension adequacy, as a result of which the maximum affordable pension replacement rate cannot exceed 30% threshold, while for some groups with higher than average wages the replacement rate will not exceed even the 10% barrier.

4.3 Incentives and disincentives

4.3.1 The priority action for maintaining the financial sustainability of the pension system is to expand *the contribution base,* which, as already mentioned in paragraphs 4.2.3.2-4.2.3.5, is currently very low. The mentioned indicators have three components: (1) number of people making social contributions, (2) the level of their wages and (3) the defined social contribution rate. Consequently, in order to increase the solvency of the system, possibilities for establishing incentive mechanisms for enhancing the role of each of those components should be determined.

4.3.2. Calculations reveal that *only **31.7%** of the economically active population makes social contributions* (see Annex 5, chart 1). Such a low level of the indicator is a result of a number of factors, which are essentially ***disincentives*** from the viewpoint of ensuring the contribution base. Analysis of the composition of the economically active population in Armenia (see Figure 19) reveals that the most influential factor counteracting the contribution base indicator is the absence of social contribution payments by large proportion of the population local are employed in agriculture (**39.4%**) and involved in informal employment (**12.1%**). The mentioned group of the employed constituting **656.5 thousand people** is nearly 1.2 times larger than the **519.3 thousand people** in formal employment.

Figure 19. Composition of economically active population of Armenia, 2005



4.3.2.1 According to Article 3 of the Mandatory Social Insurance Payments Act, those employed in agriculture and scientific or creative work were initially included in the list of people subject to social contribution payments. Accordingly, from 1998 they have made some payments. But based on difficulties of subjective and objective nature related to collecting social contributions from the mentioned groups of the employed, it was decided to exempt them from social contribution payments[33]. Study of statistical data reveals that the overall volume of social contributions collected from farms was actually very small and manifested a declining trend (see Table 3). ***In 2002, the annual amount constituted less than USD5 (AMD1472) per farm and less than USD1 (AMD 383) per employee***.

Table 3. Employed in agriculture and their social contribution payments, 2000-2005

Indicator	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Number of farms, thousand	332.6	334.8	334.7	337.9	338.5	339.2
Number of employed in agriculture, thousand people	552.0	553.6	492.8	503.5	501.6	502.3
Social contribution payments of the employed in agriculture, million drams	258.9	206.9	188.8	26.9	13.1	0
Social contribution per employee, drams	***469***	***374***	***383***	***53***	…	***0***
Social contribution per farm, drams	***1659***	***1654***	***1472***	***80***	…	***0***

4.3.2.2 Naturally, the situation described was a result of the ***extremely low level of inclusion of the employed in the group of people making social contribution payments***. The factors causing this situation are:

- The *“self-employed” status* of farms, i.e. Not belonging to any form of entrepreneurship defined by the legislation, limits the possibilities of relevant authorities for collecting social contributions,

[33] Changes to Act 476-N, 11 December 2002.

- The _absence of legal basis for declaration of incomes_ of farms as “natural persons” does not allow for resolution of any administrative issue relating to social contributions,
- _The seasonal nature of monetary revenues_ from farming is a serious obstacle to making regular monthly payments.

4.3.2.3 The same factors, to varying extents, influence also the inclusion of those involved in scientific and creative work in the system of social contributions. In order to fill the legal gap relating to this issue, the **Individual Entrepreneurs Act[34] entered into force in May 2001**. It introduced the status of “individual entrepreneur" for natural persons involved in income generating/profit making activities and regulated their relationships with the state. As a result, there was significant improvement in tax administration. ***Social contribution payments made by individual entrepreneurs increased substantially in 2000-2004, amounting to 16,772 per entrepreneur in 2004*** (see Table 4).

Table 4. Social contribution payments made by individual entrepreneurs, 2000-2005

Indicator	2000	2001	2002	2003	2004	2005
Number of individual entrepreneurs, thousand	52.4	56.9	61.8	63.5	67.1	71.6
Social contributions by individual entrepreneurs, million drams	170.3	330.7	451.9	757.1	1,125.4	…[35]
Social contribution per entrepreneur, drams	***3250***	***5812***	***7312***	***11923***	***16772***	***…***

4.3.2.4 Regardless of the increase in social contribution payments by individual entrepreneurs, the annual social contribution per entrepreneur amounts to only three times the minimum monthly social contribution defined by the law for one job position (AMD5000, see paragraph 2.4.3). That is not difficult to calculate that i***ndividual entrepreneurs registered in Armenia make social contribution payments throughout the year on average only for three months, or, in other words, only ¼ of the registered individual entrepreneurs make social contribution payments throughout the year, and ¾ does not make any social contribution payment.*** This situation is explained by the impact of the following factors:

- The _inconsistent nature of income generating activities_ by individual entrepreneurs
- The _absence of de facto activities_ by de jure registered individual entrepreneurs[36],

[34] Parallel to the mentioned laws, the Individual Entrepreneurship Act and Family Entrepreneurship Act are also enacted.

[35] Annual data for 2005 are not available, since in that year the function of collecting social contributions was transferred from the State Social Insurance Fund to the Tax Inspectorate of the Government of Armenia. According to the last data, only in the fourth quarter of 2005, the amount of social contributions paid by more than 42,000 individual entrepreneurs was more than 3.5 billion drams, which is three times more than the annual amount collected in 2004 (see Annex 3, Tables 6 and 7).

[36] According to the data of the State Tax Service of Armenia 26 thousand non-operational sole entrepreneurs were liquidated in 2006 only or 36% of sole entrepreneurs registered as of January 1, 2006. It must be noted that more than 86% of registered individual entrepreneurs

- *Wide possibilities for informal activities* while registered formally as an individual entrepreneur.

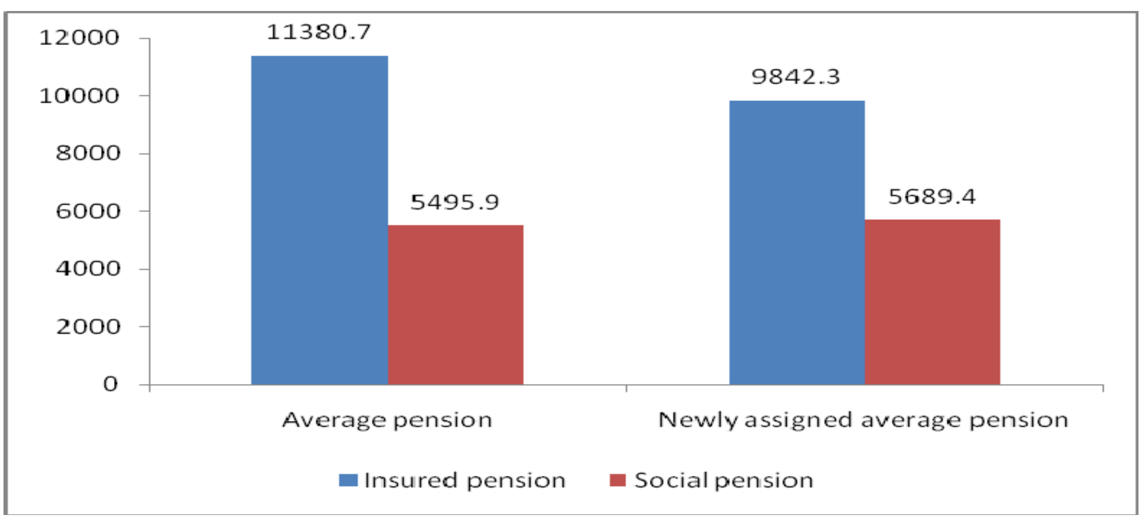
4.3.2.5 Despite being officially registered, all the farms and the majority of individual entrepreneurs complement those who from the viewpoint of the pension system are considered to be employed in the informal sector. If we also take into account those who are not registered but employed in the informal sector of the economy, who according to the last PRWG assessment, amount to 154.2 thousand people, it will become clear that ***more than 650 thousand people not on the list of those who pay social contributions "today", will end up on the list of state pension receivers "tomorrow".***

4.3.2.6 The situation created under the influence of the mentioned factors is beneficial to the above mentioned groups of the employed, i.e. besides objective factors, ***there are also subjective incentives by default for not making social contribution payments***:

- *The very small amount of insurance pension,*
- *The trend of narrowing the gap between the amounts of insurance and social pensions,*
- *Absence of the link between contributions and pensions.*

4.3.2.7 With an average of 33 years of insurance rate, the amount of insurance pension is only **2.1 times** higher than the social pension (see Figure 20) and this difference is gradually getting smaller. Social statistics record two opposite trends: a) years of insurance rate are declining under the influence of labor market factors (unemployment, informal employment, self-employment, etc.) and b) social pensions are continuously increasing through increased allocations from the state budget to the social security policy. As a result, ***difference between the amounts of pensions of new entrants in the social insurance system and social pensions is gradually decreasing.***

Figure 20. Average amount of insurance and social pensions, 2006



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made social contributions in 2006, which testifies to the stricter administrative measures taken by the Tax Inspectorate.

Types of pensions	***2006***	
	Average amount of all paid pensions	Average amount of newly allocated pensions
Insurance pensions, drams	11380.7	9842.3
Social pensions	5495.9	5689.4
Average insurance pension/average social pension	**2.071**	**1.730**

4.3.2.8 At the same time, the difference between the amounts of the two pensions, which is around 5.6-4.8 thousand drams, is very close to the minimum of 5 thousand drams of social contribution defined by the law for individual entrepreneurs and less than the 7 thousand drams of social contribution per employee paid by the employer. ***This is also a disincentive for paying social contributions.***

4.3.3 The next indicator characterizing the contribution base is *the amount of the wage subject to social contribution payment.* It is already mentioned in paragraph 4.2.3.3 that more than 2/3 of wages are concentrated in the groups with lower than average salaries, including around **24-25%** in groups with salaries lower than the minimum wage. This phenomenon is a result of the impact of the following factors:

- *Definition of the minimum monthly wage* by the legislation ***obliges employers and individual entrepreneurs to "formalize" paid wages at least to that level.***
- *Replacement rate,* calculated on the basis of the minimum wage, amounted to **75.9%** in 2006. This is 4 times higher than the average indicator (**18.4%**, see Figure 22), which is "senseless" to ***pay contributions from a salary higher from the minimum one.***

In fact, both the employers and the employees consider the minimum salary as a "mechanism for evading" from contributions.

Figure 21. Dynamics of the average insurance pension and minimum monthly wage, 2000-2006

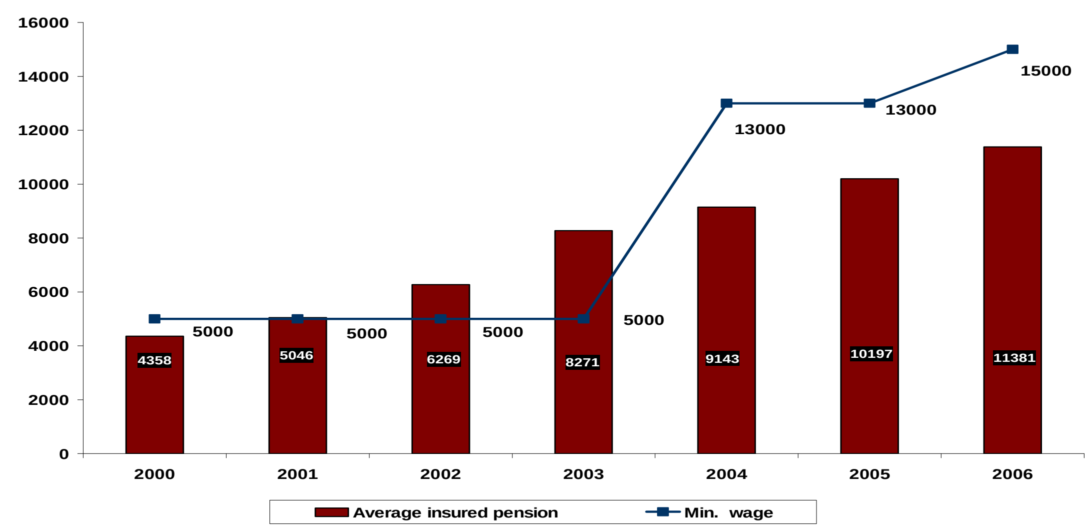
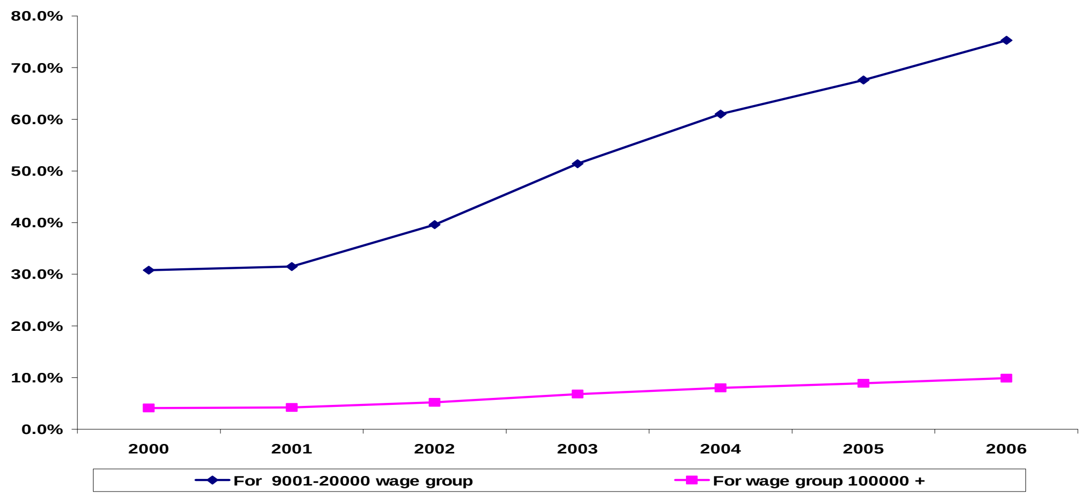


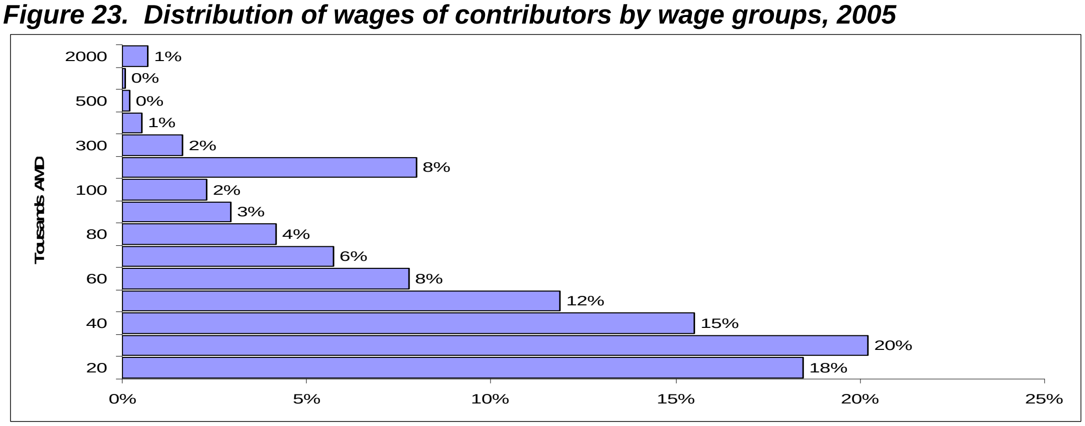
Figure 22. Comparison of replacement rates of those with minimum and high wages, 2000-2006



4.3.3.1 At the same time, the inadequate replacement rate for those in groups with higher wages (see Figure 22) is a serious disincentive from the viewpoint of social contributions. ***It encourages both employers and employees to hide the major part of the actually paid wages.***

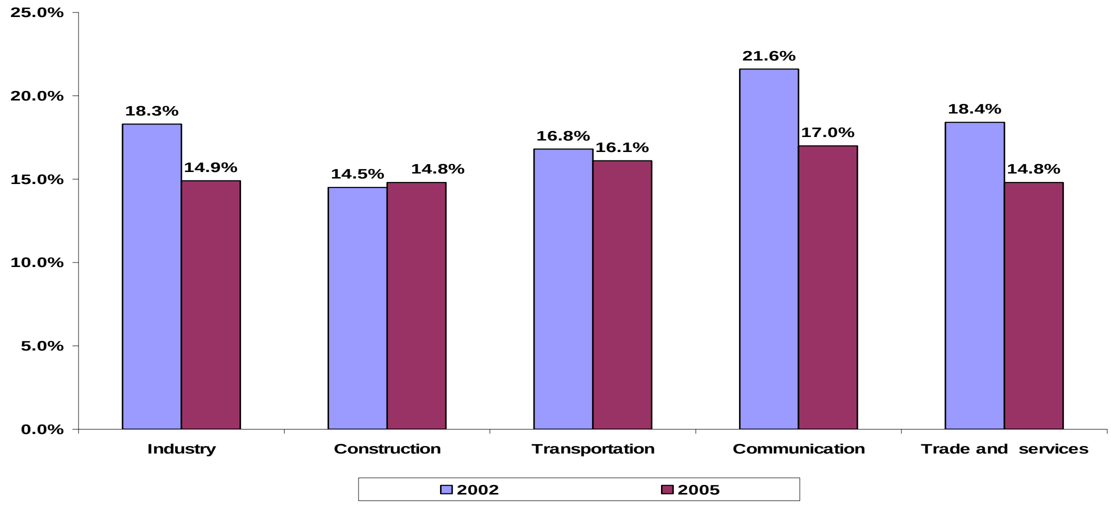
4.3.3.2 Social contributions from low wages, naturally, reduce the amount of contributions collected. Calculations based on actual distribution indicators of contributors by wages in 2005 revealed that ***the amount of social contributions made from wages higher than 100,000 drams was 10% larger than social contributions collected from wages up to 20,000 drams, although the number of contributors in the first case is 2.5 times smaller (see Figure 23).***

Figure 23. Distribution of wages of contributors by wage groups, 2005



4.3.4 *Definition of social contribution rate* is the most practical governmental leverage for influencing the contribution base. Since 1992 contribution rates have been changed for a number of times –from effective 30% (1992) there was a decline to 21% (2005) vs the wage fund. As a result, ***the decline of the proportion of social insurance expenditures for employees in the total composition of expenditures of organizations on the labor force*** (see Figure 24).

Figure 24. Proportion of expenditures on social insurance for employees in the total expenditures on the labor force, %



4.3.4.1 The regressive scale of the mandatory social contribution rate should have been an incentive for the “formalization” of higher salaries, but the progressive scale of the income tax operating simultaneously "neutralizes” the impact of that incentive. Wages continue to be formalized around the minimum wage, from which an incomparably small volume of social contributions are made. Thus, ***compared to the tax policy, the minimum wage policy has a larger impact on the contribution base.***

4.3.5 Another way to expand the contribution base is to ***include the unemployed groups in the composition of the economically active population.*** Ensuring employment for students, able-bodied pensioners and the disabled by using certain incentives will increase the number of people who make social contributions. The following incentives are used internationally for that purpose:

- *Student loans*, which encourage students and graduates to take up employment,
- *Increasing the retirement age*, which is being actively discussed in almost all European countries within the framework of pension reforms,
- *Flexible schemes of retirement age*, which encourage late retirement (widely used in Scandinavian countries).

4.3.6 It must be noted that increasing employment by involving the economically inactive population is a priority for countries, where the proportion of the employed in labor resources is high[37] and informal employment is small. Based on the economic situation in Armenia, during the drafting of the pension reforms incentive system, it is more appropriate to ***prioritize the increase in the number of people making***

[37] Employment rate in France, calculated as the ratio of the employed to labor resources, amounts to 72%, in Germany 81.7 percent, in the UK 73.4%, in the USA 80.5%. Armenia’s indicator for 2005 was 61.7% and a similar to that of Italy (62.6%) and Spain (60.3%).
“Politics, Ageing and Pensions”, - Economic Policy, April 2004, pp. 63-115.

social contributions among the employed by encouraging employment and formalization of the wages.

4.3.7 Summarizing the above-mentioned, we can state that:

The current pension system is "unattractive" for both employees and employers as a result of the numerous disincentives formed under the influence of different factors . In order to counterbalance those, pension reforms should considerably increase pensions in the short-term and ensure the link between individual contributions and pensions in the long-term.

5. Main conclusions

5.1 There is objectively a weak link between the levels of pensions in Armenia and the socio-economic development of the country, the GDP per capita and dynamics of wages, since the level of pension is primarily determined by political decisions. This is proved by the fact that despite the ongoing double-digit growth in the GDP over the years ***the amount of pensions in Armenia remains under the poverty line.***[38]

5.2 The low level of pensions violates the principle of solidarity since employed persons are not interested in making contributions to the pension system, which is not capable of ensuring pensions above the poverty line. ***Persons making mandatory contributions in Armenia make only 37% of the employed population.***

5.3 The current pension system is not "attractive" also for the employers who are evading from making mandatory contributions hiding the real number of positions and under-calculating the amount of wages actually paid. ***In the reports provided to the State Tax Service by the employers 69-77% (2000-2005) of wages is between the lowest and below-the-average wages.***

5.4 The requirement of ensuring financial sustainability of the pension system does not allow to considerably increase the pensions only at the expense of collected mandatory contributions.[39] ***Wide use of other budgetary tax resources for the funding of pensions describes the current system as pension security rathen than insurance.***

5.5 As long as the current pension system has classical traits mostly typical for social security, i.e. it is directly financed from the state budget and does not match to contributions made from the personal income, it cannot be completely deemed contributory. The pension legislation in place in Aremnia still is not supplied with the

[38] The increase in the amount of pensions from January 1, 2008 will almost bring the latter's amount in line with the poverty line.

[39] By the Government of Armenia Decree the 60% increase of pensions effective January 1, 2008 was funded from the state revenues. Such increase was impossible to fund from mandatory contributions without impairing financial sustainability of the Social Insurance Fund.

necessary mechanisms ***which in practice would ensure the operation of both state and private pension insurance industries in the country.***

5.6 The forecasted deterioration of the country's demographic situation which is a result of decreased birth rates and increase of average life expectancy will further increase the pension "burden" on the state budget since the "great" number of retirement-age population will dependent on the low number of working-age population.

5.7 In the view of aging population the pension expenses that increase every year, already make the largest component of social section of the state budget (38%) and the most weighty direction of the social security policy (72.5%, 2006Ã.).[40] However, ***there will be shortage of funds to prevent the decline of pension amounts vs. the speedily increasing wages.***[41]

5.8 In this and forecasted situation, pension system reforms become an urgent issue for Armenia, and the urgency will increase from 2011 until 2028, when one pensioner will depend on **0.98-0.73** effective, i.e. making social contribution payments, worker. Any "one-time increase" of pensions will not resolve (may even worsen) the strategic issues of ensuring financial sustainability and pension adequacy. Radical reforms of the current pension system are needed, which need to be planned seriously and implemented phase by phase in accordance with two important objectives:

- ***Ensure significant increase of pensions in the short term,***
- ***Ensure the link between contributions made from individual's incomes and pensions in the long term.***

5.9 The Government of Armenia has already taken the first step in this direction by planning a more than 60% increase in pensions. ***From January 1, 2008 the amount of the base pension from 4250 drams will increase to 6800 drams, and the value of one year of insurance rate will amount to 395 drams instead of the current 230 drams.***

5.10 Having in mind the forecasted deterioration of demographic situation in the country the Government of Armenia will consistenly continue ***activities in the direction of implementing the already conceptually adopted mandatory funded pension system***[42] clearly stipulated in the Republic of Armenia Government Program 2008-2012.[43]

[40] The pension boom of 2008 will considerably increase the referred indicators.

[41] This refers to *replacement ration* reflecting the average pension/average nominal wage ratio in the country. The latter will, according to projections, decrease starting from 2013 and reach to 23.0% in 2021 and 19.2% in 2033.

[42] See Government Decree N 796-N on Approving the Concept Paper on Pension Security System Reforms of Armenia dated May 26, 2006.

[43] See Republic of Armenia Program 2008-2012 (2007) and Government Action Plan and Priorities (2008).

Chapter II. Pension system reform

The problem of financial sustainability of solidarity pension system exists in many countries of the world as a result of the rapid aging of population. 100 years after the introduction of the first solidarity pension system by Bismarck in Germany in 1880, countries all around the world started to transform their existing systems in an attempt to overcome the ever widening gap between the "financial sustainability of the system" and "pension adequacy". Countries have different experiences based on their choice of tactical mechanisms. The strategic direction, however, is the same for everyone: diversification of state's financial risks and increasing the possibilities for citizens to receive additional pensions.

6. International experience in pension reform

6.1 Main international concepts[44]

6.1.1 Pension systems exist in all developed countries of the world, as well as the majority of developing countries. The types and main parameters of those systems, however, can be very different. International experts state that within the huge number of existing pension systems it is impossible to find two totally identical systems[45]. Nonetheless, through studies of pension systems around the world, experts have come to a conclusion that they can be grouped into two major models:

- *defined-benefit model* (**DB**)
- *defined-contribution model* (**DC**)

6.1.2 <u>*The defined-benefit model (DB)*</u> is widely used in countries, such as the USA, western, eastern and Central Europe and former Soviet Union countries. The main principle of this model is that ***first the size of pension to be paid is defined as a result of political debate (in the case of state pensions) or based on contracts (in case of private pensions), then the mandatory contribution rates are determined based on actuarial calculations.*** The main alternative within this model is the **"pay-as-you-go" (PAYG)** <u>*pension scheme, which is used in the state pension security systems of all the above-mentioned countries.*</u> Payments are not usually personified and are collected in the state budget. And the beneficiaries of the defined pensions are not those who make contributions at the given point in time, but those entitled to pension as defined by the legislation. Armenian experts refer to PAYG as <u>*"solidarity pension system"*</u>, which is effectively the only pension scheme currently operating in Armenia[46].

6.1.2.1 Pension systems based on the DB model are basically different from each other depending on the following factors:

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[44] http://www.sif.am/glossary

[45] "Guidebook to Pension Reform", Barents Group LLC, USAID; "Pensions Panorama. Retirement-Income Systems in 53 Countries", Edward Whitehouse, the World Bank; Pension Reform", Robert Holzmann and Edward Palmer, the World Bank, "Old Age Income Support in the 21st Sentury", Robert Holzmann and Richard Hinz, the World Bank, ¨ etc.

[46] The solidarity pension system currently operating in Armenia is described in detail in Section 2 "Pension system" of Chapter 1 of this report.

- What components are included in the formula, or in other words what criteria are used to determine the size of pension,
- Is the size of pension linked to the personal income of the beneficiary,
- If yes, then which income of the beneficiary is used to calculate the size of pension (for example the average income for all years of work, or the average for certain years, or the average for recent years),
- If not, is any other personified indicator, which would differentiate pensions by labor input of beneficiaries, etc., used.

6.1.2.2 Other than the above mentioned parameters of the pension calculation formula, pension systems based on the **DB** model are different from each other also by types of contribution made to the system. Approaches to this issue also different depending on the following factors:

- Which is financing source of the system: targeted (pension) mandatory contributions, or general social taxes,
- Are they (contributions are taxes) paid only by employees, only by employers, or both,
- In case of mandatory contributions, are they personified and accumulated (conditionally) in the individual account of the contributor, etc.

6.1.2.3 The next important characteristic of DB pension systems is the methods for paying pension, which differentiate systems based on the following factors:

- What types of pensions are defined and for what cases,
- What regulations apply to the payment of pensions,
- How are pensions indexed according to the growth rate of average wage, the consumer price index, or any other synthetic indicator, etc.

6.1.2.4 Finally, **DB** pension systems can be *state, private or mixed*, and correspondingly are classified into the following types:

- *State pension systems based on the DB model,* when state pensions can be the same for all citizens or (more often) differentiated by social, professional, age, or income groups, length of services, marital status, number of children, etc.
- *Private pension systems based on the DB model*, when private financial institutions define their own pension insurance conditions, particularly the rates to be paid and the amounts of pensions.
- *State-private pension schemes based on the DB model*, when the state purchases annuities[47] from private financial institutions for certain social groups of population, in order to provide them with pensions in cases defined by the legislation.

6.1.3 *The defined contributions model (**DC**)*, which is also called the *funded model*, is a relatively recent introduction into pension systems of countries. It is particularly common in Latin American, Eastern European and Baltic states. At least half of the OECD countries with high incomes have introduced pension systems based on the CD model in the last two decades. The main principle is that ***first the mandatory contribution rate is defined in the legislation as a result of political debates, and then the amounts of pensions are determined based on the volume of actual accumulations and incomes from their investment and***

[47] *Annuity* is basically a form of financial contract made by life insurance companies, which guarantees are fixed or variable amount of payment to the holder of the annuity or the beneficiary.

dividends received. Payments are accumulated in individual accounts specially opened for that purpose and are channeled to investment portfolios. The accumulated amounts grow throughout years and are paid to the given person when he or she reaches retirement. The Government of Armenia plans to introduce the DC model in the country within the framework of its strategic plan for 2008-2012.

6.1.3.1 Pension systems based on the DC model are also diverse, and as a novelty introduced in late 20th century are always improved and further developed. Depending on how the system has been introduced and in which direction it has developed, the DC model currently has the following applications:

- *The **DC** model is the only pension Security System,* operates on private bases with strict regulation and supervision of the state. This application of the **CD** model operates in parallel to and is complemented with a wide range of state social assistance programs (poverty benefits, social pensions, etc.), which are designed to support those outside the private pension system. This is the pension system used in Latin American and Caribbean countries, as well as Australia and Iceland.
- *The **CD** model operates in parallel to the state pension security system,* covers certain professional and/or age and/or income groups of population. Funds functioning by the CD model may be also state managed (the so-called ***provident funds***). In this case, specific rules for operations of the pension accumulation funds and state social security systems. This type of pension system is more widespread in Western Europe, the USA, Canada, as for the state managed funds – they are widespread mainly in Southern-and-Eastern countries like Singapore, Thailand, Malaysia.
- *The **DC** model is incorporated into the existing pension system of the country* and is the indispensable component of the unified system. This pension systems were called " Multi-pillar" and are regulated by the general pension security law of the country. The rules for mandatory participation of citizens in various pillars of the pension system are defined by the legislation. This totally new approach is widely used in a number of Eastern European, Baltic and CIS countries currently engaged in radical pension reforms. The pension system reform working group of the Government of Armenia has also selected this approach for establishing the new pension system.

6.1.3.2 The **DC** model is mainly ***used as fully-funded private pension insurance***. In this case, pensions are formed by the amounts accumulated by the employee during his years of service and revenues and dividends received from those amounts. This model is strictly personified, since the pensioner himself " finances" his pension.

6.1.3.3 In recent years, some modifications of the DC model are being applied also to the solidarity (PAYG) pension system, in order to complement the pension security of solidarity nature with pension insurance elements of funded nature. In the modifications of the DC model "accumulations" of the contributions have a *non-financial nature*[48]. The main types are *notional-defined contributions (NDC)* and *points schemes*[49].

6.1.3.4 The notional-defined contributions pension scheme assumes that part of the mandatory contributions is conditionally registered in personified "virtual accounts". An interest rate promised in advanced is applied to these accounts. Amounts in personified individual accounts are actually used for current pension payments.

6.1.3.5 In state pension schemes based on points collected, those who make mandatory contributions "collect" certain points in accordance with their incomes and/or contributions made. Each year the state, based on the possibilities of the state budget, attaches a "value" to each point. At the time of retirement, the total value of points collected by the contributor is added to his pension.

6.1.3.6 The **DC** model can be introduced based on two principles *mandatory and voluntary*. Depending on where this model is introduced (state or private), the rules for implementing the principles are totally different and are practically grouped into the following alternatives:

- *Mandatory introduction of the **DC** model as the dominant direction of pension security policy in the country*, in which case other pension security programs, be it state social security programs or individual or corporate pension schemes, are used as an ***addition*** to the dominant direction,
- *Mandatory introduction of the **DC** model as an additional direction of pension security policy in the country*, in which case it is used as "an addition" to the dominant state pension security of the ***DB*** model, in order to solve two important problems:
    a. The link between pension and individual's earnings, i.e. ***ensuring pension adequacy,***
    b. In case of lower level of state pensions, ***creating possibilities for receiving additional pension***.
- *Voluntary introduction of the **DC** model as an additional direction pension security policy in the country*, in which case it is used as "an addition" to any pension system modal operating in the country (**DC** or **DB**).

6.1.4 Other internationally recognized concepts used for studies of pension systems are ***concepts characterizing the typology of pension systems***: They are also used to group various pension systems operating around the world. Basically, the following concepts are used:

- *Levels* of pensions system - there are two levels: ***solidarity*** and ***insurance***,
- *Types of pension* at the solidarity level –usually grouped into three types: ***Targeted, base and minimum;***

[48] See for example "Pension Reform: Issues and Prospects for Non-Financial Defined Contribution Schemes", edited by Robert Holzmann and Edward Palmer, the World Bank , 2005.

[49] Another modified DC type of pension insurance is the so-called "defined credit" scheme, which is used only in Switzerland. The specific feature of this scheme is that the state defines a number of parameters: mandatory insurance payments by age groups of contributors; b) minimum profitability of accumulations, which needs to be ensured mandatorily; c) shares of pension payments made based on annuities.

- *Pension models and their types* used at the insurance level – these are usually four[50]: ***defined benefits (DB), defined contributions (DC) models as well as notional-defined contributions (NDC) and point-based (PB) types of the latter***,
- *Managing entity* of the pension scheme – which can be **state, private and mixed: state-private**.

6.1.5 *Levels of the pension system* are targeted at solving two different types of social problems. *The solidarity and level* aims to insure the ***social protection of citizens who are not able to work***, thus the priority of the level is to:

prevent and in the poverty of pensioners and ensure their minimum living standards.

The insurance level of the pension system aims to ensure the ***compensation of the incomes of the working population***, thus poverty of this level is to:

ensure the link between citizens incomes, their mandatory social contributions and their future pensions.

6.1.6 As already mentioned, there are three *types of pension* at the solidarity level:

- *Base pension* – is a general instrument of social protection in state pension systems, which is allocated to all citizens of the country entitled to pension, regardless of their former and current level of earnings. It is specially used in former socialist countries and a number of developed European countries.
- *Targeted pension* –contrary to the base pension, this type of state pensions is used as an instrument for mitigating income inequalities and from this point of view it is similar to social assistance benefits. It is commonly used in almost all European countries. The size of targeted pension differs depending on the following circumstances:
  - Is the pension the only source of income for the citizen,
  - Does the pensioner have any savings,
  - Does the pensioner have any income generating property.
- *Minimum pension* –is an important instrument of poverty reduction used in state systems, which is specially common in countries of the Middle East, North Africa, Eastern Europe and Central Asia. Only certain groups of population, i.e. the most vulnerable, are entitled to this pension.

Pension models of the insurance level are described in detail in section 6.1.3.

6.1.7 Using the mentioned concepts, pension systems of 53 countries have been classified in accordance with the above-mentioned methodological and typological criteria, which is presented in Annex 3, Table 9.

6.1.8 In order to assess all the areas of the pension policy in the country (social security, social insurance, social assistance to the elderly, etc), the concept of *pillars of the pension system* is used. By using this concept experts depict the whole

[50] For the "defined credit" insurance pension of the DC model used only in Switzerland see footnote 49 on the previous page.

picture of the pension system of the given country. From this point of view, pension systems may be divided into five pillars[51].

- ***"0" pillar*** –which, in essence, is a <u>*social security policy component*</u> for the population and supports the elderly, disabled, survivors (see Chaper 3, section 8), who are left outside labor market, at the expense of the state budget;
- ***"1" pillar*** –which, in essence, is a <u>*component of mandatory social (pension) security policy*</u> and provides mainly universal types of pensions to all persons satisfying specific requirements set forth by the legislation at the expense of mandatory social contributions paid to the budget;
- ***"2" pillar*** -which is a <u>*component of the mandatory pension insurance policy*</u> and provides pensions corresponding to the amount of contributions made at the expense of social contributions of the population from their incomes (in essence savings);
- ***"3" pillar*** –which is a component of the <u>*voluntary pension insurance policy*</u> and provides pensions at the expense of insurance payments made by the population on an individual or corporative basis, two the amounts corresponding to the latter.
- ***"4" pillar*** –which, in essence, is programs targeting old-age pensioners, which provide various types of monetary or nonmonetary social assistance and social services, in order to protect the health of the elderly, provide them with care and shelter (we are mainly referring to homes for the elderly), etc.

6.1.9 All the described concepts are strongly interconnected and only by using the entire set of those concepts we can have a full understanding of the pension system and the pension policy enacted in a given country. Based on the panorama of pension systems in different countries, alternatives for using the main concepts in reference to the above mentioned pillars of the pension system are summarized in Table 5[52].

Table 5. Brief description of pillars of pension systems

Characteristics	***Pillars of the pension system***			
	"0" pillar	***"1" pillar***	***"2" pillar***	***"3" pillar***
1. Managing entity				
State	+	+	-*	-
Private	-	-	+	+
2. Pension model				
DB	+	+	-	+
DC	-	**	+	+
3. Level of pension system				
Solidarity	+	+	-	-
Insurance	-		+	+
4. Participation principle				
Voluntary	-	-	-	+
Mandatory	+	+	+	-
5. Financing				
State Budget	+	+	-	-
Self-funded	-	-	+	+

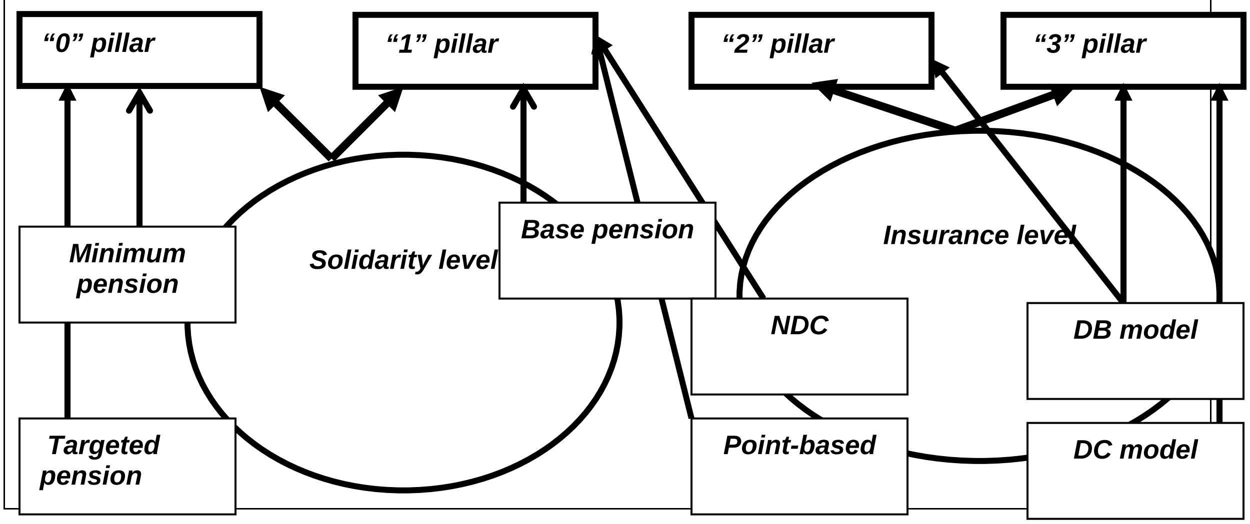
[51] For detailed description of the multi-pillar pension system see "Old Age Income Support in the 21st Century", Robert Hollzmann and Richard Hinz, the WB, 2005.

[52] The "4" Pillar of the pension system is not included in the summaries in order not to overload in-countries of age related pension issues.

** the state can manage pension fund.*
** may also be of a DC model, ** *<u>notional-defined contributions</u> or point-based pension schemes (see details in 6.1.3.4 and 6.1.3.5)*

6.1.10 The chart of the links between the levels and pillars of the pension system is presented in Chart 2.

Chart 2. Links between the levels and pillars of the pension system



6.1.11 Classification of pension systems in 53 countries with the use of the above-mentioned concepts is presented in *Annex 3, Tables 8.* The *Tables 9-13 of Annex 3* also contain summary data on different countries related to pension issues. These data have served as a basis for cross-country comparisons described below.

6.2 Cross-Country Comparisons: Main Challenges

6.2.1 Cross-country comparisons of pension systems and recent international experience of pension policy within the last decades prove that there are serious challenges related to *<u>ensuring financial sustainability of state pensions and pension adequacy</u>* almost in all the countries of the world. These challenges are conditioned both with general factors typical to all countries and specific circumstances typical to certain group of countries.

6.2.2 Universal <u>aspects</u> of the pension system are:

Box 18. Forecasted Life Expectancy in OECD Countries for 2050

	2000		**2050**	
	Men	***Women***	***Men***	***Women***
France	74.8	82.8	80.0	87.0
Germany	74.7	80.8	80.0	85.0
Italy	75.5	82.0	81.0	86.0
Spain	74.9	82.1	79.0	85.0
UK	75.2	80.0	80.0	85.0
OECD total	***74.1***	***80.6***	***79.3***	***84.7***

Source: OECD 'Health Data', 2000 Economic Policy Committee

- Ageing population;[53]
- “Wide assortment” of pensions;
- Drastic increase of pension expenses;
- Availability of informal economy and incompliance in terms of taxes.

