Islamic Republic of Iran
The Pension System in Iran:
Challenges and Opportunities
(In Two Volumes) Volume I: Main Report

September 2003
Middle East and North Africa
Social and Human Development Group (MNSHD)
Currency Equivalents

Unit of Currency = Iranian Rhials (IR)
Average Exchange Rate (IR per US Dollar)
1 Dollar = 7,500 Rhials

Basic Indicators 2001

GDP = IR 666,165 billion (USD 88.9 billion)
GDP per capita = IR 10.4 million (USD 1,396 million)
Population = 63.9 million
Labor Force = 17.1 million

ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>CS</td>
<td>Contractual Savings</td>
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<tr>
<td>CSRO</td>
<td>Civil Servants Retirement Organization</td>
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<td>DB</td>
<td>Defined Benefit</td>
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<td>DC</td>
<td>Defined Contributions</td>
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<td>FF</td>
<td>Fully Funded</td>
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<td>FFYP</td>
<td>First Five-Year Plan</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>IA</td>
<td>Individual Accounts</td>
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<td>MPO</td>
<td>Management and Planning Organization</td>
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<td>MENA</td>
<td>Middle East and North Africa Region</td>
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<td>MNSHD</td>
<td>Middle East and North Africa Human Development</td>
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<td>NDC</td>
<td>Notional Defined Contributions</td>
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<td>NPF</td>
<td>National Pension Fund</td>
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<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
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<td>PAYG</td>
<td>Pay-As-You-Go</td>
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<tr>
<td>SSIC</td>
<td>Social Security Investment Company</td>
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<td>SSO</td>
<td>Social Security Organization</td>
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<td>USD</td>
<td>United States Dollars</td>
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ACKNOWLEDGEMENTS

This report has been prepared by a team led by David Robalino and comprising Alberto Musalem and Tatyana Bogomolova. It has been prepared in close collaboration with the Managing and Planning Organization of Iran, and the technical teams of the Social Security Organization and the Civil Servants Retirement Organization. The report has benefited greatly from extensive comments provided by the peer reviewers Robert Palacios and Michal Rutkowski, as well as from Dr. Mehdi Karbasian, First Vice Minister of Finance. Remaining errors and omissions are the authors’ responsibility. Data for international comparisons were compiled by Massimo Sabbatini and Cheikh Fall. The report is part of a series of studies on Social Protection requested by the Government of the Islamic Republic of Iran.
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EXECUTIVE SUMMARY

The present report evaluates the Iranian pension system and proposes a series of policy interventions to improve outreach, financing mechanisms, incentives, equity, and management. It has been prepared at the request of the Management and Planning Organization. Given data constraints, the analysis concentrates primarily on the Social Security Organization and the Civil Servants Retirement Organization, the two main pension funds. Occupational funds and non-contributory regimes are surveyed only briefly. The need to look more closely at these schemes in the near future is emphasized.

The report is organized in eight sections. Section 1 presents the background of the study. Section 2 provides a general overview of the Iranian pension system. Sections 3 and 4 present detailed assessments of the Social Security Organization and the Civil Servants Retirement Organization. Section 5 concentrates on the tax treatment of retirement savings. Section 6 proposes a framework for guiding pension reform, presents a typology of pension mechanisms, and reviews international experiences. On the basis of this framework, Section 7 outlines strategic directions for reforming the Iranian pension system and analyzes the financial and fiscal implications. Finally, Section 8 discusses the political economy of pension reform and recommends necessary steps for the design and implementation of a successful reform program.

A. MAIN RESULTS FROM THE ANALYSIS

The Iranian Constitution mandates the government to protect the elderly and women; Iran has thus developed contributory and non-contributory pension schemes that cover close to 50 percent of the labor force and 40 percent of the population older than 60. Contributory systems in Iran—including occupational funds—regroup close to 9.5 million employees. The resulting coverage rate is high compared to the 30-40 percent observed in other countries with similar levels of income. Coverage, however, is concentrated in urban areas (close to 80 percent of the labor force). Thus, large segments of the rural labor force remain uncovered. Non-contributory schemes seem well developed, reaching 40 percent of the population older than 60. Unfortunately, in the absence of data about beneficiaries, it is not possible to assess whether these schemes are reaching the most vulnerable.

As a result of the "baby boom" that Iran experienced during the mid-80s, there is potential for a rapid increase in the number of contributors over the medium term, but raising unemployment rates are likely to dampen the effect. During the late 80s and early 90s, Iran experienced exceptional growth in the total number of contributors to the Social Security Organization (10 percent per year), which allowed dependency ratios to remain low (at 20 beneficiaries per 100 contributors). The causes behind this rapid expansion are not well understood. High economic growth during the First Five-Year Development Plan as well as the opening of the system to voluntary contributors provide only partial explanations. The growth rate of total contributors has now slowed to less than 5 percent per year. Driven by the baby boomers who will attain working age in the next 5 years as well as by rising female participation rates, the labor force is expected to grow at 5 percent per year over the next 10 years. Unfortunately, even under optimistic assumptions about GDP growth (6 percent per year for the period 2002-2012), labor markets are unlikely to absorb all the newcomers. Unemployment rates are expected to reach 20 percent by year 2012. High contribution rates are also likely to discourage enrollment in the pension system. Moreover, the current Social Security Organization benefit formulas have built-in incentives to leave the system after 8-10 years and resume contributions only 2 years prior to retirement. Hence, there are no good reasons to expect that the coverage rates of the employed
population will increase significantly. If these coverage rates remain at current levels over the next 10 years, then the share of the labor force covered by the system is likely to stagnate.

Both the Social Security Organization (SSO) and the Civil Servants Retirement Organization (CSRO) target high replacement rates\(^1\) and generous rates of return. Statutory replacement rates for full-career workers (40 years) can reach 75 percent in the CSRO and 100 percent in the SSO at all levels of income. This contrasts with most OECD countries where statutory replacement rates for the average full-career worker approximate 60 percent of gross earnings. Moreover, in these countries, replacement rates decrease with the level of income (see Figure I). In the SSO and the CSRO, with current contribution rates, implicit real rates of return range from 5 percent to over 20 percent per year. Unfortunately, implicit rates of return above the growth rate of the economy are unlikely to be sustainable over the long run.