6.2.2.1 All European countries, including Eastern Europe states warn about the tendencies of ageing population. According to the OECD projections due to increase of average life expectancy in developed countries (see *Box 18*) in 2050 the total number of population above 65 will make 2/3 of the total population in Spain and Italy, more than 1/2 in Germany and France and 30-45% in the UK and USA. Due to ageing of population ***the dependency ratio of the elderly[54] is expected to drastically increase in the OECD and transition countries*** putting financial sustainability of state pension system in these countries under danger. For instance, the dependency ratio in OECD countries will average to **49.9%** in 2050 *vs.* **23.8%** in 2000. This is also expected in Eastern Europe, Baltic and NIS states – dependency ratios will increase for 2 to 2.5 times in these countries averaging to **50%** in 2050.[55]

6.2.2.2 Pension systems *characterized with the “wide assortment” of pensions and “generosity” of pension entitlement* that are typical to European and all NIS countries. It is a consequence of pension system maturing targeted at maximum protection of population’s social rights. ***Due to ageing of population quick growth of retirees vs. contributors of the system does not allow to ensure “generosity” of the system anymore.*** In some countries, particularly in NIS countries share of population covered by the pension systems makes **25 to 30%.** For instance in *Kazakhstan* 27% of the population gets different, including privileged pensions, in *Russia* every third resident receives some pension, in *Armenia* every 5th person is pensioner.

Box 19. Pension expenses against GDP, %

	2000	**2050**
France	12.1	15.9
Germany	11.8	16.8
Italy	14.2	13.9
Spain	9.4	17.4
UK	4.3	3.6

Source: OECD, 2002

6.2.2.3 Due to increased burden on pension systems *pension expenses* surpass all the other social expenses in the OECD countries amounting to **12-14%** of GDP (in some countries pension expenses absorb more than **50%** of all public moneys for the social sector, see *Annex 3, Table 10).* Population of OECD countries pays taxes amounting to 75% in order to maintain “generous” pension systems (see *Annex 3, Table 11). **However, even with high taxes the referred states are not able to prevent dropping adequacy of pensions vs. increased salaries due to deteriorating demographic situation.***

[53] This factor is not typical only to countries, mainly Middle East, North Africa and to some extent Latin America that have high birth rate.
[54] Note that usually this is ratio of dependent age of the population being over 65 *vs.* population in the working age, i.e. 15- to 64-year olds.
[55] For example, according to projections the dependency ratio in Croatia will make 50% in 2050, 41% in Lithuania, 86% in Russia, 47% in Armenia.
Projections on demographic situation in Armenia are reflected in point 3.1 and Annex 4 of this Paper.

6.2.2.4 In order to overcome continuous "amplification" of pension systems OECD NIS countries were reviewing terms of *"social contracts"* with employees during the whole course of 1990s (see *Annex 3, Table 14 and 15*). As a result, retirement age for men and women were increased, existing privileges were removed, replacement ratios calculated in the pension formula were decreased, length of service was increased, contribution rates were increased, etc. ***However, even with the impact of these reforms the experts forecast growth of pension expenses up to 17 to 18% of GDP in 2050.***[56]

6.2.2.5 *Informal economy and tax evasion* and other phenomena are existent in any country. In developed countries this is basically an outcome of high taxes (see *Annex 3, Table 10*) and informal employment of immigrant workforce. According to different sources informal economy in OECD countries makes **15 to 20** of GDP. In Eastern Europe and former social NIS countries the informal economy that is at least twice bigger **(30 to 40% of GDP)** is also conditioned with tax and customs administration. Specialists warn that ***attempts of some countries related to increasing contribution rates for balancing growing pension expenses led to evasion from taxes and growth of informal economy.***

Box 20. Evasion from Contributions in Italy

The Italian Ministry of Labor made a statement on the "unauthorized workforce" revealed as a result of checks by the Ministry within 2003-2006. For instance *130,000 companies* did not contribute for their employees at all, about 175,000 unauthorized employees also evading from contributions were revealed, about Euro 12 billion was under-contributed as a result of misrepresenting the real amount of wages for 300,000 employees. In general misrepresentations total to 10% of contributions.
http://www.ipe.com/news/Italian_government

6.2.3 Among the abovementioned universal problems NIS countries, including Armenia encounter a number of *specific phenomena typical to countries with transition economy* more complicating financial sustainability of state pension systems and adequacy of pensions. They include:

- Scarce resources of the state budget result on the cutting of "generous" programs inherited from the previous economy;
- Low income of the population, prevalence of poverty, pensions and benefits (in some cases - also salaries) not ensuring minimum living standards;
- Unemployment, particularly high level of unreported unemployment;
- Underdevelopment of market structures and infrastructures of the country;
- Dilemma whether to "encourage economic growth" or "social protection" from the perspective of prioritizing public funds, etc.

6.3 Pension reforms: International Experience

6.3.1 Despite the nature and urgency of challenging problems governments of all the surveyed countries[57] are trying to overcome them using approaches

[56] See "Politics, ageing and pensions". Vincezo Galasso and Paola Profeta, - Economic Policy, April 2004.

[57] It should be stated that among all OECD countries serious pension reforms were not initiated only in the US.

according to socio-economic, political situation and public perception that very often differ from each other. In practice, countries initiate and implement *radical or partial reforms of the pension systems* that may be grouped by the following main dimensions:

I. ***Radical restructuring of state pension system through full privatization of insured pillar:*** This dimension was mainly implemented by the so-called "Chile Model". But other models of pension system privatization are known as well.[58] *Conceptual approach* of this dimension is that the state shall care only for the needy and vulnerable population ensuring with old age targeted minimum pension only for those strata of population. Workable strata of population have to ensure their old age (and that of their relatives) themselves through savings. *Theoretical mechanism* of using the model is the transformation of mandatory pension system into pension industry which by itself means complete privatization of the insured pillar of the system. This dimension of reforms were preferred by *Latin America and Caribbean countries, Australia and Iceland, and Kazakhstan – from NIS countries.*

II. ***"Relieving" of state pension system through modifications in the formula for the calculation of pensions and/or pension entitlements.*** This dimension is known as *"parametric reform"* as it is related to revision of important pension parameters within the current system. *Conceptual approach* of such reforms is that the state shall care for the improved quality of life and health maintenance of the aged contributing to the increase of their working years. Encouraging work of the aged and/or their involvement in gainful activities public resources shall be mainly targeted at those groups of the elderly that are really incapable to work or whose incomes are below the certain margin. From this perspective *economic mechanisms* used for the implementation of reform mostly lead to the increase of retirement age and/or setting of flexible age scale, modification of pension calculation formula with the objective of decreasing its amount (so that pensions become less attractive), encouraging staying at work, etc. Parametric reforms reached their peak in 1990s when they were being intensively implemented particularly in *Western Europe* (see Annex *3, Table 15*). Transition countries also had to implement some parametric reforms in mid 90s. Like all NIS countries (see *Annex 7, Table 2) Armenia also increased the retirement age in 1996, completely changed the pension formula and introduced the new principle of indexation (linking with the salary was replaced with pension indexation).*

III. ***Introduction of private pension schemes parallel to state pension system encouraging people's participation in these schemes.*** This approach was first used in the US in late 1980s when independently from the Social Security Act adopted in 1935 mechanisms for introducing, regulating and encouraging

[58] The "Chile Model" was first developed and implemented in Chile during 1981-1983 and its main character (as described in sub-point 6.1.3) is mandatory insurance (SV model). In some European countries mandatory privatization of pension system was accompanied with the use of SK model, e.g. in Iceland, Holland, partially – Sweden where mandatory contributions are made to the private SK model pension schemes. Under this point of the project privatization direction of state pension systems regardless of the used model is discussed.

private and corporate pension schemes were set forth by a new law.[59] *Conceptual grounds* for the dimension are similar with the previous one with the only difference being the fact that keeping the amount of state pensions low the state encourages public participation in private pension schemes. Apart from the indicated market mechanism (which is low pension) some countries also use *economic mechanisms* like provision of tax privileges for participants, provision of targeted loans from the accrued amounts, etc. This dimension of reforms is prevailing almost in all states of Western Europe since 2000 but with the difference that it is implemented parallel to parametric reforms of the 2nd pillar, i.e. current state pension system.

IV. ***Development of new multipillar system on the basis of state pension system through improvements of the current system and introduction of new pillars.*** This is a completely new approach and was developed by the *World Bank* in the frames of technical assistance program for structural and institutional reforms in former Soviet countries. *Conceptual approaches* for this dimension are structured with the combination of all the abovementioned approaches and, as a matter of fact, are related to the fact that all members of the society are exposed to at least one case of inability – old age. Specific share of population is exposed to ability to work or other accidents before the retirement age. Older share of the population is exposed to health deterioration due to old age, inability to take care of themselves, and other conditions. Consequently, threats posed for the society members that are incapable to work shall be distinguished to the possible extent and managed in a differentiated manner. This is laying grounds for the concept of multipillar pension insurance system, otherwise called as diversification of risks related to old age, working incapability, survivor benefits, as well as those related to social assistance issues, sources for their funding and ensuring complex management of these risks under one common pension policy. *Economic mechanisms* operating within the multipillar pension system differ by their pillars and consist of manifold tools for the regulation of governance system and market economy, including payment of social benefits, acquisition of insurance annuities, management of personal accumulation accounts, capitals and financial market regulation, in specific cases provision of state guarantees and tax privileges, etc.

6.3.2 Dozens of countries, mainly Baltic States, Eastern Europe and NIS transition countries have moved in the direction of *Multipillar Pension System development.* Initial phase of reforms was ***mainly in place during 1998-2002*** when 10 former soviet states (see *Table 6*) introduced mandatory pension insurances system (2nd pillar). Moreover, in 1994 to 1996 in some transition countries voluntary participation of employees in private pension schemes was already envisaged by the legislation and was being encouraged (3rd pillar).

[59] Individual Retirement Accounts (IRAs) are of great use in the US, 401K, 402K Pension Programs.

Table 6. List of Transition Countries Having Mandatory Pension Insurance System (MPIS) (or being in the preparatory stage)

N	***Countries***	***Year of MPIS Introduction***	***N***	***Countries***	***Year of MPIS Introduction***
1.	Hungary	1998	9.	Kosovo	2002
2.	Kazakhstan	1998	10.	Russia	2003
3.	Poland	1999	11.	Lithuania	2004
4.	Slovenia	2000	12.	Slovak Republic	2005
5.	Latvia	2001	13.	Macedonia	2005
6.	Bulgaria	2002	14.	Albania	2008
7.	Croatia	2002	15.	Ukraine	*In progress*
8.	Estonia	2002	16.	Armenia	*In progress*

6.3.3 As stated by international experts[60] reforms with the introduction of multipillar system are targeting at the following strategic changes:

A. Transfer from distribution pension systems funded through pay-as-you-go principle to "self-funded" accumulation systems;
B. Transfer from DC model defined on the basis of formula calculations to DC model defined on the basis of actual incomes;
C. Transfer from pension systems directly managed by the state to private pension industry regulated and controlled by the state.

6.3.4 Selection of the abovementioned strategic dimensions for the restructuring of pension systems is conditioned both with mandatory and sufficient factors. In other words, *countries on the way to reforms are not only mandated but also – interested in conducting reforms.* Reforms are necessitated by universal and specific problems that at least 1/3 of the world was confronted at the end of the 20th century that are thoroughly described under 6.2 of this section. Positive impact of reforms on political, economic, financial and social environment of the country makes them preferable by governments and people. Table 17 of Annex 3 presents advantages of multipillar pension systems that are often indicated by the specialists.

6.3.5 Advantages of multipillar pension system are acceptable almost by all specialists. But it is well-known that pension reforms are *quite expensive processes* and most of the country governments face difficulties in overcoming the opposition to such expensive reforms from political forces.[61] Moreover, in transition countries pension reforms are also challenged with the issue of state budget deficit "permitted" international financial institutions. Hence, ***budgetary constraints may create difficulties for the implementation of pension reforms.***

[60] See for instance Guidebook to Pension Reform, USAID

[61] Opposition to pension reforms is particularly typical for the countries with aged population. For instance, results of Euro-barometer regularly conducted by the Eurostat reveal the following fact: in European countries majority of voters average age of which is coming close to 50 answered positively to the question "Would you agree to increase of pensions through increased contribution rates" ad vast majority, i.e. 89.6% in the UK. See "Politics, ageing and pensions". Vincezo Galasso and Paola Profeta, - Economic Policy, April 2004.

6.3.6 The same budgetary constraints require that countries having taken the political decision on introducing multipillar pension system forced by the need of addressing numerous problems in the area of pensions shall pay more attention on the *ways of forming and implementing the system.* In Armenia as well as in other transition countries different positions were developed as a result of discussions of these issues leading to the following:

- ***In terms of public funding should the preference be given to strengthening of 0 and 1 pillars or to promoting introduction of the 2nd insured pillar during the development of multipillar pension system?***

- ***During the introduction of multipillar pension system is it necessary to prioritize the development of 3rd pillar followed by the introduction of 2nd mandatory pillar or they should be implemented in parallel?***

- ***Should participation in the 2nd pillar of pension insurance be voluntary or mandated by the legislation?***

- ***Should all citizens or specific age groups participate in the 2nd mandatory pillar of pension insurance?***

- ***Should accumulated pension amounts be managed by a state entity of private structures?***

6.3.7 Countries having implemented reforms (or being in the preparatory stage) had different tactical approaches towards addressing these problems. Review of political and economic and socio-economic evaluations of this experience, as well as that of the most typical aspects[62] (see *Tables 17 & 18, Annex 3*) enables us to draw important conclusions in terms of Armenia's pension reforms. They are classified in accordance with the issues listed under 6.3.6:

6.3.7.1 Before the introduction of multipillar pension system *almost all the transition countries* (except for Slovak Republic[63]) implemented the following:

- *Institutional reforms* (1991-1995) for bringing the pension system inherited from social regime in consistency with the requirements of market economy;
- *Parametric changes* (1996-1998) for bringing types of pensions and forms of their allocation, calculation and payment in consistency with economic and financial-budgetary capacities.[64]

[62] See for instance "Old Age Income Support in the 21st Century", the WB, 2005, "Pension Reform in Eastern Europe: Experiences and Perspectives", FIAP, 2004, " Guidebook to Pension Reform", USAID, "Pension Reform in the Baltic States", ILO ¨ ³ÛÉÝ:

[63] Slovakian pension legislation remained unchanged since 1988 and only after the adoption of the Law on Introduction of Multipillar Pension System in January 1, 2004 the previous system underwent radical changes; see Marek Lendacky "The reform in Slovak Republic" in " Pension Reform in Eastern Europe: Experiences and Perspectives", FIAP, 2004.

[64] The Republic of Armenia also passed traversed this path, for details see Sections 2.1-2.2 of Chapter 1.

6.3.7.2 While planning pension reforms the existing pension system was usually being modified over and over[65] in order to place it on conceptual footing of multipillar systems. Review of country experience shows that *two approaches for the modification of the existing system were used in general:*

- ***Improvement of the existing system*** for putting the pension types in order, bring them in consistency with the methodological requirements of 0 and 1st pillars as well as with the rationale of 2nd and 3rd pillars, clarify sources of funding, ratio and parameters of pension payments. This approach was used in *Hungary, Bulgaria, Macedonia, Slovak Republic, Croatia, Estonia*, etc.

- ***Restructuring of existing system:*** This was implemented e.g. by *Poland, Latvia, Russia;* Armenia also tried to move in this direction in terms of legislation (see *2.3.2* and *Box 8*), however, this is not completed yet. Countries having chosen this approach have considerably changed the DB solidarity system into insured pension through introducing notional-accumulation model (see 6.1.3.5).

According to international experts in countries where introduction of mulipillar pension system was accompanied with restructuring of the existing pension system the cost of reforms was considerably higher – for instance in Poland it amounted to 1.6% of GDP, whereas in Hungary – 0.6% of GDP.[66]

6.3.7.3 While implementing pension system reforms it is extremely important to keep the momentum of comprehensiveness and consistence. Transition countries passed the way of pension system reforms in different manners. For instance:

- *Hungary, Croatia, Kosovo, Poland, Slovak Republic, Macedonia, Bulgaria* etc. ***implemented multipillar pension system through initially designed and approved unified law.*** In the referred countries all the pillars of multipillar pension system were described under one common plan and enacted simultaneously through adoption of a common law;
- ***Multipillar pension system implemented through initially designed and approved separate laws*** was typical to Baltic states which have described pension reforms in open plan but later distinguished issues related to the development of solidarity system (1st pillar) from the issues related to the introduction of insured system (2nd pillar). Hence, multipillar pension system was introduces through phases by the adoption of two different laws on State Pensions (1998) and Insured Pensions (2000). As local and international experts indicate[67] such approaches are full of political danger as it was the case with Lithuania when the Draft Law on Mandatory Insurance System reached to a new stage of discussions as a result of change of authorities (2000) and was protracted for two more years and after the adoption of the law (2002) the actual accumulation process was commenced only from July 2004;

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[65] *Kazakhstan* had a unique approach towards this issue. Without improving the solidarity PAYG system it quickly introduced the mandatory 2nd pillar of insured pensions for all employed persons with the requirement of contributing 10% of the salary. The solidarity system was preserved for current pensioners and payment of minimum old age benefit.

[66] See Agnieszka Chlon-Dominczak “Pension Reforms in Eastern Europe”, FIAP, 2004.

[67] See e.g. “Pension Reform in the Baltic States” edited by Elaine Fultz, “Pension Reform in Lithuania” by Romas Lazutka, “The Missing Pillar” by Maria Augusztinovics, “The Political Economy of Pension Privatization in the Baltics” by Katharina Muller, etc.

- Reforms of some pension systems were implemented in ***non-coordinated manner and with action disjunct from each other.*** In terms of unacceptability of this path the *Russian* can serve as a good example. For instance, non-state pension funds were operational in Russia since 1992,[68] however, their operation was regulated only from May 1998 with the adoption of the RF Law on Non-State Pension Funds. Later the *mandatory pension insurance system* was introduced by making respective amendments to this law in 2003. Independently from the latter the existing RF Pension Insurance System remained operational and issues related social security of pensioners were being regulated in the frames of Social Policy. Hence, the current RF Pension system has all the pillars including the 4th one, however, all of them are functional in different legislative fields and are not interrelated.[69]

In terms of coordination of activities country experience shows that countries which have introduced multipillar system through common plan and one unified law were more successful both in consistent implementation of reforms and visibility of results for the public. Disjunct actions are not acceptible in this case (Russia) and policy of implementing solidarity and accumulation systems separately leads to unjustified waste of time.

6.3.7.4 All countries that have implemented reforms are obliged to address coverage of the population by “old” (solidarity) and “new” (accumulation) systems. Countries have also different approaches towards this issue. They are mainly the following:

- ***At a certain period everybody mandatorily moves to the “new” system and the “old” one is preserved for social protection of current pensioners.*** Among transition countries only *Kazakhstan* and *Kosovo* have chosen this way. Kazakhstan succeeded in ensuring economic surge[70] and due to economic growth address financial problems of the solidarity system. Kosovo was compelled to take this path because it simply did not have an “old” system. It should be stated that both of the countries do not have a problem of ageing;
- ***At a certain period a specific group moves to the “new” system mandatorily and the other group – voluntarily; whereas, the other age groups mandatorily remain in the “old” system.*** Almost all transition countries in Eastern Europe, as well as Latvia have chosen this direction (see *Table 18, Annex 3*). The age-group that should be mandatorily covered by the accumulation system is between 30 to 40 (*Poland, Latvia, Croatia*) and the age for voluntary coverage is 50;

- ***At a certain period a certain age group mandatorily moves to the “new” system, while the others mandatorily remain in the “old” one.*** *Romania,*

[68] The Decree of the RF President on Non-State Pension Funds (1992) was mainly targeted at the development of financial markets.
[69] Public complaints about the current situation related to pension policy prepared grounds for the submission of a new Draft Law on Pension Reforms to the State Duma in 2007 by the RF President.
[70] According to the results of first five years (1998-2003) on accumulation system 75% of employed population is covered by the accumulation system, absolute number of contributors increased for 10 times, annual amount of contributions is increasing for 14-15% every year and effective profitability of investments makes 5.85%. See “Pension Reform in Kazakhstan” by Aydar Alibayev, FIAP, 2004.

Bulgaria and Russia used this approach. In the first two countries the age limit is 42 and in Russia – 50.

- ***At a certain period one age group is mandatorily covered by the "new" system and the others voluntarily chose between the "new" and "old" systems.*** Accumulation system is mandatory for all new employees in *Estonia, Slovak Republic, Hungary, Macedonia*, i.e. for those who are going to make contributions for the first time. The remaining groups of employees have to decide within a defined period (usually one year) whether to stay in the "old" system or move to the "new" one;

> ***Box 21. It is Hard for People to Take a Decision on Saving on Their Own***
>
> Surveys of public attitude show that even in European countries like Germany and Holland that traditionally having culture of saving people prefer mandatory participation in the 2nd Pension Insurance Pillar. 41% of Germans and 71% of Dutch are of this opinion. 31% of Germans and 15% of Dutch are of extremely negative opinion about the principle of mandating. More than 50 percent of respondents having positive attitude towards the mandatory principle think that they will be "released" of unnecessary thoughts, hesitations and decision-making, whereas 1/3 think that they do not have time and necessary skills for making right decision. About 1/5 of respondents think that mandatory implementation of 2nd pillar is the only way out for avoiding poverty in the retirement age.
>
> *Source: www.ipe.com*
> *Surveys were conducted by:*
> *Postbank - Germany & De Nederlandsche Bank -* Holland

- ***At a certain defined period the mandatory accumulation system becomes functional where every person is "welcome".*** Among the selected countries with transition economy only *Lithuania* has adopted this route.[71] Within 2002-2004 **47.6%** of contributors voluntarily left the PAYG system. There are no time-limits for the transition process, i.e. employees may decide to quit the "old" system any time they want. Experts find this approach as very expensive and indistinct in terms of managing PAYG system expenses.[72]

Experience of Mandatory Pension Insurance Scheme in transition countries witnesses that basically voluntary-mandatory mixed participation is preferred[73] and the more clearly the transition periods and age groups are defined the smaller is the indistinctness in public funds management.

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[71] Since July 01, 2002 citizens of Lithuania without any age limitation shall inform the state pension authority about their decision to move to the accumulation system so that contributions made to the person's fund are (from the day of submitting application) regularly transferred from the Treasury to the Private Pension Fund indicated in person's application. Absence of application is similar to taking decision on staying in the "old" system.

[72] During the very first year of adopting the law **more than 50% of 26- to 35-year-olds** left the system. Majority of persons in all age groups that have left the system were receiving high salaries. According to expert evaluations due to such transitions the system will lose at least 15-20% of its annual incomes. Government's projections that the percentage of persons to move to the "new" system during 2004 should total to **28%** was underestimated for **1.7 times** and as a result it had to constantly cover the increasing deficit of state fund. In addition, the Fund is going to great expenses in relation to explanatory activities for the labor force participants and their transition. According to expert calculations they make more than Euro **25** per participant. See Pension Reform in Lithuania by Romas Lazutka, ILO, 2006.

[73] Strengths and weaknesses of *mandatory and voluntary participation* of employees in the mandatory pension insurance schemes in Armenian context are summarized in *Table 16 of Annex 3.*

6.3.7.5 According to experts right selection of mechanisms for the management and control of multipillar pension systems is the most important guarantee for effective pension reforms. Hence, almost all the countries paid special attention to the design of institutional framework. Selection of this or that method by the countries was dependent on the development level of existing institutes and capacity building options. Usually, countries chose one of the following management models:

- ***PAYG system is managed by state authority and accumulative – by private structures.*** This model was chosen by *Kazakhstan, Estonia, Latvia, Croatia, Lithuania, Russia, Hungary* In the referred countries contributions are collected by tax authorities and directly transferred either to the state budget (treasury) or private structure managing personal accumulation accounts (depository or non-state pension funds). Peculiarity of this model is that it does not establish *any additional state entity* (usually Fund) responsible for collection of contributions, checking of accounts and distribution of moneys. Financial flows at the source of payment are usually distinguished by pillars with the government collecting and managing contributions to the O and 1st pillars of PAYG system and the private structures – contributions to the 2nd and 3rd pillars;
- ***Pension Insurance Contributions are collected by specifically established state funds and distributed by the structures of PAYG and accumulation system.*** This model is used in *Poland, Bulgaria, Macedonia, Slovak republic.* State Pension Insurance Funds (or institutes)[74] collect all the insurance contributions, check and managed the accounts register and distribute the funds by the structures of PAYG and accumulation components. Funds of the PAYG component are used for the payment of pensions and contributions of accumulation system participants are transferred to another specifically established fund which transfers them to personal accounts.
- ***Pension Insurance Contributions are collected and managed by state authority and transferred for private management in a procedure set out by the legislation.*** Among the selected countries only *Kosovo* has such a management model which is conditioned with the lack (or underdevelopment) of financial structures in the country and with the need of establishing a state pension structure. Kosovo does not have any state pension insurance system. Since 2002 mandatory private accumulation system was established here which is in fact the only institute for population's pension insurance. Hence, it establishment of Provident Fund was critical for this country. The latter collects mandatory contributions, manages personal accounts records, checks accuracy of account moneys and transfers for the management by EBRD.

Cross-country review of multipillar pension systems management shows that countries having complicated PAYG system, particularly in terms of

[74] In *Poland* insurance contributions are collected by the ZUS - Social Insurance Institute which transfers these amounts to FUS - Social Insurance Fund (for participants of PAYG system) and OFE - Private Pension Fund (for participants of accumulation system). The latter transfers amounts to different private funds by personal accounts. In *Macedonia* Pension and Disability Insurance Funds (PDIF) are established through a simplified procedure. In *Bulgaria* contributions are collected by the Social Security Institute (NSSI) and in *Slovenia*[a] – by the central register of Social Security Agency, etc.

calculation of pensions for the insured pillar (or don't have any state pension system) are forced to make additional financial expenses in order to form state funds through the required procedures.

6.4. Lessons learned

6.4.1 The experience of other countries in implementation of pension reforms in different directions and in various tactical modes has been repeatedly presented and discussed in international conventions. Experts and sector specialists with a specific attention observe particularly the experience of countries with transition economies, since these are the countries, which practically introduce the multi-pillar pension system with the technical support of the World Bank expertise. More extensive experience of other countries in this regard was recently summarized at an international congress, which took place in **Varna**[75] **(Bulgaria, June 2007)** and was devoted to the significance of the cumulative component within the multi-pillar pension system. The major lessons that the international experts have learned from the results of pension reforms implemented in different countries, including the transitional ones, are as follows:

<u>LESSON ONE</u> – the projection of pension reforms by means of introduction of the accumulation component, which is based on the principles of the operating distribution component, is beneficial in long-term perspective for all groups of the population, since it provides:

- ***efficient and targeted social protection for the elderly population;***
- ***higher pensions with less state expenditures for all pillars of the population;***
- ***motivation for extensive employment, higher remuneration and income distribution improvement.***

<u>LESSON TWO</u> – the experience of the Eastern European and Latin American countries, which have implemented fundamental pension reforms, proves that the success of the reforms depends on:

- ***the political intension and conviction of the governments;***
- ***the awareness and elucidation of the population;***
- ***the cooperation of political powers and unified attitude;***
- ***the availability of a complex program and a coordinated and extended implementation of activities.***

<u>LESSON THREE</u> – with the aim of an efficient social protection of all groups of the employed people the introduction of a multi-pillar pension system is a vital necessity, since:

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[75] The Armenian delegation comprised of the members of the pension system reforms working group of the RoA government, the specialists of the involved ministries and the experts of international projects operating in Armenia (overall 10 participants) also participated in the activities of the international congress in Varna. The congress was organized by the international association of the accumulation pension funds (FIAP).

- ***re-distributional (non-cumulative) 0 and 1st pillars protect pensioners from poverty;***
- ***mandatory accumulation 2nd pillar ensures the income compensation of the employed people; and***
- ***the voluntary 3rd pension pillar offers the employed persons an opportunity to receive additional pension.***

Summarizing the international experience of the pension reforms the sector specialists and experts have noted that it would be unfair to deprive the future generations of the opportunity, which the multi-level pension system offers in terms of the financial stability and provision of the pensions adequacy, by leaving the ever-growing "heavy pension gravity" upon the shoulders of today's youth.

6.5 Summary and conclusions

6.5.1 The main issue of revising the currently operating pension systems is urgent especially in the Eastern European countries (OECD members), which have recorded tendencies for a rapid population ageing, and in the countries with transition economies (former socialistic countries)[76]. ***These countries are obliged to reform the state "pay-as-you-go" systems, which were established during decades, in order to prevent their financial instability and the long-lasting decrease of the pension compensation coefficients.***

6.5.2 The tactics of reforms of the state pension "pay-as-you-go" systems differs from country to country, though the strategic direction is common for all the countries which have chosen the path of reforms, and which is "***discharge" of the PAYG system that operates based on the solidarity principle, on account of the introduction of the cumulative pension schemes based on the individual financing principle.***

6.5.3 All the countries, which have implemented pension reforms, preserve the state solidarity "pay-as-you-go" system as a protection means of the elderly population from income poverty. In this regard ***the PAYG systems are considered as an indivisible component of the countries' social security state policy.***

6.5.4 The experience of those countries, which have implemented pension reforms, shows that the most efficient and financially stable way of ensuring a link between pensions and individual incomes is ***the introduction of the accumulation systems accompanied by the application of "defined contribution - DC" module.*** Realizing the role of the "pay-as-you-go" systems in the process of poverty elimination, ***the countries with transition economies,*** which are in the middle of

[76] *"Politics, Ageing and Pensions", see Appendix 7, Tables 1, 2, and 3.*

pension reforms implementation, ***have chosen the option of establishing a multi-pillar pension system, which will be based on the state pension system grounds, and introducing new accumulation pillars.***

6.5.5 The study of international experience shows that ***the establishment of multi-pillar pension systems requires from the pension-reform-implementing countries to realize large-scale and fundamental transformations according to the following directions:***

- transition from PAYG systems, which are financed based on the generations solidarity principle, towards "self-financed" accumulation systems;
- transition from the "defined benefit - DB" pension module, which is defined on the basis of computation formulas, towards the "defined contributions - DC" model, which is defined on the basis of actual incomes;
- transition from the pension sector systems, which are directly managed by the state, towards the introduction of private pension industry, which is regulated and controlled by the state.

6.5.6 The comparison of resultant/consequent indicators of the pension reforms among countries proves the advantage of introducing the accumulation system based on the mandatory principle. For example, the countries with transition economies, the majority of which have introduced the private accumulation DB model based on the mandatory principle, provide higher rates of compensation rather than a number of OECD member states do. ***On average the indicator of the countries with transition economies trivially differs from the average of OECD, while for the "high-salary-paid" groups it even exceeds the average for OECD.***

6.5.7 The comparative analysis of the experience of those countries, which have implemented (or currently are in the implementation stage of) the multi-pillar pension system shows that:

- in those countries, where the introduction of the accumulation component was accompanied by the "heavy-weight" reconstruction of the operating pension system, *the costs of reforms were considerably high;*
- those countries, which have implemented the multi-pillar pension system *within the complex project and one unified law*, have had greater success in terms of both the consistent realization of reforms and the visibility of results for the population;
- those countries, which have pensions of the insured pillar within the PAYG system, are obliged to commit *additional expenditures* directed at the administrative expenditures of the state funds or the social insurance agencies;
- in those countries, where a "voluntary" and "unlimited" (in terms of timeframe) inclusion into the mandatory accumulation system is defined, *the uncertainty of state finances management* is high.

6.5.8 The summary of the lessons learned from the results of the impact of the multi-pillar pension systems, which have already been in operation in a dozen of countries, shows that:

- ***the introduction of the accumulation component on the basis of the operating PAYG component is beneficial for all groups of the population, since it simultaneously ensures both the social protection of the unable-***

to-work population and the compensation of incomes of the employed population;

- ***the success of the pension reforms implementation greatly depends on the political intention of the governments, the public awareness, the cooperation of the political powers and the consistent realization of the preliminarily planned activities;***

- ***it will not be fair to deprive the future generations of the opportunity, which the multi-pillar pension system offers in terms of the financial stability and ensuring the pension adequacy, and to leave the long-lasting growing pension gravity upon the shoulders of today's youth.***

6.5.11 *The government of the Republic of Armenia* adopted Concept Paper on Pension Security System Reforms by Decree 796 dated May 26, 2006, and thus initiated in the country the preparatory activities for the introduction of the multi-pillar pension system and the mandatory accumulation pension component.

7. Armenian model of pension reform

7.1 Brief description of the model

7.1.1 Based on the detailed study of the situation in the country and international experience, the Government of Armenia has made its choice of the multi-pillar pension system to be established in the country. The government has declared its political decision in its Order No. 796-N dated 26 May 2006. The pension system reform working group of the Government of Armenia organized comprehensive discussions on *strategic directions of the reforms and the fundamental principles and main parameters of the Armenian model* from August 2006[77] to October 2007.

7.1.2 The Armenian model of pension reform is based on numerous model scenarios developed with the support of World Bank experts by using the PROST[78] software. They have been presented and discussed at open sessions of the pension system reform working group of the Government of Armenia, workshops and round tables (see box 22). ***Based on the results of the discussions, working group members expressed their common position on the main principles and parameters of pension reform in Armenia by completing a questionnaire especially prepared for that purpose.***

Box 22. Pension reform strategy: expert discussions

The Pension Reform Preparation Group of the Central Bank, which was established in December 2006 in order to do the necessary expert work, with the support of the World Bank and the USAID experts and jointly with the working group of the Government of Armenia, organized a number of expert discussions on the following topics:

- Issues of drafting the pension system reform implementation program;
  28 February-1 March 2007 (Tzaghkadzor, CB)
- Alternative solutions to systemic problems of pension reform
  15-16 may 2007 (Tzaghkadzor, CB)
- Strategic directions of pension system reform
  18-19 June 2007 (Yerevan, CB)
- Main parameters of pension system reform
  8 August 2007 (Yerevan, MoFE)
- Model scenarios of pension reform
  10 October 2007 (Yerevan, CB)

Box 23. Strategic objective of pension system reform

The strategic objective of the Government of Armenia is to establish the pension system which will ensure some type of income for each and every elderly, from the minimum of the benefit exceeding the poverty line to the compensation of the wage or income before retiring. For this purpose, the Government of Armenia will introduce a new multi-pillar pension system financed from various sources.

Source: The conceptual framework of pension security system reform, Order of the Government of Armenia No. 796-N dated 26 May 2006. Annex 1.

7.1.3 The aims, objectives, principles and parameters approved by the working group, in essence, outlined the Armenian pension reform model, which will form the basis for drafting the ***"Armenian pension reform program"***.

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1 Based on the timetable in Annex 1 of Government Order No. 796-N dated 26 May 2006, in accordance with the Ordinance of the Prime Minister No.599-A dated 4 August 2006, the ***working group*** was established in order to implement activities for pension system reform. See Annex 1.

[78] PROST (Pension Reform Options Simulation Toolkit) software was developed by World Bank specialists as a tool for analyzing pension reform options.

7.1.4 The brief outline of the *Armenian model* of pension reform is as follows:

7.1.4.1 The way of reforming the pension system chosen by Republic of Armenia is: ***establishment of a new unified multi-pillar system by improving the current system and implementing new pillars***[79].

7.1.4.2 The multi-pillar pension system of Armenia will have two components: ***solidarity component, or PAYG and funded component***. Each of the mentioned components will have their two pillars: ***the solidarity component will have pillars "0" and "1", while the funded component will have pillars "2" and "3"***[80]**.** Pensions system pillars are differentiated by types of pensions paid to the retired population and whether they are mandatory or not:

"0" pillar –social pension (mandatory)
"1" pillar – employment pension (mandatory)
"2" pillar –funded pension (mandatory)
"3" pillar –funded pension (voluntary)

7.1.4.3 Pillars "0" and "1" of the unified multi-pillar pension system will address the ***social security issues of pensioners***, while by the implementation of pillars "2" and "3 ***the pension insurance of population*** " will be realized (see Table 7).

Table 7. Armenian model of pension reform (I)
the essence of system's components and pillars

	Solidarity component		***Funded component***	
	"0" pillar	***"1" pillar***	***"2" pillar***	***"3" pillar***
Social security	**+**	**+**	**-**	**-**
Pension insurance	**-**	**-**	**+**	**+**

7.1.4.4 Pension programs of ***social security*** nature will be implemented by a <u>government agency</u> and will be financed directly from the state budget. ***Pension insurance*** schemes will be <u>managed by private entities</u> and financed from mandatory and voluntary contributions of employees and/or employers. They will also be co-financed from the state budget (see Table 8).

[79] The conceptual and economic bases for this direction are described in paragraph 6.3.4 as the IV direction of international experience in pension reform.
[80] Based on the methodological principles of Multi-pillar pension systems developed by the World Bank, each country, nonetheless, describes its pillars in its own way. Sweden differentiates its pillars by "the decision-making entity" in various pension schemes. "1" pillar includes not only the redistributive pensions, but also the mandatory funded DC component, since the amounts of payments are determined and enforced by the *government*; "2" pillar includes only occupational-corporative pension, whose size of contribution or level of pension is determined by joint agreement of *trade unions and employers*; "3" pillar includes all individual pension schemes, which are selected by *individuals* themselves.

Table 8. Armenian model of pension reform (II)
management of levels/pillars

	Social security		***Pension insurance***	
	"0" pillar	***"1" pillar***	***"2" pillar***	***"3" pillar***
Public	**+**	**+**	**-**	**-**
Private	**-**	**-**	**+**	**+**
State's participation	**…**	**…**	**+**	**-**

7.1.4.5 In the Armenian multi-pillar pension system model, *social and employment pensions* will not be linked to the personal incomes of beneficiaries and will be paid from the state budget based on the s***olidarity principle***. On the contrary, the level of *funded pension* will be directly linked to the contributions made from persona incomes, meaning that these pensions will be formed based on the ***self-financing principle*** (see Table 9).

Table 9. Armenian model of pension reform (III)
principles of financing pensions

	Social pensions	***Employment pension***	***Funded pension***
Solidarity principle	**+**	**+**	**-**
Accumulation principle	**-**	**-**	**+**

7.1.4.6 Each pillar of Armenia's pension system model will address a specific key issue *from the viewpoint entitlement to pension*:

- ***"0" pillar social pension*** will protect from poverty those citizens of Armenia, who are not entitled to pension, or have an inadequate right to pension (details in Chapter 3, Paragraph 8) The key criterion forto be alligible for social pension is the residency *of the Republic of Armenia.*
- ***"1" pillar employment pension*** will ensure compensation for years of service of individuals entitled to pension (details in Chapter 3, Paragraph 9). The key criterion for obtaining the right to pension is the availability of the *defined length of service*.
- ***"2" and "3" pillars of the funded pension*** will compensate individual incomes of those who have made pension contributions (details in Chapter 3, Paragraph 10, 11). The key criterion for obtaining the right to funded pension is the availability of *the defined contributions* (see Table 10).

Table 10. Armenian model of pension reform (IV)
pension entitlement criteria

	Social pensions	***Employment pension***	***Funded pension***
Rezidenc yof Armenia	**+**	**-**	**-**
Length of services	**-**	**+**	**-**
Contributions	**-**	**-**	**+**

7.1.4.7 "0" and "1" pillars of the pension system will apply the *defined benefit (DB) model*, while "2" and "3" pillars will apply the *defined contributions (DC) model.*

In essence, all types of pensions at the ***state level***, whose absolute values and compensation rates for length of services will be defined by the legislation, will apply the DB model. Pensions applying the DC model are planned for the ***individual level***, since they are based on amounts accumulated in personified accounts (see Table 11).

Table 11. Armenian model of pension reform (V)
applications of pension models

	State level		***Individual level***	
	"0" pillar	***"1" pillar***	***"2" pillar***	***"3" pillar***
DB model	+	+	-	-
DC model	-	-	+	+

7.1.4.8 Pensions of the reformed pension system will have two parts: *redistributive* and *insured*. The redistributive part will be based on the ***basic pension*** legislatively defined by the state (details in Chapter 3, Paragraph 9).The insured part will be linked to years of length of service of the individual (in case of the employment pension), or the size of his contributions (in the case of the funded pension). *The insured part of the social pension is equal to "0", hence the title "0" pillar* (see Table 12).

Table 12. Armenian model of pension reform (VI)
pension composition

	Redistributive part	***Insured part***	
	Basic pension	***Years of service***	***Contributions***
"0" pillar	+	-	-
"1" pillar	+	+	-
"2" pillar	+	-	+
"3" pillar	+	+	+

** For madatory participants years of service before joining the funded pillar will be compensated*

7.1.5 The Armenian multi-pillar pension system model will be different from models introduced and operating in transition countries in the following ***aspects:***

- the presented Armenian model there will *not be a description of occupational-corporative pension schemes*. The point is that t***rade unions*** are the initiators of *occupational-corporative pension schemes*. Considering that the institution of trade unions is not yet properly established in our country[81], "organized labor"[82] is nonexistent, - the introduction of this level was considered to be untimely.

[81] After the collapse of the USSR, Armenia attempted to create independent trade unions by adoption of the Trade Unions Act in December 2000. Today there are about 30 sectoral trade unions, who are de jure registered, but de facto do not perform the role of real trade unions as understood internationally.
[82] According to ILO terminology, "organized labor" is the united and joint demands of the labor force in the labor market, which is basically manifested by establishing trade unions.

- in the mandatory funded component pension schemes with DB model are absent. Given that the actuarial school is not "mature" yet, the future pensions estimated today cannot rely on sound actuarial calculations[83].

7.1.6 The Armenian multi-pillar pension model is based on a number of *key principles and parametric standards*, which have been approved by the pension system reform working group of the Government of Armenia in line with the 2008-2012 Government Program priorities (see Box 24).

Box 24. Pension Policy Aspects Identified in 2008-2012 Government Program

The 2008-2012 Government pension policy includes two strategic directions, namely:

1. Annual upward adjustment of pension levels thereby ensuring average employment (insurance) pension equal to 100 percent of the minimal consumer budget in 2012.
2. Introducing a multi-pillar pension system and achieving increased financing of the social protection system -up to 6.2 percent of the gross domestic product.

Source: Armenian Government Program for 2008-2012;
Government Decree 380-A of April 28, 2008.

7.2 Key principles

7.2.1 The *principles of pension reform* primarily stem from recent policy developments in the country declaring poverty reduction as a priority strategic direction. In this regard, the implementation of "There will be no poor pensioners in Armenia" objective enshrined in the 2008-2012 Government Program[84] obliges to adhere to ***the principle of state pensions equivalent to the cost of the minimal consumer budget***.