**Figure I: Statutory Replacement Rates for the SSO, the CSRO, and Selected Countries**

![Figure I: Statutory Replacement Rates for the SSO, the CSRO, and Selected Countries](image)

*Source: Whitehouse (2002) and mission calculations for the SSO and the CSRO.*

Pension expenditures have increased rapidly, doubling their share in GDP within the last decade. Pension expenditures (old age, disability, and survivor pensions) grew in real terms at an average of 11 percent per year during the last decade. Today pension expenditures capture 1.5 percent of GDP. Higher expenditures reflect the rapid increase in the total number of beneficiaries (9 percent per year) fueled, in part, by low minimum retirement ages and vesting periods, benefit formulas that encourage individuals to retire as soon as possible, and rising life expectancies. At various points in time the CSRO has provided additional incentives for early retirement as a mechanism to reduce the size of the civil service. In 1988 and 1992, the SSO also implemented two generous early retirement programs.

On an accrual basis, both the SSO and the CSRO are insolvent. Financial projections under various economic scenarios show that the operational balances of the CSRO and the SSO will continue to deteriorate, becoming negative within the next 3-10 years respectively (see Figure II). This is not only the result of the gradual aging of the population but probably, more importantly, a reflection of the generosity of the system. If the system remains open to new entrants, unfunded pension liabilities for the period 2002-2070 could attain 140 percent of today's GDP in the SSO and 35 percent in the CSRO. If the systems were closed to new entrants, unfunded pension liabilities would be lower but still in the order of 20 percent of GDP for the CSRO and 100 percent for the SSO. These large, unfunded pension liabilities threaten the credibility of fiscal policy and the welfare of future generations.

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1 The replacement rate is defined as the old-age pension divided by last gross wage.
In addition to problems of financial sustainability, important challenges remain to improve the management of reserves for both funds. Current investment policies are complex, risky, and not necessarily in the best interest of plan members. Lately, the funds have been converted de facto into agencies responsible for restructuring public companies. Indeed, in 2001, the government transferred assets worth Rhials 4,000 billion to the SSO and Rhials 3,750 billion to the CSRO to cover part of its debt (mostly arrears). In the case of the CSRO, these transfers have caused losses amounting to Rhials 132 billion. Further investment in these companies to improve management and profitability is likely to bring additional losses to plan members. The pension funds are over-expanding their mandate and now have considerable market power in several economic sectors—including the stock market. This interferes with corporate governance and hampers the development of the financial sector. In part, inappropriate investment policies reflect weak governance structures, as processes to select and structure the governing bodies, define fiduciary responsibilities, and enforce accountability do not follow best international practices.

The analysis has also raised concerns about equity, as the system is prone to adverse inter- and intragenerational transfers. There are various sources of inequities in the current arrangements. First, part of the resources that the government transfers to the SSO (3 percent of covered wages) and the CSRO (resources for administration) mostly benefits well-off workers in the formal sector. Second, as in other defined benefit systems, rates of return on contributions vary as a function of wage histories, life expectancies, and retirement strategies. Workers with fast-growing salaries and who live longer obtain higher rates of return. Often they are well educated and healthy individuals. Workers who join the system late in life or who evade the system during mid-career also obtain higher rates of return. This heterogeneity in rates of return creates intragenerational transfers that do not always favor low-income individuals. Third, the fact that only the last two years of salaries are included in the calculation of the pension penalizes low-income workers (blue-collar workers), who usually have their peak income relative to the average during mid-career. Finally, if reforms are delayed, future bailouts and/or cuts in benefits necessary to balance the finances of the system will imply a massive intergenerational transfer from tomorrow's poor to the current well-off.

While very scant information is currently available regarding the structure, size, and finances of occupational funds, it is likely that the majority is accumulating unfunded pension liabilities. The occupational funds seem to be heterogeneous in terms of size and benefits offered. Actuaries from the SSO Research Institute consider that while a few of the funds are properly managed and seem to be financially sustainable, the majority is likely to generate an operational deficit within the next few years. Since the funds are linked to public companies, their implicit pension debt is part of the contingent liabilities of the government. Another issue of concern is the fact that in
transferring from one fund to another or from any fund to the SSO, the current rules are complex, give room to discretion, are not always fair from the workers' point of view, and thus constrain labor mobility.

B. PROPOSED POLICY INTERVENTIONS

The report identifies various types of interventions that the government could consider to strengthen the social function of the Iranian pension system while improving financial sustainability and reducing economic distortions. The recommendations are classified in five groups: (i) interventions to improve the financial situation of the current systems and to improve incentives and equity; (ii) interventions to improve the management of reserves; (iii) interventions to expand coverage; (iv) interventions to promote voluntary savings; and (v) other interventions to improve institutional capacity and management. The main policies are summarized below.

Dealing with the Finances of Current Systems While Improving Equity and Reducing Distortions in Labor Supply and Retirement Decisions

The government and civil society need to make a decision as to what is an adequate and affordable level of income replacement for retirement and how this level of income should be generated by a combination of mandatory and voluntary savings. In OECD countries, for instance, the public system focuses on replacing income for low-income individuals. Middle-income and high-income individuals are expected to complement the savings in the mandatory public system through voluntary savings. In Iran, current high replacement rates at all levels of income are neither affordable nor sustainable. This section presents three reform options for reviewing the pattern of income replacement in order to improve financial sustainability, while improving incentives and equity.

Reform Type I: Maintain the current mandate to save while introducing parametric reforms in the SSO and the CSRO. This reform maintains the level of the current mandate to save (i.e., contribution rates are kept at current levels) through the defined benefit—pay-as-you-go (DB–PAYG) systems. Implicitly, the reform considers the DB–PAYG system as the only source of savings for retirement and preserves flat replacement rates across levels of income. In order to improve financial sustainability, however, the targeted replacement rate for a full-career worker (40 years) would need to be reduced to at least 80 percent (close to Spain). This implies a 2 percent accrual rate that could be reached over a period of 10 years. Other interventions include:

- Eliminate multiple retirement conditions and benefit formulas and target a uniform rule for all workers, in both the SSO and the CSRO.
- Target a retirement age of 63-65 years for both males and females with no maximum retirement age. The new age could be reached in a period of 6-10 years for males and 16-20 years for females. Afterward, the retirement age would be indexed with life expectancy.
- Allow for early retirement with actuarially fair reductions in replacement rates and eliminate special incentives in the CSRO as well as current lump-sum payments.
- Eliminate incentives to strategically manipulate wages, reduce heterogeneity in rates of return, and improve equity by each fiscal year including an additional year of salary in the benefit formula. Wages included in the calculation of the pension are indexed by the growth rate of system-average wage.

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2 This intervention takes into account that, today, a male worker retiring at age 60 can expect to live until age 76 and that a female retiring at age 55 can expect to live until age 77.
• Reduce incentives for retirement over work, by reducing the minimum pension to at least 70-80 percent of the minimum wage. The minimum pension should be granted only to individuals who have contributed for a period of 30 years.

• Modify current articles governing the indexation of pensions in such a way that the responsibility to implement the adjustment is transferred directly to the department in charge of processing payments. Use consumer prices as the index. This policy, however, should only be implemented after the other reforms have been adopted.

Reform Type II: Downsize the current DB system while giving a more prominent role to voluntary savings. This reform considers that the current DB–PAYG system will not be the only system replacing income for retirement. Therefore, it proposes reducing the size of the mandate to save (i.e., the contribution rate), reducing the targeted replacement rate, and also imposing a maximum covered wage of three times the economy-wide average. This would generate patterns of income replacement similar to those observed in OECD countries. The targeted replacement rate for the average full-career worker (40 years) could be set initially at 60 percent, implying an accrual rate of 1.5 percent per year. This reform would not affect current retirees or workers close to retirement. The implementation of the reform could proceed as follows:

• New CSRO and SSO workers would enter a new DB scheme (that could have some degree of pre-funding) where the contribution rate is lower (below 15 percent), where benefits are lower (accrual rate is set at 1.5 percent), retirement conditions are tighter (a minimum retirement age of 63 years indexed with life expectancy is enforced), and pensions are computed on the basis of lifetime earnings. Wages are indexed by the growth rate of the system average wage, and pensions are indexed by prices.

• The system guarantees a minimum pension of 70-80 percent of the minimum wage.

• For those workers who are in the current system, benefits and retirement conditions are adjusted according to the recommendations of Reform Type I.

• In parallel, necessary incentives and an appropriate regulatory and supervisory framework are put in place to promote voluntary savings in the form of contractual savings.

• Eventually, a mandated defined contribution (DC) fully funded (FF) pillar could be introduced, while the DB–PAYG system is downsized further.

Reform Type III: Downsize the current DB–PAYG system while introducing Notional Defined Contributions (NDC) and promoting voluntary savings. This reform has the potential to reduce the contingent liabilities intrinsic to a traditional PAYG system, by legally enforcing that the rate of return paid on contributions approximates the sustainable rate of return. Although the system remains unfunded, it could have the following advantages: allows for an easy and rapid harmonization of retirement schemes across professions; allows for more fundamental reforms of disability and survivor benefits; eliminates perverse redistributive features of the traditional PAYG system; reduces distortions in individual labor supply and retirement decisions; and generates a better distribution of risks between current and future generations. The reform could proceed as follows:

• New workers enter a new system where the total contribution rate is lower (below 15 percent), thus allowing for a better balance between voluntary savings and mandatory savings.

• Contributions are accumulated in "virtual" individual accounts, earning a notional interest rate that is a function of the growth rate of covered wages. Stabilization mechanisms are
also incorporated to reduce volatility in rates of return and to ensure that the system liabilities do not surpass the system’s assets. At retirement, the accumulated capital in the virtual accounts is transformed into a lifetime pension on the basis of estimates about life expectancy.

- Current contributors are allowed to switch to the new system. For them, an initial capital is accredited to the “virtual” account, which is calculated on the basis of past contributions plus notional interest.

- Workers who remain in the current system face the type of adjustments described in the case of Reform Type I.

- In parallel, necessary incentives and an appropriate regulatory framework are put in place to promote voluntary savings in the form of contractual savings.

These three types of reform would considerably enhance the financial situation of the funds while improving incentives. Each has pros and cons that would be amplified or dampened by the particularities of the Iranian economic and social systems. The first reform could be easier to implement at the political level, but it maintains high contribution rates that may not be affordable by the Iranian economy and that would continue to distort labor markets. In addition, it leaves the finances of the system vulnerable to changes in macroeconomic conditions; it does not fully resolve distributional problems; and it does not allow for the development of other forms of saving. Thus, financial risks remain concentrated in public hands and future generations. The second type of reform is subject to the same criticisms, except that it does create room for other forms of savings and does reduce labor market distortions. Finally the third reform, while having the potential to reduce risk, distributional problems, and improve incentives to enroll and contribute to the system, could fail if choices in terms of rates of return on notional accounts and formulas to compute pensions are not technically sound. This reform may also be more demanding in terms of institutional capacity.

Improving the Management of Fund Reserves

A review of international experiences shows that, in general, public pension funds have failed to generate appropriate rates of return on investments, in part, given weak governance structures. The report discusses best practices to improve governance, which involve reviewing how duties and obligations are specified; how the governing body is structured and selected; how the management of the pension fund is structured and selected; and how accountability is enforced. Policy options are also given for refinancing the public debt and reducing risks in current investment policies. The main recommendations can be summarized as follows:

**Governing Body.** To improve the effectiveness of current governing bodies, it is necessary to clarify responsibilities and objectives, as well as to modify their composition and their selection process. In particular: substitute direct government appointments to the High Councils by recommendations from a high-level Selection Committee with representatives from civil society; focus the mandate of the High Councils on managing the pension funds in the interest of plan members, while eliminating other objectives such as pursuing social or economic development policies; give the High Councils the freedom to select and remove the Managing Director of the pension fund(s) and to decide on compensation modalities; lastly, separate governance responsibilities from management/executive responsibilities.

**Public Debt.** It is recommended to eliminate the current practice of transferring public companies as payments on the public debt. Instead, external audits should be conducted to establish the correct value of current government arrears. Then, a plan to collect these arrears at fair value should be developed, which is based on the use of government bonds and revenues
from privatization. This implies that the restructuring and selling of public enterprises would be carried out by specialized institutions within the government and not by the pension funds.

**Investment Policies.** The report advises against investing fund resources in the restructuring of companies that have already been transferred. Rather, it is recommended to find strategic investors with controlling ownership. Other recommendations to improve investment policies include: adopting a program to reduce controlling stakes in corporations by holding minority participation; encouraging the participation of other fund managers in addition to the funds' own investment companies (Shasta in the case of the SSO and the Investment Company in the case of the CSRO); adopting exposure limits to ensure maximum diversification on investments in shares (a maximum of 5 percent of the capital of any company should be owned by the fund, and a maximum of 5 percent of fund assets should be invested in any company); allowing for investments outside the country; and eliminating taxes on investment income.

**Accountability.** To improve accountability it is recommended that a mark-to-market valuation of current assets is conducted by an independent auditing company. In addition, it is necessary to improve current reporting mechanisms and make Annual Reports available to plan members; publish the balance sheets of the companies owned by the pension funds; introduce periodic external audits (if possible by international consulting firms); and make use of external custodians.