7.2.2 Reforms should encompass the entire pension system, including the current one. An important principle from this point of view will be the elimination of the terms "old" and "new" systems from the vocabulary and the use of ***"unified multi-pillar pension system"*** concept. This principle stems from the state policy priority of ensuring social solidarity and avoiding social stratification.

7.2.3 The application of social solidarity principle also commands a ***unified approach to types of pensions***. It will be implemented by putting the state guaranteed *basic pension* at the basis of the types of pension. The level and regulations for indexing the basic pension will be defined by the legislation. The basic pension should be comparable to the *minimal consumer budget* calculated annually by the National Statistical Service. From this point of view, it can be stated that the ***Armenian multi-pillar pension system model is anchored in the basic pension.*** This conceptual approach has the following justifications:

[83] Even in countries with extensive actuarial traditions, such as Great Britain, Germany, Holland, an explicit trend of blocking the DB model for new participants of pension schemes by pension insurance companies was traced.
See http://www.ipe.com/news/Pension_strike_threatens_UK_fuel_supply_27763.php

[84] Armenian Government Program, Section 4.4.2, Yerevan, 2008.

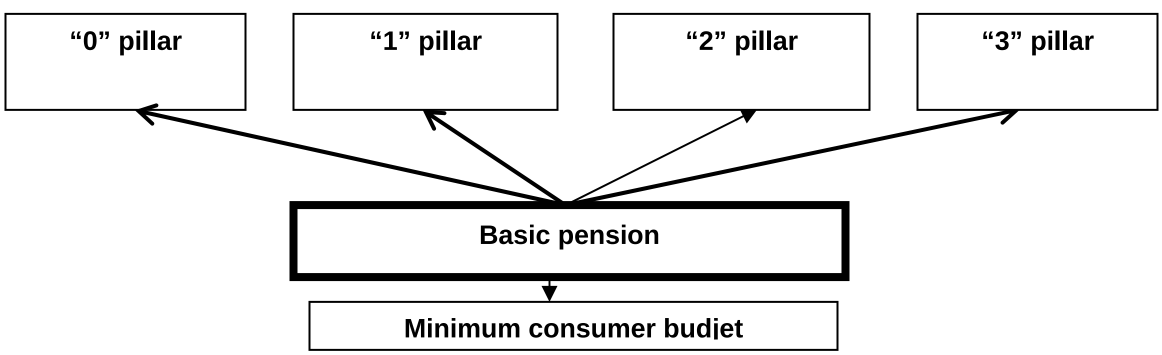
7.2.3.1 The basic pension ***is universal***, i.e. is universal for all those with incapacity for work, as well as all vulnerable groups of the population (elderly, those with inadequate length of service, the disabled, survivors, parentless children, etc.). In essence, the basic pension is ***the only universal tool for the social protection of those with incapacity for work and vulnerable groups of population***. By using this tool, the state guarantees the protection of the social rights of citizens stipulated by the constitution.

7.2.3.2 The basic pension is a stable ***source of income*** from the viewpoint of overcoming the poverty of those with incapacity for work, since it should not be below the minimal consumer budget. This means that ***people with incapacity for work will avoid poverty thanks to the basic pension***.

7.2.3.3 The basic pension is an important tool for ensuring ***social solidarity*** and mitigating income disparities for the elderly, since it ***ensures equal compensation of lost income for participants in both solidarity and funded components of the pension system.***

7.2.3.4 Thus, the basic pension is the ***cornerstone*** of the multi-pillar pension system since regardless of the pillar to which a beneficiary belongs, on retirement he will ***mandatorily receive basic pension***, either at its full (for beneficiaries of "1", "2" and "3" pillars), or prevailing amount (beneficiaries of "0" pillar)

Chart 3. The feature of universality of multi-pillar pension system



7.2.4 Pension reforms should be based on the ***key political-economic principle of establishing a market-based and liberal economy*** adopted when Armenia became an independent state. Application of this principle would mean promoting the development of the private pension industry, introduction of fully financed funded pensions, revision of the economic bases of insured pensions and their differentiation from the social security guarantees provided by the state

7.2.5 The following principles will be applied to pensions of the *solidarity component* (see paragraph 7.1.4.3) of the unified multi-pillar pension system:

- Principle of ***targeted increase of pensions*** (see paragraph 7.4),
- Principle of ***indexation of pensions*** (see paragraph 7.5).

7.2.6 The following main principles will be applied to the introduction of the *funded component* (see paragraph 7.1.4.3) of the unified multi-pillar pension system:

- ***state participation*** in pension contributions of persons under 40 - by adding from state budget to the amounts accumulated in individual accounts. Application of this principle will allow to some extent smoothen the reduction of disposable incomes of mandatory funded pillar participants; .
- ***higher replacement rates*** for participants of the funded component, which requires a imposing a maximum entry age threshold;
- ***acceptable fiscal cost*** for implementing the set of measures for improving the solidarity component and introducing the funded component of the pension reform. This principle is particularly important in view of targeted increase of PAYG pensions and state's contribution to individual accumulations of mandatory participants in the funded component.

7.2.7 An indivisible part of the pension reform is the ***improvement of the current pension system for the disabled and survivors.*** The reform targeting the mentioned groups of pensioners should ensure:

- ***transition from the application of the "disability" principle to the " incapacity for work" principle,*** which will require certain measures for establishing the legal framework and creating and/or strengthening the relevant structures and infrastructures[85],
- ***transition from "social security" principle to "accident insurance" principle,*** which, in effect, would lead to the commercialization of the sector. Application of the mentioned principle would require the elaboration and consistent implementation of measures for introducing insurance from occupational disabilities and diseases[86],
- ***application of public-private partnership principle,*** according to which employers in specially hazardous productions or economic activities should participate in insurance schemes developed by the state in order to insure their employees against accidents.

7.2.8 The ***system of privileged pensions*** will also be changed under the comprehensive pension reform program. The main principles to be applied to the revision of these pensions are as follows:

- *reduction of workplaces with especially hazardous, especially heavy (list 1), as well as hazardous and heavy (list 2) conditions*, through stricter labour norms and stronger state supervision over compliance. As a result of the application of this principle the number of people entitled to privileged pensions will reduce significantly,
- mandatory pension insurance of defined categories of employees by the employer, which will be performed through mandatory funding participation

[85] This principle is already applied in Estonia, where capacity for work is assessed by percentages. Pensions are allocated only in cases where the person has lost more than 80% of his capacity for work. There was restructuring also in the institutional framework of the sector – funding principles, medical expertise, etc.

[86] Reference is made to the purchase of insurance policies by the government for taxpaying citizens on a unified basis.

of each employee working in hazardous or heavy conditions in pension schemes of "3" pillar[87].

- *application of public-private partnership principle* exactly with the same conditions described in paragraph 7.2.8. This principle will be applied to employees in private companies, including those with long-term services in civilian aviation,

7.2.9 *Until the development of the program packages mentioned above (see paragraphs 7.2.8 and 7.2.9)* and the establishment of the needed institutional structures and infrastructures, disability, survivorship and privileged, including partial, pensions ***will operate based on principles and regulations defined by the current legislation***.

7.2.10 Another important principle of pension reform is the ***creation of economic incentives*** which will aim to:

- *reduce the informal sector* of the labour market through stricter pension rights and linking of contributions with future pension (for details see Chapter 3, paragraphs 8, 9, 10);
- declaration of incomes and expansion of participation in unified pension system by *deductions of voluntary pension contributions from the taxable base of wages and incomes equalized to them* (for details see Chapter 3, Paragraph 10),
- encourage *long-term employment* by setting up favourable rules for payment employment and funded pensions (details in Chapter 3, paragraph 8,9,10).

7.2.11 The ***principle of a unified tax*** will be applied in order to ensure the flexibility of the state pension policy. According to the principle, current mandatory social contributions and income taxes will be joined into one unified *natural persons income tax*, the rates of which should be comparable to the sum of the current average rates of these two. The Tax will be levied on personal incomes and/or salary. The employer will be the tax agent. Records on unified tax will be maintained on individual level - for each employee (or person declaring its income) and on a monthly basis[88].

7.2.12 Principles of the pension reform are not applied to ***military personnel and persons equalized to them***. Their inclusion in pension reform, particularly in the funded component, cannot be mandatory. The pension rights of the ***military personnel*** are regulated by separate legislation.

7.2.13 Within the frames of pension schemes described in this program employers may encourage their employees by providing supplements to their pension contributions from profits. Depending on budget capacity, ***the state -as an employer, may propose and envisage in a procedure set forth by the law,***

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[87] Since terms of insurance in the "3" pillar are more personalized and have no limitations related to age, contribution, system "entry-exit", etc. which are typical to the mandatory funded "2" pillar classic insurance scheme is suggested for the employees of this category.

[88] The mechanisms for introducing the unified (income) tax and its personified recording will be laid down in a separate law.

pension privileges (e.g., set increasing coefficients for years of civil service, funding of defined contributions, etc.).

7.2.14 Principles and parameters of pension system reform, as well as rules for their modification will be set out in the ***legislative package on the pension system reform*** and the regulation mechanisms will be set out by respective bylaws.

7.3 Defined parameters

7.3.1 Parameters of the Armenian model of pension reform have been discussed and changed on numerous occasions during the entire period of preparatory work. In order to select the parameters, the expert group of the Central Bank of Armenia, based on the recommendations of the Working Group of the Government of Armenia and with the support of USAID experts, conducted numerous simulations and introduced the corresponding changes in target functions for modelling the reform.

7.3.1.1 In particular, local and international experts were most concerned about the following issues relating to parametric indicators:

1. ***Is there a need for defining specific target indicators for the solidarity component?*** And if yes, then what are those components:
    a. A specific guaranteed level of *replacement rate,* or
    b. A specific guaranteed ratio to the *poverty line,* or
    c. "0" balance of the *pension fund.*

2. ***Should participation in the funded component be voluntary or mandatory?*** And if the latter, then what will be the cut-off age:
    a. *Up to 35 years*, or
    b. *Up to 40 years,* or
    c. Up to 16 years.

3. ***Should state pensions be indexed, or determined based on the possibilities of the state budget?*** And if the former, then:
    a. Based on the *wage growth* rate, or
    b. *Consumer prices index*.

4. ***Should the contribution to the funded pension be defined at 10%?***

5. ***Should the state participate in contributions to funded pensions?*** If yes, then to what extent.

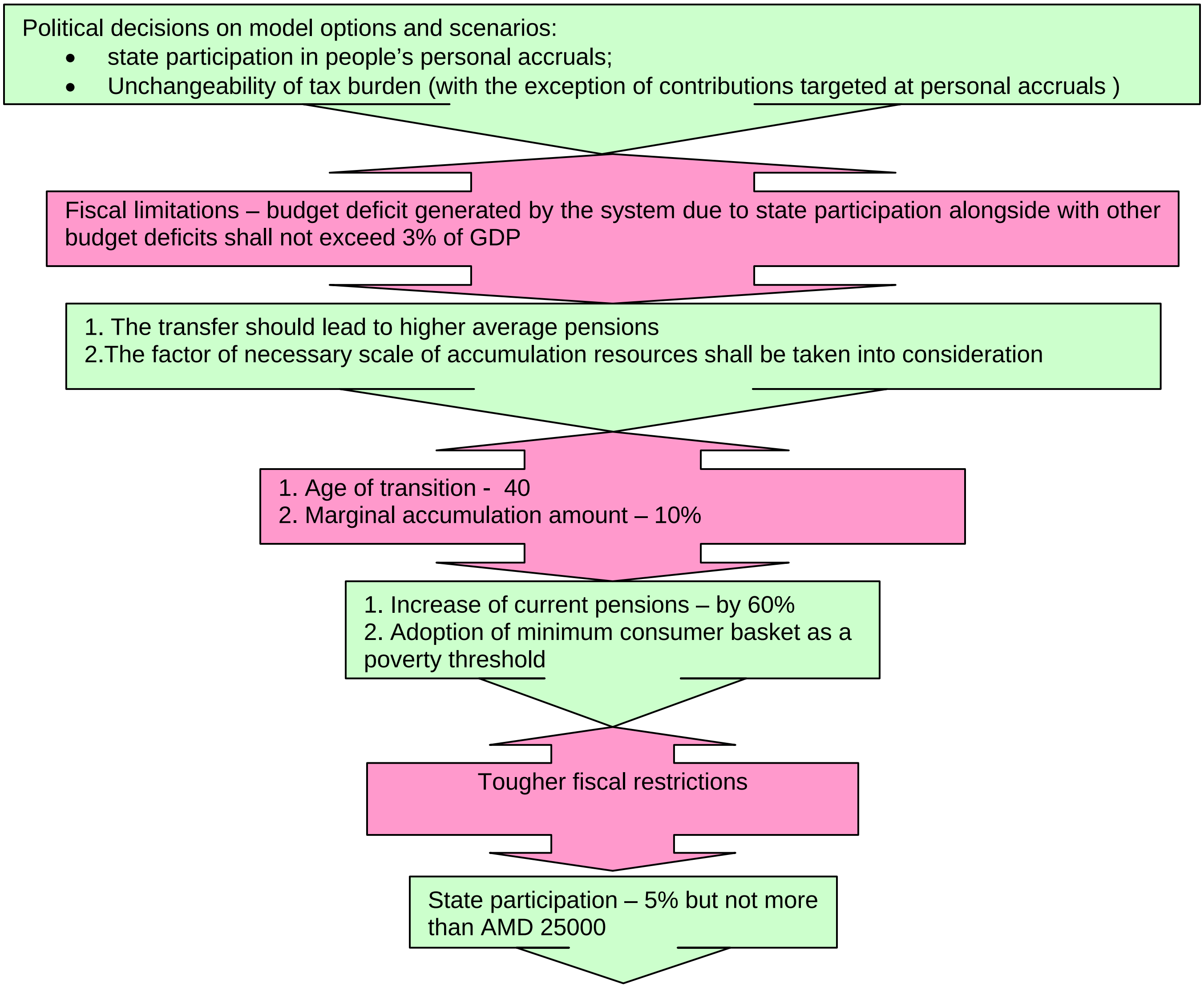
7.3.1.2 The working group of the Government of Armenia had defined the following criterion for addressing the above-mentioned issues:

ensure maximum replacement rate in the frames of macroeconomic stability through targeted increase of pensions and further indexation.

7.3.1.3 Based on the above-mentioned issues and identified benchmarks, simulation analysis of pension reforms were made through specific sequence of steps that were influenced by **political factors, comments on ensuring**

effectiveness as well as objective restrictions. Methodological algorithm of simulation analysis is described in *Chart 4.*

Chart 4. Algorithm for the selection of reforms parameters



<u>*Step 1.*</u> ***As a result of political decision*** scenarios for *state participation* in mandatory funded pillar were developed. In the frames of another political restriction there shouldn't be *changes in tax burden* as a result of this participation. In this aspect it was necessary to consider different proportions of state participation.

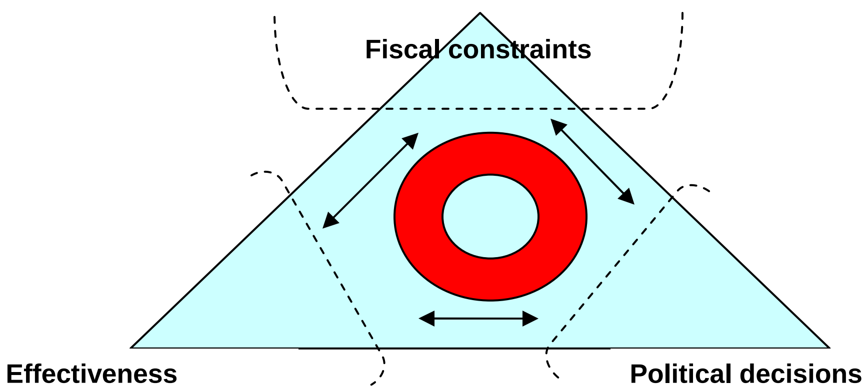
<u>*Step 2.*</u> ***Deficit of pension budget alongside with other budget deficits*** originated as a result of state participation ***shall not exceed the accepted 3% of GDP.*** *The criterion of state participation substantiality was determined as* a criterion of effectiveness which would result on contributors' personal behavior in favor of reforms. This means that income possessed by the contributors should not substantially decrease; concurrently state participation should be encouraging. Given the requirement of ensuring effectiveness *state participation was decided to calculate as half of personal accruals.*

Step 3. As a result of passing to multi-pillar pension system (as an indicator of effectiveness) the difference between the ***pensions of beneficiaries of all pillars in PAYG and accumulation components should be in favor of those covered by mandatory accumulation component.*** According to calculations *10% of the salary was defined as the required accumulation amount* which was ensuring higher replacement rate during 25 years of employment. Besides, another effectiveness indicator, i.e. ***deduction from the management of accumulation funds*** required ensuring scale effect. Calculations showed that 10% is the optimum line which simultaneously satisfied the referred two requirements.

Step 4. ***Determination of a transitions age was conditioned with simultaneously ensuring higher pensions and the necessary scale of accumulated funds to the optimum extent.*** *The transition age of 40* enables persons of this age to work for 23 more years and get higher average pension than 41-year-old persons covered by the solidarity system. At the same time this difference should not be substantial so that pensions of persons retiring at the same time do not differ considerably.

Step 5. Due to political developments ***60% average increase of pensions*** from 2008 by the Government of Armenia Decree ***made fiscal restrictions of the reforms stricter.*** Hence, there was a need to somehow review the state participation limiting it to AMD 25000. Concurrently, the requirement of ensuring the focus of budgetary expenses to the poor was being addressed. By taking this step the cost of state participation (parallel to the growth of average wage) is gradually reduced.

Chart 5. Scheme for the selection of schemes



7.3.1.4 Hence, the number of options discussed as a result of different calculations decreased under the influence of the described factors (see Chart 5) and eventually we concluded with a scenario of reforms main parameters and principles of which were presented during the conference held on June 18-19, 2007 at the Central Bank of Armenia. Participants of the conference[89] discussed the strengths and weaknesses of the presented parameters and justifications of their

[89] Participants of the mentioned conference were not only locals experts, but also high level officials from the Washington HQ of the World Bank and internationally renowned experts Robert Holzman, Alexandra Posarak, Hormoz Agdey, Heinz Rudolf, Ramin Shojay, as well as experts from "The Social Group" and "Emerging Markets Group" consultancy firms from USA David Snellbecker, Lena Zezulina, Robert Singleteri and Richard Web. Experts from WB and IMF Yerevan offices, including IMF Armenia office director Nienke Oomes, also participated in the conference.

selection. Positions, comments and recommendations of the experts, including the international ones, were summarized and submitted to the WG for its discussion.

7.3.1.5 By comparing and discussing the alternatives of the pension reform model, members of the WG ***defined the main parameters, which should serve as a basis for drafting the Pension System Reform Implementation Program.*** The defined parameters were finally adopted on August 8, 2007 during the expanded session (with the participation of donors) of the WG held at the Ministry of Finance and Economy of Armenia.

7.3.2 Parameters presented in the section are based on two key concepts:

Length of service - this is a compound concept and includes: *work history indicator*, which is calculated based on the number of years of service until 1992 (when mandatory social contributions were introduced by the legislation), *insurance rate indicator*, which is calculated from 1992 onwards is based on the number of years/months for which mandatory social contributions were made by persons, and taxpayer history indicator, which will be calculated from 1 January 2009 based on the number of years/months when unified tax is paid.

Right to pension– preconditions defined by the legislation for allocating pension, which include retirement age, length of service rate and privileged conditions. Within the context of this section, persons acquiring the right to pension are referred to as *beneficiaries*.

7.3.3 Parameters defined by the pension system reform working group of the Government of Armenia have been classified by the following criteria:

a. By ***social, employment and funded pensions*** of different pillars of the multi-pillar pension system, into beneficiaries,

b. By the two main ***components – solidarity and funded***, of the multi-pillar pension system, into directions of transformation,

c. By the two important principles of participation in the funded component – ***mandatory and voluntary***, into specific features of mechanisms.

7.3.4 For various types of *pensions*, parameters for the right to the given pension and the method for calculating the pension have been defined as follows:

7.3.4.1 ***Social pension*** ("0" pillar).

Beneficiaries: Armenian residents, who reach 65 years of age, if they:

- Do not have any length of service[90],
- Have ***up to 10 years*** of length of service[91].

Pension calculation method: 80% of the basic pension defined by the legislation for the given year.

7.3.4.2 ***Employment pension*** ("1" pillar).

Beneficiaries: Armenian citizens of the retirement age defined by the legislation[92] with more than 10 years of length of service.

[90] The proportion of length of service and insurance rate are not important for entitlement to social pension.

[91] According to the current legislation, persons reaching 65 years of age with up to five years of length of service or insurance rate are entitled to social pension. By now no changes in the eligibility criteria for the disability and survivor's pensions are anticipated. This issue will be reviewed comprehensively in the new concept papers on incapability and life insurance.

Pension calculation methods: the legislation defines:

- The monthly amount of the basic pension
- The value of one working year's

7.3.4.3 ***Funded (mandatory) pension*** ("2" pillar).

Beneficiaries:

- Armenian residents[93] under 16 years of age on 1 January 2009 (mandatory)
- Armenian residents under 40 years of age on 1 January 2009 (I scheme),
- Armenian residents aged 41-62 years (II scheme)

Pension calculation methods: the legislation defines:

- The monthly amount of the basic pension (in accordance with the "1" pillar)
- The rate planned for mandatory accumulation – 10% of wage/income (scheme I), including state participation and 5% (scheme II) without state participation;
- Portion of state participation – 5% (half of 10%) but not more than AMD 25000 (scheme I),
- The value of one working year (according to the "1" pillar).

7.3.4.4 ***Funded (voluntary) pension*** *("3" pillar).*

Beneficiaries: all working-age residents of Armenia.

Pension calculation method: sizes of contributions are determined by private entities of the pension industry based on actuarial calculations.

7.3.5 Parameters defined for the *components* refer to target directions and indicators for improvement or introduction of the given component, baseline data of forecasts and actuarial calculations.

7.3.5.1 ***Solidarity component***

Main objective: annual increases of pensions by ensuring:

- In 2012 an average employment pension equivalent to 100 percent of the minimal consumer budget;
- In 2018 basic pensions equivalent to 100 percent of the minimal consumer budget;
- In 2021 social pensions equivalent to 100 percent of the minimal consumer budget (see *Table 13*).

Table 13. Parameters of the growth of solidarity component pensions
compared to the minimal consumer budget

	2008	*Targets*		
		2012	2018	2021
Average employment pension / MCB, %	***64.2***	***100.0***	***x***	***x***
Basic pension / MCB, %	***19.6***	***x***	***100.0***	***x***
Social pension * / MCB, %	***x***	***x***	***x***	***100.0***

**Note: the social pension should equal to 80 percent of the basic pension.*

[92] The State Pension Act defines the unified retirement age for both men and women at 63 years, instead of the formerly defined 50 years for women and 60 years for men. The step by step increase in women's retirement age will end in 2011.

[93] In terms of this Program all persons residing and/or engaged in economic activities in the Republic of Armenia are deemed residents of Armenia regardless of their citizenship.

Parametric objectives:

- In 2008-2012, faster increase in average pension compared to average wage, in order to eliminate the significant gap between the two incomes,
- Faster increase of the level of basic pension compared to the increase in working year value, considering the direct correlation of social pension with the size of the basic pension (80%),
- Ensuring a social pension comparable to the minimal consumer budget in 2012, which will bring pensioners out of poverty.

Calculation methods:

- Macroeconomic and pension system parameters described in the government program 2008-2012, serve as a basis for calculation of the annual level of basic pension and working year value,
- The government program for 2008-2012 is considered as baseline scenario,
- 2008-2080 macroeconomic and pension system projections are made by PROST software, were input indicators are customized to the baseline (2008-2012) scenario and targets shown in Table 13 (2012-2021),
- A differentiated method is used for pension level projections for 2013-2080;

- In 2013-2021 the basic pension increases in line with achieving the targets reflected in *Table 13*,
- In 2022-2080 the basic pension is indexed by the annual rate of increase of nominal salary (which is one of the main projections of the PROST).
- In 2013-2080 the value of each yeas of service is indexed by CPI, which is one of main projections of PROST as well.

Source of financing: unified tax .

7.3.5.2 ***Funded component***

Main objective: introduction of funded pension system with the objective of linking pensions with personal incomes.

Parameters for the introduction of funded component:

- The system is introduced on 1 January 2010:

a) For Armenian residents at the age of 16-40 on a mandatory basis (Scheme I)
b) For Armenian residents at the age of 41-62 on a voluntary basis (scheme II),

- The accumulated share of the participant of the funded system amounts to **10%** of income/wage, at least half of it (5% of income/wage) is paid by the employee[94]
- The participant of the funded component will receive half (**5%** of income/wage) of the above mentioned 10%, but not more than 25000 AMD[95] monthly.

Calculation methods:

- The funded component pension is calculated by two methods:

- Calculation and projections of the basic pension are done by the method used for the solidarity component,
- Accrued rights before the introduction of funded component for mandatory participants are recognised and replaced by the same method as for the participants of solidarity component;

[94] It should be noted that persons having wages above AMD 500,000 will pay more than 5% of their salary since the ceiling for state participation is limited with AMD 25,000 monthly.
[95] For 2008 the minimum wage is defined 25000 AMD.

- Projections of the funded component of the pension are done on the basis of investment return rate (see paragraph 7.5).

Source of financing:

I scheme (mandatory for individuals aged 16-40)

- Unified tax
- Accumulations in individual accounts at the rate of **10%,** half of which (but not more than AMD 25000) is paid by the state.

II scheme (voluntary for individuals aged 40-62)

- Unified tax
- Accumulations in individual accounts at a fixed rate of **5%** of the wage and/or income.

7.3.6 The application of *mandatory and voluntary principles* for participation in the funded component will require specific incentive mechanisms, which will be different for "2" and "3" pillars of the funded component. The specific aspects are primarily related to "mandatory" and " voluntary" concepts. Thus,

7.3.6.1 ***The "2" pillar of the multi-pillar pension system is mandatory.*** The specific aspect of this pillar is that although the entry in the system may also be voluntary[96], *however the exit or termination of contributions is forbidden*. By virtue of participating in this pension system, the ***individual takes on the obligation to make payments defined by the legislation***[97]. This means that regardless of the principle behind the entry of the individual in the "2" pillar of the funded system, from the viewpoint of the multi-pillar pension system he will be considered as a beneficiary of the mandatory funded pension and will be subjected to the regulations mechanisms, of the funded system.

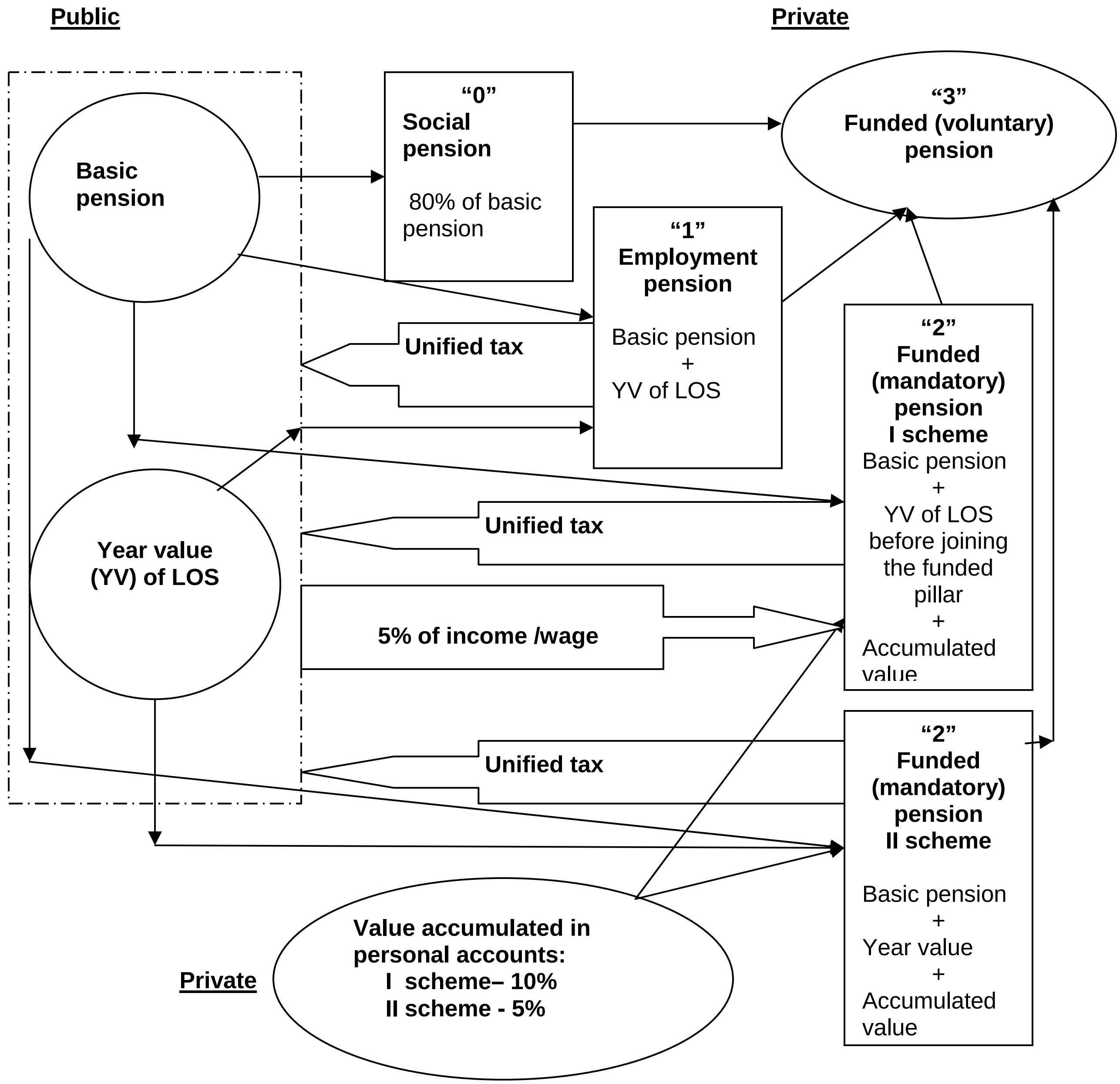
7.3.6.2 ***The "3" pillar of the multi-pillar pension system is voluntary.*** The specific aspect of this pillar is that any Armenian citizen, regardless of age and participation in the other pillars of the multi-pillar pension system can enter the "3" pillar. Moreover, without any precondition, the participant in the "3" pillar *is also free to stop making contributions to the system*.

7.3.6.3 Participation in the funded component, in general, ***will be promoted*** . If an Armenian citizen decides to participate in Pillar "2" (Scheme II) or Pillar "3" of the funded component, then *the calculation base for the income tax of the natural person is reduced by the amount of pension contributions (such a reduction must not exceed 5 % of contributions).* Other than the mentioned tax incentive, young participants of the "2" pillar (up to 40 years of age), as already mentioned in paragraph 7.3.5.2, will also receive direct state support in the form of co-funding from the state budget to personal accumulation funds.

[96] According to the defined parameters, the entry of those aged 41-62 in the funded "2" pillar is voluntary for participants of the Scheme II.

[97] Of course with the exception of cases where the participant does not receive any income or wage.

Chart 6. Pensions of the unified multi-pillar pension system and their sources of financing



7.3.7 The above mentioned ***parameters have formed the basis for pension reform model projections***. They have been used as input data for actuarial calculations of baseline (2008-2012) and reform (2008-2080) scenarios using the PROST software. Pensions paid from all pillars of the unified multi-pillar pension system, their structure, sources of financing and links are presented in Chart 6.

7.4 Baseline scenario: 2008-2012

7.4.1 Calculations of the <u>*baseline scenario*</u> of pension reform (made by the PROST software developed by the World Bank) are aligned to the main indicators contained in draft PRSP II_(Poverty Reduction Strategy Paper). ***Main parameters of pension reform*** (see Section 7.3) have been used as input indicators for the baseline scenario.

7.4.2 The basis for macroeconomic and pension reform projections were the ***target indicators included in the government program 2008-2012***. In addition, the projections for 2009-2011 are consistent with the indicators anticipated in the Medium-Term Expenditure Framework (MTEF). Namely:

7.4.2.1 <u>*GDP forecasts*</u> are comparable to the growth rates envisioned in the MTEF: ***10.4% for 2008, 9.2% for 2009, 8.5% for 2010, 8% for 2011, 7.4% for 2012.***

7.4.2.2 The growth rate of the average nominal wage is synchronized with the main indicators of 2009-2011 MTEF: 117.4% for 2008, 113.6% for 2009, 112.0% for 2010, 111.3% for 2011, 108.6% for 2012.

7.4.2.3 The forecasts for average pension secure the fulfilment of two target indicators: 60% increase in pensions from January 1, 2008 and bringing the average employment pension to a level equivalent to the minimal consumer budget (100%).[98]

7.4.3 The population projections are based on the following assumptions: tow main indicators are projected with the expert assistance of the National Statistical Service and the UN Population Fund, i.e., ***aggregate birth rate (ABR)*** for which a smooth growth is assumed from 1.366 (2005) to 1.653 (2012); and b) average duration growth of life expectancy from 68.7 years (2005) to 70.7 years (2012) for males and from 75.6 years (2005) to 77.0 years (2012) for females. As a result, in the projected period the number of permanent population in Armenia will grow by around 37 thousand.

7.4.4 <u>*The forecasts on the number of pensioners*</u> are based on the sex and age composition of the population.

7.4.5 In the forecasts on the number of *contributors* was considered the growth in the number of employed population (by around 100 000) as projected in the 2008-2012 Government Program[99].

7.4.6 Forecasts based on the defined parameters, political targets and experts assumptions ***refer only to the existing solidarity component***, since it will be used as a baseline scenario for the reform scenario (see Table 14).

---

[98] Since draft legislation on the minimal consumer basket and minimal consumer budget has not been developed yet, the 2008-2021 forecasts for the minimal consumer basket (MCB) as provided in PRSP-II are used as a benchmark.

[99] Under the 2008-2012 Government Program, "…it is anticipated that non-agricultural employment will increase by around 105 thousand jobs…". See Sub-section "Employment, Labor Productivity and Incomes" of Section 4.3.1.

Table 14. Main indicators of the solidarity component 2008-2012

baseline scenario

Indicators	**2008**	**2009**	**2010**	**2011**	**2012**	**2008/ 2007**	**2012/ 2008**
Average employment pension*, AMD	22.238	25.840	31.085	35.982	41.859	***179.9%***	***188.2%***
Average old age employment pension, AMD	22.242	28.290	32.121	37.233	43.333	***169.1%***	***178.8%***
Year value of LOS, AMD	395	455	555	645	730	***171.7%***	***184.8%***
Basic pension, AMD	6.800	7.950	9.290	10.870	13.431	***160.0%***	***197.5%***
Average nominal wage, AMD	90.957	103.324	115.781	128.808	139.886	***117.4%***	***153.8%***
Minimum consumer budget, AMD	34.640	36.026	37.467	38.591	39.749		
Average employment pension/average nominal wage, %	***24.4***	***25.0***	***26.9***	***27.9***	***29.9***		
Average old age employment pension / average nominal wage, %	***26.7***	***27.4***	***29.5***	***30.8***	***32.9***		
Average employment pension/, min. consumer budget, %	***64.2***	***71.7***	***83.0***	***93.2***	***105.3***		
Average old age employment pension/ min. consumer budget, %	***70.0***	***78.5***	***91.3***	***102.7***	***115.9***		
Reference indicators							
Real GDP growth, %	110.4	109.2	108.5	108.0	107.4		
De jure population, 1000 people	3,229	3,236	3,243	3,251	3,260		
Old age pensioners, 1000 people	365.4	359.6	357.6	357.1	359.1		
Unified tax payers, 1000 people	496.9	518.2	*543.8*	569.1	575.8		

***** *Including employment (insured) pensions for disability and survivorship.*

7.5 Reform scenario: 2009-2080

7.5.1 _Model projections_ of pension reform are made by the PROST software developed by the World Bank[100]. The reform scenario is based:

a) ***for 2009-2011***: the macro-economic and pension system indicators as reflected in the MTEF,

b) ***for 2012-2021***: the synchronized macro-economic and pension system projections of PRSP-II and PRPP[101],

c) for 2021-2080: projections made by the experts of the PSRS working group.

7.5.2 The main projections were made for the following indicators:

- Population and its sex-age composition;
- Real GDP growth rate;
- Real wage growth rate;
- Inflation rate;
- Average monthly pension growth rate;
- Average LOS at retirement;
- Level of inclusion in the pension system;
- The level of investment return.

Informational bases for model forecasts are presented in Box 25.

7.5.3 Assumptions used for demographic, macroeconomic and pension system forecasts were elaborated based on the analysis provided in Chapter 1 of this document[102]. Indicators and factors relevant to pension reform were studied, compared and assessed comprehensively from the viewpoint of impact on indicators listed in paragraph 7.5.2.

Box 25. Information for model forecasts

The CB expert group collected, compared and studied the following information during the development of forecasts:

- Data from the National Statistical Service, including the results of household surveys
- Administrative data from the SSIF, including the database on personal accounts
- Population projections of UNFPA (2006-2035) and the World Bank (2006-2080)
- The macroeconomic framework and poverty forecasts of the Ministry of Finance and Economy for 2008-2021
- The database on the unemployed of the State Employment Agency of the Ministry of Labor and Social Issues
- Data of the Tax Inspectorate on income taxes and social contributions
- Statistics collected by the Central Bank on investment returns in domestic and international financial markets.
- Model projections and estimations performed by experts of USAID Social Protection System Strengthening Project and Financial Sector Deepening Project.

7.5.4 The main assumptions serving as the basis for reform scenario 2009-2080 projections are divided into three groups:

- ***Demographic trends***
- ***Macroeconomic trends***
- ***Pension system parameters***

[100] World Bank experts Tatiana Bogomolova and Zoran Anushich assisted the CBA Pension Reform Preparation Group in performing alternative pension reform calculations and developing respective assumptions for macro-economic, demographic and system projections through the PROST software package.

[101] Pension System Reform Program.

[102] During the development of the assumptions, the program preparation group also used the “Model scenarios/programs of action for Armenia’s pension system reform” prepared by USAID expert Landis Mackellar, which was submitted to the Pension Reform Working Group of the Government of Armenia for discussions on 10 October 2007.

7.5.5*.* Assumptions on _demographic trends_ were made for the following indicators, which are considered to be essential for the PROST software:

7.5.5.1 ***Total fertility rate*** – based on trends officially recorded in previous years by the NSS, as well as alternative assumptions of demographic forecasts developed with the support of the UNFPA, it is assumed that the _indicator will have a slow, but steady increase_: _from 1.37 in 2005, by the end of the forecast period (2080) it will reach 2.16 which will ensure simple reproduction._

7.5.5.2 ***Crude death rate*** – it was assumed that _this indicator will manifest a steady decline_. The basis for this assumption were the forecasts of the World Bank on world population until 2080, were crude death rate trends for our country have also been described[103].

7.5.5.3 ***Average life expectancy at birth –*** in order to forecast the indicator, it has been taken into account that every 12 years the average life expectancy increases by one year. Time series officially published by the NSS show that this assumption is justified.

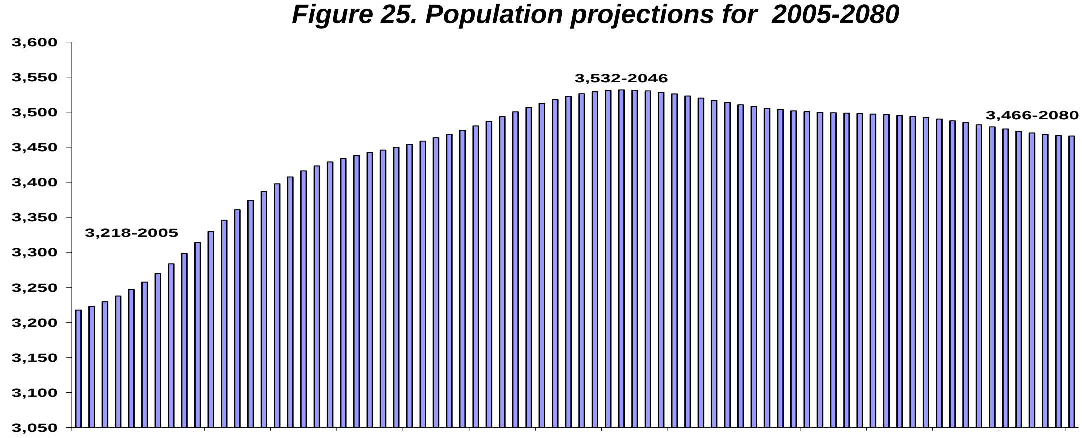
7.5.5.4 ***Migration balance –*** because of the absence of reliable information on the size of migration and its sex-age composition, the migration balance for the entire forecast period is _assumed to be neutral and equal to "0"_.

7.5.5.5 ***Sex ratio at birth*** – this indicator, which indicates the ratio of born males to 100 born females, has been assumed to be _equal to its actual level in 2005 at 105%_ for the entire forecast period.

7.5.5.6 ***Mortality rate for certain groups of population -*** as an input indicator for PROST, is forecasted only for the disabled and old-age pensioners. It has been assumed to be constant for the entire forecast period and _equal to its level of 2005 at 100%_.