**Expanding Coverage**

In the case of Iran, reducing the contribution rate and implementing a credible reform program that ensures a better balance between mandatory and voluntary schemes could contribute to expand coverage. If a DB system is preserved, computing pensions on the basis of full-career salaries will also reduce incentives to evade. Structural reforms leading to faster economic growth and better employment opportunities in the formal private sector will contribute too. Nonetheless, neither a reformed pension system nor a more dynamic economy is likely to suffice, at least over the medium-term. This implies that social assistance programs targeted to the elderly will remain an important component of the government strategy to ensure an adequate level of income during old age. The following recommendations are made:

- Conduct appropriate surveys to estimate the coverage gap and its causes. The objective of this activity is to identify population groups not covered by the system as well as their geographic and socioeconomic characteristics.

- Conduct a review of current social assistance programs for the elderly—including estimates of costs, benefits, number of beneficiaries, and their socioeconomic characteristics. The review should assess management, targeting, and monitoring mechanisms and present recommendations in terms of the need to expand or eliminate existing programs and/or design additional ones.

- Consider the introduction of a demogrant. The demogrant is a special form of cash transfer that is not limited to the elderly poor, but to all elderly. While in the case of the nonpoor the transfer brings negligible benefits, for the elderly poor it can represent a sizable share of total income. Although the grant is universal and, therefore, does not require the establishment of targeting mechanisms, administrative issues should not be underestimated, particularly in a large country like Iran. On the other hand, no funds need to be invested, and estimating the present and future costs of the grant is a relatively straightforward task. Today, providing USD 200 per year (roughly 20 percent of the minimum wage) to the entire populace above age 65 (2.9 million individuals in year 2001) would cost between 0.4 percent and 0.7 percent of GDP.
Promoting Voluntary Savings

An appropriate balance between the mandatory and voluntary components of a pension system is an important feature of its design. Among voluntary savings schemes, contractual savings (CSs) are promising alternatives. Contractual savings are savings accounts created to promote long-term savings and manage social risks. These savings can be used to finance funded pension plans (accumulation period), annuities (payout period), life insurance, unemployment, and other contingencies. Thus, they constitute an instrument to improve the management of social risks. Contractual savings can have six important effects on financial markets: increase depth and liquidity by increasing the demand for shares and bonds, market capitalization, and volume traded; increase the demand for long-term bonds and the supply of long-term loans; create incentives to improve regulations and transparency; foster financial innovation, competition, and efficiency; improve corporate governance; and, contribute to the reduction of financial risks and, therefore, of output volatility.

The report recommends that over the medium term the government put in place the necessary regulatory and supervisory infrastructure to stimulate the development of contractual savings in Iran. A variety of international experiences can guide this strategy. The development of CSs could become part of the agenda that the government is currently putting in place in the area of private sector development and financial sector reform. An important element that will need to be evaluated is the tax treatment of different types of savings. To this end, the necessary studies should be conducted.

C. NEXT STEPS

The required follow-up activities to move the reform process forward are summarized in Table I. First, it is necessary that the government create the body that will be responsible for managing the reform process, the Pension Reform Commission. One of the first activities of the Commission will be to disseminate the current report within the government and among representatives of civil society. To this end, various seminars and workshops can be organized. On the basis of these discussions, the Pension Reform Commission will need to prepare a White Paper that presents the key elements of the government’s pension reform strategy. A detailed multi-year reform program can then be prepared and executed.

Pension reform is taking place at a time when unemployment rates remain high and the impact of ongoing structural reform on faster growth and higher labor productivity still needs to materialize. Some have argued that in this context increasing retirement ages could be counterproductive. Or that reducing replacement rates will imply an even lower purchasing power for future retirees. There are also concerns regarding the readiness of the private sector to provide supplementary retirement plans. All of these are valid points. It is important, however, that policymakers and civil society recognize the following:

- Different problems require different policy instruments. Keeping retirement ages at current level will not be enough to solve the unemployment problem and it will only compromise the financial sustainability of the pension system. Reducing unemployment rates in a sustainable way requires other policy instruments/strategies to promote investment and growth and reduce distortions in labor markets. Appropriate social protection instruments, such as well-designed and monitored active and passive labor market programs and a solvent unemployment insurance system, should accompany these. Pension reform should thus be part of a larger program of structural reforms. Interventions in the various sectors should be implemented in sync. That is why the recommendation is to implement reductions in the retirement age in a phased manner.
- The level of the pensions that the contributory system can afford is ultimately constrained by economic and labor productivity growth. If current benefits are not gradually brought down to sustainable and affordable levels, future generations will be penalized either through abrupt cuts in benefits or higher taxation. The reforms being proposed will not affect current retirees or those who are close to retirement. A minimum pension will continue to be guaranteed. Also, the gradual implementation of the reform should allow the economy to catch-up. Newcomers while facing lower accrual rates (and probably lower contribution rates) will also face better economic prospects. Moreover, it is important to recognize that the contributory system regroups relatively prosperous individuals. Indeed, the poorest and more vulnerable population groups in Iran cannot afford to enter the contributory scheme. Thus, public resources allocated to the contributory scheme to cover unfunded liabilities are resources implicitly taken away from programs to assist the poor and vulnerable. This is an important source of inequality.

- It is clear that the private sector cannot start providing voluntary complementary pensions overnight. Several activities will need to be conducted to set up the necessary regulatory and supervisory framework and to assist the industry in developing new products. These activities should all be part of the medium-term reform program (see Table 1). Changes in the mandate of the public pension system should thus be timed with reforms in the private sector.

### Table 1: Next Steps in the Reform Process

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
<th>Unit Responsible and Suggested Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of the Pension Reform Commission.</td>
<td>The role of the Pension Reform Commission is to act as coordinator and manager of the reform process.</td>
<td>MPO, by August 2003.</td>
</tr>
<tr>
<td>Dissemination of the current report.</td>
<td>The current report identifying problems and options for reform will be discussed within the government</td>
<td>Pension Reform Commission, by September</td>
</tr>
<tr>
<td>Prepare White Paper on pension reform.</td>
<td>On the basis of various discussions the Pension Reform Commission will prepare a White Paper describing</td>
<td>Pension Reform Commission, by December</td>
</tr>
<tr>
<td>Prepare multi-year reform program.</td>
<td>Once a final reform strategy/course of action has been established, the various activities necessary</td>
<td>Pension Reform Commission, by February</td>
</tr>
</tbody>
</table>

Source: Mission design on the basis of discussions with government officials.
1. BACKGROUND

The Government of the Islamic Republic of Iran, through the Management and Planning Organization (MPO), has engaged in a medium-term program to assess the effectiveness and efficiency of its social protection system and to introduce necessary reforms. As part of this program, MPO has requested Bank technical assistance to evaluate social assistance programs, active labor market programs, and insurance programs.

The present report concentrates on the Iranian pension system and has two major objectives. First, to identify the strengths and weaknesses of the system, particularly with respect to financing mechanisms, incentives, institutional capacity, management, and outreach. Second, to propose strategic lines for eventual policy interventions that could strengthen the system.

The bulk of the analysis concentrates on the Social Security Organization (SSO) and the Civil Servants Retirement Organization (CSRO), the two most important pension funds in Iran. Given data constraints, the various occupational funds and the non-contributory schemes are only surveyed briefly.

The report has been jointly prepared with the Government of the Islamic Republic of Iran. It is the result of an extensive analysis of demographic, economic, and financial data prepared by the different technical departments and a series of discussions and seminars held with concerned authorities and technical staff during five field visits: January 11-24, April 20-30, and June 21-July 4, 2002; March 7-13 and June 9-13, 2003.

The report is comprised of eight sections. Section 2 provides a general overview of the Iranian pension system and summarizes major challenges and opportunities. Sections 3 and 4 present detailed assessments of the Social Security Organization (SSO) and the Civil Service Retirement Organization (CSRO). Section 5 briefly discusses the tax treatment of retirement savings. Section 6 proposes a framework for guiding pension reform, presents a typology of pension mechanisms, and reviews international experiences. On the basis of this framework, Section 7 outlines strategic directions for reforming the Iranian pension system and analyzes their financial and fiscal implications. Finally, Section 8 discusses the political economy of pension reform and recommends necessary steps for the design and implementation of a successful reform program.
2. **GENERAL OVERVIEW OF THE IRANIAN PENSION SYSTEM**

The Iranian Constitution mandates the government to protect all elderly; Iran has thus developed an extensive pension system that is composed of contributory and non-contributory schemes, which together cover 50 percent of the labor force and close to 60 percent of the elderly population. Contributory systems are defined-benefit with pay-as-you-go financing. The Social Security Organization (SSO) is the largest fund, mainly covering workers in the formal private sector and workers retaining government contracts (see Figure 1). It currently has 6 million contributors and 1.14 million individuals receiving old-age, disability, or survivor pensions. The Civil Service Retirement Organization (CSRO) covers approximately 1.5 million civil servants and pays benefits to 662,786 pensioners. In addition to these funds, close to 18 public companies in sectors such as telecommunications, transports, oil, steel, copper, finances—including the Central Bank—and the military have put in place defined-benefit systems for their employees. It is not clear at this stage how many employees are covered through these schemes, but unofficial estimates put the figure at around 1.8-2 million. Hence, contributory regimes would cover close to 50 percent of the labor force, among the highest in the MENA region (see Figure 2). Finally, there are several non-contributory schemes. The largest is the Shahid Rajaee program managed by the Emam Khomeini Relief Committee, which supports 1.5 million elderly, or 40 percent of the elderly population. These non-contributory regimes have been crucial in expanding coverage among low-income population groups.

![Figure 1: Iranian Pension System](image)

*Source: MPO Statistical Annex, SSO Annual Report, and various interviews.*

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3 While the funds have some reserves, they are not being managed as partially-funded schemes.
The SSO, the CSRO, and the occupational funds impose large mandates to save that are likely distorting labor supply and savings decisions. The total contribution rate for pensions ranges from 17 percent in the case of the Ministry of Jihad-Sazandegy to 27 percent in the case of the Central Insurance. These contribution rates are the highest in the region, only surpassed by Egypt, Kuwait, and the United Arab Emirates (see Figure 3). In the case of the SSO and the CSRO, total contributions paid represent 1.8 percent of GDP. The concern is that this high mandate is crowding-out other forms of savings that could contribute to the development of financial markets. In addition, there is some evidence in the case of Latin American countries that high contribution rates to DB–PAYG schemes can reduce the probability of enrollment and encourage work in the informal sector. Thus, high contribution rates may in fact be reducing the potential revenues of the pension system.

The individual replacement rates offered by the SSO and the CSRO are high (equal or above 100 percent in the case of the SSO) at all levels of income. This contrasts with most OECD countries where the public pension system focuses on replacing income at retirement for low-income individuals. As an illustration, Germany replaces 80 percent of the income of a full-career worker earning 50 percent of average earnings (see Table 1). For workers earning 5 times average earnings the replacement rate drops to 30 percent. Similarly, in Canada, the replacement rate for a full-career worker goes from 74 percent to 6 percent. Even in Spain where the system tends to be more generous, the replacement rate drops from 88 percent to

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4 No information is available regarding replacement rates for occupational funds.
60 percent. In the SSO, with an accrual rate of 3.3 percent per year and only the last two years used to compute the base salary for the pension, statutory replacement rates for full-career workers are equal to 116 percent. In the CSRO because contributions and the pension are computed on a base of 75 percent of total income, effective replacement rates are lower (75 percent). In the SSO the ceiling to compute contributions and benefits is a little over 8 times the average wage; most plan members are not affected. In the CSRO there are no ceilings. Hence, high replacement rates are received by the quasi-totality of workers, regardless of income level. Today, the average replacement rate for the SSO and the CSRO old-age pension (the average old-age pension divided by the average wage) is 112 percent and 61 percent respectively.

Table 1: Total Mandatory Pension Benefits as Percent of Individual Earnings in High-Income Countries

<table>
<thead>
<tr>
<th>Individual Earnings as a Proportion of Economy-Wide Average</th>
<th>50 Percent of Average</th>
<th>Average</th>
<th>5 Times Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iran SSO</td>
<td>133</td>
<td>99</td>
<td>99</td>
</tr>
<tr>
<td>Iran the CSRO</td>
<td>133</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Australia</td>
<td>71</td>
<td>43</td>
<td>31</td>
</tr>
<tr>
<td>Canada</td>
<td>74</td>
<td>43</td>
<td>6</td>
</tr>
<tr>
<td>Finland</td>
<td>50</td>
<td>38</td>
<td>13</td>
</tr>
<tr>
<td>France</td>
<td>77</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Germany</td>
<td>80</td>
<td>72</td>
<td>30</td>
</tr>
<tr>
<td>Italy</td>
<td>58</td>
<td>58</td>
<td>42</td>
</tr>
<tr>
<td>Japan</td>
<td>72</td>
<td>53</td>
<td>15</td>
</tr>
<tr>
<td>Korea</td>
<td>108</td>
<td>78</td>
<td>54</td>
</tr>
<tr>
<td>Netherlands</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Norway</td>
<td>62</td>
<td>52</td>
<td>15</td>
</tr>
<tr>
<td>Spain</td>
<td>88</td>
<td>88</td>
<td>30</td>
</tr>
<tr>
<td>Sweden</td>
<td>93</td>
<td>69</td>
<td>55</td>
</tr>
<tr>
<td>Switzerland</td>
<td>63</td>
<td>58</td>
<td>14</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>51</td>
<td>35</td>
<td>9</td>
</tr>
<tr>
<td>United States</td>
<td>57</td>
<td>45</td>
<td>15</td>
</tr>
</tbody>
</table>