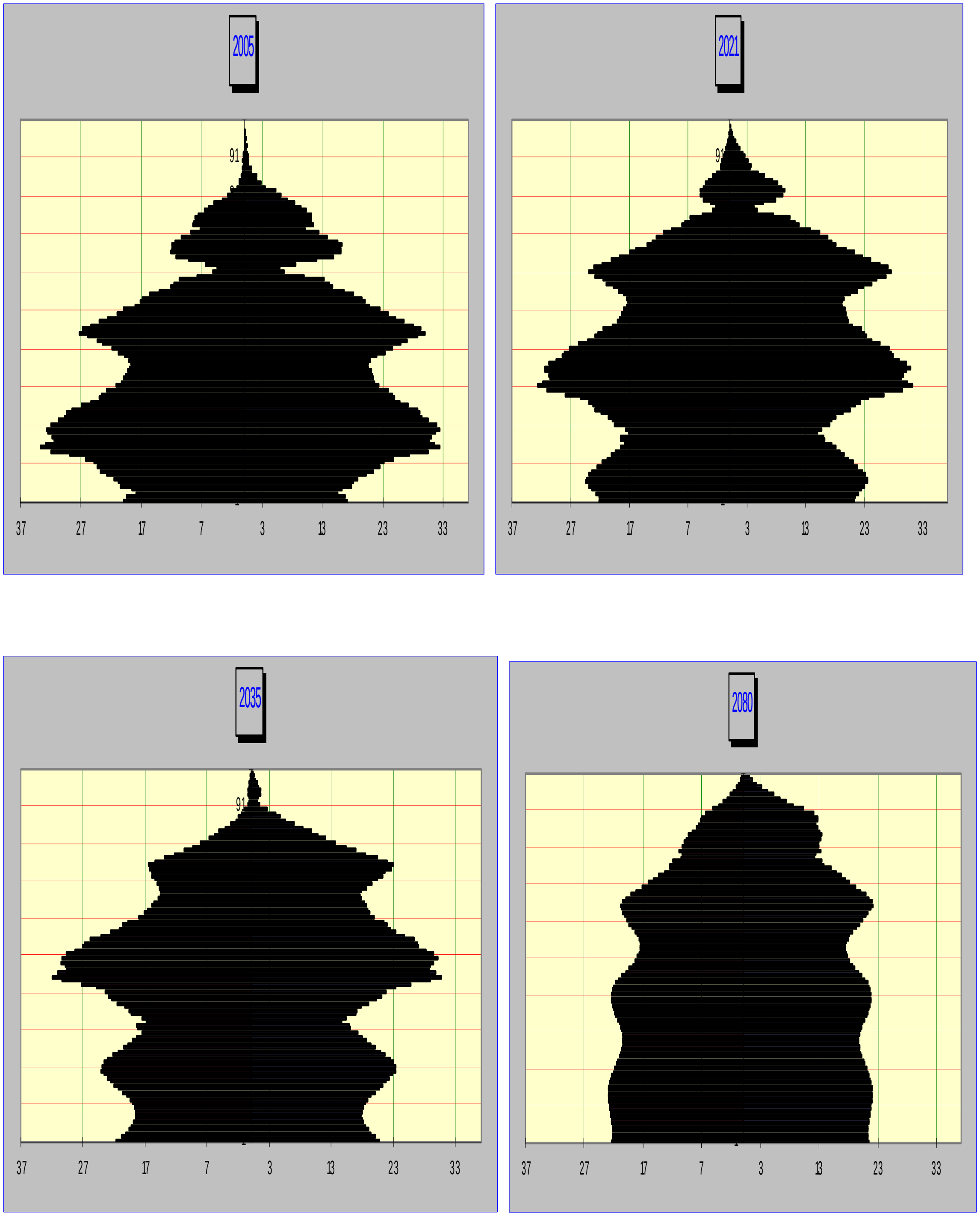
Projections of the population by sex and age groups are based on assumptions regarding demographic trends. The results reveal that although the demographic situation manifests improvement trends until 2035, but it will continuously worsen in the following years, resulting in lower number of population. The sex-age composition of the population will deteriorate in particular. The population will age and older age groups will predominantly consist of women (see Figures 25 and 26).

Figure 25. Population projections for 2005-2080



[103] Demographic forecasts of the World Bank were modified by the WB specialist Tatyana Bogomolova in cooperation with the local experts.

Figure 26. Population sex and age pyramids based on projections for 2006, 2021, 2035 and 2080



7.5.6 Assumptions for forecasting _macroeconomic trends_ were made for the following indicators:

7.5.6.1 ***Real GDP growth*** – it is assumed that from 2013 this indicator will tend to decrease smoothly from 6.9% to 5.1% (2021) and will remain at a 3% level from 2025 through the end of the forecast period (2080).

7.5.6.2 ***Nominal wage growth*** – while during 2008-2011 real wage grows at a rate higher that the real GDP growth rate by 4% in average, in 2012-2025 the real wage growth rate decreases to 1-2% (based on the assumption of increased labor productivity) and from 2025 till 2080 it remains steadily at the level of 6%, i.e. by 3% difference from the CPI.

7.5.6.3 ***Consumer price index (inflation)*** – the average annual CPI for 2009-2011 is aligned to the MTEF forecasts, and it is assumed that from 2012 till the end of the forecasted period the annual inflation rate will become stable (around 3%).

7.5.7 Forecasts of _pension system parameters_ were made using the ***"defined parameters"*** presented in paragraph 7.3. The latter, together with the ***"main principles"*** of pension reform (paragraph 7.2) formed the basis for assumptions on the following indicators[104]:

7.5.7.1 ***Retirement age*** – has been assumed to be _63 years for both women and men_ in the entire projection period[105].

7.5.7.2 ***Social contributions from wages*** –Social contributions currently consist of two parts: employees pay 3% of their wages and employers pay 23% of their wage bill. The mentioned rates of social contribution – calculated as 26% of unified tax - have been maintained for the entire projection period. Revenues of the state budget from social contributions are calculated based on the assumption that ***all individuals aged 16-62 pay unified tax*** (in this case at 26%) regardless of their participation in the mandatory funded componen

7.5.7.3 ***Payments allocated to individual accumulations*** –this indicator is a key element of the mandatory funded component modelling. It is applied only to the participants of the funded component and according to the defined parameters (see paragraph 7.3) amounts to _*5% of the income/wage of the individual plus 5% from the state budget.*_ In the reform scenario model only the below approach is applied for the participants of the funded component:

- ***From 2010 all individuals aged 16-40 pay the unified tax and 5% to their individual accounts,*** since they have to participate in the funded component.

It should be noted that since the voluntary participation of individuals aged 41-62 in the funded system will not originate any fiscal burden, their participation is not considered in the reform model.

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[104] PROST software allows for modeling and forecasting pension system parameters only by one condition: if the system is considered as an "independent fund" with its "independent" balance of expenditures and revenues. In other words, pensions paid from the state budget in accordance with the legislation of Armenia are not included in the model. In order to overcome this the "gap" of the model, USAID experts Landis Mc Kellary developed another model, which makes the pension system forecasts comprehensive by including social pensioners as well.

[105] According to the scale defined by the legislation, the 63 years retirement age will be applicable to women from all age groups until 2011. This fact is taken into account while modeling scenarios.

7.5.7.4 ***Administrative costs*** – this indicator was assumed to be a certain percentage of the total social contributions made. In particular, based on the actual and planned administrative costs of the former State Social Insurance Fund f, which during 2006-2007 varied between 3.2% and 3.4%, it has been assumed that by 2008 they will gradually decrease up to 1.5% in 2080.

7.5.7.5 ***Other costs of pension fund*** –this indicator is calculated as a certain percentage of the pension costs. Based on the same logic as in the forecast for the previous indicator, 2005-2007 data from SSIF, which vary between 289% at 6.2%, were used. It has been assumed that for the forecast period they will amount to fixed 4.2*% of the total expenditures on retirement (contributory) pensions made by the fund.*

7.5.7.6 ***Pension indexation*** *– during 2008-2012 pensions are increased based on the scale as reflected in the 2008-2012 Government Program and the PRSP-II targets (see Table 13).* At the same time the following rules for indexation of employment and basic pensions are applied:

- ***From 2013 the year value of LOS is indexed by the consumer price index,***
- ***From 2022 the basic pension is indexed by the annual wage growth rate.***

7.5.7.7 ***Investment return rate*** - in essence is the "*indexation*" indicator of funded pensions. In order to model it the return rate has been gradually reduced from the 7.7% real rate in 2009, to 4 percent in 2033 maintaining that level until 2080.

7.5.7.8 ***Length of service*** –according to data from SSSS, in 2005 the average LOS for men was 37.1 and for women 31 years. Since the average length of service has a declining trend, it has been *reduced gradually to 25 years in 2015* and has maintained this level for both men and women covered by the solidarity system until the end of the forecast period. As for the persons mandatory joining the funded system their length of service earned prior to it makes 13.2 years in average.

7.5.7.9 ***Number of contributors*** – in the 2008-2012 Government Program is *considered increase in employment by* 105 thousand individuals. The number of contributors is accordingly increased for the same period. The projected average growth rate of contributors for 2013-2021 is 3%, and for 2021-2080 a constant ratio of contributors to the total population is applied.

7.5.8 Based on the above-mentioned assumptions on the behaviour of PROST input data, the ***reform scenario for 2009-2080*** was modelled and calculated (see Table 15). Forecasts of the pension system balance were made for both reform and baseline scenario. It must be noted that the baseline scenario was developed based on the following principles:

- ***For 2008-2012,*** the *targeted increases* of awerage pension planned by the Government of Armenia were used as benchmarks (see Table 13),
- ***For 2013-2080***, the pension *indexation* principle was used, whereas the basic pension was indexed by the wage growth and the year value of the length of service by inflation.

7.5.9 The projection of current balance of solidarity (baseline scenario) and multi-pillar (reform scenario) pension systems, as well as their replacement rates are presented in Figures 27 and 28.

Table 15. Output indicators of reform scenario, 2010-2080

Indicators	**2010**	**2012**	**2018**	**2021**	**2033**	**2040**	**2060**	**2080**
Average (old age) ***employment*** pension, AMD	28.290	46.213	90.661	110.847	183.356	253.436	671.543	-
Average ***funded*** (mandatory) pension, AMD	-	-	-	-	198.589	331.767	1231.014	3586.742
Basic pension, MD	10.870	13.431	48.388	63.455	131.467	198.855	649.425	2.121.911
Average nominal wage, AMD	103304	139886	218088	267183	549061	831455	2710617	8862526
Average ***employment*** pension/average wage, %	***27.4***	***33.0***	***41.6***	***41.5***	***33.4***	***30.5***	***24.8***	-
Average ***funded*** pension/average wage, %	-	-	-	-	***36.2***	***39.9***	***45.4***	***40.5***
Basic pension / min. consumer budget, %	***24.8***	***33.8***	***102.0***	***122.4***				
Reference indicators								
Real GDP growth, %	109.2	107.4	106.3	105.1	103.0	103.0	103.0	103.0
Population, 1000 people	3247	3284	3330	3408	3468	3513	3501	3466
Pensioners, 1000 people	469.3	468.3	493.0	578.5	670.2	661.0	641.2	540.1

Figure 27. Pension system balance, 2009-2080
baseline (only solidarity) and reform (multi-pillar) scenarios

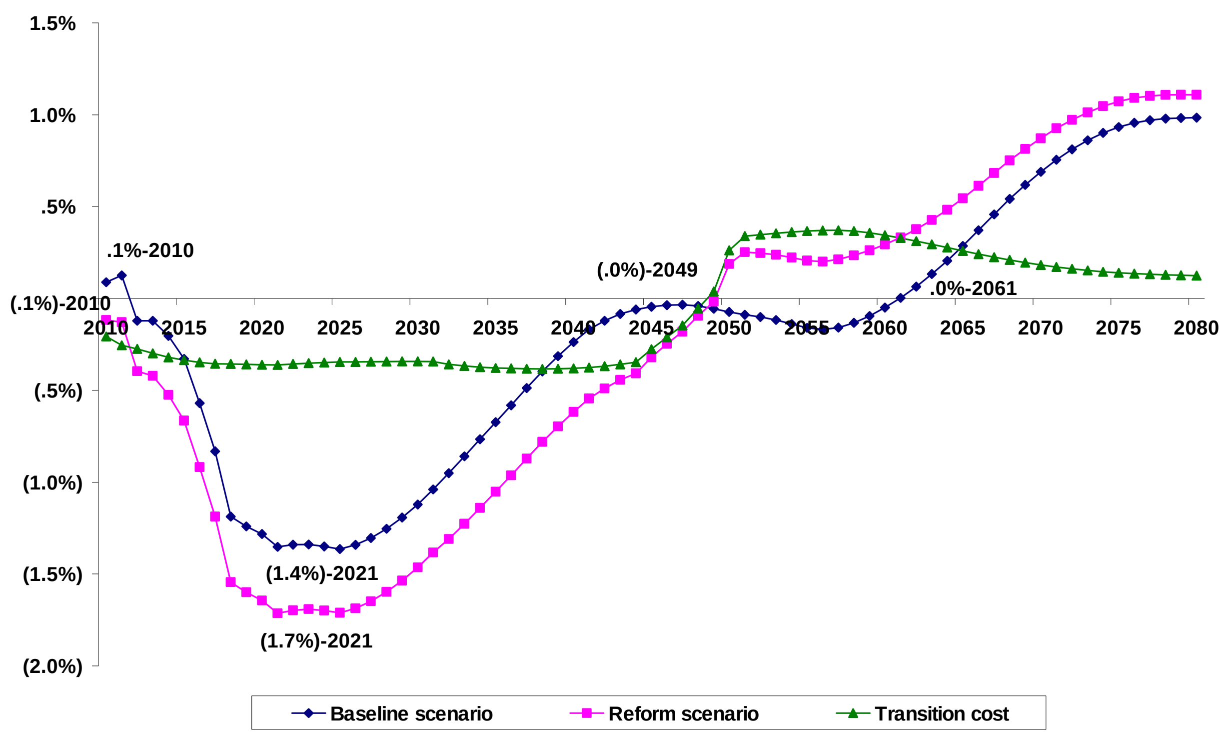
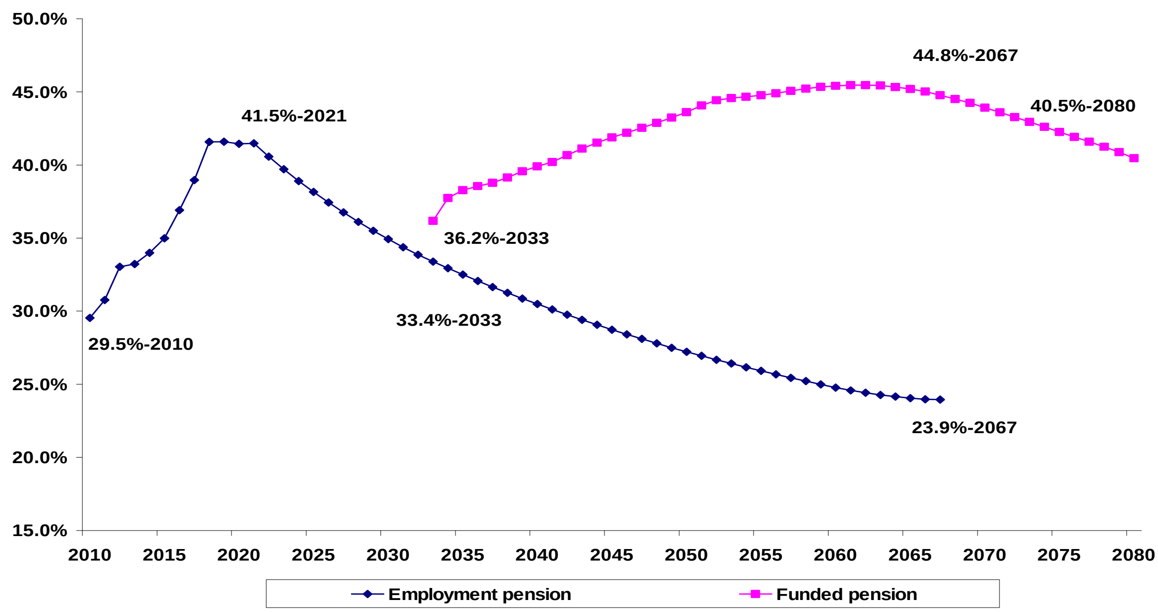


Figure 28. Pension (old-age) replacement rates, 2009-2080
beneficiaries of solidarity and funded components



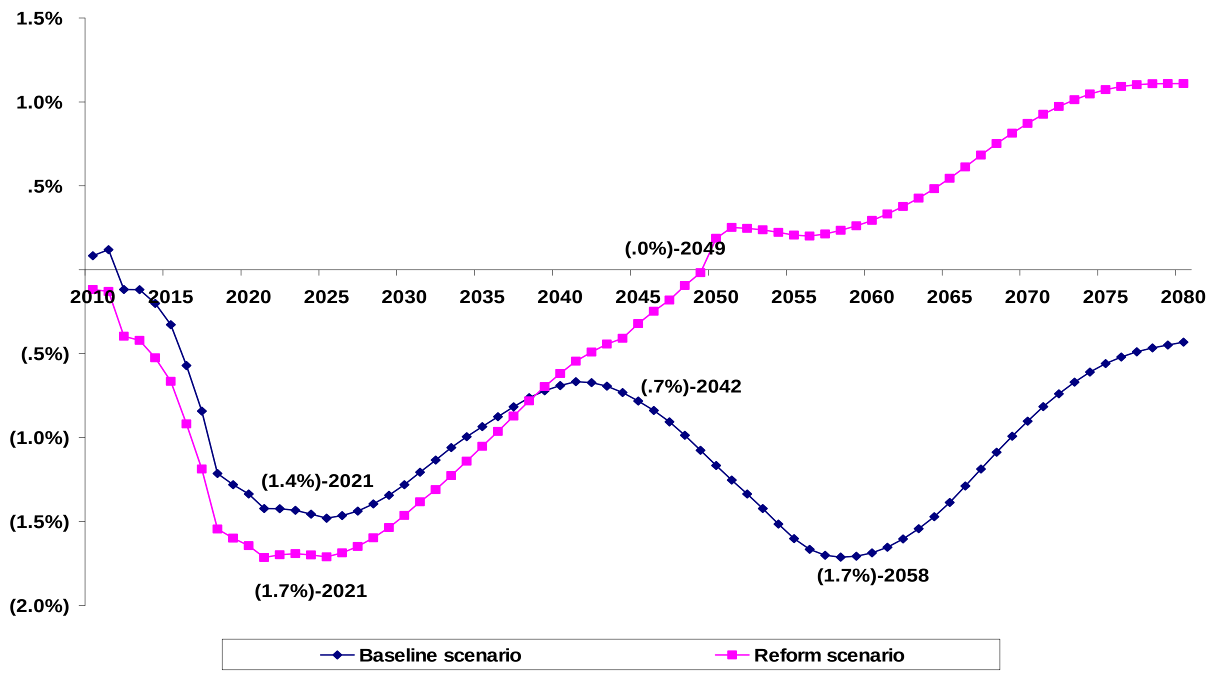
7.5.10 Model projections reveal that by the introduction of the multi-pillar pension system, pension reforms will be accompanied by a ***system budget deficit of 0.1% in 2010 which will reach the level of 0.4% in 2012 and in the course of the reform process the maximal level of deficit (1.7% of GDP) will be traced during 2021-2023*** which is due to aligning the amount of social pension to the consumer basket cost. The calculation of fiscal burden related to the reforms included:

- Amount of state support to be provided to mandatory participants of funded component under the age 40. The amount makes 5% of personal wage, but not more than AMD 25000 (starting from 2010),
- Replacement of the length of service earned by the participants prior to joining the funded component (starting from 2033),
- Steady growth of solidarity component pensions (starting from 2008).

7.5.11 Simultaneously, as a result of reforms the ***replacement ratio of average pension for young generation*** (for persons under 40) will make ***36.2% in 2033 which will consistently grow ensuring 40% of income replacement for the coming new generations (in terms of 25 years of length of service).*** Figure 28 clearly shows that staying in the non-reformed system the future pensioners would lose their expected pensions for ***1.1-1.9 times.*** Furthermore, with the introduction of multi-pillar pension system *the total average of the replacement ratio will considerably improve:* from 2033 it will tend to grow, thus ensuring ***an average level of 35-40%*** (detailed calculations are presented in *Section 13*) for all pensioners of the country (both solidarity and funded).

7.5.12 ***Ensuring replacements rates for the beneficiaries of the solidarity component, comparable to the reform scenario, will result in larger deficits of the solidarity system*** (see Figure 29). For instance, in the <u>*baseline scenario*</u> the replacement rate of the employment pension for 2021-2080 does not go down and remains at the stabile level of 40%. In this case ***improvements of the exclusively solidarity system through continuous increase in pensions will be accompanied by continuous unrecoverable deficits.***

Figure 29. Pension system balance for 2021-2080 under the condition of ensuring 40% replacement rate for solidarity pensions



7.5.13 As it was already mentioned the described scenario of reform is a result of numerous simulations, which were made based on alternative assumptions and changes in reform parameters. The purpose of numerous simulations was to determine *the group of input indicators which have the largest impact on the two most important output indicators of pension reform:*

- ***Fiscal price of the reforms; and***
- ***Replacement rates.***

7.5.14 Simulations based on changes in parameters revealed that the mentioned output indicators of the reform are most sensitive to ***the pension indexation principle***. If pensions are indexed only by the consumer price index, i.e. The basic pension is also indexed by inflation instead of wage growth (see paragraph 7.5.7.6), the fiscal price of the reform and the duration of the deficit will be reduced significantly. However, at the same time, the other important output indicator – the replacement rate - will be reduced sharply until the unacceptably low level of 8-18% (see Figures 30 and 31).

Figure 30. Balance of the reformed pension system, basic and employment pensions with price indexing, 2022-2080

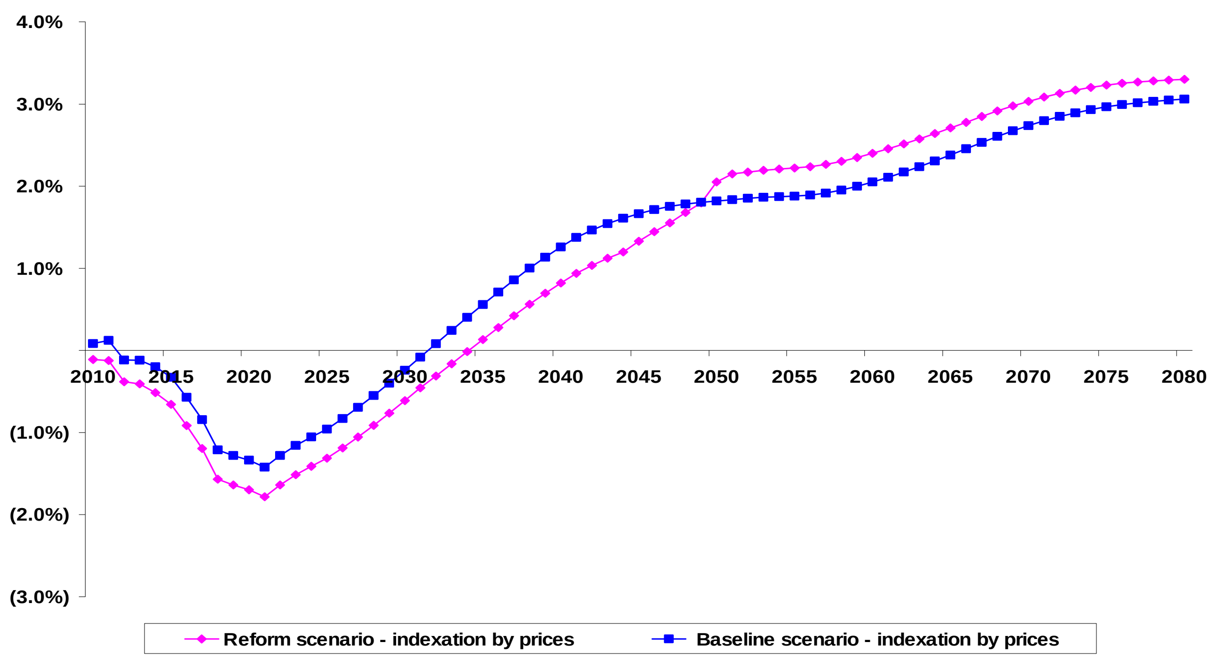
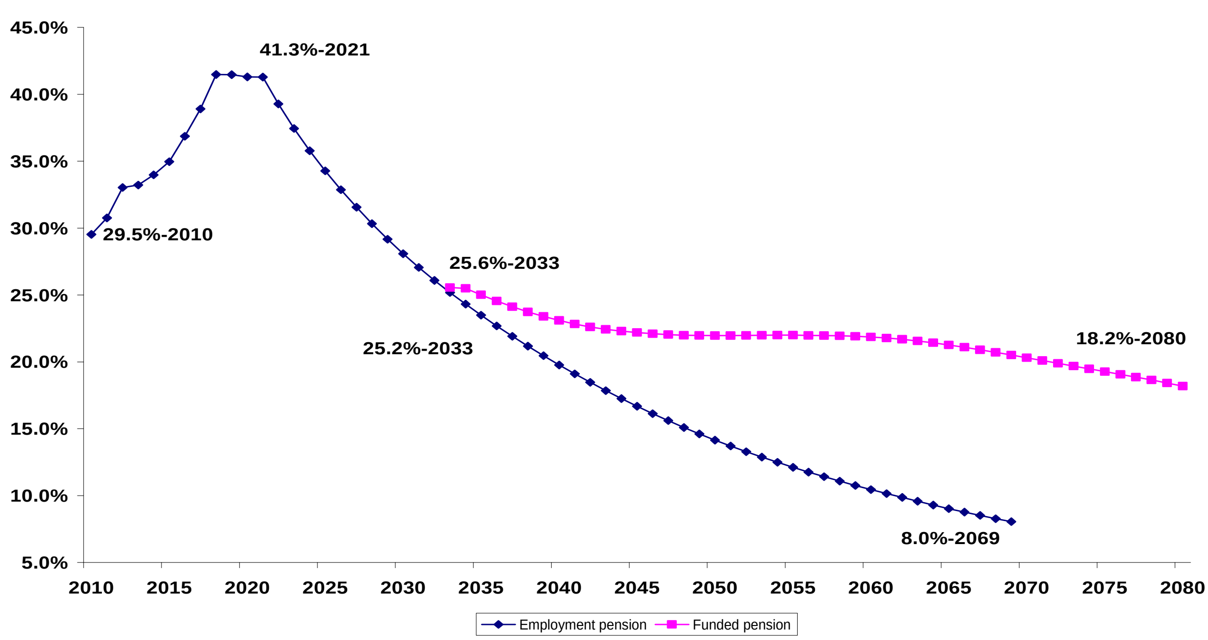


Figure 31. Replacement rates for pensions of the reformed pension system, basic and employment pensions with price indexing, 2022-2080



CHAPTER III. ARMENIA'S MULTI-PILLAR PENSION SYSTEM

As result of reforms a multi-pillar pension system will be established in Armenia, with each pillar having its unique role ensuring income for elderly people.

- ***Pillar "0" or social pension will protect from extreme poverty Armenian citizens incapable of working;***
- ***Pillar "1" or old-age pension will compensate years of service for people above 40 by ensuring income exceeding poverty threshold by at least 1.5 times;***
- ***Pillar "2" or mandatory funded pension will compensate incomes for people below 40 by insuring adequate income commensurate with defined contributions;***
- ***Pillar "3" or voluntary funded pension will be an additional income resource for elderly people by ensuring income adequate to voluntary contributions made.***

Simultaneous participation in pillars "1", "2" and "3" of a multi-pillar system will assure full compensation for people upon retirement.

8. "0" Pillar of the Pension System

8.1 Pillar "0": Social Pension

8.1.1 *Pillar "0"* will be used to pay ***social pension, which aims to provide a minimum income*** to those *individuals* who are in ***old-age, disabled and are survivors of persons without pensions***, i.e. to those *individuals* who *are not eligible for pensions*.

- Have never worked and/or have never accumulated contributions;
- Have worked in the informal sector of the economy or have failed to make mandatory contributions;
- Have worked in the formal sector, but the total is less than 5-10 years (according to the scale presented under 8.1.1.1);
- Have made contributions to the funded component for a period less than 10 years.

8.1.2 *Pillar "0"* is also established for those participants of pillars "1", "2" and "3"of the multi-pillar system who are not entitled to retirement and funded pensions (see Sections 9 and 10 on retirement and funded pension entitlements).

8.1.3 In this regard social pension is of a ***universal nature*** because it is paid as a flat amount to those eligible for a pension (irrespective of assets owned or revenues, see *Box 26*) who subjectively or objectively were left out of the other pillars of the system and meet the following conditions of social pension entitlement:

Box 26. Selection of the Universal Approach to Social Pensions

Social pension is assigned based on universal criteria. The rationale behind this approach is as follows:

- The basic size of social pension is even below the extreme poverty line;
- Number of social pension beneficiaries does not exceed 10% of the number of pensioners;
- Income declaration practices still lack in the country;
- Indirect collection of information about income costs more than payment of social pensions.

8.1.3.1 The person shall be a **resident of the Republic of Armenia**.

8.1.3.2 The person shall has a **permanent or temporary registration in the Republic of Armenia**. For the latter case social pension is received as long as the person resides (is registered) on the territory of the Republic of Armenia.

8.1.3.3 ***In case of emergencies*** (for example in case of refugees) or by ***interstate agreements*** other criteria may be defined regarding assignment of social pensions to individuals other than Armenian citizens.

8.1.3.4 The person has reached the ***age of 65 and does not have 10 years of (according to the scale of Table 16) length of service***.

8.1.3.5 The person has not reached the ***age of 65 and does not have 5years of length of service (according to the current legislation),*** but he/she is disabled or a dependent/survivor.

8.1.4 ***Social pension is assigned irrespective on any other non-pension incomes,*** provided the person meets the criteria listed in 8.1.1-8.1.3 above.

8.2 Types of Social Pension

8.2.1 Currently existing types of social pensions are retained and they are as follows: <u>*old-age social pension, disability, social pensions and survivor social pension.*</u>

8.2.1.1 <u>*Old-age social pension*</u> is assigned to people who have reached the age of 65 and have up to 10 years of service. To smoothly shift from the previous "up to 5 years of service" requirement to the new "up to 10 years of service" requirement and in order to protect the right to old-age pension of those in pre-retirement age a schedule for the length of service criteria based on years of retirement has been developed (see: *Table 16*).

Table 16. Terms of assigning social pension by the length of service and retirement

Year of Birth	*Year of Retirement*	*Length of Service*
1944	2009	Up to 5 years
1945	2010	Up to 6 years
1946	2011	Up to 7 years
1947	2012	Up to 8 years
1948	2013	Up to 9 years
1949	2014	Up to 10 years

8.2.1.2 Persons whose length of service meets the scale presented in Table 16 will get social old age social pension according to the terms referred to under 8.1 of this project. Those born after January 1, 1950 will be eligible for old-age social pension if their length of service is less than 10 years.

8.2.1.3 Size of old-age social pension ***amounts to the 80% the basic pension.*** This proportion aims to encourage people to give up informal employment and/or seek formal employment. <u>**Size of social pension should be discouraging**</u> (see Box *27*).

8.2.1.4 Old-age social pension assigned prior to ***January 1, 2009*** will continue to be paid in the same size as basic pension.

8.2.2 Beneficiaries of *disability (incapacity)*[106] *social pensions* are those with disability categories 1, 2 and 3 of the age up to 65 with length of service in accordance with the current legislation.

8.2.3 *Survivor social pension* is assigned to family members or dependents of a person who has passed away and at the time of death does not have the length of service in accordance with the current legislation.

Box 27. Why the Parameters of Social Pension Were Changed?

It has already been pointed out in Section 7.3. "Defined Parameters" of Chapter 2 that "up to 5 years" of service requirement of the previous system has been replaced with the new "up to 10 years" of service requirement in the multi-pillar system: The ratio of social pension to the basic pension will also go down and current 100% will be reduced to 80%. These changes are aimed to:

- encourage formal employment by making eligibility for retirement pension more difficult and relatively reducing the size of the pension;
- encourage long-term savings by applying this parameter to beneficiaries of funded pensions as well.

So, the parameters of the pension of a person with 10 years of service as of 2008 will be 6800+395x10x0.7 = 9565 drams, and social pension will be 6800x0.8 = 5440 drams.

As you see from the conditional sample the difference is significant – 1.75 times.

8.3 General Provisions

8.3.1 Social pensions are i**ncreased according to the targets** presented in the Table 13 in the period of 2009-2021, and are **indexed to the annual growth of average salaries** in the period of 2022-2080.

8.3.2 Social pension may be **terminated** in the following cases**:**

- person changes Armenian citizenship and/or place of residence (unless otherwise defined by inter-state agreements);
- secondary medical examination recognizes the person receiving disability social pension as capable of work;
- circumstances of survivor social pension recipient change (e.g. age, unemployed or not working dependents, daytime study and other circumstances).

8.3.3 In certain cases social pension is allocated **life-long** (e.g. for mentally ill people, or people with chronic illnesses, disabled from childhood, etc.).

8.3.4 Social pension is allocated by authorized state body and is funded by **the national budget.**

8.3.5 Financial and/or special needs of poor and vulnerable social pensioners will be addressed through **state-run social assistance programs** on general terms.

[106] As mentioned in 7.2.8 of "General Provisions" section of Chapter 2 the principle of "invalidity" needs rather to be replaced with the principle of "disability" or "incapacity to work" and its introduction will require development of a separate project document. Before development and introduction of that document all issues related to disability will be governed in accordance with legal and regulatory acts by using new schedules for calculation of length of service presented in this project.

9. “1” Pillar of the Pension System

9.1 Pillar “1”: Employment Pension

9.1.1 *Pillar “1”* is established as the basis for ***the multi-pillar integrated pension system*** since it has to ensure the viability of all the pillars of the system. ***It has to play an important role in ensuring social protection for pensioners and standards of living guaranteed by the state.***

9.1.2 *Pillar “1”* is of twofold importance:

- *firstly*, the number of pensioners of this pillar will exceed the number of beneficiaries from other pillars up until 2040-s; and
- *secondly,* basic pension[107], which is the “cornerstone” of the pension system and ensures “integration” of the system, is funded through this pillar.

9.1.3 Some beneficiaries of this pillar in addition to the basic pension will receive employment pension**, which aims to provide compensation by the state for the years of service to recipients of old-age, disability and survivor pensions** to those individuals who:

- have 5 to 10 years of creditable service (in the meaning described 7.3.2 of Chapter 2);
- have reached the age of 63 (for females according to the pension schedule);
- have become eligible for old-age pension by legislation or in accordance with provisions defined by inter-state agreements.

9.1.4 *Basic pension* is **universal** flat rate amount payable to everyone eligible for employment pension.

9.1.4.1 Size of the basic pension is defined by the legislation of the RA and indexed to the growth of average salary in the country.

9.1.5 *Employment pension* i***s differentiated by the length of service*** *of those eligible for employment pension.*

9.1.5.1 The amount payable for *each year of service* is defined by Armenian legislation and ***indexed to consumer price index.***

9.1.6 Thus, all beneficiaries of pillar “1” receive basic pension, which means that eligibility **for employment pension implies entitlement to basic pension**.

9.1.7 Beneficiaries of *Pillar “2”* receive the basic pension of pillar “1” if they meet the employment pension eligibility criteria (see: 9.1.3). In case of insufficient pension rights beneficiaries of pillar “2” receive social pension of pillar “0” at the terms described in 8.1.2 - 8.1.3.

9.1.8 Beneficiaries of *Pillar “3”* receive ***both the basic and*** employment ***pension*** of pillar “1” if they meet the old-age pension eligibility criteria (see: 9.1.3).

[107] The role of basic pension in Armenia’s multi-pillar pension system is discussed in detail in 7.2.3.

Beneficiaries of pillar “3” with insufficient pension rights receive social pension at the terms described in 8.1.4.

9.1.9 Entitlement to a **Life-long** employement pension occurs if:

- the person is an **Armenian citizen**
- the person is **a permanent resident** of Armenia at the moment of pension allocation;
- **length of service is accrued** from employment **on the territory of the Republic of Armenia** (or Former Armenian Republic of Soviet Union);
- Other instances defined by inter-state agreements.

9.1.10 Employment pensions will be an ***incentive for formally working and unified tax payers*.**

9.1.11 Through differentiation of employment pensions some sort of *compensation* will be offered for losses of service years that occurred as result of **labor market deterioration in Armenia** for over a decade (1990-s).

9.2 Types of Employment Pension

9.2.1. Current types of employment pension will be retained. Those are *retirement, incapacity to work (disability) and survivor employment pensions*.

9.2.2 Employment pension is assigned to people who have reached the age of 63 with length of service equal or above 10 years. To smoothly shift from the previous "up to 5 years" of service requirement to the new "up to 10 years" of service requirement and in order of those in pre-retirement age a schedule for the length of service criteria based on years of retirement has been developed (see: *Table 19*).

Table 22. Schedule of eligible length of service applicable for employment pensions

Retirement year	***Required length of service***
2009	5 years
2010	6 years
2011	7 years
2012	8 years
2013	9 years
2014	10 years

9.2.2.1 As of January 1, 2014 the minimum required length of service for employment pension will be 10 years across the board (see: Box 27 for rationale)

9.2.2.2 The following formula will be used to define the size of old-age benefit:

RB = LS x CLS x YV, where

RB is the retirement benefit
LS is the length of service
CLS is coefficient[108] for the length of service
YV is the value for a year

[108] Coefficient for length of service corresponds to the current personal coefficient and is calculated as the ratio of actual years of service to required (25 years) length of service. For each year exceeding 25 there is a growth coefficient of 0.02.

9.2.2.3 The pension benefit for old-age employment pension recipients will include two components according to the formula below:

OARB = BP + OAP

where OARB is the old-age retirement benefit
BP is the basic pension
OAP is the old-age pension

9.2.3 The entire system of *incapacity to work (disability) and survivor employment pensions* needs to be reconsidered in accordance with the principles set forth in 7.2.5 and 7.2.8. of "General Provisions" part. These principles envisage a transition from "disability" to "incapacity to work" and from "social security" to "incident insurance". Recommendations developed with the technical assistance of World Bank experts are presented in section12 of this Chapter.

9.2.4 *A new approach will be developed in relation to privileged, long service and partial pension schemes will also be reconsidered; with the application of market mechanisms the state budgetary funding will be decreased*

9.3 General Provisions

9.3.1 Basic pension and the year value in 2008-2012 will be increased in accordance with Government of Armenia Program, until 2021 according to the schedule presented in the table 13 and afterwards starting from 2022 will be indexed as follow:

- **basic pension to annual growth of average salary**
- **year value to the consumer price index.**

9.3.2 ***Armenian citizens with right of permanent residence are entitled to life-long old-age pension*** once they qualify for it at the time of retirement. By changing the place of residence or citizenship they retain their entitlement to retirement benefit.

9.3.3 Employment pension is assigned ***irrespective on any other non-pension incomes, i***.e. it does not matter what are the sources of incomes for the person with temporary or permanent RA residency. Once the person is eligible for employment pension he will become it's beneficiary.

9.3.4 Payment of employment pension will be ***terminated*** only upon **the request** of the pensioner, as well as in cases defined by inter-state agreements.

9.3.5 Employment pension is allocated by **Pension Agency of RA**, the authorized state body **and** is funded by **the national budget.**

9.3.6 As a result of harmonization of specific programs in Armenia's social policy the number of employment pensioners who are also beneficiaries of social assistance, mostly of **family benefit** program, will be reduced.

10. “2” Pillar of the Pension system

10.1. Pillar “2”: Mandatory Funded Pension

10.1.1 _The “2” pillar_ ***is the core essence*** of the multi-pillar pension system, since the system is called “multi-pillar” just because of the introduction of the mandatory funded pillar. ***Funded (mandatory) pensions, which aim to compensate the incomes of persons in retirement age commensurable to their contributions,*** are paid under the “2” pillar.

10.1.2 ***All persons living and/or conducting economic activities in the Republic of Armenia, regardless of their citizenship (i.e. residents of the Republic of Armenia)*** are entitled to funded (mandatory) pension, if:

- The person has _voluntarily_ decided to participate in the mandatory funded “2” pillar without any age restriction,
- The person is _obligated to participate_ in the funded “2” pillar, since he is in the age group defined by the legislation for which participation is mandatory.

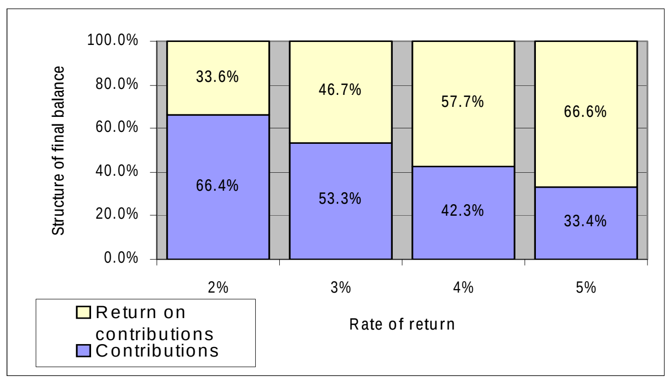
10.1.3 ***From 1 January 2010,*** participation in the “2” pillar ***is mandatory*** for persons born on and after January 1, 1970 and/or those who are under 40 on their first entry to the labor market:

10.1.3.1 _Person in the mentioned age groups_ participate in the mandatory funded “2” pillar ***in accordance with “scheme I”***, the parameters of which are presented in paragraph 7.3.5.2 and Chart 6 (Chapter 2).

Box 28. Justification of mandatory cumulative contribution rate

At least 30 years of length of service is a widely accepted criterion for entitlement to pension in European countries. Moreover, comparison of pensions between countries is basically made by using the mentioned criterion. Based on this circumstance, the justification for the 10% contribution rate defined for Armenia’s funded system is as follows:

First, this is the necessary level, which in 30 years can accumulate the amount needed for ensuring the necessary replacement rate, which, within this context, would mean at least the same replacement rate which the person might have had if he had stayed in the solidarity system. A 10% accumulation with 5% rate of return in 30 years will provide the beneficiary with an income which would be two times more that his accumulated amount (see figure).