Benefit formulas and eligibility conditions provide incentives for underdeclaration, evasion, and retirement over work, and may penalize low-income individuals. Statutory retirement ages ranging between no minimum (males with 30 contribution years or females with 20 contribution years in the CSRO) and 60 years (males with 10 contribution years in the SSO or females with no minimum number of years in the CSRO) are among the lowest in the region (see Table 2). These retirement ages seem unsustainable taking into account that the life expectancies for males is 76 at 60, and for females 77 at 55. Individuals enrolled in the SSO system have incentives to evade the system after 10 contribution years and return to the system two years prior to retirement. As discussed in the next section, this strategy considerably increases the rates of return. In the CSRO, the government has created special rules as a mechanism to reduce the size of the public administration. In addition, the fact that the pension is computed only on the basis of the last two years of wage history penalizes blue-collar workers (low-income workers). Indeed, for these workers the peak in earnings relative to average earnings in economy tends to occur in mid-career. Moreover, this formula encourages the underdeclaration of wages in early and mid-career. Finally, generous minimum pensions (equal to the minimum wage) provide incentives for retirement over work.
Table 2: Vesting Periods, Accrual Rates, and Retirement Ages in MENA Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Scheme</th>
<th>Vesting Period</th>
<th>Reference Wage</th>
<th>Accrual Rate (Percent)</th>
<th>Minimum Retirement Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>CNR</td>
<td>15-M 10-F, 15-F</td>
<td>AMW last 5 yrs</td>
<td>2.50%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>CASNOS</td>
<td>15</td>
<td>AMW last 5 yrs</td>
<td>2.50%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td>Djibouti</td>
<td>OPS</td>
<td>15 55-M, 50-F</td>
<td>AMW last 10 yrs</td>
<td>2.00%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>CNR/Functionaries</td>
<td>25 50</td>
<td>last monthly wage</td>
<td>3% (first 10 yrs)</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>CNR/Police</td>
<td>26 40</td>
<td>last monthly wage</td>
<td>2% (after 10 yrs)</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>CNR/Ministers</td>
<td>10 55</td>
<td>last monthly wage</td>
<td>3% (first 10 yrs)</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>CMR</td>
<td>15</td>
<td>last monthly wage</td>
<td>3%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td>Egypt</td>
<td>Law 79/1975</td>
<td>10 60</td>
<td>AMW last 2 yrs</td>
<td>2.22%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>Law 108/1976</td>
<td>10 60</td>
<td>all years</td>
<td>2.22%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>Law 50/1978</td>
<td>10 60</td>
<td>all years</td>
<td>2.22%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>Law 112/1980</td>
<td>10 60</td>
<td>all years</td>
<td>2.22%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td>Iran</td>
<td>CSRO</td>
<td>25-M, 20-F, 30-F</td>
<td>AMW last yrs</td>
<td>3.30%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>SSO</td>
<td>10 30-M, 25-F, 35-F</td>
<td>AMW last yrs</td>
<td>3.30%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td>Jordan</td>
<td>SSC</td>
<td>15 60-M, 55-F</td>
<td>AMW last yrs</td>
<td>2.50%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>Military Pension System</td>
<td>16 none</td>
<td>last monthly wage</td>
<td>4.17%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>Civil Service System</td>
<td>20-M, 15-F</td>
<td>last monthly wage</td>
<td>4.17%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td>Lebanon</td>
<td>Civil service and military system</td>
<td>from 18 to 25 none</td>
<td>last monthly wage</td>
<td>2.13%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>NSSF</td>
<td>20 60</td>
<td>AMW last yrs</td>
<td>1.05%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td>Morocco</td>
<td>CMR</td>
<td>21-M, 15-F, 30-F</td>
<td>last year</td>
<td>2.50%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>CNSS</td>
<td>15 60</td>
<td>last 3 or 5 years</td>
<td>3.33% (first 15 yrs)</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1% (after 15 yrs)</td>
<td>last 3 or 5 years</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td>Tunisia</td>
<td>CNRPS</td>
<td>15 60</td>
<td>last monthly wage</td>
<td>2% (yrs &lt;=10)</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>or AMW of the 2 consecutive best years</td>
<td>3% (10&lt;yrs&lt;=20)</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2% (yrs &gt; 20)</td>
<td>60-M, 55-F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RSNA</td>
<td>5 60</td>
<td>AMW last yrs</td>
<td>4% (yrs &lt;=10)</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>RSA</td>
<td>10 60</td>
<td>AMW of 3 out of last 5 years</td>
<td>4% (yrs &lt;=10)</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>RNS</td>
<td>10 65</td>
<td>AMW of 3 out of last 5 years</td>
<td>3% (yrs &lt;=10)</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>RTTE</td>
<td>10 65</td>
<td>AMW of 3 out of last 5 years</td>
<td>3% (yrs &lt;=10)</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td>Yemen</td>
<td>Private Sector Scheme</td>
<td>15 60-M, 55-F</td>
<td>AMW last yrs</td>
<td>2.50%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>Civil Service and Public Enterprises Scheme</td>
<td>15 60-M, 55-F</td>
<td>AMW last yrs</td>
<td>2.86%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td>West Bank and Gaza</td>
<td>West Bank</td>
<td>15 60</td>
<td>basic salary (yrs before 1987)</td>
<td>2.00%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>Gaza Pension and Insurance Corp. (Civil servants)</td>
<td>15 60</td>
<td>last basic salary and allowances (years after 1987)</td>
<td>2.50%</td>
<td>60-M, 55-F</td>
</tr>
<tr>
<td></td>
<td>Security Forces</td>
<td>15 60</td>
<td>last monthly wage</td>
<td>3.33%</td>
<td>60-M, 55-F</td>
</tr>
</tbody>
</table>

Source: World Bank, MNSHD Pension Database.
The rates of return offered by the SSO and the CSRO seem average when compared to other MENA and OECD countries. The analysis reveals, however, that large intragenerational transfers are taking place. Comparisons of rates of return at the international level are complicated by the many differences in the benefit formula, eligibility conditions, and existence of minimum and maximum pensions. When only looking at statutory contribution rates and accrual rates in a sample of OECD and MENA countries (see Figure 4), rates of return for an individual entering the system at age 30 and retiring at age 60 with a growth rate in wages of 2 percent per year, range between 1 percent (Egypt) and 9 percent (Tunisia). In Iran, the internal rate of return (IRR) for this individual is close to 5 percent in the SSO (similar to Germany) and 4 percent in the CSRO (similar to Spain). Nonetheless, there is high heterogeneity in rates of return. First, rates of return are higher for individuals with fast-growing wages and who live longer (this is a feature of defined-benefit systems). Second, rates of return are higher (over 6 percent), for individuals entering the system later in life. Finally, in the case of the SSO, rates of return for individuals who contribute for 10 years early in life, leave the system, and return to the system two years prior to retirement can be above 10 percent per year. This heterogeneity in the rates of return gives room to intragenerational transfers that do not always favor low-income workers.

Figure 4: Rates of Return in OECD and Selected MENA Countries

Source: Actuaria (2002).
Note: For comparison purposes calculations are limited to an individual who enters the system at age 30 and retires at age 60. Only old-age pension benefits are considered and only statutory contribution rates and accrual rates are taken into account. No early retirement is allowed. Life expectancies used in the calculations are country-specific.

Total pension expenditures through the SSO and the CSRO have doubled as a share of GDP within the last 7 years and now stand at 1.5 percent of GDP. This level of expenditures is lower than that observed in countries of similar demographic structure like Morocco or Algeria (see Table 3 – military expenditures are not included for these three countries). In part, this is explained by a low average-covered wage. The high growth in expenditures is linked to the increase in the number of beneficiaries, who grew at an average of 9 percent per year during the last decade in both the SSO and the CSRO.\footnote{In SSO growth rates were higher between 1986 and 1996 (12 percent average per year). The reasons are unclear at this stage. In the CSRO high growth rates are explained in part by the provision of incentives for early retirement to reduce the size of the civil service.} In the case of the SSO, the financial impacts were neutralized, in part, by a fast expansion in the number of contributors between 1987 and 1995 (an average increase of 10 percent per year). This expansion followed the end of the war with Iraq and can be partially explained by high rates of economic growth during the First Five-Year Development Plan and by extending the system to voluntary contributors. It is unclear whether
other structural changes within the SSO and/or the economy-at-large took place during that time. Regardless, growth rates for the total number of contributors have now slowed down.

Table 3: Pension Expenditures and Determinants in Selected MENA Countries

<table>
<thead>
<tr>
<th>Old-Age, Disability, and Survivor</th>
<th>Old-Age Only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Algeria</td>
<td>1999</td>
</tr>
<tr>
<td>Kingdom of Bahraina</td>
<td>2000</td>
</tr>
<tr>
<td>Islamic Republic of Iran</td>
<td>2000</td>
</tr>
<tr>
<td>Kingdom of Jordan</td>
<td>2001</td>
</tr>
<tr>
<td>Kingdom of Morocco</td>
<td>1998</td>
</tr>
<tr>
<td>Tunisia</td>
<td>2001</td>
</tr>
<tr>
<td>Djibouti</td>
<td>2000</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>1998</td>
</tr>
<tr>
<td>Egypt</td>
<td>2001</td>
</tr>
<tr>
<td>Yemen</td>
<td>1999</td>
</tr>
<tr>
<td>Lebanon</td>
<td>1999</td>
</tr>
<tr>
<td>West Bank and Gaza</td>
<td>2000</td>
</tr>
</tbody>
</table>

Source: World Bank, MNSHD Pension Database.
Note: (a) Includes the Military Pension System. (b) No information on the civil and military sector is available. Data contains information on the private sector only. (c) Pension expenditure data for Egypt regard only pension schemes regulated by Law 79/1975 (main scheme), Law 108/1976 (self-employed scheme), Law 50/1978 (scheme for Egyptians working abroad). Pension expenditure regulated by Law 112/1980 follows a contributory scheme, which is not directly comparable with those inspiring pension funds in the rest of the MENA region.

As a result of the "baby boom" that Iran experienced during the mid-80s, there is potential for a rapid increase in the number of contributors over the medium term, though rising unemployment rates are likely to dampen the effect. The Iranian population is essentially young. Fertility rates picked up during the early 80s. Hence, the 1996 census displays a large proportion of the population to be 8-12 years old. These individuals will start to enter the labor force in the next five years. If at the same time the trend of increasing female participation rates continues, the labor force could grow at over 4-5 percent for the next 10 years. If a majority of these individuals were to work in the formal sector, the finances of the SSO could be improved considerably over the short and medium terms. Unfortunately, with expected GDP growth rates of 6 percent and labor and capital productivity growth rates of 2-3 percent, total employment is forecasted to grow at less than 4 percent per year. To keep the share of the labor force covered by the system constant or growing, coverage rates of the employed population will need to increase. Given the incentive problems discussed above, this will not necessarily be the case. Even if an optimistic stance were taken—with total beneficiaries growing at 9 percent per year—the system's dependency ratio would rapidly deteriorate.

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6 Under the current structure of contributions and benefits each individual is a liability to the system. Expanding coverage would increase the financing gap over the long-run.

7 World Bank, Country Office Estimate.
Looking forward, both the SSO and the CSRO are on an unsustainable path with unfunded pension liabilities for the period 2002-2070 reaching 140 percent and 35 percent of GDP respectively. In two to five years, an operational deficit could be observed in the CSRO, and an operational deficit in the SSO could be observed within the next 10 years. Reacting to this imbalance in the future through bailouts and cuts in benefits will impose an adverse intergenerational transfer from tomorrow’s poor to today’s relatively well-off workers.

While very scant information is currently available regarding the structure, size, and finances of occupational funds, it is likely that the majority is accumulating unfunded pension liabilities. The occupational funds seem to be heterogeneous in terms of size and benefits offered. Actuaries from the SSO Research Institute consider that while a few of the funds are properly managed and seem to be financially sustainable, the majority is likely to generate an operational deficit within the next few years. Since the funds are linked to public companies, their implicit pension debt is part of the contingent liabilities of the government. Another issue of concern is the fact that in transferring from one fund to another or from any fund to the SSO, the current rules are complex, give room to discretion, are not always fair from the workers point of view, and thus constrain labor mobility.

Non-contributory schemes for the elderly are well developed in Iran relative to other countries in the region, but there are concerns in terms of the level of efficiency of these schemes and whether targeting mechanisms are appropriate. Non-contributory regimes ought to concentrate on the elderly poor. The fact that these programs cover 40 percent of the elderly population raises questions about targeting. Indeed, it may be the case that the programs are reaching individuals who could have been part of the contributory regimes, or individuals who are indeed also receiving benefits from a contributory scheme. On the other hand, it is possible that individuals who should be covered by non-contributory schemes are being left out. In the absence of data about the characteristics of the beneficiaries, it is not possible to conduct a rigorous evaluation of these programs. This is an area where more work is required.