Second, the size of assets under management should be adequate for their effective investment. According to studies, 1% increase in assets under management results in 0.91% increase in operating expenses. Another study revealed that in order to manage $250 million of assets it is necessary to make 1.39% expenditures and for $250-500 million 1.12% expenditures. According to calculations of the Central Bank of Armenia, in 2011 the assets will amount to $217 million, and in 2015 $945.8 million, and consequently due to the scale effect, beneficiaries will receive increased pension at the expense of savings in expenditures.

Source: Augusto Iglesias “The regulation of pension fund investment in Latin America”, -Pension Fund Investment – FIAP, 2005

10.1.3.2 <u>Persons not in the mentioned age groups</u> participate in the “2” pillar in accordance with ***“scheme II”***.

10.1.4 *<u>Persons exempt from mandatory contributions in a procedure set forth by the legislation</u>* (military personnel, persons involved in farming, foreign citizens, etc) have ***the right to voluntarily participate*** in mandatory funded “2” pillar:[109]:

10.1.5 Entry into the mandatory funded ***“2” pillar is “open”*** for age groups entitled to voluntary choice (if the condition described in 10.1.2 is met), but ***“exit”, i.e. stopping contributions, is banned.***

10.2 Mandatory cumulative contributions

> ***Box 29. Unified tax***
>
> The unified tax is the unification of employee and employer social contribution and income tax. The unified tax rate will be calculated by the ratio of social contributions and income tax to the new taxation base.
>
> Unification of social contributions and income tax is done by changing the taxation base, i.e. the social contribution made by the employer is added to the former taxation base, to which the unified income tax is applied.
>
> In this report the rate of 26% of unified tax was used for modeling the pension reform in Armenia.

10.2.1. For persons up to 40 years of age, mandatory cumulative contributions amount to ***10% of the salary (5% or half of which is paid by the state)***. This rate is defined based on the need to ensure the necessary replacement rate in the future (see box 28) and the aim to have enough scale of funds, in order to ensure high effect from that scale. The ceiling for state participation is AMD 25,000. I.e. if the salary is lower than AMD 500,000 – the state will participate in the amount of 5%, whereas for salaries higher than AMD 500,000 - the state participation will make AMD 25,000 monthly. Hence, the accumulated contributions made by persons having higher salaries will exceed the 5% of their salary.

10.2.2. The ***“scheme I”*** based on the principle of state participation is applied to participants of the funded “2” pillar up to 40 years of age. In this scheme, the state transfers an amount equal to ***5% of participant’s salary to his account but not more than AMD25000.*** This means that ***only part of the 10% is paid by the participant of the 2nd pillar.*** [110]:

10.2.3 ***“Scheme II”*** is applied to participants of the mandatory funded “2” pillar above 40 years of age, according to which the principle of ***full and mandatory participation in the solidarity system applies*** to persons of the mentioned age group. Thus, participants of “scheme II” pay ***unified tax*** and if they prefer they can

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[109] In this case the state does not participate in personal accumulations and does not set age limits.

[110] Note that in case of salaries above AMD 500,000 the person’s incomes will exceed 5% of his/her salary.

additionally participate in the “2” pillar. In this case, however, ***the contribution to the funded system is defined by the state at 5%.***

10.2.4 Thus, in equal conditions of taxes and contributions, i.e. 26% unified tax + 5% contribution, participants of the two schemes will ensure for them pensions of almost equal amount (pension replacement ratios are presented in Section 13, see *Figure 34*). .

10.2.5. ***Mandatory cumulative contributions are not tax deductible***.

10.3 Use of funded pension

10.3.1 The funded (mandatory) pension is ***the pension which is consist of personal accumulations and the revenues received from their investment, which can be used by the person only based on the defined rules and forms.***

10.3.2. The rules for use of mandatory funded pensions are defined by the ***state in the corresponding legislation.*** Within the framework of this program, it is planned that the person has the rights to <u>*use*</u> amounts accumulated in individual accounts, if:

- The person has reached the retirement age defined by the law;
- The accumulated amounts were used for purchasing disability and survivorship annuities or insurance before retirement (see section 12);
- The person changes his citizenship.

10.3.2.1 <u>At retirement</u>, the person is entitled to <u>use his pension in the following forms</u>:

- ***Programmed withdrawal – receiving monthly pension according to a specific scheme.*** In this case, the monthly pension is calculated by dividing the total accumulated amount into life expectancy at retirement (amount divided by number of months);

Box 30. Justification for limitations of the use of mandatory accumulated amounts

The options of use of mandatory accumulated amounts are limited because the funded pension in Armenia will not be an supplementary, but rather the basic means of pension insurance.

The purchase of annuity is obligatory due to the following justifications:

1. The annuity allows people to transfer the risk of living longer than average life expectancy to the company offering the annuity, and by forcing people to participate in the mandatory funded pillar, the state takes on the commitment to ensure conditions so that people will receive the accumulated pension until the end of their lives,
2. For the annuity offer to be economically beneficial to companies offering them, purchasers should be persons of retirement age with varying health conditions and of different sexes, so that risk assessment based on average life expectancies will be effective. If the purchase of annuity was on voluntary basis, they would be purchased by persons who do not have any health problem and, according to their own judgment, will live longer than the average life expectancy, and persons who have chronic health problems at retirement would not purchase annuities, in other words there is adverse selection problem
3. In case of large accumulations, people are provided with the opportunity to be flexible by using part of their amount through annuities and the other part through programmed withdrawals.

- ***Annuity*** - when all the accumulated amounts are transferred to an insurance company, which commits itself to paying a ***certain amount of monthly pension to the person until the end of his life***[111];
- ***Lump-sum payment -*** when in special cases defined by the legislation the person has the right to receive his accumulated funds with single payment, as well as in cases specified under 10.3.3.

10.3.2.2 <u>Use of the funded pension</u> before reaching retirement is possible only in the following cases:

- If the person has a an illness (list of illnesses is defined by the authorized body of the Armenian Government) that will have fatal outcome if respective expenses are not made for the treatment or it has fatal outcome regardless of expenses;
- If the person changes his Armenian citizenship or has not been an Armenian citizen when he was making contributions.

Box 31. Obligation to purchase annuities

In some cases, the state forces the purchase of annuities by accumulated amounts. This is done due to the following reasons:

1. Voluntary selection of annuities results in adverse selection, since annuities will be purchased only by those, whose amounts, in their own opinion, will not be adequate for the rest of their lives (there always people who think that they will live longer than the average life expectancy),
2. If a small number of people choose the annuity option, the distribution of their projected life expectancy can be significantly different from the distribution for the entire population, since small samples are not representational.

Due to the mentioned reasons, annuities naturally become more expensive and the demand for annuities drops. As a result of the price rise, a large number of people will not have adequate amounts for receiving pensions until the end of their lives, and consequently their incomes will drop significantly. In order to prevent such scenario, the state should provide support by creating adequate conditions for the annuities market. At the same time, however, in order to protect the rights of annuity beneficiaries, the state requires annuities to have a guarantee period, i.e. to be inheritable. Of course the prices of such annuities will be higher than annuities with no guarantee period. But, since according to the principles of pension reforms in Armenia, accumulated amounts should be inheritable, the high price of such annuities is “compensated” by their inheritability.

10.3.2.3 <u>In case of not having or changing Armenian citizenship</u>, amounts accumulated by the person are used in the following forms:

- <u>*Transfer*</u> to the individual pension account opened in the country of new citizenship (for non-citizens – in the new residence country), if a mandatory or voluntary funded system is operating in the given country and the necessary legal basis for transfer of pension assets are in place.
- <u>*Remain in Armenia*</u>, if mandatory or voluntary funded systems do not operate in the given country and/or the necessary legal basis for transfer of pension assets

[111] The selection of annuity, in effect, transfers the risk of living longer than average life expectancy and investment to the insurance company, and in case of programmed withdrawals the risks of both investments and inadequacy of the amount when living longer than life expectancy are borne by the pensioner himself.

is not available. In this case, the person receives his accumulated amounts in accordance with the legislation of Armenia.

10.3.3 ***Use of funded (mandatory) pension*** is limited as follows:

- If the monthly annuity of accumulated amounts[112] of the person at retirement is ***smaller than 25% of the basic pension***, then the person has the right to receive the accumulated amounts in the ***form of programmed withdrawals or lump sum payment***;
- If the annuity of accumulated amounts of the person at retirement expressed in the monthly amount is ***larger than 25% of the basic pension, but smaller than five times the amount of that pension***, then the person has to use his funds by ***purchasing annuities***;
- If the annuity of accumulated amounts of the person at retirement expressed in the monthly amount ***is larger than five times of the basic pension***, then the person pays part of his amount to purchase annuity to the amount of five times the basic pension, and may use the remainder of the amount through programmed withdrawals or get lump-sum amount.

Personal replacement ratio or minimum price of annuity in the market may be also used as criteria.

10.3.3.1 Mandatory cumulative amounts are ***transferred to the insurance company for purchase of annuity or insurance*** *before reaching the retirement age*[113] for persons, who:

- Have permanent disability;
- Are survivors having accumulated amounts.

10.3.3.2 In order to calculate *annuities and programmed withdrawals*, the Central Depository of Armenia (hereinafter **CDA**) and insurance companies should use ***unisex mortality tables***. The tables should be provided by the National Statistical Service of Armenia (**NSS**).

10.3.4 The mandatory funded pension cannot be used before retirement, with the exception of cases defined under paragraph 10.3.2.3.

10.4 Types of funded pensions

10.4.1 There will be two types of funded pensions: ***annuities and programmed withdrawals***.

10.4.2 *Programmed withdrawal* is the division of the accumulated amounts by the number of months of life expectancy. Programmed withdrawals are calculated based on the rules approved by the Government of Armenia.[114]

[112] Annuity for one person with minimum single life guarantee is assumed.

[113] The reformed version of disability and survivorship pension payments is presented in detail in Paragraph 12.

10.4.3 The main part of the funded pension will be paid in *annuities*, including disability and survivorship pensions. For this reason, ensuring the inheritability of annuities is a mandatory requirement (see Box 32). According to this requirement, there will be the following types of annuities:

10.4.3.1 Single life with guarantee[115] - Which is purchase of annuity for one person only, where payments stop after the death of the person[116]. If the person dies during the guarantee period, then his heirs receive certain part (25, 50, 75%) of the amount that he has not received in accordance with the contract.

10.4.3.2. Survivor with guarantee- Which is the purchase of annuity by spouses, where after the death of the person his or her spouse receives certain part of the person's monthly payments (25, 50, 75%) until his or her death. If both spouses die during the guarantee period, then their heirs receive certain part of the unpaid amount.

10.5 Taxation of accumulated amounts

10.5.1 Mandatory cumulative ***contributions*** are ***taxed*** at the time of collection.

10.5.2 ***Revenues*** received from mandatory cumulative amounts ***are not taxed***.

10.5.3 Mandatory funded ***pensions are not taxed at the time of payment.***

10.5.4 Thus, TEE has been selected as taxation scheme for mandatory cumulative amounts, which means contributions are taxed revenues and pensions are tax exempt.

10.6 Inheritance of accumulated amounts

10.6.1 ***Mandatory accumulated funds are inheritable***. Conditions of inheritance and proportions of inherited amounts differ by case.

10.6.1.1 In the case where a person dies before retirement, his or her spouse and other heirs as defined by the law receive the ***whole*** amount accumulated by the person. The size of inheritance received by the spouse and other heirs is defined by the *legislation on inheritance of assets*.

10.6.1.2 If the person dies in the retirement age and he/she receives his/her pension in the form of programmed withdrawals, then the entire remaining amount in the deceased person's individual account is given to his heirs in proportions defined by the *legislation on inheritance of assets.*

[114] There are *decreasing, increasing and equal distribution* rules for calculation of programmed withdrawals. The specific rule is selected based on the level and composition of consumption of pensioners.

[115] The guarantee period is usually 5 or 10 years, based on which the price of annuity increases.

[116] For this annuity the "guarantee period" is defined until the death of the holder of annuity.

10.6.1.3 The inheritable shares of the accumulated amounts will be *transferred to heirs' pension accounts if they have one: It is allowed to take part of inherited accumulated amounts in cash (will be defined in legislation).* Legal persons cannot be beneficiaries of inheritance of pension assets.

10.6.1.4 Accumulated amounts are inherited in cases where there is no basis for their mandatory use for *purchase of survivorship annuity*. These are cases where heirs are not beneficiaries of survivorship pensions (see section 12 of this chapter).

10.6.2 Before possession defined by the law, during accumulation mandatory accumulated amounts are ***not subject to confiscation***.

10.7 Asset management – description of the process

10.7.1. *The asset management process starts with the* ***collection of contributions and information***. Employers send information on employees making mandatory cumulative contributions to State Tax Service of the Government of Armenia (hereinafter **STS**). The information is entered into the STS database.

10.7.1.1 ***Employers calculate the unified tax and the mandatory cumulative contribution*** in accordance with the rules described under paragraph 10.2.

10.7.1.2. The employer ***transfers*** calculated income tax and the amount for individual accumulation ***to the treasury***[117]. The employer also calculates the contribution needed for adjusting to the maximum state participation of AMD25000. If the person's salary is higher than AMD500000, then the individual accumulation contribution paid by him is higher than 5%.

10.7.1.3 The employer shall present ***monthly and annual information to employers*** on salary, paid taxes and funded contributions.

10.7.1.4 ***The STS*** compares the information on payments with the existing financial flows within 15 days, i.e. compares the data of the individual reports with the unified tax and individual contributions actually paid[118].

10.7.1.5 Data of the already checked reports are ***electronically sent by the STS to CDA***. And 10% of persons' individual accumulations is sent to the account of the Central Depository of Armenia (hereinafter CDA) in the CB.

10.7.1.6 The **CDA**, within 24 hours after receiving information about the share of the amounts in individual accounts that it maintains, ***transfers that share to asset managers (hereinafter AM)***.

10.7.1.7 Based on the information it receives, the **CDA** ***updates persons' pension accounts.***

[117] For detailed functions of CDA and STS see Chapter 4, Section 14.

[118] Advance payments for the unified tax should be excluded as much as possible, and in cases where this is not possible advance payments should be presented separately in reports.

10.7.1.8 ***The pension account, or individual account,*** should contain at least the following information about the account holder:

- Name, surname, sex
- Address(es)
- Passport number
- Day, month, year of birth
- Social card number (or certificate on not having a card)
- Bank account number
- History of contributions made by the individual (10 or 5% of salary)
- Current or past information on the choice made by the individual:
  - titles of assets managers
  - types of portfolios
  - number, sum of units.

10.7.2. The next important block in *the asset management process* ***is the organization of activities for ensuring the participation of beneficiaries.*** It would require the consecutive implementation of the following steps:

10.7.2.1 Employees voluntarily joining the mandatory funded "2" pillar ***complete and sign an application form.*** The hard copy of the application is submitted through a bank or post office[119] to the CDA in a sealed envelope, or electronically. Based on the application, the CDA ***a pension account is opened for the employee***, about which the beneficiary receive a notification.

10.7.2.2 After opening the pension account, the ***employee applies to the employer*** for t ax deduction of funded contributions. If the employee is within the age group defined for mandatory participation in the funded component, then the employer makes an additional payment to the treasury amounting to 5% of the defined **10%** (in case of salaries higher than AMD500,000 a correspondingly higher rate is applied), and the treasury in its turn doubles the amount (if it does not exceed AMD25,000) and sends it to the CDA. If 5% of the employee's salary is higher than AMD25,000, the state, nonetheless, pays AMD25,000. If the person is not within the defined age group, then according to the application of the employee, the employer pays **5%** of his salary to the treasury and completes the corresponding individual report of the employee. Based on the STS application the treasury, on behalf of the employee, sends the amount and the information to CDA.

10.7.2.3 *Entrants into the labor market* should open a pension account at the CDA by themselves in accordance with the rules defined in subparagraph of the paragraph 10.5 and submit the notification about account to the employer.

10.7.2.4 *Pension account holder* ***receives information on asset managers and their investment portfolios*** *from CDA or banks or post offices* and makes his selection (secretly, without participation of the bank or post office employee) based on that information. Participants should submit the document/certificate indicating their selection to the employer. The employer includes that document as a basis in the ***employee's individual report***.

10.7.2.5 The employer sends ***individual reports on payment of the unified tax*** for participants of the funded component to the STS every month. The STS ***will***

[119] Banks and post offices, as a service to their clients, ensure the entry of clients into CDA.

not accept reports from persons, who had the obligation to open pension accounts at the CDA and select AMs, but have not included that information in the report. The selection is also considered valid if the selection form is signed but AM and portfolio selection fields are left blank.

10.7.2.6. The following <u>*are responsible*</u> for the accuracy of information included in ***individual reports:***

- ***The employee*** –For the information he has provided,
- ***The employer –*** for calculated and paid salary and unified tax, as well as other information he might have provided,
- ***STS –*** for the checks it has done,
- ***CDA -*** for errors resulting from its operations**.**

10.7.2.7 If the information about the employees' individual account has ***inaccuracies***, then the employee should make corrections first with the employer and then with the STS.

10.7.3 The second step for organizing the <u>*asset management process*</u> is the ***distribution of accumulated amounts between asset managers and investment portfolios.***

10.7.3.1 Participants of the mandatory funded "2" pillar should ***choose asset managers and the investment portfolio.*** The selection of asset managers and investment portfolio is made by participants in the following ways:

- Through CDA <u>*website*</u>
- Through <u>*banks and post offices*</u>

10.7.3.2 <u>*The selection can be changed*</u> not often than ***once a year for free****.* Changing of the investment portfolio more than once a year is a <u>*paid service*</u>, if amounts invested in the former portfolio are to be allocated to a new investment portfolio. Changing of the investment portfolio is a <u>*free of charge service*</u>, if the person changes one portfolio of the assets manager with another one. ***Participants cannot allocate their monthly contributions to more than one investment portfolio at the same time,*** for example intending to invest part of the monthly contribution in an aggressive portfolio and the remaining part in a balanced portfolio (for types of investment portfolios see paragraph 10.8 of this section).

Box 32. Blind quotation of accounts

Confidential coding is the order of digits of the pension account number or social card number, which does not allow for identification of account holders with investment portfolio numbers.

Confidential coding aims to eliminate a number of risks which have occurred in a number of countries:

1. In Estonia and Chile, asset managers conduct direct marketing and offered gifts and special services to participants of the funded "2" pillar, if they choose given asset manager then they have discount or gift from affiliated financial institutions. In this case, the "price factor", which is the basis for competition, becomes secondary, which distorts the real market competition between AMs and pushes the prices of pension assets management up.
2. Corruption risks are high due to inadequate level of financial knowledge among the majority of participants. It can be manifested in guiding the choice of individuals and consulting to the benefit of a specific asset manager by "intermediary organizations".

The best measure to avoid such cases is the blind quotation (confidential coding) of individual accounts which are used for example in Sweden. In this case, results received from a "corruption agreement" are not visible and measurable for the asset manager.

10.7.3.4 <u>*Participants are allowed not to make a selection*</u>*.* Absence of selection occurs only in cases where the participant does not complete the corresponding fields in the application for opening his pension account (a pension account is opened, but there is no indication about the selection). In such cases, the asset manager is ***selected by the CDA*** through the *program module* established for that purpose. By using the module, contributions of those who didn't choose any AM are distributed in pro rata basis.

10.7.3.5 Participants are allowed also not to select the investment portfolio. In this case, randomly selected ***AMs*** should allocate the contributions of the given participant to a balanced investment portfolio.

10.7.4 One of the special aspects of the *asset management process* is ***confidential coding (see Box 33)***. The ***CDA*** is responsible for confidential coding.

10.7.4.1 The CDA issues units to each contributor. ***Units represent the stake or share in each specific investment portfolio.*** Based on information on monthly contributions received from the STS, the CDA produces certain number of units. Identification numbers of these units are coded using the algorithm of random numbers. Pension account and social card numbers of participants are used for *application of the algorithm.*

10.7.4.2 The CDA maintains the codes attached to the units of participants, which ***does not allow AMs to match the person's units with his pension account.***

10.7.4.3 ***Investment portfolios maintained at the CDA have their units***. The units are *valued every day based on the current market values* (asset management fees are deducted from the value of the units). Based on the valuation, the value of one unit of the investment portfolio can increase or decrease. Every new payment is translated into units. ***The number of units are issued based on their value on the previous day (see Box 34).***

10.7.4.4 ***The CDA make valuation of assets included in investment portfolios*** at the end of each day. As a result of valuation, the value of units of each portfolio is also changed. Assets are valued based on their market value and the valuation procedure is defined by the *Financial Markets Supervision Service of Armenia.*

Box 33. Calculation of the units of investment portfolios

Calculation of the units of investment portfolios is done by the CDA. Problems with rounding the decimals occur during transformation of contributions into units. One solution is to do the rounding for all individuals based on the same rule. This option is presented in the table, when the units for two contributors are rounded to the hundredth. But, in this case the value of contribution transformed into units can be higher than the actual amount of contribution.

Monthly contribution	***Value of one unit***	***Number of units***	
		Without rounding	*Rounded*
100 (account A)	33.71	2.96	2.97
100 (account B)	33.71	2.96	2.97
TOTAL			
200	33.71x 2.96x 200 = ***199.5632***		
200	33.71x 2.97x 200 = ***200.2374***		

In order to avoid such incongruence, the "without rounding" alternative is proposed. In this case, the difference in the amount (in the example of the table: 100-2.96*33.71) is transferred to the next period and added to contributions of the next period: 100+(100-2.96*33.71) and divided by the value of its units and so forth.

10.7.5 ***Assets custody*** is an inseparable part of the *asset management process*, which is implemented by the CDA.

10.7.5.1 ***Daily information on the accumulated amounts (deposits)*** of the participants of the funded "2" pillar in foreign bank accounts is provided to the CDA. Documents certifying the investments in the non RA banks shall be ***dematerialized and kept as a security by global custody***. Deposit certificates of the amounts deposited in Armenian banks are ***dematerialized and kept at the CDA and registered as securities***. In effect, information on all assets included in investment portfolios is provided to the CDA on a daily basis, which allows the latter to conduct daily valuation of the assets.

10.7.6 Operational costs of the *asset management process* ***are financed by fees***. Fees are collected from contributions of the participants of the funded "2" pillar, from the moment they "enter" into the CDA.

10.7.6.1 *Fees* are of the following types:

- Unit issue fees*,*
- Portfolio participation fees*,*
- Unit redemption fees*,*
- Fraud guarantee fund payment
  (see section 10.9 of this chapter).

10.7.6.2 The state defines the maximum amount of the abovementioned payments. Assets management payments may be defined in relation to the size of assets and/or contributions made to the pension account.

10.7.6.3 Additional fees are not collected for assets profitability and effective management of assets.

10.7.6.4 The maximum *unit redemption fee* is ***1%*** of the net value of units. This fee is collected for changes to investment portfolios if it is done for more than one time in a year..

10.7.7 The final point of the *asset management process* is the ***provision of information to beneficiaries***, which is organized and managed by the ***CDA***.

10.7.7.1 Based on the results of the daily valuation of investment portfolios, the ***CDA*** records the ***current values of the pension assets of each person, his contributions and information on investment portfolios*** in his pension account. This information maintained on a daily basis is provided to beneficiaries electronically – any time or *once a year in hard copy free of charge*.

10.7.7.2 The CDA should provide the following *information* to the beneficiaries once a year:

- ***Contributions*** during the year by months,
- The current value of the pension account during the year, i.e. ***net asset value of units*** (NAV)[120] by months,

[120] The methodology and rules for calculating NAV are defined by the *Financial Markets Supervision Service of Armenia*.

- ***Return on assets*** in percentages calculated based on the defined rules,
- ***Number of units*** issued during the year by months,
- ***Fees charged*** from contributions of beneficiaries by types, their amounts and percentage rates,
- ***Choice made*** by the beneficiary regarding the asset manager and investment portfolio,
- If the beneficiary has not made a selection, then the ***selection made by the CDA*** regarding the asset manager and investment portfolio.

10.7.7.3 Beneficiaries can receive current information on individual pension accounts:

- Through CDA ***website,***
- ***Bank branches and post offices*** in hardcopy and/or through electronic access points.

10.7.8 The *schematic presentation* of the asset management process is presented ***in Scheme 4 of Annex 2***.

10.8 Investment portfolios and assets investment

10.8.1. ***Investment portfolios are composed by AMs*** according to the defined restrictions for investment portfolios. Investment portfolios are registered by the *Financial Markets Supervision Service of Armenia*.

10.8.1.1 ***AMs*** can register ***three types***[121] of investment portfolios:

- ***Aggressive portfolio***, which should include in minimum of 50% fixed income instruments (hereinafter *bonds*) and in maximum - 50% equity (hereinafter *shares*),
- ***Balanced portfolio***, which should include the minimum of 75% bonds and the maximum of 25% shares,
- ***Conservative portfolio***, which may include 100% bonds.

10.8.1.2 In the first 3-5 years of the introduction of the funded component, i.e. in the initial phase of the formation of new financial instruments and financial knowledge among the population, ***AMs will set up only one investment portfolio***, which should be ***balanced***. Later, AMs should propose ***at least two types of investment portfolios, one of which should be balanced.***

10.8.2. ***Qualitative and quantitative restrictions***[122] are applied to *investment portfolios* which aimed to diversify the risk of the investment portfolio. *Quantitative restrictions* mainly refer to the permissible ratio of bonds and shares, the composition of the portfolio, etc. (see paragraph 10.8.1.2). *Qualitative restrictions* refer to the criteria of solvency of the entity issuing the bonds and shares (hereinafter *issuer*).

[121] Titles of portfolios are based on the level of their risks.
[122] Restrictions are defined based on the OECD Guidelines on Pension Fund Asset Management.

10.8.2.1 Various restrictions applied to investment portfolios stem from the ***internationally accepted principles for pension assets investments***, which are as follows:

- ***Safety*** of pension assets,
- Investment ***diversification***,
- Ensuring ***maximum profitability*** in accordance with the safety of pension assets,
- Ensuring ***adequate liquidity.***

10.8.2.2 Based on the mentioned principles, ***pension assets should be invested*** in the following categories of assets:

1) ***Deposits and bank accounts*** of financial institutions licensed and supervised by OECD countries,
2) ***Securities*** issued by OECD states,
3) ***Securities*** issued by <u>municipalities</u> of OECD countries,
4) ***Securities listed in securities markets*** registered and regulated by the authority regulating the capital market in OECD member states,
5) ***Securities of investment companies*** registered and regulated by the authority regulating the capital market in OECD member states,
6) A list of other countries where pension assets may be invested can be established by the Financial Markets Supervision Service.

10.8.2.3 ***Pension assets in Armenia can be invested*** in the following assets:

1) ***Bank accounts and deposits***, of banks that are not under the enforcement action and are not subject to a suspension of their license,
2) ***Securities*** issued by ***the Government of Armenia,***
3) ***Securities*** of Armenian organizations registered at the authority regulating the capital market and ***listed*** in the security market of Armenia or OECD countries,
4) ***In investment companies***, which are supervised by the Financial Markets Supervision Service of Armenia.

Purchase of securities in the secondary market shall be performed by the assets managers only through stock exchanges.

10.8.2.4 The composition of the investment portfolio is subject to the following restrictions:

1) ***The maximum investment*** in securities issued by ***one issuer*** or affiliated issuers should amount to ***5%*** of the total volume of shares issued by issuers and ***10%*** of the total volume for bonds***.*** This restriction ***does not apply to investments in investment companies***, if the investment company complies with such restrictions as well as to security Central Bank and government bonds,
2) ***In the investment portfolio,*** the maximum share of securities issued ***by one issuer*** and/or affiliated issuers in the portfolio should be not more than ***5%.*** This restriction does not extend to investment companies, which already comply with this restriction.

3) The maximum ***investment in foreign currency denominated instruments*** should be ***30%,***
4) Investments in ***bonds issued by the Central Bank of Armenia and the government*** should not exceed ***70% of the portfolio,***
5) The amounts kept in ***bank accounts and deposits*** should not exceed 20% of the portfolio.

10.8.2.5 *The Financial Markets Supervision Service of Armenia* can define ***other temporary restrictions****,* which will be aimed to counteracting the unfavourable impacts of financial markets. In particular, it might define minimum limits[123].

10.8.2.6 *Restrictions* in investments with foreign currency and investments in governmental bonds in the period where *AMs* will offer only one investment portfolio, ***can be defined otherwise*** based on investment opportunities.

10.8.2.7 **Certain restrictions** will also apply to pension assets investment. Investments in the following will be prohibited:

1) Non listed securities,
2) In assets which according to the law are not capable of alienation,
3) Derivative Financial Instruments, if not for hedging purposes
4) Property or other physical assets, if they are not listed in organized markets and/or if their evaluation is uncertain (for example pieces of art, coins, luxury cars, etc.),
5) In securities issued by AMs, custodians, members of their managerial boards, as well as persons affiliated to the mentioned individuals, and in their property,
6) In other assets, which in the reasonable opinion of the financial supervision authority in Armenia are risky.

10.8.2.8 If *portfolio restrictions* are breached due to:

- Valuation resulting from changes in market prices, or
- Changes in foreign currency exchange rates, or
- Factors outside the direct control and influence of the AM,

Then within three months after the discovery of the violation, ***AMs should undertake measures to correct*** them in order to adapt the composition of the portfolio to the defined restrictions.

10.8.2.9 *Pension assets* cannot be sold to the following persons:

- Asset custodian,
- Asset manager,
- Members of the managerial board of asset manager,
- Persons affiliated with the mentioned individuals.

[123] Only maximum restriction is to be applied, but in some cases also the minimum permissible limits might be defined.

10.8.2.10 The board of AM should approve ***internal procedures***, which should include:

- ***Measures,*** which will be implemented in order for AMs to ensure requirements posed to the management of assets
- ***Types of assets***, where pension assets will be invested,
- ***Responsibilities and authorities*** for making investment decisions, implementing investments and supervising the process.

10.8.2.11 *Asset managers* should present an ***investment strategy*** for each year to the financial market supervision service of Armenia.

10.9. Ensuring safety of investments

10.9.1. ***The government will not provide absolute and relative guarantees for pension assets investments.*** *It will be forbidden for AMs* ***to promise a guaranteed level of profitability*** in their announcements and commercial messages.

10.9.2 ***The state will ensure the safety of pension assets*** through introduction and application of strict supervision and regulatory mechanisms. (see chapter 4, section 15).

10.9.3 ***The guarantee fund*** will be created to insure the operational risks as well as possible fraud of pension asset management and compensate resulting losses.

11. "3" Pillar of the Pension System

11. 1 Pillar “3”: Voluntary Funded Pension

11.1.1 *Pillar “3”*[a] this is the ***pillar for additional pensions*** in a multi-pillar system. **Voluntary accumulation pension** is paid from this pillar **with** an objective of ensuring additional revenues people of retirement age based on the voluntary contributions they have made prior to attaining retirement age and returns generated as result of investing those contributions.

11.1.2 *Voluntary funded pension* ***“in the pension insurance under the models of “defined contributions or DC” and “defined benefit or DB”,*** which is implemented on the basis of the mutually agreed ***contract*** between the individual and the financial institution licensed to provide pension insurance.

11.1.3 *Voluntary funded pension* is paid in accordance to certain rules that are set forth in the pension insurance program. In general, the main types of payments of ***Voluntary funded pensions are programmed withdrawals*** or ***annuities,*** that are also the options for mandatory accumulation plan (See: section 10.4 for details), as well as the payments defined by the Contract.

11.2 Tax Provisions

11.2.1 ***Armenian residents,*** who will voluntarily save some of their revenues with an objective of getting them upon retirement, are the beneficiaries of voluntary funded pensions.

11.2.2 Any revenue that is *declared revenue* can be used for ***voluntary contributions***.

11.2.3 Voluntary pension contributions paid from the *declared income* are ***deducted from the income tax base.*** Deduction is applicable only to the Pillar "3" participants but it shall not exceed 5 percent of the declared income. The person may contribute to pillar "3" as much as he/she wants to, but any amount exceeding the mentioned cap cannot be deducted from the income tax base.

11.2.4 Pension contributions made *by legal persons* to the accounts of employees are considered as an expense and deducted from the corporate tax base. Above-mentioned cap for deductions in this case is also applicable, and the contribution for one employee (who participates in Pillar "3") cannot exceed 5% of personal income/salary. This cap is not calculated as an average for the whole payroll, but individually for each employee.

11.3 Use of Voluntary Funded Pension

11.3.1. The types, forms, terms and procedures for the use of voluntary funded pensions are usually set forth ***in the contract with the beneficiary***. In cases ***when the person has enjoyed some tax privileges offered by the state*** (See: 11.2.3) the state mandates certain rules for the use of voluntary funded pension, namely: **funded pension can be used by the beneficiary** in following cases

1) he/she has reached the retirement age defined by legislation;
2) he/she has changed his/her Armenian citizenship and/or place of residence (in case the person wasn't Armenian citizen during contribution period)
3) he/she is in a health status which is covered in the list of the respective authority[124] of the Armenian government.

11.3.2. *Upon attaining the retirement age* defined by legislation the person is entitled to use voluntary funded pension in the following manner:

- programmed withdrawals;
- annuity;
- lump sum.

11.3.2.1 ***Lump sum withdrawal of funds prior to retirement*** is possible in the following cases:

[124] Medical certification of such a health status should be necessarily issued by the authority dealing with disability examination.

- the person suffers from a disease (the list of diseases is set out by the body authorized by the Government) which may lead to a lethal outcome if the related health costs are not incurred or regardless of any incurrence of these costs is terminal by its nature;
- the person changes his/her Armenian citizenship (may possibly transfer the funds to the pension account in the new country of citizenship) and/or place of residence (in case person wasn't Armenian citizen during contribution period).

11.3.2.2 The person ***who has attained retirement age may withdraw the funds as a lump sum*** (in case of DC model), but in such a case a higher rate of income tax will be applied (the rate is to be defined by legislation).

11.4. Pension Insurance

11.4.1 In the economic territory of the Republic of Armenia voluntary funded *pension insurance* can be implemented in the ***following ways***:

1) in accordance with mandatory accumulation funds management scheme (of pillar "2") (See: Section 10:7 of this Chapter). In this case services of CDA are used on maintaining centralized account keeping;
2) by a licensed legal person that independently collects the contributions, maintains accounts and manages assets. In this mandatory funded pilar administration is not applicable. ***Custody of funds is to be done by non affiliated institution.***

11.4.1.1 Voluntary funded *pension insurance* may be implemented by asset managers of mandatory pillar (they are not authorized to provide pension insurance of the DB model), as well as by licensed companies.

11.4.1.2 Providers of voluntary funded pension insurance are licensed companies that ***cannot be involved in other businesses***.

11.4.2 *Contributors* (sponsor of the pension scheme) for the voluntary funded pension insurance may include

1) natural persons/individuals who make contributions for themselves from their income;
2) natural persons/individuals who make contributions for another person from their income;
3) legal persons that make contributions for its employees.

11.5. Assets management process

11.5.1. Regulation of *assets management process* depends on the ***model of*** voluntary pension insurance (for models see point 11.4.1).

11.5.1.1 If voluntary funded pension insurance is implemented with the scheme of mandatory funded pension insurance (“2” pillar) then ***information and financial flows will be organized according to the rules described in respective points of Section 10.***

11.5.1.2 If voluntary funded insurance is implemented according to the form described under sub-point 2 of point 11.4.1 the ***person is to present documents certifying pension contributions*** that serve as a basis for respective tax deductions.

11.5.1.3 Persons (if payment is made personally) and employers (if payments are made on behalf of the employee) submit ***documents certifying the transfer of pension contributions to the STS*** as a basis for tax deductions.

11.5.1.4 The ***STS*** is entitled to conduct random surveys among companies providing voluntary funded pension insurance services ***to check "authenticity" of provided certificates.***

11.6. Regulation of investments

11.6.1. *Limitations towards investments* in voluntary funded pension *assets* are milder as compared with that of mandatory funded "2" pillar. However, there will be ***certain mandatory rules and limitations*** also in relation to investments in the assets of "3" pillar of the funded component.

11.6.2 The same principles determined for mandatory funded "2" component will be used for ***state regulation of investments*** in voluntary funded pension assets (including also in relation to limitation) (see section 10.8):

- Security of pension assets;
- Diversification of investments;
- Maximum return rate corresponding to the security of pension assets;
- Relevant liquidity.

11.6.3 ***Investment portfolios*** shall be registered by the *Financial Markets Supervision Service of Armenia.*

11.6.3.1 ***AMs*** may register three types[125] of investment portfolios:

1) ***Aggressive –*** investment portfolio, 75% and more shares;
2) ***Balanced -*** investment portfolio, 50-75% of shares;
3) ***Conservative –*** investment portfolio, up to 50% of shares.

11.6.3.2 the structure of ***investment portfolio*** is determined as follows:

- Maximum amount invested in the securities of one issuer and related issuers shall exceed ***5%*** of the total issuance for equity securities and 10% for debt

[125] Portfolios are named from the risk perspective. See section 10.8 of this Chapter.

securities. These limits are not applicable for investment in investment companies if the company's investment portfolio otherwise meets the restrictions (with the exception of government and Armenia's Central Bank bonds);

- Maximum share of securities by one or affiliated issuers in the investment portfolio shall make ***5%.*** This limits are not applicable for investment companies which comply with this limitation;
- Securities of one or affiliated issuers in one investment portfolio shall not exceed the ***5%*** of the portfolio.

11.6.3.3 It is also possible for the *Financial Markets Supervision Service of Armenia* ***to use other temporary limitations*** if these are aimed to protect against financial crises. In this case it is possible to define also the minimum limits.

11.6.4 ***Pension assets shall be invested*** in the following assets:

1) Investments and bank accounts of financial institutes accredited and controlled by the OECD countries;
2) Securities issued by the OECD countries;
3) Securities issued by the local self-governance entities of OECD countries;
4) Securities registered by the entity regulating the capital market of OECD countries and listed in the stock market under their regulation;
5) In securities of investment companies registered and supervised by the regulator of the capital market of OECD countries;
6) In securities of Russia meeting the criteria set by the Financial Markets Supervision Service of Armenia.
7) A list of other countries where pension assets may be invested can be established by the Financial Markets Supervision Service.

11.6.4.1 Pension funds accumulated in ***Armenia*** may be invested in the following assets:

1) Bank accounts and savings if the bank is not in the process of license withdrawal;
2) Securities issued by the Government of Armenia and Central Bank of Armenia;
3) Securities listed in the stock markets of Armenia or OECD, organizations registered in in the Capital Market Regulation Entity of Armenia;
4) Investment companies supervised by the Capital Market Regulation Entity of Armenia.

11.6.4.2. ***Investment of pension assets is prohibited in:***

1) Non-listed securities;
2) In assets which according to the law are not capable of alienation;
3) Financial derivatives, other than for hedging purposes;
4) Real estate property or other physical assets which are not traded in the organized market and/or their valuation is not clear (art pieces, gift coins, luxury cars, etc.);
5) Securities issued by and property of asset managers, custodians, their management board members as well as persons affiliated with mentioned entities.

11.6.5 If _portfolio restrictions_ are breached due to***:***

- Re-evaluation of assets as a result of changing market prices;
- Change of exchange rate;
- If this was a result of factors being outside of the direct control and power of the assets manager

Then within three months after the discovery of the violation, ***AMs should undertake measures to correct*** them in order to adapt the composition of the portfolio to the defined restrictions.

11.6.6. Pension assets ***may not be sold to:***

- Custodian of assets ,
- Assets manager,
- Members the management board of assets manager;
- Persons interrelated to the above-mentioned persons.

11.6.7 The state does not ***directly guarantee returns from voluntary funded pension assets.***

11.6.8 Financial Markets Supervision Service defines specific investment limitations for the DB model. In particular, asset liability matching, liability driven asset management etc.

12. Insurance against risks of disability and survivorship

12.1 Financing of cases of disability and survivorship is made from the state budget, i.e. from the solidarity component of the pension system. . ***All participants of "0", "1" and "2" and "3" pillars will receive the mentioned types of pensions from the solidarity component.*** The current regulations for allocation and payment of disability and survivorship pensions will extend to all of them.

12.2. With introduction of insurance based on classical principles for cases of incapacity to work and survivorship, and the parallel development of the insurance market in Armenia, it will become possible to ***change the financing scheme of the mentioned pensions by adapting it to the classical principles of insurance.***

12.3 Within the framework of this program, a number of alternatives of financing schemes with the introduction of insurance principles have been developed with the support of international experts. These alternatives are presented below:

12.3.1 ***Alternative 1.*** The proportion of payments for disability and survivorship in the total taxable salary is calculated based on the actual expenditures of the solidarity scheme of financing. It is considered _as the premium for ensuring the risks of incapacity to work and survivorship_.

These payments were accumulated in the ***state's authorized body***[126] and used by the state for purchasing annuities. Annuities are purchased through auctions for groups of beneficiaries classified by certain criteria. *Survivorship annuities* are purchased for all the beneficiaries of the deceased employee, as long as they are beneficiaries of survivorship pension.

If the deceased was participating in the ***"2" funded pillar***, the entire amount available in the individual cumulative account of the deceased is used for purchasing *survivorship annuity*. If the amount is not adequate for ensuring the defined replacement rates, the needed remainder will be paid from the state budget at the expense of contributions collected for ensuring the risks of survivorship and incapacity to work.

For persons with permanent incapacity to work lifetime annuity is purchased by using the mandatory and voluntary[127] amounts he has accumulated. As in cases of survivorship, the needed remainder will be paid from the insurance contributions for disability and survivorship collected by the state.

For persons with temporary incapacity to work the annuities purchased for the period of incapacity to work. In this case, however, the amounts accumulated by him are not used for purchasing annuities. ***10%*** of the incapacity pension calculated for each month is transferred to the individual pension account of the person with temporary incapacity to work. If the person, as a result of repeated assessment, ***is declared to have permanent incapacity to work***, the amount in his individual account is used for the purchase of lifetime annuity, and again the remainder is covered at the expense of the above-mentioned sources.

In cases where the amounts collected in the state budget for insuring survivorship and incapacity to work are not adequate for purchasing one-year annuity and/or complementing shortages in individual accounts, it is possible to borrow the needed remainder from the state budget. Later, the debt to the state budget will be covered at the expense of surplus amounts.

12.3.2 ***Alternative 2.*** The state starts to form ***technical reserves***, in order to provide classical insurance services to beneficiaries with permanent incapacity to work, temporary incapacity to work and survivors. ***In case of permanent incapacity to work and survivorship, amounts accumulated in individual accounts are used.***

12.3.3 ***Alternative 3.*** The individuals make direct payments to insurance companies, which after the occurrence of the event, are used for making payments in accordance with conditions stipulated in beneficiaries' insurance policies. In this case, amounts accumulated in individual accounts might or might not be used for insuring those risks.

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[126] *In Estonia* this body is called "medical cash box", where 13% payments from the person's salary is accumulated (in addition to pension contributions). *In Poland* the social insurance fund has been created for that purpose, which is a separate body from the pension fund, and where 13% of the gross salary of the person is accumulated for insurance against cases of disability, 2.45% for temporary sickness and another 0.97% for accidents. In Chile risk insurance of occupational diseases and impairments is done from the interests of the assets managers.

[127] We are referring to those participants of the voluntary funded "3" pillar, who have enjoyed tax privileges.

12.4 Any of the proposed alternatives <u>*might be selected*</u> for insuring cases of incapacity to work and survivorship in accordance with classical principles. The selected alternative will also be used for ***insuring against profesional diseases and occupational disabilities at the expense of additional contributions by the employer.***

12.5 The expert group of the Central Bank ***prefers the third alternative***, which reduces the participation of the state in classical insurance of employees to a minimum. Special importance is attached to the ***contradicting public and private interests*** in issuing the incapacity to work status, which is a precondition for ensuring the effectiveness of the assessment process. In other words, if insurance is done in private companies, i.e. monthly premiums are directly paid to the insurance company; their participation in the assessment process increases the effectiveness of the procedure for issuing in capacity to work status. However, this alternative should be introduced by using the first alternative in the transition period.

12.6 Insuring cases of incapacity to work and survivorship <u>*at private insurance companies*</u> has another advantage: ***It prepares the insurance market for paying pensions to the first beneficiaries of the "2" pillar in the form of annuities.***

13. Projections of Replacement Rates

13.1 The Multi-pillar pension system formed in Armenia as a result of the pension reforms described in this chapter will ensure the payment of pensions from various sources of financing. The expected approximate proportions of pensions for all four pillars are presented in *Chart 7.*

13.2 Projections of the sizes of pension replacement ratios were made in 4 options based on the following assumptions:

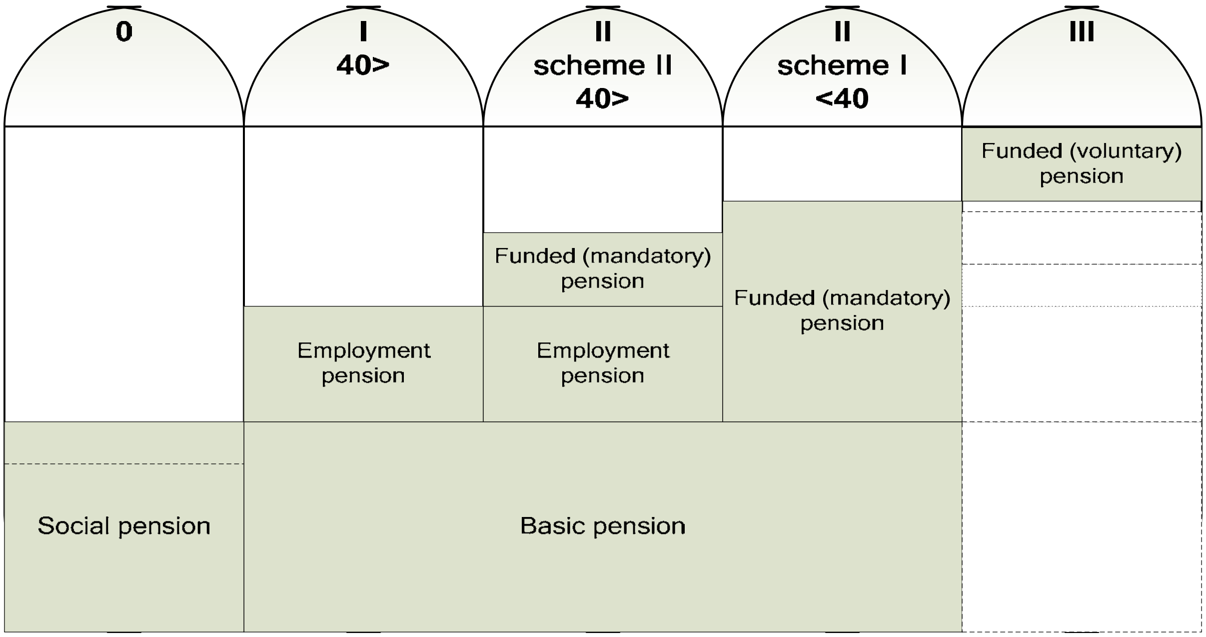
- *25 years of total length of service*;
- *30 years of total length of service;*
- *35 years of total length of service;*
- *40 years of total length of service.*

Calculations were made for beneficiaries of the "1" and "2" mandatory pillars of the pension system (see Figure 32):

13.3 Projections on pension replacement ratios were also made by different wage groups. They were also made for "1" and "2" pillar pensions. In this case the *30 years* range used in international comparisons was taken as average length of service (for beneficiaries of the "1" pillar) and contributory years (for beneficiaries of the "2" pillar) (see *Figure 33*).

13.4 Projections on pension replacement ratios was also made by another option; pensions for persons in the age limit of 40 and 41 in 2010 were calculated for 2033 when the first mandatory funded employment pension is to be paid. Calculations, naturally, were made for the beneficiaries of the two mandatory pillars - "1" and "2" of the pension system with the assumption of 25 years of length of service in average (see *Figure 34*).

Chart 7. Pensions of the multi-pillar pension system



13.5 Comparisons of Figures 32-34 shows that pensions paid from the funded component are unquestionably higher than that of the participants covered by the solidarity system regardless of their length of service and amount of wages. Concurrently, it should be noted that participants of the funded component ensure relatievely higher pensions for them by paying 31% of the monthly salary out of which 10% is accumulated, whereas participants of the solidarity system pay 25%, i.e. 5% less. If the latter participate in the II scheme, i.e. accumulate the difference of 5% than the pension replacement ratio will grow. Calculations show that the maximum voluntary accumulation during 20 years participants of the 1st pillar will even have higher pension than those in the 2nd pillar (see *Figure 34*).

Figure 32. Projected replacement ratio, %
by the years earned, in 2050

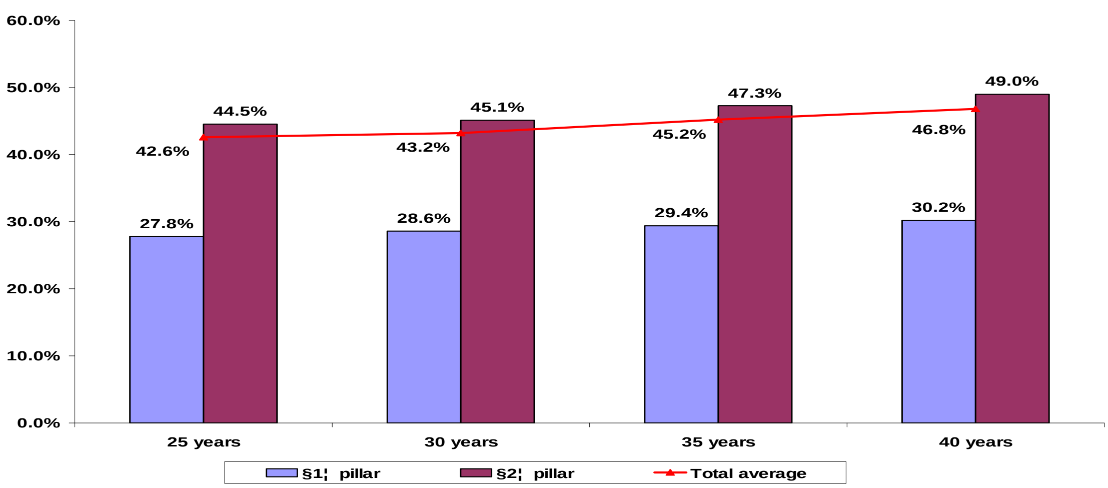


Figure 33. Projected replacement ratio, %
by personal wage groups, in 2050

average wage = 100%
earned years = 30 years

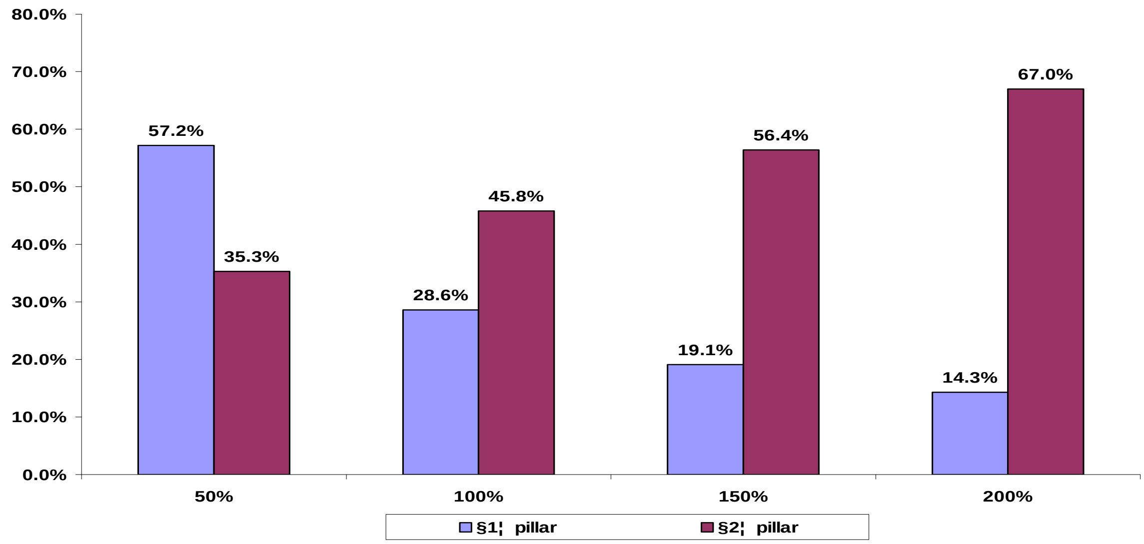
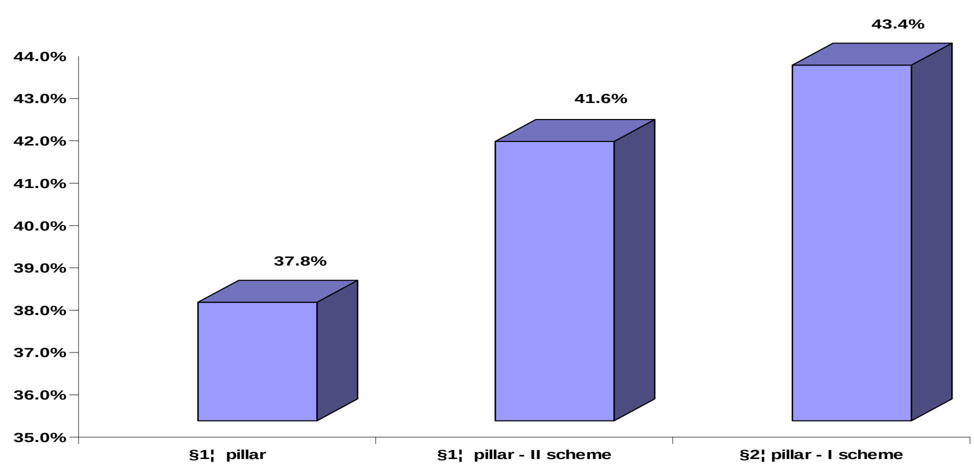


Figure 34. Projected replacement ratio, %
for 40 and 41 olds retiring in 2032



13.6 The following rational was used for the calculations made in the Figure 34. Let's assume that during the year of introducing the funded pillar. i.e. in 2010 participants of "I" and "II" schemes the first being 40 years old and the second – 41 already have length of service of 20 years. Participating in the mandatory funded component the 40-year old accumulates 10% and the 41-year old – 5%. Let's assume that they have wages equal to the average nominal wage of the country and they have similar growth tendency (this lies in the basis of reforms scenario projections). Let's assume that after 2010 they managed to work for 20 more years before the retirement year (let's assume that it is 2033 for both participants). In this case their pension will have 3 components:

- ***Basic pension*** *which is equal for bith participants;*
- ***Sum value of length of service*** *which is 20 years of the participant of "scheme I" and 40 years – for the participant of "scheme II";*
- ***Contributory pension*** *which has 10% of accumulation value during 20 years for the participant of "scheme I' and 5% of accumulation value during the same 20 years for the participant of "scheme I'participant.*

13.7 According to the calculations the ***difference between pension replacement ratios for the participants of 1st and 2nd pillars will not be great in the year of their almost equal retirement (even if the 1st participates also in the 3rd pillar)***, which is an important aspect in terms of brining the incomes of the same-generation pensioners having equal length of service in solidarity.

Chapter IV. Governance of multi-pillar pensions system

The governance scheme of the multi-pillar pension system has been developed based on three key principles:

- *Reducing direct intervention of the state in pension insurance at the expense of strengthened supervisory function of the state,*
- *Not creating new state structures but rather redistributing new functions to existing structures,*
- *Expanding public-private partnership and social responsibility by delegating certain pension insurance functions to private entities, nongovernmental organizations and individuals.*

Governance of the multi-pillar pension system based on the mentioned principles will ensure effective implementation of functions and provision of quality social services to beneficiaries.

14. Institutional framework of the system

14.1 Main principles

14.1.1 The *institutional framework* is based on the fact that the multi-pillar pension system will have two components, i.e. ***state solidarity and private funded, where the latter will also be a component of the financial market.***

14.1.2 *Structures* included in the institutional framework of the system *and their administration schemes* are defined from the viewpoint of the distinction between *pension (social) security and pension insurance*.

14.1.3 Mechanisms for managing *information and financial flows* of the system are developed based on the nature of pensions paid from the four – ***social, employment, mandatory funded and voluntary funded***, pillars and the need to pay the ***basic pension*** which is the universal basis for all other pensions.

14.1.4 ***The state budget will manage and finance*** social, basic and employment pensions paid from the ***state solidarity component*** (see point 14.3, Chart 8).

14.1.5 ***Financial institutions***, with the participation of financial market supervision service of Armenia, ***will manage*** mandatory funded and voluntary funded pensions paid from ***private funded component*** (see point 14.3, Chart 8).

Institutions and their functions are presented below.

14.2 Institutions and functions

14.2.1 Ministry of Labor and Social Issues (MLSI) – will undertake the policy on state pension (social) security, as well as will ensure the implementation monitoring and supervision of the pension policy.

14.2.1.1 In order to ensure the performance of these functions, *the Social Insurance and Pension Insurance Department* of the MLSI will be reorganized in line with the scope of the pensin policy implemented by the MLSI.

14.2.2 After **the State Social Insurance Fund (SSIF)** is reorganized into ***"Social Security State Service" (SSSS) within the structure of the MLSI*** in January, 2008, it will preserve most of its functions while from 2009 the function related to unemployment benefits and other state employment programs will be transfered to the State Employment Service of the MLSI. Benefits will be paid by the State Employment Service through the Treasury by using the same scheme.

14.2.2.1 The administration of the social security system of Armenia will be reformed. In particular, during 2008-2009:

- The ***regional offices of social services*** operating under the control of Marzpetarans (for Yerevan and other towns in individual cases under the control of municipalities) will be included in the system of the MLSI by merger with regional offices of the SSSS,
- Measures will be undertaken towards implementation of ***the system of payment*** of pensions and benefits by plastic cards along with gradually reducing the coverage SSSS (former SSIF) payment service. Payments of pensions will be effected by using the classical scheme of cooperation with the Treasury which is currently applied for payments of other benefits. This means that in order to ensure payment of pensions to customers, the SSSS will instruct the Treasury on the amounts calculated according to lists of pensioners which will be transferred to the respective branches of Haypost or commercial banks.
- ***Certain rules for payment of pensions will be reviewed (liberalized).*** In particular, the legislative requirements for returning pension amounts to the treasury account in case the beneficiary didn't receive in person his pension, register with the authorities within the specified time period or receive pension.

14.2.2.2 The reorganized ***State Service of Social Security*** will perform the functions currently assigned to the regional offices of social services, as well as the ones laid down in its Charter. Namely, within the pension reform the SSSS will be responsible for:

1. *calculation (recalculation), granting and payment* of state pensions (*social, employment and basic*, including for participants of the funded component) as prescribed by the legislation of Armenia,
2. registration of state pension beneficiaries and *maintenance of the administrative registry*,
3. <u>*education of citizens* on the pension legislation, in particular, granting, calculating, paying pensions, and other issues.</u>

14.2.2.3 Through electronic access the SSSS will receive information necessary for assigning state pensions from the STS and may also send requests in order to verify the accuracy of the existing data.

14.2.2.4 With a view to improve the quality of service to *citizens (beneficiaries)* the Government will undertake measures towards improving the premises and equipment of regional offices.

14.2.3 The Labor Inspectorate (LI) of the ministry of labor and social issues will organize, in accordance with the law, *authenticity checks of documents submitted for assignment and payment of pensions*. It will also apply administrative sanctions, as stipulated by relevant legislation, in case of administrative violations. In the view of assigning new functions to the LI, the strengthening of its capacities will be important.

14.2.3.1 During implementation of this function, the ***LA will cooperate with the SSSS***. In particular, in cases of inaccuracy or suspicion with regard to the reliability of documents submitted by employers or beneficiaries for assignment and payment of pensions, the SSSS would ask the Employer or the beneficiary who has submitted documents for additional information. If suspicions are not eliminated by the information and there is a lack of reliability, the available information is transferred to the LA for further inspections at the given employers organization and receiving conclusions regarding clarification of circumstances and the situation. *This cooperation will eliminate the need for establishing separate structural units with unnecessary, duplicated functions and will reduce the number of units conducting inspections at employers' organizations.*

Box 34. Recent legislative developments in the area of pension

The Parliament of Armenia has received a *package of bills* on financing all types of services financed by the State Social Insurance Fund from the state budget, as well as replacing the term “social insurance” in the State Pension Act and other relevant laws with “social security”.

Changes have been made to the Budget System Act, according to which the “fund budget” concept is removed and resources allocated to social security are transferred to the state budget.

According to the package of amendments approved in the parliament of Armenia, functions described in the current charter of the state social insurance fund and services provided by the fund will be terminated from *1 January 2008*.

14.2.4 The State Tax Service (STS) of the Government of Armenia will organize collection of information on the *unified tax and mandatory/voluntary funded contributions.* Given the new functions of the STS related to the introduction of funded component the latter's capacity building will become one of the most important trends in international cooperation during the coming 2-3 years.

14.2.4.1 When the unified tax is introduced, the STS will be responsible for personified record keeping of persons who pay taxes and pension contributions. The STS will also perform reconciliations of individual accounts of contributors in cooperations with the SSSS.

14.2.4.2 When the personified system of ***unified tax payments*** is introduced, the current *Social Contributions and Income Supervision Department of the STS will be renamed* and reorganized into a specialized inspectorate using the capacity of regional tax inspectorates.

14.2.4.3 *The individual registry of unified tax payers* will require the implementation of the following functions:

1. Receiving monthly individual reports from employers on *employees' incomes, mandatory social contributions and taxes paid,*
2. *Entry of individual reports' data* into the database and checking the data as necessary,
3. *Provision of information* on mandatory cumulative individual payments (through access to electronic databases) to the Central Depository of Armenia,
4. *Supervision over the process* of collection of the unified tax and mandatory cumulative contributions,
5. *Registration and identification* of the paid unified tax and the amounts transferred to cumulative individual accounts,
6. *Public advice to Armenian citizens* on the unified tax and mandatory cumulative contributions.

14.2.5 The Ministry of Finance and Ministry of Economy (MF, ME) will ensure development of the financial and economic and fiscal policies and *funding of state pensions* in accordance with the approved pension policy.

14.2.5.1 Based on the payment request submitted by the SSSS, the Treasury of Armenia of the MF will finance the payment of state pensions to organizations in charge of delivering services of payment of state pensions, in order to credit the pension amounts on the beneficiaries' bank accounts.

14.2.5.2 Based on the information received from the STS, the Treasury will transfer the mandatory funded contributions to the CDA account in the Central Bank of Armenia.

14.2.6 The Central Depository of Armenia (CDA) will be the body responsible for centralized administration of the funded component. The CDA will implement the following functions:

1. *Pnsion account keeping,* information provision to citizens,
2. *Issuing, valuation and redemption of pension units* in accordance with the choice of investment portfolio,
3. *"Transferring pension accounts"* to asset management,
4. *Acting as an intermediary* between beneficiaries and asset managers,
5. *Coding the accounts*, random selection of asset managers for those participants who have not chosen their asset manager,
6. *Receiving information* from asset managers and providing the information to beneficiaries and vice versa
7. *Custody*.

14.2.7 The Financial Markets Supervision Service (FMSS)[128] will *regulate, license, monitor and supervise the activities* of financial institutions of the pension system, such as assets managers, private pension insurance companies, CDA, etc. In effect, the FMSS will be responsible for introducing the funded pension component institutions. Regulatory and supervisory functions with regard to the mentioned institutions include:

- *Defining licensing requirements*, issuing, suspending and voiding accreditations,
- *Defining prudential requirements* for market, liquidity, operational and other risks within the framework defined by the law,
- *Defining information disclosure* requirements,
- Receiving and analyzing reports according to the defined forms, on site and off site *inspections*,
- *Protection of consumers' interests.*

14.2.8 Each structure of the multi-pillar pension system will implement *beneficiary advisory functions* within the framework of information and functions under its jurisdiction. ***No state structure will provide direct financial advisory services for selection of investment portfolios and assets managers.***

14.2.9 For the development and capacity building of institutions of the multi-pillar pension system ***the Government of Armenia will develop and together with international organizations implement special targeted programs.*** The latter will include professional training of human resources, improvement of knowledge, introduction of modern IT technologies, including corporate networks and other components.

14.2.10 In order to ensure legal grounds for pension system reforms the Government of Armenia with the assistance of donor community and with the participation of country's civil society will develop action plan and implement it.

14.2.11 At the same time, in order to make the concept and process of the reforms understandable for the civil society the ***Program of Measures for Raising Public Awareness and Participation of the Civil Society*** will be developed.

14.2.12 Given the aspect that effectiveness of multi-pillar pension system considerably depends on financial knowledge of the participants, ***programs on different aspects of financial education*** will developed in the frames of public-private partnership and delivered to different layers and age groups of the population. The latter will include training and knowledge dissemination mechanisms on financial markets, institutes, tools and their types, risks and rewards, returns on assets, etc.

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[128] This will be an entity responsible, for financial system regulation and supervision, after separation from central bank. FMSS and CBA could be used interchangeably.

14.3 Management Schemes

Chart 8. Management scheme of the state solidarity component of the multi-pillar pension system

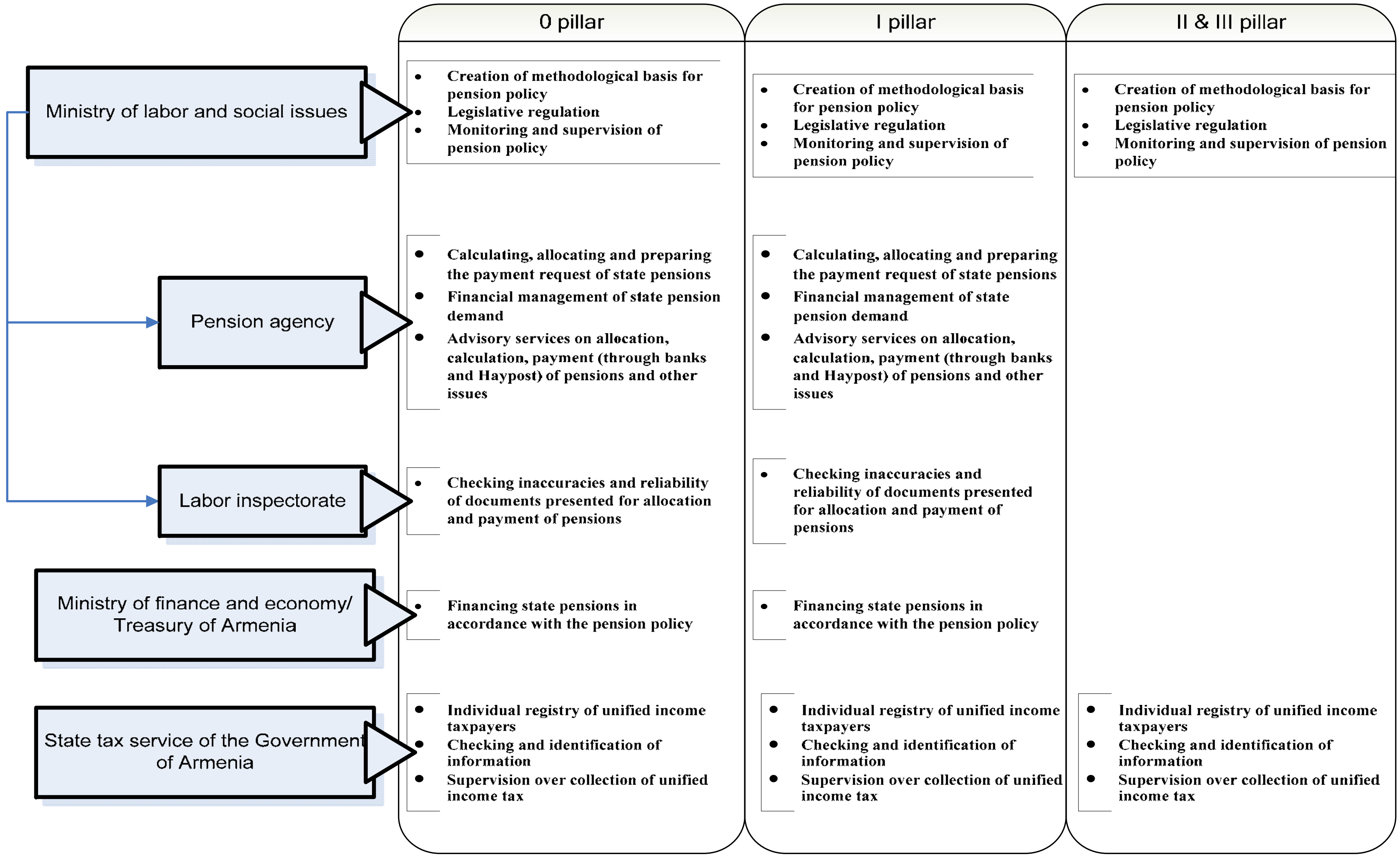
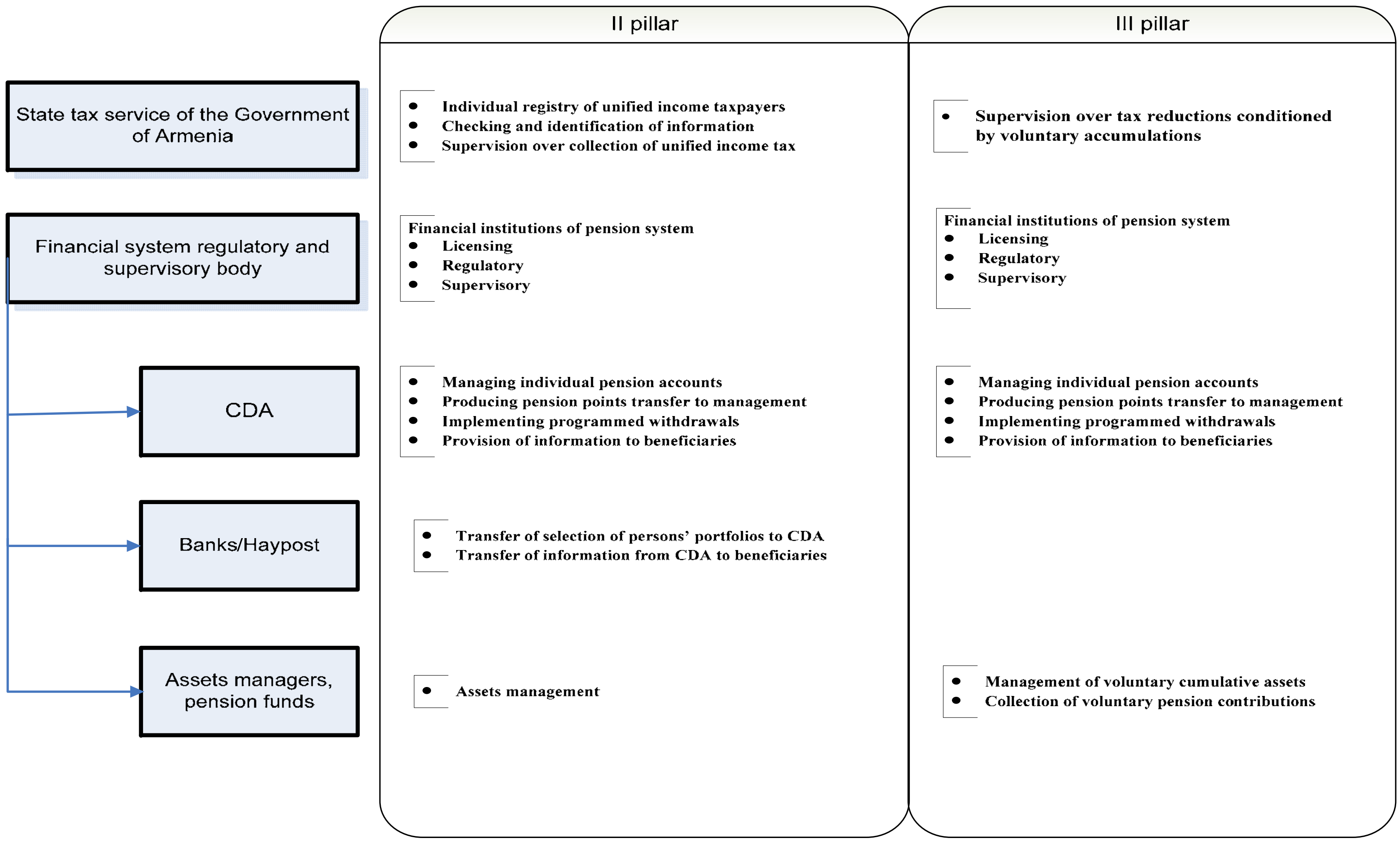


Chart 9. Management scheme of the private funded component of the multi-pillar pension system



15. Regulation and supervision of nongovernmental pension institutions

15.1. Central Depository of Armenia – CDA

15.1.1. _CDA activities_ related to mandatory and voluntary funded pension insurance are regulated by the legislation, as well as bilateral agreements between the Government of Armenia and the CDA[129].

15.1.1.1 The CDA, separate from its other functions, also implements _*functions ascribed to it under Chapter 3 paragraph 10.7.*_

15.1.2 Operations of the CDA are supervised by the _*Financial Markets Supervision Service (Central Bank)*_. Supervision over the overall activities of the CDA is implemented in accordance with current supervision practice.

15.1.2.1 Supervision over activities relating to the funded pillar is implemented in the following directions:

- Supervision over ***compliance with Armenian legislation,***
- Supervision over compliance with ***agreement between the Government of Armenia and the CDA,***
- Supervision over ***compliance with FMSS regulations.***

15.1.2.2 Regulations of the Financial Markets Supervision Service will aim to reduce the risks and possibilities for fraud in CDA information technologies and operations.

15.2 Pension Assets Managers – AM

15.2.1 Pension _*assets managers*_ are ***commercial organizations*** registered in Armenia in accordance with regulations defined by the legislation.

15.2.2 The legal bases for _*AM operations*_ are:

- Armenian legislation regulating professional activities of commercial organizations and the securities market,
- Agreements made between AM and CDA,
- Policies and rules developed by the Financial Market Supervision Service of Armenia.

15.2.2.1 ***The number of AMs in the market*** will be limited. The preference will be given to organizations whose founders have the corresponding international experience, corporate governance traditions, international rating in the area of assets management, and also availability of adequate resources.

15.2.3 The preliminary selection of AMs and negotiations with them will be implemented by _*the Central Bank of Armenia or the Ministry of Economy.*_

15.2.4 The _*FMSS*_ will be responsible for licensing and supervision of AMs.

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[1] Considering the preliminary agreement of the Government of Armenia with NASDAQ OMX Group regarding the sale of the CDA, the activities of the CDA will be regulated also by the provisions of the international agreement between the Government of Armenia and OMX Group.

15.2.5 Regulation and supervision of *pension asset managers* will be implemented in the following directions:

- Licensing,
- Setting Information Disclosing requirements,
- Defining management requirements,
- Defining the minimum capital requirements,
- Defining the maximum rate of assets management fees,
- Monitoring and supervising investment portfolio composition,
- For DB schemes, also the criteria for solvency.

15.2.5.1 Licensing

Fit and proper analysis of *AM founders, affiliated persons, members of management board should be done in detail.*

The business plan of the organization and the availability of human, technical and financial resources for implementing the plan should be analyzed in detail.

15.2.5.2 Information Disclosure

Information disclosure requirements, reliability and truthfulness of information are the cornerstones in pension assets management supervision.

AMs should present expanded version of their prospectus to the FMSS and only after the approval of the latter they can publish it in the brief version. *The list of information to be included in the prospectus is defined by the FMSS.* It should at least include:

1. The composition of the investment portfolio,
2. Profitability of the investment portfolio in absolute and relative terms compared to the average in the sector,
3. Composition of asset management fees, types of fees and their size in absolute and relative terms compared to the average in the sector.

All comparisons and conclusions should be made with reasonable basis and should not include any misrepresentation or misleading information. In the next 5-10 years, the mentioned information should as much as possible be in compliance with Global investment performance standards.

15.2.5.3 Management Requirements

The AM should be managed as effectively as possible with regard to exclusion of the conflict of interests and ensuring services corresponding to clients' interests. The managing board should have capacities for overseeing and monitoring over the process of investment decision-making and process of taking investment actions. *The managing board should consist of a number of independent and professional members.* The AM should have an internal control system and an independent internal assessment unit. Decision making, implementation and assessment activities should be separated. The detailed requirements for management will be defined by the FMSS.

15.2.5.4 Minimum Capital Requirement

Minimum capital requirement will be defined for AMs: to invest at least 1% of the total amount of investment portfolios from their own resources. Actually, this is a capital adequacy requirement.

15.2.5.5 Maximum size of asset management fees

Types of fees on asset management and other fees are defined in ***Chapter 3 paragraph 10.7.6***. The need for such price ceilings is because of limited service providers and limited competition.

15.2.5.6 Investment portfolio restrictions

The imitations of investment portfolio composition are presented in ***Chapter 3 paragraph 10.8***. In countries of case law the supervision of asset trust management is based on Prudent Person Principle: The principle cannot be included in specific legal acts, since the situations and conditions for investment can be very different. *It is not possible to effectively use supervision based on principles in civil law countries.*

Considering the limited usability of the mentioned type of supervision, definition of the requirements for the composition of investment portfolio will have an important role in reducing investment risks. This will be done through *definition of portfolio diversification requirements*.

Supervision over fiduciary responsibilities will be implemented also by AMs through presentation of annual strategies. The annual investment strategy should include a description of investments, related risks and methods for their management.

In general, periodic reports, non periodic reports by custodians or the CDA as well as on the on site inspections will be the tools of supervision.

15.3 Custodians

15.3.1 *Custodians* are ***companies licensed***, in accordance with the Armenian or another country's legislation, for custodial activities. In the institutional model of the Armenian multi-pillar pension system, ***custodial activities (both local and global) are implemented by the CDA and the foreign global custodian and in case of voluntary insurance contributions – also the custodian banks.***.

15.3.2 In case of voluntary funded insurance, *special supervision of the custodian* will be implemented. In particular, it shall include examination of compliance with Armenian legislation regulations that regard to management of securities account, as well as information technologies and operational risks management.

15.4 Private pension funds

15.4.1 *Private pension funds* will have the functions of ***collecting voluntary cumulative contributions***, managing individual accounts and managing pension assets.

15.4.2 *Regulation and supervision* of private pension funds will be based on the same principles, as defined for regulating and supervising the operations of the CDA and mandatory cumulative assets managers.

15.4.3 Voluntary cumulative insurance organizations that will offer insurance of the "defined benefit" model to the participants of 3rd voluntary accumulation pillar have to comply with the requirements of asset liability matching to be defined by the Financial Markets Supervision Service by both volumes and periods. Supervision will be exercised on the defining of tariffs, actuarial calculations, their revision process and the investment policy.

16. Possible risks and their management

There are some risks related to the implementation of pension system reforms. Part of them is of a subjective nature as they arise from the policy choice. The other part is related to contributory pension insurance since it is connected with the pension assets investment. The level of risk impact and their manageability is dependant on the specifics of Armenian model of funded pension system.

16.1 Risks of the program

16.1.1 The Program itself already contains some risks originating from ***long-term projections, political decisions, subjectively defined parameters and adopted principles.*** All of them have been selected based on the tendencies of country's socio-economic development and political situation. However, with the change of the latter there may certainly arise risks related to "wrong selection" which are presented below by groups.

16.1.1.2 *Risk of inconsistency between assumptions, projections and calculations with actual reality*

Lots of assumptions, projections and calculations based on them are underlying the development of pension reforms. Unfavourable development of real tendencies may considerably affect results of the already taken decisions on reforms implementation.

In order to decrease the risk, assumptions and projections were made by the ***maximum security principle*** which served as a basis for the development of a pessimistic scenario in terms of state financial expenses. This means that the likelihood of more favourable actual developments and tendencies is rather high.

16.1.1.3 System and institutional risks

In the stage of designing the funded pension component some risks were already visible and respective measures were anticipated in different sections of the Program for their prevention and management.

For instance, indifference of the population, lack of financial knowledge, bad awareness and inaccessibility of information may lead to ***lack of competition between asset managers.*** As a result initial distribution of pension resources by asset managers and portfolios may remain for a long time negatively affecting the effectiveness of the management, consequently, rate of return of pension assets.

Reduction of this risk is possible only through increasing economic activeness of the population. Particularly, the Program envisages (see points 14.2.11-14.2.12) *development of measures for raising public awareness and providing general financial knowledge.*

On the other hand often change of AMs will also negatively affect the quality of asset management. Particularly, the high frequency of exchange of units will make the *AMs to keep a great amount of highly liquid assets in their portfolios* in the form of cash and cash equivalent assets. In order to prevent this tendency the Program anticipates allowing people to make a exchange of units once a year for free and each additional time – for a certain charge.

Frequency of switching from one AMs to another will be also restrained by the provision of the Program on their limited presence in Armenia – *it is planned to have 3-4 AMs, not more.*

High likelihood of not selecting an AM and/or investment portfolio by persons was also considered as an institutional risk. For the management of this risk (in some countries – Sweden, Russia it is quite common) with possibly minimum amounts the Program envisages the ***use of "random selection principle" by the CDA*** according to which resources of such participants will be equally directed to the AMs and placed in "conservative portfolios" mandatorily formed by them.

16.1.1.4 Risks of inefficient (bad) management

Ensuring the necessary level of pension assets (economy of scale) has an important role in the effective operation of the whole funded system. Particularly, *ensuring optimum amount of assets under management as well as sufficient fees for the management of assets* may considerably improve effectiveness of asset management. This is particularly important during the initial phase of the reforms which is the most sensitive period in terms of politics

For the ***reduction of this risk the program contains certain parametric and institutional measures.*** Thus, in order to ensure the optimum scale of accumulation assets the <u>following parameters</u> were adopted*:* a) define 10% of personal income/salary as contribution rate , b) age limit for participant was considered 40, c) the principle of participation – from 2010 all citizens in the age of 16-40 will mandatory participate, d) no age limit was set for persons above 40 for their voluntary participation in the funded system, e) tax deduction was envisaged for voluntary pension contributions for the amount up to 5%; f) for the initial period an posibility for setting sufficient level of management service payments was envisaged, etc. *In order to reduce risks in institutional terms* it was planned: a) to involve international companies with asset management experience, b) in the initial period limit the number of such companies with 3 to 4.

16.2 Market risks

16.2.1 Market risks related to the management of pension assets ***are usually managed through portfolio diversification.*** Furthermore, some elements of portfolio diversification envisaged in the Program are to defined by legislation. Details of market risks and their management are presented below.

16.2.1.1 <u>Default Risk</u>

In order to reduce default risks of the investment portfolio ***the mechanism of investment restrictions will be used.*** Particularly, according to the program, investments in Armenia may be done only in those bonds which are registered in the stock market. Foreign investments will be limited only with the bonds registered in OECD countries which will restrain the risk of insolvency.

16.2.1.2 Interest rate risk

Interest rate risk management will be conducted by hedging, because hedging instruments are available for foreign bonds and the capacities for hedging will be developed for Armenian bonds in the meantime. The role of banks in this process becomes of great significance since given the peculiarities of banking operations, i.e. availability of assets and liabilities with different terms they may act as the other party of hedging.

Rate of return risk for shares/stock, including the ones with stock exchange quotations will be reduced through ***diversification of investment portfolio***, and control over that will be vested with the Financial Market Supervision Service of the Republic of Armenia at the time of registering the portfolio and afterwards.

16.2.1.3 *<u>Exchange rate risk</u>*

In the initial phase foreign currency risk will be managed by asset managers by making investments in different currencies which will significantly reduce the risk through ***foreign currency diversification.***

An option for foreign currency risk reduction are forward contracts with banks, as the banks having liabilities in foreign currency and assets in Armenian dram may enter into forward deals for a one-year term with asset managers. The Forward contracts will be renewed annually, rollover hedging. USAID FSDP project has prepared the paper on currency hedging.

In addition, Armenian dram derivatives contracts in the international market are emerging; Armenian dram is already quoted in several countries. A growth in the volumes of derivative deals is also noted in Armenia. By using these opportunities there will ***gradually be supply for foreign currency risk hedging instruments***.

16.3 Operational risks

Management of operational risks will be performed through risk management systems of the AMs and their effective implementation. *Damages related to operational risks and fraud will be insured by the guarantee fund.*

Box 35. Employe and self-employed persons in the farms: International experience of pension reforms

From the government perspective the most difficult sector is regulation and supervision pension security for *non-organized labor force.* This is a complex issue in every country as such labor force involved population employed in the farms, housing economy, creative, seasonal and nonpermanent employment that have income which is difficult to calculate and contribution process is almost out of control. Interational experience shows that countries try to address the problem in different ways. For instance:

Poland: Pension insurance of persons employed in the agriculture is conducted separately from the general system. Pension contributions are defined regardless of income and paid on quarterly basis; *the amount is linked with the basic pension and makes 30% of it. State* subsidizing is performed in the amount of 94% of the collected sum which makes 2% of the GDP. Persons having made contributions to the scheme for 25 years are entitled to pension. Old age, disability, maternity and temporary working incapacity, survivor and other benefits are paid. 1% of the minimum benefit is paid for one year's contribution which is added with supplement.

Greece: Special *Organization for Agriculture Insurance* was established for persons employed in agriculture and farms. Employed persons make contributions in the amount of 7% of their incomes and the state pays the double amount, i.e. 14%. Income base for the payments differes by the payer categories. Employment pension is paid in the availability of 15 years payment history, and the disability pension - in the availability of at least 5 years of payment history. *Organization for Agriculture Insurance* makes payment of old age, health insurance benefits and benefits for families with many children. It also implements social security and social turism programs.

Spain: Social regime is in place for persons employed in agriculture. This covers all the other groups of self-employed population. Pension contributions are made on the basis of minimum tax base, in the amount of 18.75%. However, at contributor's choice it is possible to calculate contributions based on the amount axceeding the minimum base at the same rate.

Source: Augusto Iglesias & Primamérica on the basis of European Commission data.

Annexes

Annex 1

I.

In order to ensure the implementation of pension system reforms and coordinate the activities of ministries involved in the process, the Order No. 1069-A of the Government of Armenia dated 27 July 2006 established a ***steering committee*** with the following membership:

-- Prime minister (chair of the committee)
-- Finance and economy minister
-- Labor and social issues minister
-- Trade and economic development minister
-- Central bank chairman
-- Chair of the standing committee of the National Assembly on finance-credit and economic issues (by consent)
-- Chair of the standing committee of the national assembly on social, environmental issues (by consent)
-- Adviser to the President of Armenia
-- Chairman of the State Social Insurance Fund

II.

In order to implement activities for pension system reforms, a ***working group*** headed by ***Simon Ghonghchyan*** head of the economics department of the stuff of the government was formed by the Ordinance of the Prime Minister No. 599-A dated 4 August 2006 with the following membership:

- Representative of the department of social issues of the administration of government (***Tigran Harutyunyan***)
- Representative of the ministry of finance and economy ***(Karen Tamazyan)***
- Representative of the ministry of labor and social issues ***(Artem Asatryan)***
- Representative of the ministry of trade and economic development ***(Varujan Harutyunyan)***
- Representative of the state social insurance fund ***(Stepan Hayrapetyan)***
- Representative of the central bank (by consent) ***(Anna Vardikyan).***

Annex 2 (Charts)

Chart 1. THEMATIC GROUPS
for drafting the implementation program for pension system reform

	Thematic groups	*Responsible body*	*Responsible person and team members*	*Main issues*
1.	**Solidarity component of the pension system**	MLSI CB SSIF MFE	WG member: ***Artem Asatryan*** Group members: MLSI Smbat Saiyan Roza Mkrtchyan Mamikon Ghazaryan SSIF Ruben Markosyan Vahagn Khachatryan Gurgen Khachatryan Nona Sargsyan CB Ani Makaryan Susanna Karapetyan MFE Ara Akhoyan Ruzanna Balasanova Hayk Harutyunyan Karina Mkhitaryan MTED Varujan Harutyunyan WB USAID/SPSS	1. Description of minimum old-age social benefit and base pension components of the new pension system: a) conditions entitling to minimum old-age social benefit and base pension b) amount of minimum old-age social benefit and base pension c) pension security with privileged conditions in the new pension system d) pension security in the new pension system for individual categories (owners of agricultural lands, persons involved in scientific or creative work, etc.) e) entitlement to disability pension and mechanisms for its implementation in the new pension system f) entitlement to loss of breadwinner pension and mechanisms for its implementation in the new pension system 2. General description of parametric changes in the current pension system
2.	**Funded component of the pension system**	CB MFE SSIF MLSI	WG member: ***Hayk Voskanyan*** Group members: CB Susanna Karapetyan Anna Vardikyan Karen Hakobyan	1. Description of mandatory and voluntary funded components: a) the essence of funded pension, options and modes of the use of accumulated funds, sizes of funded pensions, mechanisms for payments b) conditions and regulations for inclusion in voluntary funded system, forms of payment of accumulated funds c) fiscal and output indicators 2. Description of asset management process: a) assets managers model, their function, selection and change b) types, structure, limitations, instruments and selection possibilities of investment

			Armenuhi Mkrtchyan MLSI Smbat Saiyan MFE Karen Tamazyan Artak Azizyan Samvel Khanvelyan SSIF Yeghishe Sargsyan Agnesa Aghababyan MTED Maria Saponjyan WB USAID/SPSS USAID/FSDP	portfolios, commission payments of assets management c) forms of supervision over assets managers d) financing of management costs e) information and financial flows f) public awareness and consultancy 3. Management of individual accounts: a) strengthening the central depository b) confidential and double coding systems c) regulations for providing accounts for management d) mechanisms for maintaining, supervising and ensuring the safety of individual accounts e) receiving information and transferring to assets managers f) regulations for providing accounts for management Maintenance of personified accounts 4. Supervision, functions of mandatory and voluntary funded system 5. Description of the financial sector relating to pension reforms including infrastructure developments
3.	**Management of multi-pillar pension system**	MFE CB MLSI SSIF	WG MEMBER: ***Karen Tamazyan*** MFE Artak Azizyan Ara Akhoyan Shushanik Mkrtchyan Narine Titizyan MLSI Smbat Saiyan CB Hayk Voskanyan SSIF Agnesa Aghababyan Yeghishe Sargsyan MTED Merujan Hakobyan Syuzanna Papoyan USAID/SPSS USAID/FSDP WB	1. Description of the management system: a) management structure, bodies, functions b) establishing the legal framework for management 2. Supervisory bodies for mandatory and voluntary funded system as well as assets managers 3. Description of the reforms of the mandatory social insurance payments system within the framework of the new pension system and mechanisms for its implementation a) the new structure and functions of the SSIF b) collection/administration of social taxes/contributions c) financing the operations of management bodies 4. Description of the financial sector relating to pension reforms including infrastructure developments (from institutional point of view) 5. Mechanisms for provision of information and consultancy to the public, ensuring interagency information flows

Chart 2. ORGANIZATIONAL CHART OF MANAGEMENT
for drafting the implementation program for pension system reform (PSR)

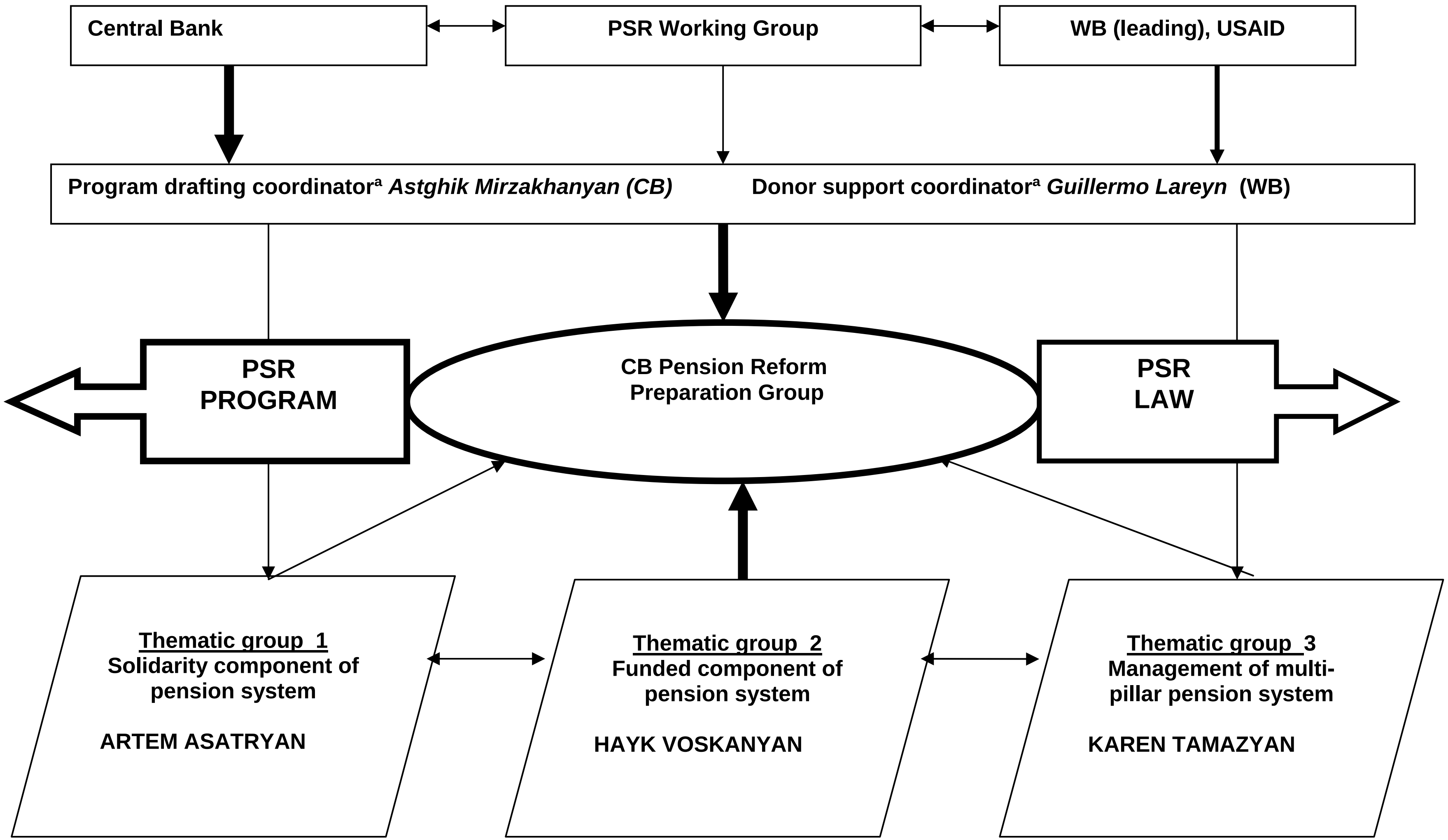


Chart 3. Organizing the work of thematic groups

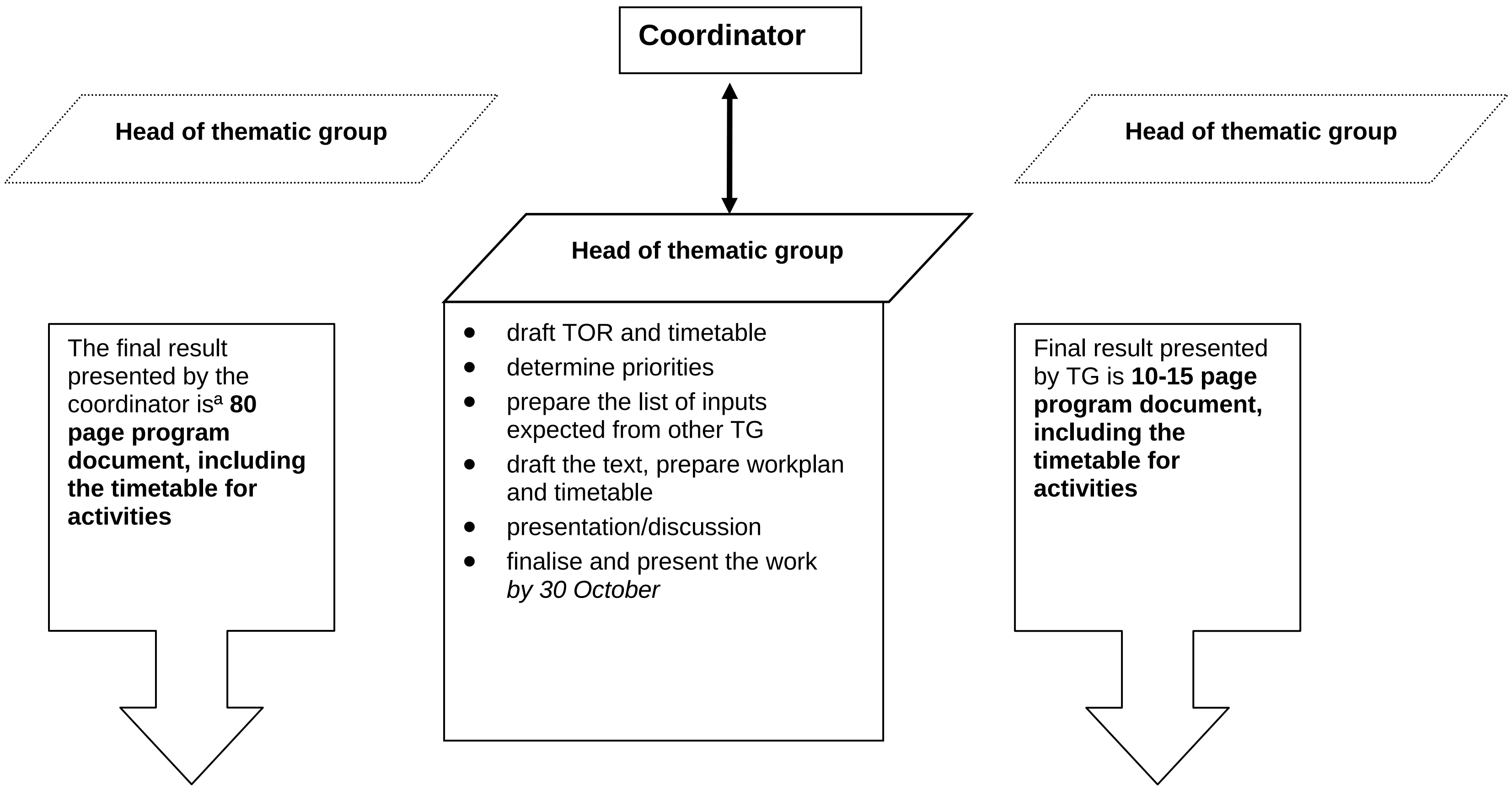
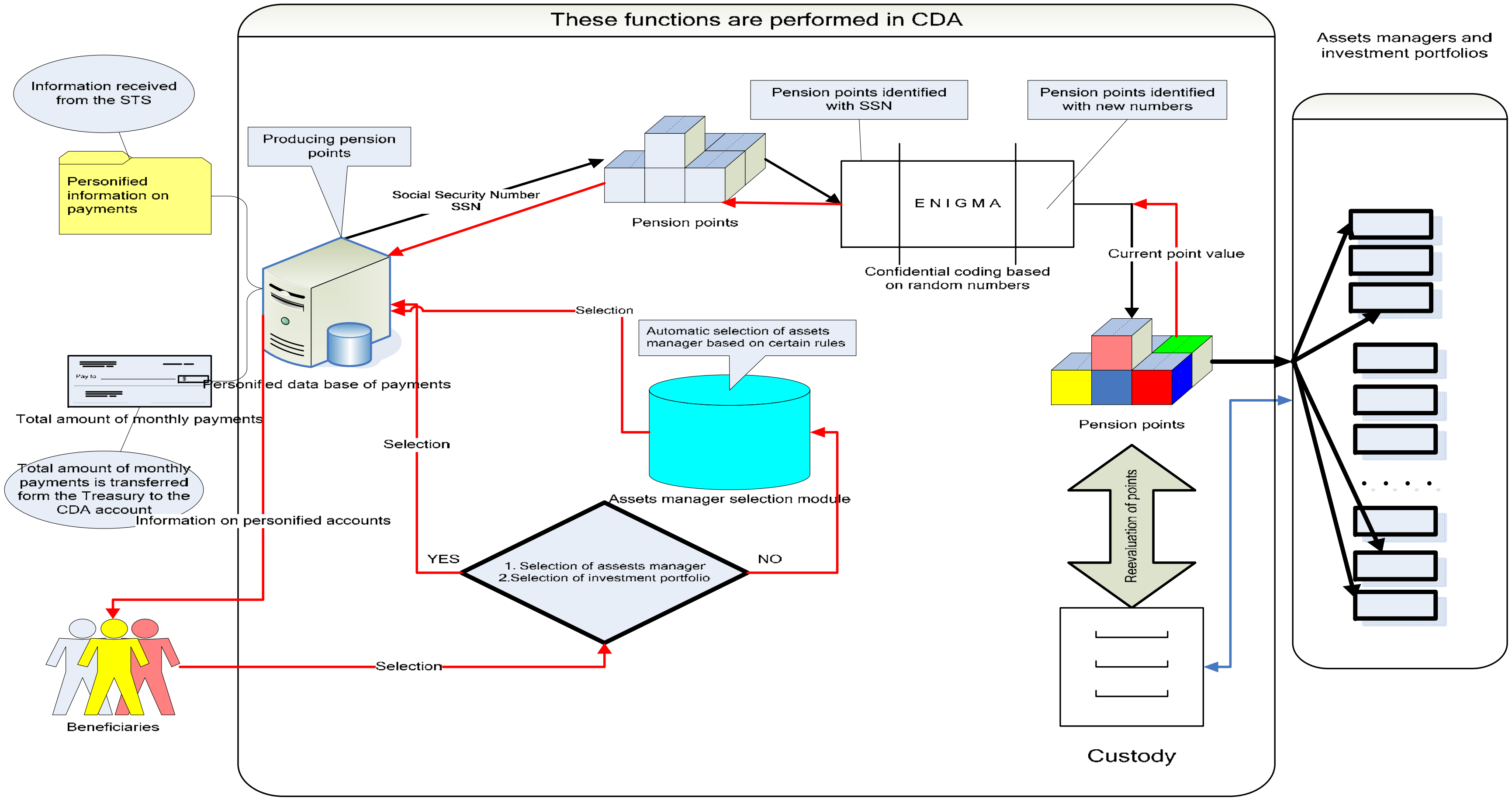


Chart 4. Process of pension asset management



Annex 3 (Tables)

Table 1. Calculation of income tax and social contribution
(according to legislation in effect at 1.10.2007)

No	Wages, thousand drams	Mandatory social insurance payments, thousand drams		Total social contributions, thousand drams	Employers wage bill, thousand drams	Income tax from employees, thousand drams	Income tax from the wage bill %	Total social contributions from the wage bill %	Total social contributions from nominal wage bill %	Total income tax and social contributions from wage bill %
		Employer	Employee, 3%							
1	20.0	7.0	0.6	7.6	27.0	–	0	28.1	38.0	28.1
2	50.0	7.0 + 4.5 =11.5	1.5	13.0	61.5	2.85	4.6	21.1	26.0	25.7
3	80.0	7.0 + 9.0 = 16.0	2.4	18.4	96.0	5.76	6.0	19.2	23.0	25.2
4	100.0	7.0 + 12.0 = 19.0	3.0	22.0	119.0	7.70	6.5	18.5	21.0	25.0
5	250.0	7.0 + 12.0 + 7.5 = 26.5	7.5	34.0	276.5	36.5	13.2	12.3	13.6	25.5
6	*250.0 (y. 1 + 2 + 3 + 4)*	*7.0 + 11.5 + 16.0 + 19.0 = 53.5*	*7.5*	*61.0*	*303.5*	*16.31*	*5.4*	*20.1*	*24.4*	*25.5*
7	**52.0** Average nominal wage, 2005	**7.0 + 4.8 = 11.8**	**1.6**	**13.4**	**63.8**	**3.04**	**4.8**	**21.0**	**25.8**	**25.8**

Table 2. Dynamics of registered population by gender and age groups
(as at the beginning of the year)

1000 people

	1990	1992	1994	1996	1998	2000	2001*	2002	2003	2004	2005	2006
Total population	***3514.9***	***3633.3***	***3356.7***	***3248.8***	***3238.2***	***3226.9***	***3213.0***	***3212.9***	***3210.3***	***3212.2***	***3215.8***	***3219.2***
Including: 0-14	1074.0	1100.1	992.0	917.8	859.2	798.5	780.0	787.0	752.4	723.1	695.8	664.5
15-64	2245.2	2308.4	2126.1	2074	2104.4	2137.8	2121.5	2118.5	2139.4	2160.5	2182.3	2242.2
65+	195.7	224.8	238.6	257	274.6	290.6	311.5	307.4	318.5	328.6	337.7	312.5
Men	***1704.8***	***1761.5***	***1580.0***	***1514.6***	***1547.5***	***1545.7***	***1542.0***	***1542.4***	***1543.6***	***1546.7***	***1550.6***	***1554.1***
Including: 0-14	550.7	563.8	494.9	461.7	435.8	409.7	404	407.6	390.7	377.1	364	349
15-64	1080.2	1110.5	990.5	977.7	999.3	1016.8	1011.4	1010	1023.8	1036.6	1050.3	1065.6
65+	73.9	87.2	94.6	102.2	112.4	119.2	126.6	124.8	129.1	133	136.3	139.5
Women	***1810.1***	***1871.8***	***1776.7***	***1707.2***	***1690.7***	***1681.2***	***1671.0***	***1670.5***	***1666.7***	***1665.5***	***1665.2***	***1665.1***
Including: 0-14	523.3	536.3	497.1	456.1	423.4	388.8	376	379.4	361.7	346	331.8	315.5
15-64	1165	1197.9	1135.6	1096.3	1105.1	1121	1110.1	1108.5	1115.6	1123.9	1132	1176.6
65+	121.8	137.6	144	154.8	162.2	171.4	184.9	182.6	189.4	195.6	201.4	173

Source: Demographic bulletin of Armenia 2006, NSS
* census 2001

Table 3. Dynamics of registered population by gender and age groups
(as at the beginning of the year)

% of total

	1990	***1992***	***1994***	***1996***	***1998***	***2000***	***2001****	***2002***	***2003***	***2004***	***2005***	***2006***
Total population	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***
Including: 0-14	30.6%	30.3%	29.6%	28.3%	26.5%	24.7%	24.3%	24.5%	23.4%	22.5%	21.6%	20.6%
15-64	63.9%	63.5%	63.3%	63.8%	65.0%	66.2%	66.0%	65.9%	66.6%	67.3%	67.9%	69.7%
65+	5.6%	6.2%	7.1%	7.9%	8.5%	9.0%	9.7%	9.6%	9.9%	10.2%	10.5%	9.7%
Men	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***
Including: 0-14	32.3%	32.0%	31.3%	29.9%	28.2%	26.5%	26.2%	26.4%	25.3%	24.4%	23.5%	22.5%
15-64	63.4%	63.0%	62.7%	63.4%	64.6%	65.8%	65.6%	65.5%	66.3%	67.0%	67.7%	68.6%
65+	4.3%	5.0%	6.0%	6.6%	7.3%	7.7%	8.2%	8.1%	8.4%	8.6%	8.8%	9.0%
Women	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***
Including: 0-14	28.9%	28.7%	28.0%	26.7%	25.0%	23.1%	22.5%	22.7%	21.7%	20.8%	19.9%	18.9%
15-64	64.4%	64.0%	63.9%	64.2%	65.4%	66.7%	66.4%	66.4%	66.9%	67.5%	68.0%	70.7%
65+	6.7%	7.4%	8.1%	9.1%	9.6%	10.2%	11.1%	10.9%	11.4%	11.7%	12.1%	10.4%

Source: Demographic bulletin of Armenia 2006, NSS
census 2001

Table 4. Migratory movements in Armenia by age group 2001-2005

Percentages

Year, age	Immigrants		Emigrants	
	Men	Women	Men	Women
2001				
0-19	27.6	21.6	36.0	20.1
20-49	54.2	62.2	33.0	58.1
50+	18.2	16.2	31.0	21.8
TOTAL	100	100	100	100
2002				
0-19	27.2	20.5	36.2	21.2
20-49	51.8	59.9	37.6	60.1
50+	21.0	19.6	26.2	18.7
TOTAL	100	100	100	100
2003				
0-19	27.7	19.0	33.9	18.8
20-49	50.7	65.1	39.2	61.5
50+	21.6	15.9	26.9	19.7
TOTAL	100	100	100	100
2004				
0-19	26.3	17.1	32.7	18.4
20-49	49.7	63.7	44.3	61.9
50+	24.0	19.2	23.0	19.7
TOTAL	100	100	100	100
2005				
0-19	29.2	16.9	28.1	15.6
20-49	49.4	64.6	49.9	67.4
50+	21.4	18.5	22.0	17.0
TOTAL	100	100	100	100

Source: Demographic bulletin of Armenia 2006, NSS

Table 5. *Social Insurance Cascade, 2005*
1000 people

Employment resources	***2072.4***	***100%***				
Economically active population			***1273.8***			
% vs. employment resources			***61.5%***			
Employed in Economy*				***1175.8***		
% vs. employment resources				***56.7%***		
% vs economically active population				***92.3%***		
Employed in formal sector of the economy					***519.3***	
% vs employment resources					***25.1%***	
% vs economically active population					***40.8%***	
% vs. employed population					***44.2%***	
Persons making contributions						***435.5***
% vs. employment resources						***21.0%***
% vs economically active population						***34.2%***
% vs. employed population						***37.0%***

* The number of persons employed in the economy includes the number of persons employed also in the informal sector, including those in the farms. According to the assessment 656.5 thousand people or 55.8% of total employed persons are employed in the informal sector. Persons making contributions to the pension fund make 83.9% of persons employed in the formal sector of economy and only 37% of the employed.

Table 6. *Number of Tax-Paying (submitting records) Sole Entrepreneurs and Amounts of Paid taxes*

	Simplified tax		***Fixed payment***		***Income tax (agent)***		***Annual income tax declaration***	
	Presented calculation	Social contributions they paid *thousand AMD*	Presented calculation	Social contributions they paid *thousand AMD*	Presented calculation	Social contributions they paid *thousand AMD*	Presented calculation	Social contributions they paid *thousand AMD*
2002	8,062		17,376		13,219		5,859	
2003	9,404		19,275		16,319		7,165	
2004	11,373		21,594		19,109		4,475	
2005*	14,484	429,237.6	23,979	312,025.8	22,808	622,204.3	3.794	83,491
2006	15,594	2,130,052.5	26,464	1,480,793.3	23,008	2,976,668.1	2,932	388,649

* *social contribution for the fourth quarter of 2005*

Table 7. *Income tax calculated and paid by individual entrepreneurs, 1000 drams*

	Income tax (agent)	***Annual declaration***	***Total calculated***	***Income tax paid***
2002	53,147.8	59,805.1	112,952.9	286,216.0
2003	117,013.5	73,384.6	190,398.1	251,556.3
2004	136,109.7	65,673.5	201,783.2	408.428.5
2005	260,841.8	136,521.4	397,363.2	550,143.7
2006	326,740.0	270,800.3	597,540.3	738,255.5

Source: STS

Table 8. *Classification of countries by type of pension system, as of 2005*

NN	Level	Solidarity			Contributory	
	Coverage	***Universal***			***Mandatory***	
	Sector	***State***			***State***	***Private***
	Type	***Targeted***	***Basic***	***Minimum***	***Model***	***Model***
I. OECD countries with high revenues						
1	Australia	**+**				**DC**
2	Austria	**+**			**DB**	
3	Belgium	**+**		**+**	**DB**	
4	Canada	**+**	**+**		**DB**	
5	Denmark	**+**	**+**		**DB+DB**	
6	Finland	**+**			**DB**	**DC**
7	France	**+**		**+**	**DB+P**	
8	Germany	**+**			**P**	
9	Greece	**+**		**+**	**DB**	
10	***Iceland***	**+**				**DB**
11	Ireland	**+**	**+**			
12	Italy	**+**			**NDC**	
13	Japan		**+**		**DB**	
14	Korea		**+**		**DB**	
15	Luxemburg	**+**	**+**	**+**	**DB**	
16	Holland	**+**	**+**			**DB**
17	New Zealand		**+**			
18	Norway	**+**	**+**		**P**	
19	Portugal	**+**		**+**	**DB**	
20	Spain			**+**	**DB**	
21	Sweden	**+**			**SB**	**DB+DC**
22	Switzerland	**+**		**+**	**DB**	**Payment by defined parameters**
23	UK	**+**	**+**	**+**	**DB**	
24	US	**+**			**DB**	
II. Countries of Eastern Europe and Central Asia						
25	Bulgaria	**+**		**+**	**DB**	**DC**
26	Croatia		**+**		**P**	**DC**
27	Czech Republic	**+**	**+**	**+**	**DB**	
28	Estonia	**+**	**+**		**P**	**DC**
29	Hungary			**+**	**DB**	**DC**
30	Latvia			**+**	**NDC**	**DC**
31	Lithuania		**+**		**DB**	**DC**
32	Poland			**+**	**NDC**	**DC**
33	Slovakia			**+**	**P**	
34	Turkey	**+**		**+**	**DB**	
III. Latin America and Caribbean countries						
35	Argentina		**+**			**DC**
36	Chile	**+**				**DC**
37	Columbia	**+**				**DC**
38	Costa Rika	**+**			**DB**	**DC**
39	Dominican Republic	**+**				**DC**
40	Salvador	**+**				**DC**

41	Mexico	**+**				**DC**
42	Peru	**+**				**DC**
43	Uruguay	**+**			**DB**	**DC**
IV. Countries of Middle East and North Africa						
44	Algir			**+**	**DB**	
45	Bahrain			**+**	**DB**	
46	Jibuti			**+**	**DB**	
47	Egypt			**+**	**DB**	
48	Iran			**+**	**DB**	
49	Jordan			**+**	**DB**	
50	Libya			**+**	**DB**	
51	Morocco			**+**	**DB**	
52	Tunisia			**+**	**DB**	
53	Yemen			**+**	**DB**	

Note: ***DB* – *defined benefits***
DC – d*efined contributions*
NDC – *notional defined contribution*
P – *points*

Source: Pensions Panorama: Retirement-Income Systems in 53 Countries, IBRD/WB, 2007

Table 9. *Social and pension expenses in a number of countries as a % of GDP*

	Total Social Expenses	***Including monetary transfers***	***Including pensions***	***Including employment pensions***
Austria	27	19	16	9.9
Belgium	25	17	11	7.4
Czech Republic	19	13	9	6.4
Denmark	30	19	12	6.8
Estonia	16	11	8	6.3
Finland	27	18	12	7.0
France	29	19	14	10.6
Germany	27	17	13	10.5
Greece	23	17	14	10.2
Iceland	***18***	***10***	***8***	***3.8***
Ireland	16	10	5	2.5
Italy	25	19	17	12.8
Latvia	17	13	10	8.3
Lithuania	15	10	8	4.7
Luxemburg	22	16	11	8.0
Holland	24	16	11	6.2
Norway	27	18	13	6.0
Poland	23	18	14	8.0
Portugal	18	12	10	6.3
Slovakia	14	13	9	5.2
Spain	20	14	11	8.1
Sweden	31	21	14	7.5
Switzerland	28	20	15	11.2
Turkey	12	7	6	4.2
UK	25	18	14	9.8
US	15	8	7	5.2

Source: *OECD, 2003: From Pension Reform in the Baltic States – Part I, p. 349:*

***Table 10**. Income tax and pension contributions in a number of countries vs. nominal salary of an average industrial employee, %*

	Income Tax	***Employer contributions***	***Employee contributions***	***Total (1+2+3)***
	1	**2**	**3**	**4**
Belgium	28	14	33	75
Hungary	20	13	41	73
France	13	13	41	68
Sweden	25	7	33	66
Lithuania	29	3	31	63
Latvia	25	9	27	63
Italy	19	10	33	62
Germany	22	20	20	63
Finland	26	8	26	59
Austria	9	18	32	59
Slovakia	7	13	39	58
Czech Republic	11	12	35	58
Estonia	22	--	33	55
Holland	8	29	16	52
Poland	6	25	20	52
Spain	12	6	30	49
Turkey	14	14	19	48
Greece	3	15	28	46
Denmark	32	12	0	44
Portugal	6	12	23	42
Norway	21	8	12	42
Luxemburg	12	14	14	40
US	18	8	8	33
UK	15	8	10	33
Ireland	16	5	12	33
Switzerland	10	11	11	33
Iceland	***21***	***0***	***5***	***26***

Source: OECD, 2003: From Pension Reform in the Baltic States – Part I, p. 350:

***Table 11.** Pension contributions in the countries of South and South-Eastern Asia*

	Employer contributions	***Employee contributions***	***Total***
Malaysia	12	11	23
Singapore	16	20	26
Hong-Kong	5	5	10
Thailand	3-15	3-15 and more	3-30 and more

Source: South East Asian Experience with Retirement Saving Schemes: Lessons for Armenian Pension Reform

Table 12. *Replacement ratios by countries*
(for pre-retirement wage of men with the availability of 40 years of length of service in average)

NN	Countries	Groups of nominal salary Average wage of the country - "1"					
		"0.5"	"0.75"	"1"	"1.5"	"2"	"2.5"
I. OECD countries with high revenues							
1	Australia	65.1	48.2	40.0	31.7	26.2	21.9
2	Austria	78.3	78.3	78.3	78.3	64.3	51.5
3	Belgium	61.6	41.1	37.3	31.9	23.9	19.2
4	Canada	72.4	52.4	42.5	28.4	21.3	17.0
5	Denmark	82.4	56.4	43.3	30.3	23.8	19.8
6	Finland	80.0	71.5	71.5	71.5	71.5	71.5
7	France	84.2	56.1	49.4	47.3	44.0	42.1
8	Germany	47.3	45.8	45.8	45.8	37.6	30.1
9	Greece	84.0	84.0	84.0	84.0	84.0	84.0
10	Iceland	85.5	63.7	52.8	42.8	41.3	40.3
11	Ireland	61.3	40.9	30.6	20.4	15.3	12.3
12	Italy	78.8	78.8	78.8	78.8	78.8	78.8
13	Japan	69.2	56.6	50.3	44.0	36.9	29.5
14	Korea	60.9	47.4	40.6	33.8	29.3	23.5
15	Luxemburg	115.5	106.5	101.9	97.4	95.2	89.8
16	Holland	68.7	68.3	68.3	68.3	68.3	68.3
17	New Zealand	75.1	50.1	37.6	25.0	18.8	15.0
18	Norway	65.3	56.1	52.6	46.5	38.4	31.8
19	Portugal	103.1	68.8	66.7	65.9	65.5	64.7
20	Spain	80.1	80.1	80.1	80.1	75.6	60.5
21	Sweden	87.8	72.5	64.8	64.6	66.2	67.1
22	Switzerland	62.8	60.2	58.2	44.2	33.1	26.5
23	UK	67.2	46.4	37.1	29.3	22.5	18.0
24	US	53.1	44.6	40.3	36.1	30.6	27.0
II. Countries of Eastern Europe and Central Asia							
25	Bulgaria	49.7	49.7	49.7	49.7	40.0	33.5
26	Croatia	47.3	41.3	38.4	35.4	33.9	33.0
27	Czech Republic	70.5	53.3	44.4	31.7	25.4	21.6
28	Estonia	58.4	53.9	51.6	49.4	48.2	47.5
29	Hungary	75.4	75.4	75.4	75.4	75.4	66.3
30	Latvia	63.6	58.2	58.2	58.2	58.2	58.2
31	Lithuania	69.9	58.9	53.4	47.8	45.1	43.4
32	Poland	56.9	56.9	56.9	56.9	56.9	55.8
33	Slovakia	48.6	48.6	48.6	48.6	48.6	48.6
34	Turkey	96.2	90.2	87.2	84.1	71.9	57.5
III. Latin America and Caribbean countries							
35	Argentina	104.6	76.6	62.6	48.6	41.6	37.4
36	Chile	45.0	43.8	43.8	43.8	43.8	43.8
37	Columbia	100.0	66.7	50.0	46.1	46.1	46.1
38	Costa Rika	89.0	89.0	89.0	89.0	89.0	89.0
39	Dominican Republic	105.3	70.2	52.6	35.1	29.4	29.4

40	Salvador	64.1	42.7	38.7	38.7	38.7	38.7
41	Mexico	39.1	37.0	36.0	34.9	34.4	34.1
42	Peru	49.4	39.1	39.1	39.1	39.1	39.1
43	Uruguay	102.6	102.6	102.6	90.5	72.8	58.2
IV. Countries of Middle East and North Africa							
44	Aljeer	80.0	80.0	80.0	80.0	80.0	80.0
45	Bahrain	84.0	79.2	79.2	79.2	79.2	79.2
46	Jibuti	42.5	37.5	37.5	37.5	37.5	37.5
47	Egypt	90.5	87.0	85.3	75.2	63.6	50.9
48	Iran	132.0	115.5	115.5	115.5	115.5	115.5
49	Jordan	69.6	67.5	67.5	67.5	67.5	67.5
50	Libya	80.0	80.0	80.0	80.0	80.0	80.0
51	Morocco	70.0	70.0	70.0	70.0	70.0	70.0
52	Tunisia	64.0	64.0	64.0	64.0	64.0	64.0
53	Yemen	100.0	100.0	100.0	100.0	100.0	100.0

Source: Pensions Panorama: Retirement-Income Systems in 53 Countries", IBRD / WB, 2007

Table 13. *State arrears and implicit pension depts in a number of countries, as % of GDP*

	State arrears	***IPD***
Brazil	33	330
Slovakia	25	298
Romania	18	256
Holland	43	261
Ukraine	59	257
Hungary	59	203
Argentina	53	85
Mexico	19	65
Columbia	24	56
Chile	9	60

Source: Implicit Pension Debt: Issues, Measurement and Scope in International Perspective, Robert Holzmann, Robert Palacios and Asta Zvieniene, The World Bank, 2004:

Table 14. *Parametric Reforms of the pension system in a number of OECD countries, 1990-2003*

Country	***Year of reforms***	***Description of reforms***
France	***1993***	*Change of pension parameters:* • *Required length of service -* ***25 years*** *(instead of 10)* • *Years of pension contribution -* ***40 years (****37.5 years)* • *Pension indexing by price index (instead of employment growth speed)*
	1997	*Tomas law* • *Exemption of income tax for the participation in private pension scheme (suspended from 1998)*
	1998	*Partial pension* • *Persons below the retirement age may work not a full working day and get partial pension*
	2003	*Fillon's reform* • *Incentives for late retirement* • *Disincentives for early retirement* • *Change of the procedure for the calculation of average salary and contributory years in the formula*
Germany	***1992***	*Change of pension parameters* • *Increase of retirement age – 65 for all* • *Early retirement age – 62, but with less favorable conditions*
	1997	*Stricter pension entitlements* • *Removing years of education loan payment form the calculation of years of pension contributions;* • *Non-calculation of unemployment period*
	1997-1999	*Blume's reform* • *Decrease of replacement ratio from 70 to 67%* • *Covering of pension expenses from the increased tax ratio* • *Pension indexing by prices rather than by wages*
	2001	*Social Security Act for the Elderly* • *Decrease of replacement ration to 64%,* • *Assignment of additional nominal pensions* • *Use of incentives for the participation in private pension schemes*
	2002	*Encouragement of private pension schemes* • *Incentive system* • *Development of private pension industry*
Italy	***1992***	*Amato reforms* • *Increase of retirement age – 60 for women and 65 for men (instead of 55 and 60)* • *Required length of service -* ***20 years*** *(instead of 15)* • *Calculation of average wage for the all years worked* • *Indexing of pensions by price index*
	1995	*Dini reform*

		• *Flexible retirement age – 57-65 for all* • *System of high pensions if 40 years of length of service (65-year olds) and 35 years of length of service (57-year olds) is available* • *Tax privileges for the participants of private pension scheme*
	1997	*<u>Prodi agreement</u>* • *Increase of early retirement age* • *Increase of pension contributions for individual entrepreneurs* • *Non-indexation of higher pensions* • *Stricter entitlement to privileged pensions* • *Use of incentives for the participation in private pension schemes* • *Increase of minimum social pension*
	2000	*<u>Development of private pension industry</u>* • *Decrease of pension fund taxes - 11% instead of the standard 12.5%* • *Provision of bonuses at retirement for the investment in private pension fund*
Spain	***1997***	*<u>Toledo's pact</u>* • *Calculation of average wage based on the last 15 years (instead of 8 years)* • *Automated indexation of pensions by price index* • *Establishment of reserve pension fund financed from increased contributions* • *Elimination of previous incentives for pre-timely retirement*
	1999	*<u>Encouragement of employment for the elderly</u>* • *Use of private pension schemes for the employed elderly*
	2000	*<u>Preparation for the introduction of mandatory funded system</u>* • *Establishment of transition fund for the introduction of mandatory funded component parallel to the PAYG component*
UK	***1995***	*<u>Pension Act</u>* • *Increase of retirement age to 65 (instead of 60)* • *Introduction of individual pension schemes* • *Regulation of corporate pension schemes*
	1999-2002	*<u>Living standard reform and Pension Act</u>* • *Receipt of guaranteed minimum income* • *Introduction of savings promoting pension loan* • *Introduction of second pension (S2P) for persons having low income instead of universal pensions* • *Introduction of participatory pension programs (SPSs) for persons having average income and not participating in private pension schemes*

Source: *"Politics, ageing and pensions", Vincenzo Galasso and Paola Profeta, "Economic Policy, April 2004.*

Table 15. *Provisions on Entitlement to Contributory Pension in NIS and Baltic states, as of 2006*

	Length of service for passing to old age pension in general terms, *years*		***Age*** For passing to pension in general terms, age	
	men	***women***	***men***	***women***
Azerbaijan	5	5	62	62
Armenia	***25***	***25***	***63***	***63***
Belarus	25	20	60	55
Georgia	5	5	65	60
Kazakhstan	25	20	63	58
Krgzstan	25	20	63	58
Latvia	10	10	62	62
Lithuania	30	30	63	60
Moldova	30	30	62	57
Russia	5	5	60	55
Tajikistan	25	20	63	58
Turkmenistan	25	20	62	57
Uzbekistan	25	20	60	55
Ukraine	5	5	60	55
Estonia	15	15	63	63

Source: www.apsf.ru

***Table 16**. Privileges of multi-pillar pension systems by summarized expert opinions (Literature Review method)*

A. Transfer from PAYG to funded system	
Political and economic nature	1. The government does not have to give promises which it is not able to keep in a long term.
	2. Pressure of the electorate on the government for increasing the pensions considerably decreases
	3. Government gets an opportunity to concentrate on social security and social assistance issues in order to target the social expenses at more vulnerable.
	4. People adapt themselves to pension contribution rates easier since they consider them personal savings rather than tax.
	5. People are more interested in wage increase and transparency as they are concerned with the growth of pension accumulations.
Financial and economic nature	6. Financial expenses of the system are more obvious and manageable.
	7. Funding of the social sector is consolidated and more effective since it is more targeted.
	8. Pension payments are based on sustainable financial grounds since the principle of self-financing is in place.
	9. Due to pension contributions “long moneys” are formed which are used for sustainable development of the country.
	10. In order to serve the pension sector financial markets and infrastructures are necessarily developing.
Social and economic nature	11. Social protection system of the population becomes more understandable and predictable due to clarification of country’s commitments towards the elderly.
	12. Person’s role in ensuring his/her old age is emphasized and people’s dependence from political decisions of authorities decreases.
	13. The principle of social justice is actually applied since person’s pension is linked to his/her contributions.
	14. People get opportunities for getting supplementary pensions by participating in different pillar of the system.
	15. Economic activity, development of economic, including financial knowledge is promoted.
	16. Due to the fund accumulated by people they participate in the increase of investments and savings
	17. People directly benefit from the results of economic growth in the country since they get certain “profit” from the investment of their pension funds.
	18. New structures are established, new jobs are created to serve the private pension industry.

B. Transition from "Defined Benefits" to "Defined Contributions"	
Political and economic nature	1. Political debates turn from populist promises to conceptual discussions on ensuring rates, protection of investments and economic growth.
	2. Amount of contributory pension is not subject to political pressure anymore.
	3. Amount of social pensions is discussed in the general context of country's social policy.
Financial and economic nature	4. Young people have to think about their old age by making certain savings.
	5. As amount of pensions is not determined in advance it is possible to adjust it to the contributions and average life expectancy at the moment to the maximum extent.
	6. Link between the person's income and pension is obvious and countable
	7. Indicators of implicit pension debt of the state budget drastically decrease.[130]
	8. Indicator of population savings grows absolutely and relatively (vs. GDP).
Social and economic nature	9. Pension contributions made by people and their flow becomes clear and visible.
	10. There are incentives to work after the retirement age as accumulations are growing.
	11. People have opportunity to actively participate in the design of investment portfolios.
	12. People can get their pensions in a lump-sum amount (in defined cases) and leave it to their heirs.
D. Transition from state management of the system to the private one	
Political and economic nature	1. Political risks are incomparably low in the private systems.
	2. In case of private management the government's political responsibility for "bad management" decreases leaving place for the increase of supervision responsibility.
	3. Pension systems are almost free from corruption risks.
Financial and economic nature	4. Private management is more effective due to high motivation and result orientation.
	5. Long-term investments become more affordable for business entities of the private sector.[131]
	6. In case of private management there is reduced targeting of budgetary funds to the maintenance of state system.
Social and economic nature	7. People are not dependant on the will of state "official", the incidence of bribery is eliminated.
	8. Private management ensures higher pensions for citizens due to higher return rate from investments.
	9. Private management leads to creation of additional and well paid jobs in the financial market.

[130] ***Implicit Pension Debt**,* is an important financial indicator of pension systems with the use of DB model. It shows the pension debt to be paid in the future for the pensions defined according to current prices and current legislation. This should be provide to contributors in the retirement age for the pension entitlement earned by them. See "Implicit Pension Debt: Issues, Measurement and Scope of International Perspectives", Robert Holzmann, Robert Palacios and Asta Zviniene, The World Bank, 2004:

[131] Pension accumulation systems may be managed also by the state through the so-called Provident Funds established for that purpose. However, as studies of the World Bank show, investment portfolios are mostly formed from government bonds and state enterprises. See "Guidebook to Pension Reform", USAID, p. 47:

Table 17**. **Pension system reforms implemented through multi-pillar pension system in some transition countries

	PAYG **"0" ¨ "1" pillars**		**Mandatory funded** **"2" pillar**		**Voluntary "3" pillar**	
	Year	*Description*	*Year*	*Description*	*Year*	*Description*
Hungary	1998	*Minimum p** -"0" whose who have no length of service *Basic pension* – "1" indexation - 50% w**- 50% CPI*** *Mandatory contribution* – 22% - employer 9% - employee	1998	*Participation -* mandatory <16y voluntary 17-62y *Mandatory contribution* 20% of money collected in the "1" pillar *Collecting entity* Tax inspector	1994	*Tax privileges* for employers
Kazakhstan	1998	*Guaranteed minimum pension* -"0"+"1" for all, paid from taxes	1998	*Participation -* mandatory for all *Mandatory contribution* 10% employee *Collecting entity* Capitalizing P fund - CPF	1998	Additional payment "2" pillar
Poland	1999	*PAYG-funded* for all -"0"+"1" *Mandatory contribution* 19.52%	1999	*Participation -* mandatory <30y voluntary 30-50y *Mandatory contribution* 7.3% (from 19.52%) *Collecting entity* Central Administrator - ZUS	2004	Personal pension accounts – IRA/IKA
Latvia	1996	*PAYG-funded* for all -"0"+"1" *Mandatory contribution*	2001	*Participation -* mandatory <30y voluntary 30-50y	1998	life insurance, private p funds

		25.26% - social tax		*Mandatory contribution* 2% (from 19.52%) *increasing 9%* *Collecting entity* Treasury - ST	2004	
Croatia	1998	*Minimum p* * -"0" for persons without length of service *Point* - "1" *Mandatory contribution* 20%	2002	*Participation -* mandatory <40y voluntary 40-50y *Mandatory contribution* 5%, *increasing 10%* *Collecting entity* State register "Regos"	2002	private p funds
Bulgaria	1999	*Minimum p* * -"0" for persons without length of service *Basic p* - "1"	2002	*Participation -* mandatory <42y voluntary 30-50y *Mandatory contribution* 2% , *increasing 5%* *Collecting entity* NSSI	1994	
Slovakia	1988	Unchangeable	2005	*Participation -* mandatory <160y voluntary 17-62y *Mandatory contribution* 9% - employee *Collecting entity* Social Insurance Fund	1996	Life insurance
Estonia	1998	*Minimum p* * -"0" for persons without length of service	2002	*Participation -* mandatory <16y voluntary 17-62y	1998	in addition to "2 pillar"

		Point - "1", for persons with >10 years of length of service *Mandatory contribution* 16%		*Mandatory contribution* 2% - employee + 4% to the state budget *Collecting entity* Social Insurance Fund		
Lithuania	1995-1997	*Social p* - "0", for persons with <15 years of length of service *Basic p* - "1"	2004	*Participation* - voluntary for all *Mandatory contribution* 2.5%-5.5% - from employee *Collecting entity* Social Insurance Fund	2004	in addition to "2 pillar"
Thailand	-	-	1997	*Participation* - voluntary for all with the exception of certain organizations *Mandatory contribution* 3%-15% - from employee From the employer – not less from the amount paid by the employee *Collecting entity* Provident Fund	1997	Voluntary for some part of employers

** Pension*
*** Wage*
**** Consumption Price Index*

Source: "Old Age Income Support in the 21st Century", the WB, 2005, "Pension Reform in Eastern Europe: Experiences and Perspectives", FIAP, 2004, " Guidebook to Pension Reform", USAID, "Pension Reform in the Baltic States", ILO ¨, etc.

Table 18. Strengths and weaknesses of voluntary and mandatory transfer to the mandatory funded pension scheme in the frames of Armenia's Concept Paper on Pension Reforms

Standards	***Mandatory transition***		***Voluntary transition***	
	strength (+)	***weakness (-)***	***strength (+)***	***weakness (-)***
Political nature	Due to application of **mandatory** principle: 1. There will be real and radical change in the pension system, i.e. complete reform 2. Political and civil forces will join in the implementation of reforms 3. Consistent implementation of Government Decree (N796) will be ensured 4. International financial markets will be further established to make Yerevan a financial centre in the region	At the same time introduction of **mandatory funded system** will lead to: 1. Scale changes which are scary 2. Increased political responsibility which some political forces try to avoid 3. Origination of certain state guarantees , which is difficult to solve in the light of pension industry liberalization	Application of **voluntary** principle: 1. Makes easer to reach political agreement/consensus 2. Enables political forces to clarify their position based on the results of the reforms	However, introduction of **funded system** will mean: 1. Declining of Government Decree N796, political inconsistency, danger of giving up 2. Protraction of the reform, increased ambiguity/non-clarity 3. Increased framework for destructive political PR
Economic nature	1. Country's chances for ensuring steady economic growth for PRSP will increase 2. Super-profit received by the financial system will be re-distributed through investment of pension savings	1. Inevitable increase of tax burden 2. Short-term increase of budget deficit 3. Certain difficulties, that will arise due to lack of or non-developed necessary financial and	1. Tax burden increases voluntarily 2. Makes budget deficit related to the introduction of funded pension relatively small 3. Enables to assess economic impact and	1. Certain loss of "scale effect" 2. Useless competition between two components (PAYG and contributory) of the reform 3. Obstacles for planning

	3. Development of financial will be considerably promoted 4. The issue of complete modernization of financial and economic infrastructures will be addressed 5. The issue of determining and managing fiscal price of the reform will be clarified	economic structures	clarify parameters of the reform 4. Gradually burden financial markets 5. Enables to willfully participate in the reform	of fiscal burden and budgetary expenses 4. Increase of expenses related to the operation of funded system 5. Budget deficit in the PAYG system in the long term if the number of participants is low
Social nature	1. Great opportunity for educating all layers of the population in financial and economic issues 2. Young generation will have to think about old age and this will balance consumption among generations 3. Will encourage the participants to organize themselves, consistently follow the socio-economic policy	1. Confusion among the participants due to lack of financial knowledge 2. Reform discrimination towards "non-entitled" age group	1. As a result of covering more literate and well-to-do layers the reform will be implemented more smoothly 2. Will ensure free participation in the reform 3. Will enable to secure time for acquiring necessary knowledge and skills	1. Use of different pension schemes for the "rich" and "poor" will lead to stratification of ageing population 2. "Age restriction" will contradict the principle of voluntarism 3. Employees struggle against shadow economy, increase of salary is not promoted 4. PR costs very expensive

Source: Assessment of Pension Reforms Preparation Group of the World Bank of Armenia.

Table 19. Mandatory contributions in different countries

Country	***Mandatory contribution %***	***Country***	***Mandatory contribution %***
Argentina	7	**India**	10
Chile	12.3	**UK**	2.5-5.25
Mexico	6.5	**Iceland**	10
Peru	10.9	**Sweden**	2.5
Columbia	13.5	**Estonia**	6
Poland	7.3	**Bulgaria**	2
Croatia	5	**Latvia**	4[132]
Lithuania	2.5	**Hungary**	8

Source: Edward Whitehouse "Pension Panorama: Retirement-Income Systems in 53 Countries", WB, 2007
Helene K. Poirson "Financial Market Implications of India's Pension Reform", IMF Working Paper, WP/07/85

[132] It is gradually increasing according to the scale and it is anticipated to increase up to 10% by 2010.

Table 20. Fiscal Burden of Pension Reforms* 2010-2080 (projections)

/billion, AMD/

	2010	2011	2012	2015	2018	2021	2033	2040	2050	2060	2070	2080
Improvement of PAYG component, increase of pensions	0.0	0.0	6.9	26.3	130.5	201.4	279.1	115.6	64.7	79.3	0.0	0.0
Support provided to participants of funded component by the state (5% , but not more than AMD 25 000)	10.7	15.5	19.7	37.7	65.0	98.3	298.6	468.2	74.8	…**	…	…
Compensation for length of service earned by the participants of funded component before the reforms							4.9	41.2	81.1	4.9	0.0	0.0
Total	**10.7**	**15.5**	**26.6**	**64.0**	**195.5**	**299.7**	**603.2**	**625.0**	**220.6**	**84.2**	**0.0**	**0.0**
Note												
Nominal GDP	4705.2	5284.9	5900.9	8048.6	10759.8	14158.3	30123.6	45564.6	82294.8	148633.6	268448.7	484848.3

***** *PROST projections show that the balance of PAYG component for 2009-2011 is positive, since the number of contributors to the system was increased by more than 100.000 (according to the Government program for 2008-2012). The calculations of fiscal burden were made only for:*

a) funded component – financial support to 16-40 age old participants from the state budget,

b) solidarity component – "income- expenditure" balance of PAYG system.

** *Since the state budget support is limited by 25000 drams, in parallel with awerage wage growth the effective value of 5% will be close to "0".*

Table 21. *Fiscal burden of pension reforms 2009-2080 (projections)*

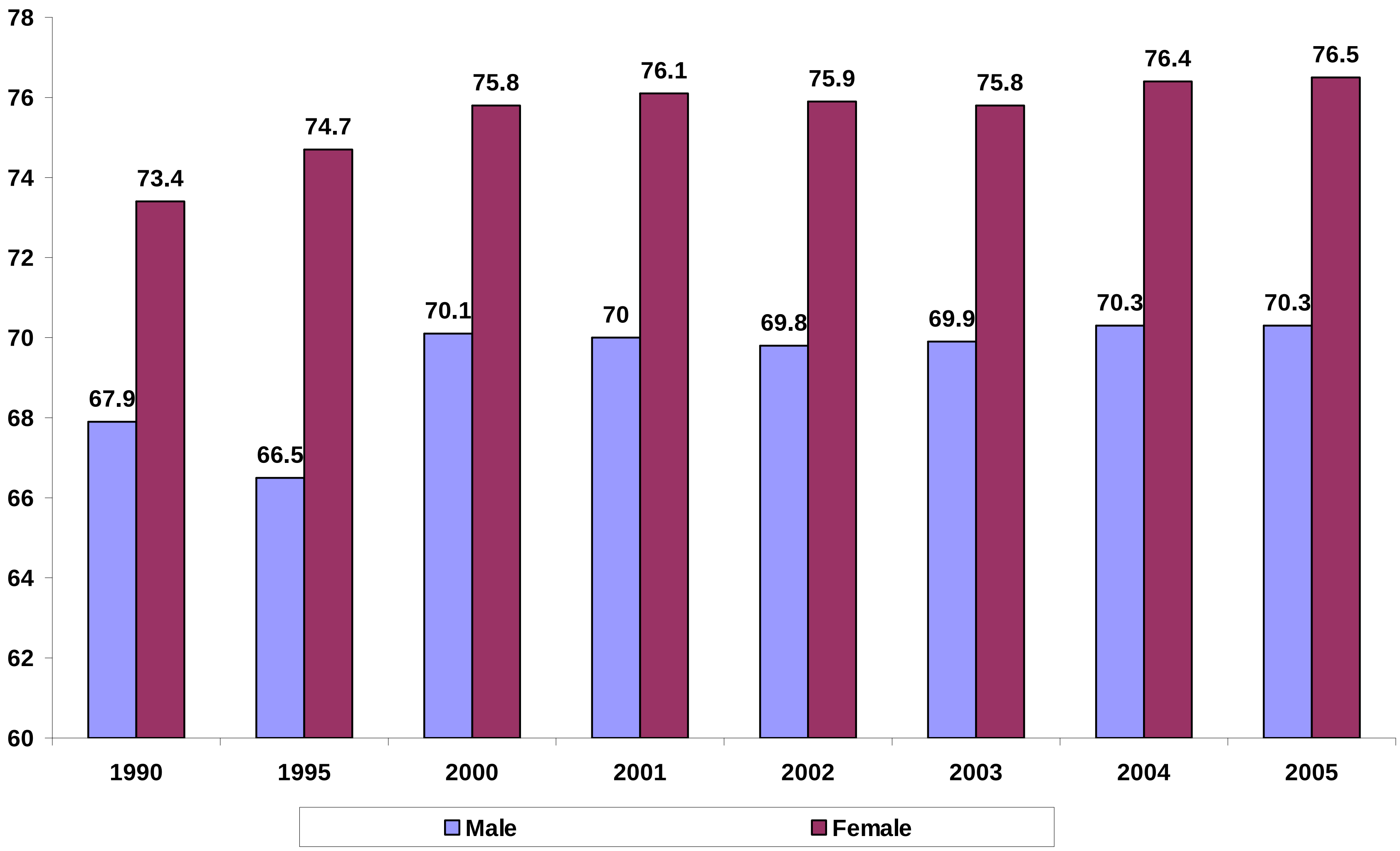
/as a % of GDP/

	2010	2011	2012	2015	2018	2021	2033	2040	2050	2060	2070	2080
Improvement of PAYG component, increase of pensions	0.1	0.1	0.3	0.3	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
Support provided to participants of funded component by the state (5% , but not more than AMD 25 000) *	0.0	0.0	0.1	0.4	1.2	1.4	0.9	0.3	0.0	0.0	0.0	0.0
Total	**0.1**	**0.1**	**0.4**	**0.7**	**1.6**	**1.8**	**1.3**	**0.7**	**0.0**	**0.0**	**0.0**	**0.0**

* *Including the compensation for length of service earned by the participants of funded component before the reforms (see row 3 of previous table)*

Annex 4 (Figures)

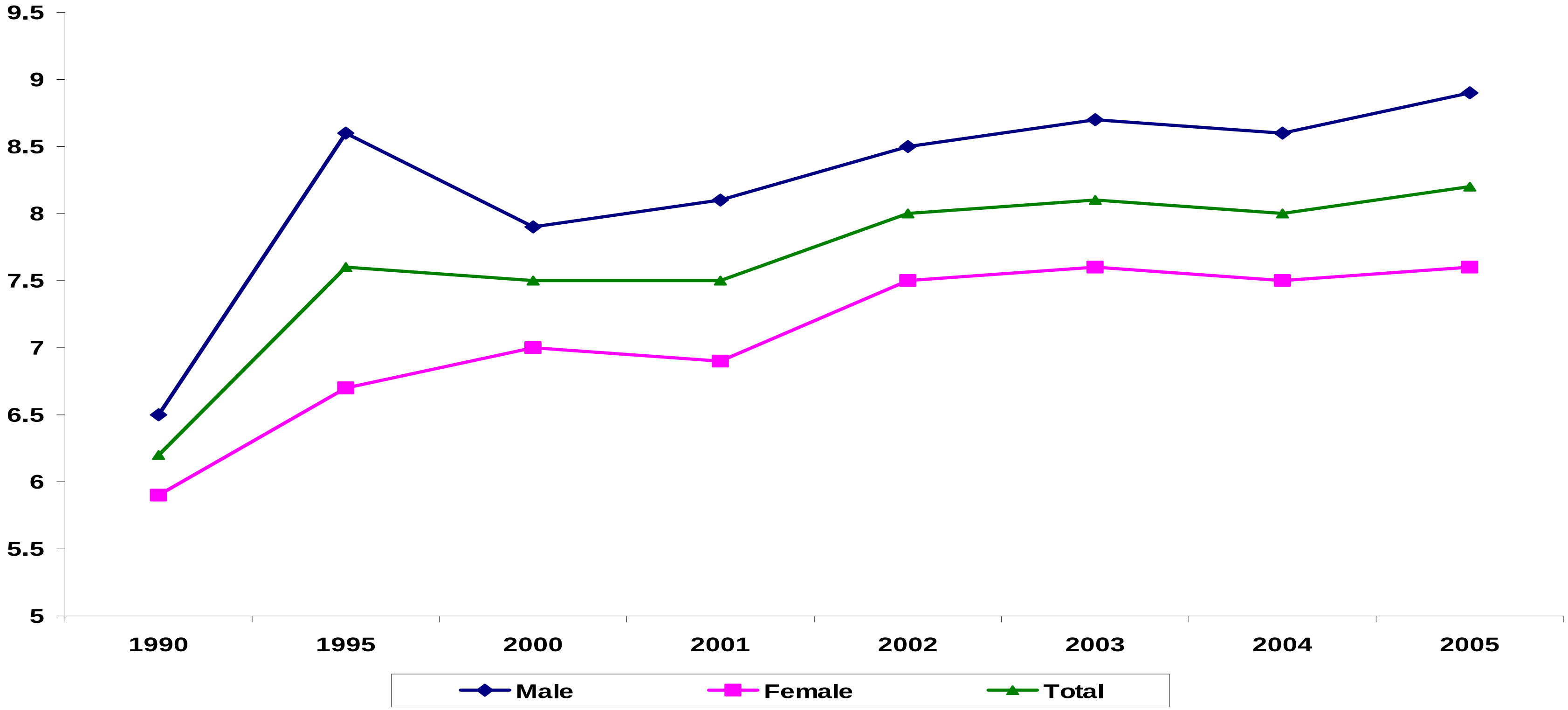
Figure 1. Average life expectancy at birth, 1990-2005, years



Source: Demographic bulletin of Armenia 2006, NSS

Figure 2. Overall mortality rate 1990-2005

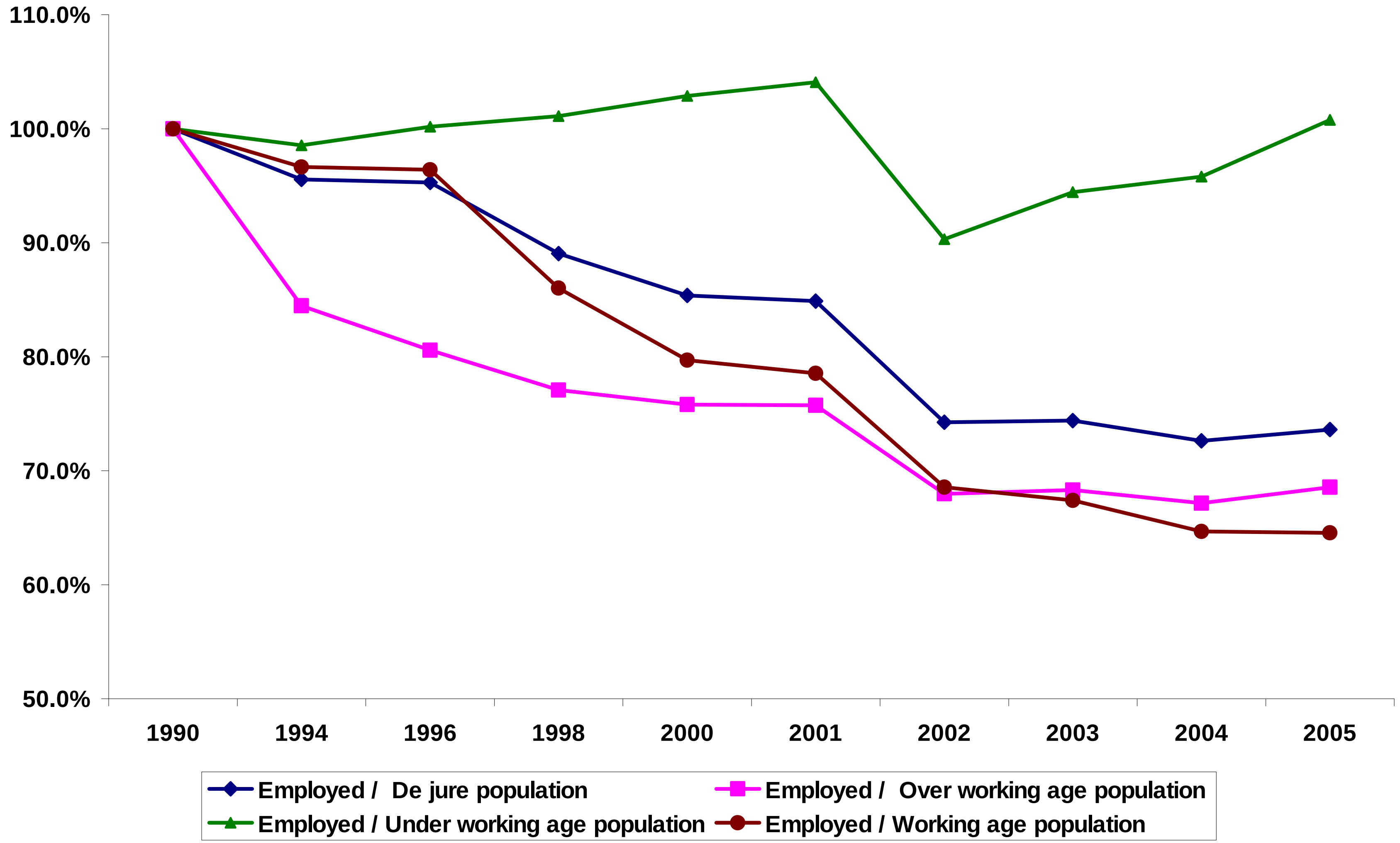
(per 1000 population)



	1990	*1995*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*
Male	6.5	8.6	7.9	8.1	8.5	8.7	8.6	8.9
Female	5.9	6.7	7.0	6.9	7.5	7.6	7.5	7.6
Total	6.2	7.6	7.5	7.5	8.0	8.1	8.0	8.2

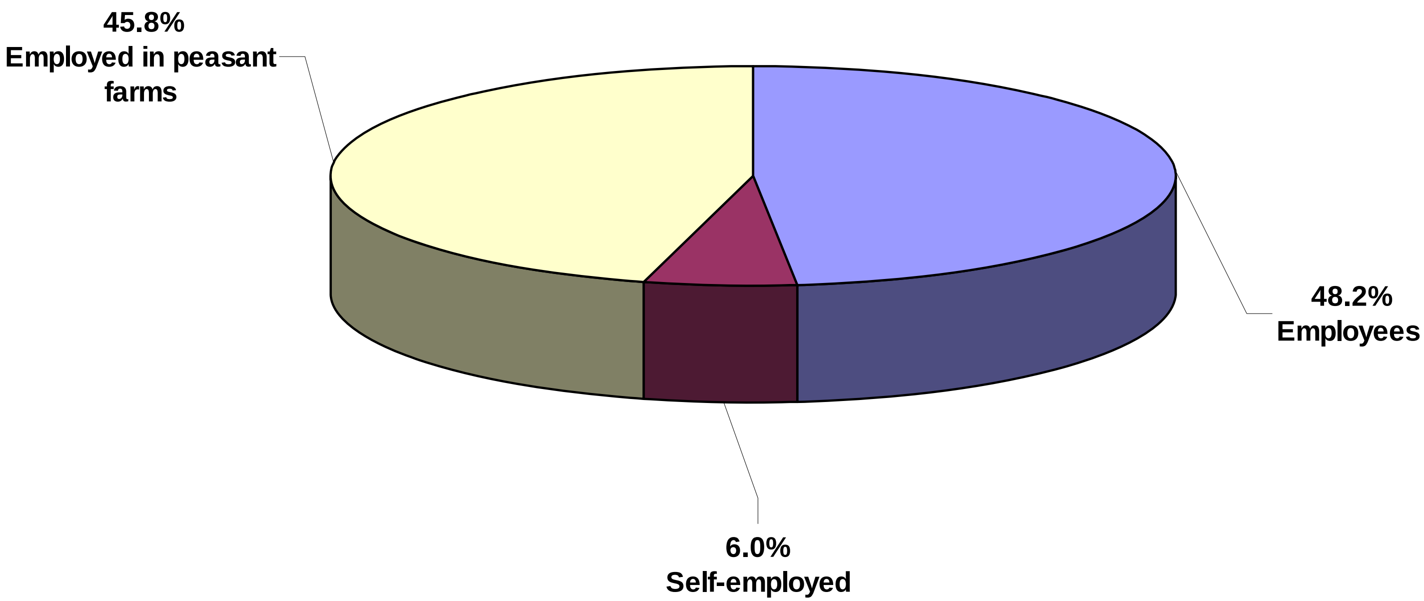
Source: Demographic bulletin of Armenia 2006, NSS

Figure 3. Dynamics of employed to population ratio, 1990=100



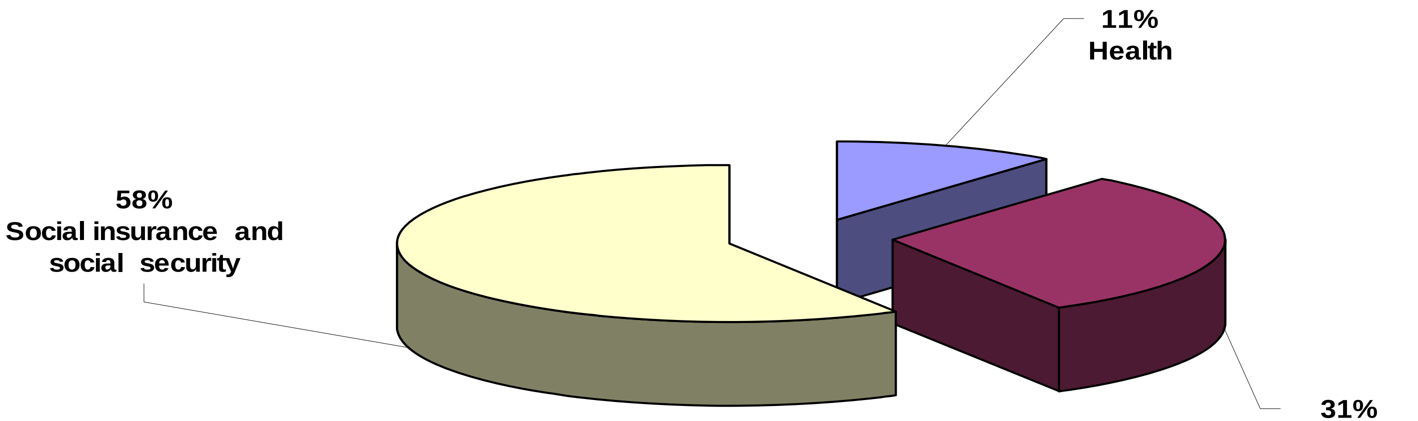
Source: NSS

Figure 4. Composition of economically active population by employment status



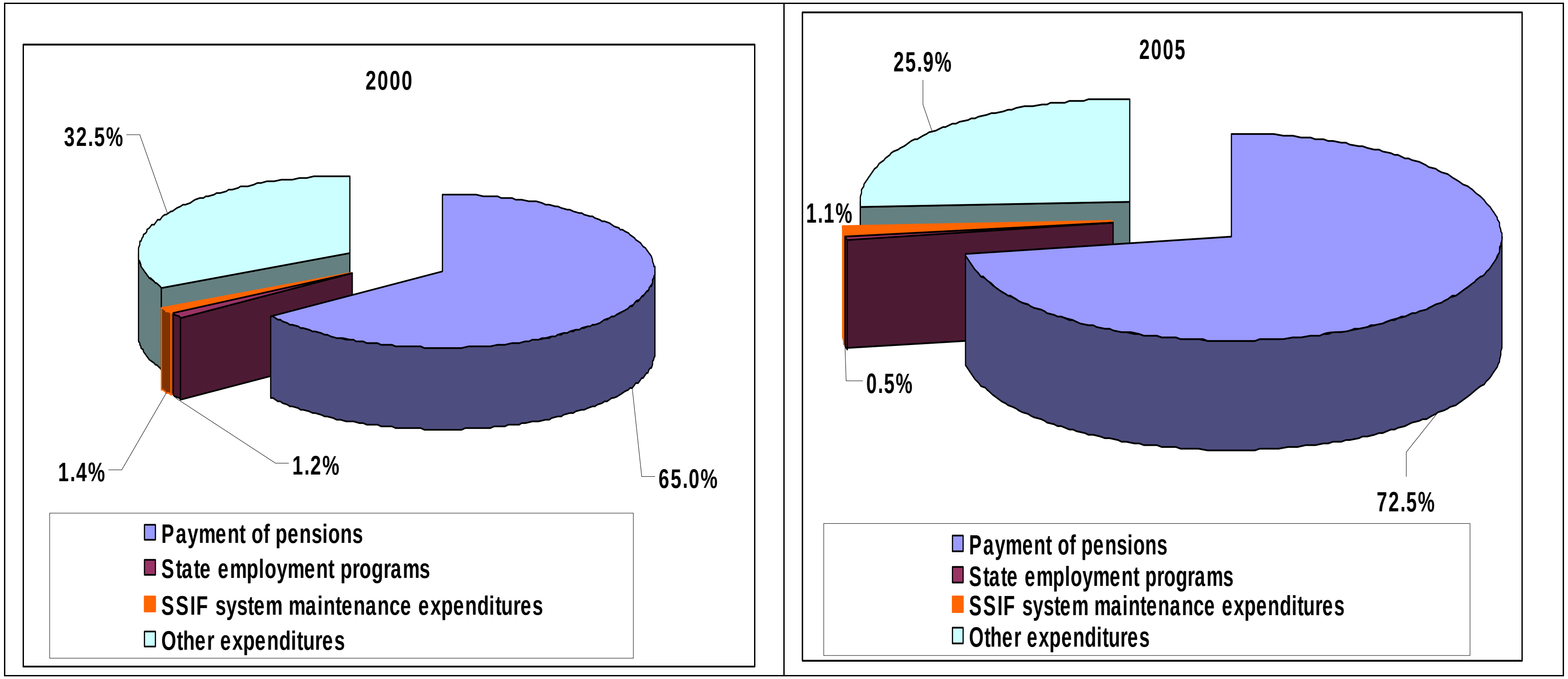
Source: NSS, sample labor force survey 2005

Figure 5. Composition of social expenditures 2005, percentage of total expenditures



Source: Ministry of Finance

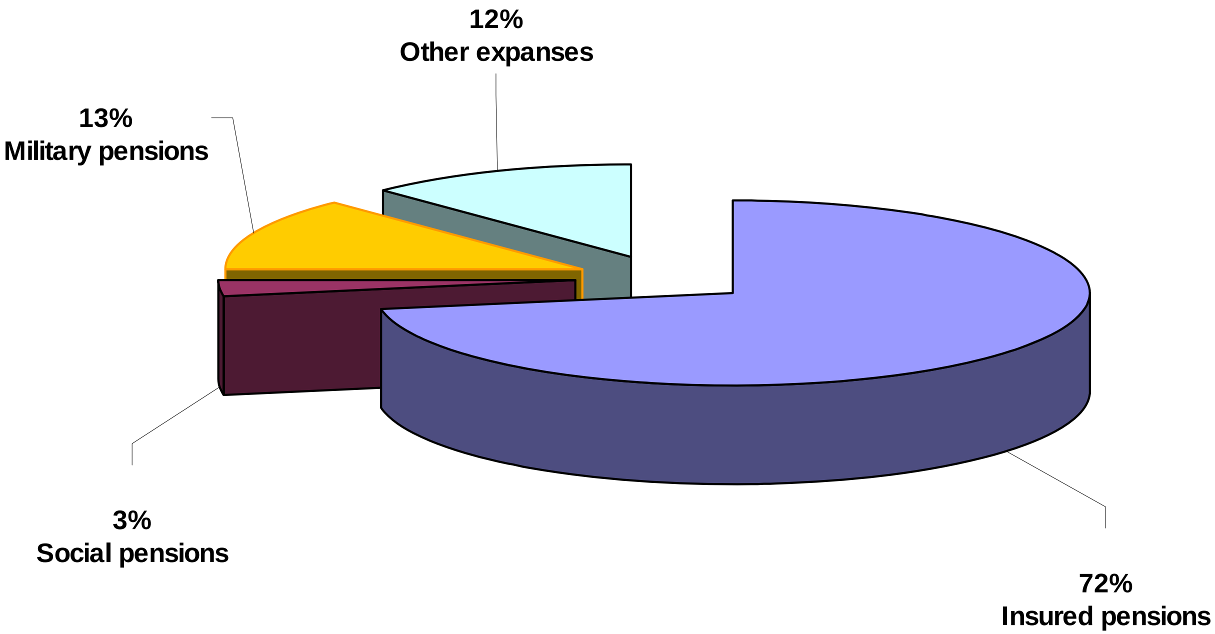
Figure 6. Composition of social insurance and social security expenditures
as % of total expenditures



	2000	*2001*	*2002*	*2003*	*2004*	*2005*
Social insurance and social security expenditures,	**100**	**100**	**100**	**100**	**100**	**100**
Payment of pensions	65.0%	64.1%	69.1%	70.6%	69.8%	72.5%
State employment programs	1.2%	0.7%	1.8%	0.6%	0.5%	0.5%
SSIF system maintenance expenditures	1.4%	1.4%	1.4%	1.6%	1.8%	1.1%
Other expenditures	32.5%	33.9%	27.7%	27.3%	28.0%	25.9%

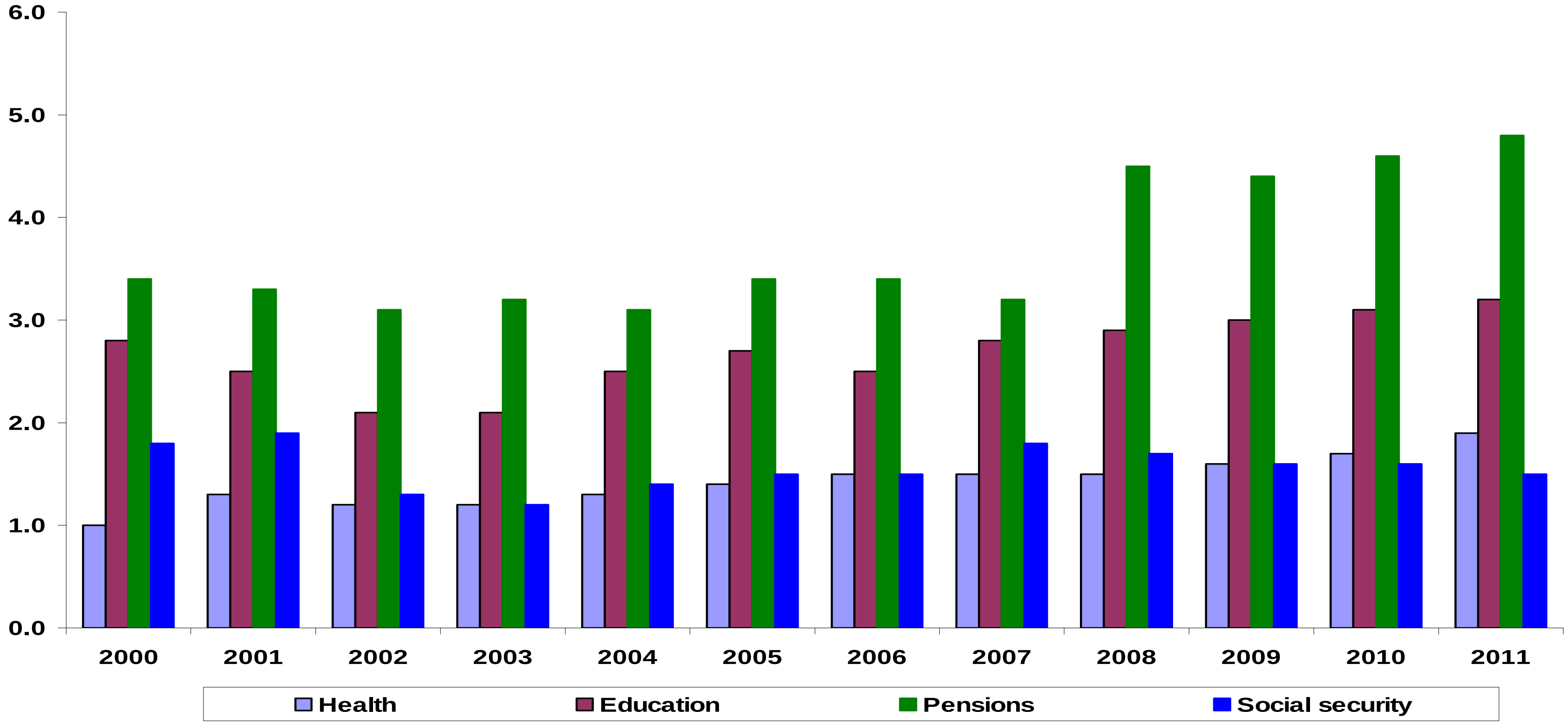
Source: Ministry of Labor and Social issues

Figure 7. Composition of mandatory social insurance expenditures 2007



Source: MF, MLSI

Figure 8. Dynamics of social expenditures, as % of GDP



	2000	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*
Healthcare	1.0	1.3	1.2	1.2	1.3	1.4	1.5	1.5	1.5	1.6	1.7	1.9
Education	2.8	2.5	2.1	2.1	2.5	2.7	2.5	2.8	2.9	3.0	3.1	3.2
Pensions	3.4	3.3	3.1	3.2	3.1	3.4	3.4	3.2	4.5	4.4	4.6	4.8
Social security	1.8	1.9	1.3	1.2	1.4	1.5	1.5	1.8	1.7	1.6	1.6	1.5
TOTAL	***9.0***	***9.0***	***7.7***	***7.7***	***8.3***	***9.0***	***8.9***	***9.3***	***10.6***	***10.6***	***11.0***	***11.4***

Source: NSS, 2000-2007
MTEF, 2009-2011

Annex 5.

PLAN OF ACTIONS