While the SSO and the CSRO still own reserves amounting to 5 percent of GDP, these are mostly invested in fixed assets and government debt, generating low or negative rates of return. The funds were designed with some degree of pre-funding. However, no funding targets are defined explicitly. In practice, the funds are managed as pay-as-you-go systems with a stock of savings that is used to smooth adjustments to contributions and benefits. Today’s portfolios are illiquid and risky. Nonetheless, even if higher rates of return could be achieved, current reserves would not be sufficient to cover pension liabilities over the next decade. Thus, maintaining the current level of benefits implies accumulating a debt that future generations will have to finance, either by diverting resources from other sectors (e.g., education and health) or by increasing the tax burden.

The SSO and the CSRO have over-expanded their mandate by directly managing companies that operate in most economic sectors and lately have become de facto agencies to restructure public enterprises. This gives the pension funds excessive influence in financial markets and corporate governance. The strategy of transferring public companies as payments on government arrears imposes unnecessary risks on worker savings. Looking forward, important challenges remain to improve the management of these savings. For instance, improving the process for structuring governing bodies; creating appropriate incentives for managers; and increasing accountability—including better disclosure, auditing, and custody. Fiduciary responsibilities also need to be reviewed to ensure that the pension fund is managed in the best interest of the plan members. These are preconditions for increasing rates of return on fund reserves.

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8 Meeting with representatives from the Occupational Funds. MPO. January 2002.
Although the problems outlined are complex, policymakers have a unique opportunity to initiate reforms. First, the pension funds are not yet facing an operational deficit and demographics remain favorable, allowing for a larger margin of maneuver. Second, the government has improved economic management, leading to a more stable macroeconomic environment. Third, Iran is initiating structural reforms in the financial sector, particularly the banking system. In addition, the government has made considerable progress in the privatization of insurance companies. In the last two years, eight insurance companies were privatized. The government is also creating the conditions for the development of private auditing companies. These reforms are likely to reduce the risks facing pension funds, to improve accountability and to expand investment opportunities. At the same time, the reforms open the way for the development of pension plans that complement the public pension system. Finally, the rationalization of the system of indirect subsidies is expected to liberate considerable public resources that could be used to restructure the current government debt with the pension funds and absorb transition costs.

Looking forward, policymakers need to create awareness among the population regarding the problems facing the pension system while generating commitment for reform. This requires framing discussions within a long-term horizon to make explicit the tradeoffs between the potential social and economic costs of today’s policies with the future benefits. The analysis presented in this report will, it is expected, contribute to the discussions.

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3. **THE SOCIAL SECURITY ORGANIZATION (SSO)**

3.1. **Institutional Issues**

The Social Security Organization was established in 1952 to provide pensions, unemployment insurance, and health insurance to workers in the private sector—including the self-employed and voluntary contributors—and to contractual workers from the public sector. The SSO is an autonomous institution attached to the Ministry of Hygiene, Health, and Medical Education. Today the binding law for the institution is the 1975 Social Security Law, which has been amended several times since 1994.\(^\text{10}\)

The Social Security Organization is governed by the High Council of Social Security, which is constituted by 7 government representatives, 5 employer representatives, and 3 employee representatives. The Minister of Hygiene, Health, and Medical Education chairs the council. The Social Security Organization is administered by a Board of Directors, of which three members are selected on the basis of recommendations from the Minister of Health. The Managing Director of the SSO is the Chair of the Board. A Supervising Committee monitors activities and comments on balance sheets before they are referred to the High Council. The Supervising Committee is composed of a government representative who is proposed by the Ministry of Economic Affairs and Finance, an employer representative, and a employee representative (see Figure 5).

The SSO is a large organization employing 30,533 employees distributed between its headquarters in Teheran, 29 regional offices, and 364 local branches. Eighty percent of employees are full-time and the majority, or 83 percent, works in the regional offices. Their distribution by region is closely correlated with the size of the population. Employees are allocated half-and-half between the health branch and the insurance branch.

In the case of the pension branch, expenditures in administration are more or less in-line with international standards. Wages paid amount to Rhials 538,400 billion (USD 71 million) or 79 percent of operational expenditures. In-line with levels observed in other countries, these expenditures represent 6 percent of total benefits paid.

The SSO is a pension fund where institutional capacity can be characterized as average; considerable challenges remain to upgrade management and information systems. At present, it is difficult to generate data regarding the finances of the funds, investments, or simply demographic and economic data regarding contributors and beneficiaries. While information technologies are widely available, these do not operate in the context of an integrated information system. Electronic mail is still not used routinely and much of the exchange of information continues to take place through traditional means (mostly paper). Furthermore, there is high heterogeneity in the level of access that the different regional offices have to these technologies. While the SSO is working on the implementation of a new MIS, through one of its own IT companies, the proposed design has serious flaws. First of all, the software and operating systems being used are not appropriate for this type of MIS. Second, the module to track contributors and payments to the pension plan is not being designed as an integrated system. This implies that each local branch will have its own system. Information can be routinely transferred to the Center, yet the Center has no easy mechanism to merge the databases. At this stage, the information that is transferred from the local branches is not disaggregated by individual but only by employer. In the case of beneficiaries, local branches receive requests to process pension liquidations and compute the value of the pension. The request to pay the claim is then sent to the Center. The Center's database of current

\(^{10}\) For a brief history see SSO (2000).
beneficiaries is compiled with the information from the branches. The central office, however, cannot verify the calculations since individual records for the contributors are not available.

![Organizational Chart of the SSO](image)

Figure 5: Organizational Chart of the SSO

Source: SSO.

3.2. Contributions and Labor Force Coverage

The total payroll contribution to the SSO is set at 33 percent to finance cash benefits—including unemployment, pensions, and health services. It is divided between employers (23 percent), the government (3 percent), and workers (7 percent). There is a maximum contribution of Rhials 2.5 million per month, implying a maximum covered wage of Rhials 7.5 million per month (USD 1,000 per month or 8 times the minimum wage\(^\text{11}\)). No contribution can be paid on a wage that is below the minimum wage set at Rhials 850,000 per month in 2003 (Rhials 650,000 or USD 80 in 2001 or 66 percent of the average wage). Family allowances are required to be paid directly by the employer, which raises the effective contribution rate above 23 percent. As discussed in the next section, while contributions are formally divided by type of benefit, there are no separated accounts.

The Social Security Organization currently covers 753,435 establishments in the private sector, 16,867 establishments in the public sector, and voluntary contributors (self-employed, non-economically active individuals, or the unemployed). The majority pays a contribution equivalent to 30 percent of wages. Some of the public establishments (1,070, or 6 percent of the total) operate under contractual arrangements where the SSO reimburses part of the contributions received in exchange for services that are directly provided by the employer to its workers. In the case of small enterprises in the private sector (9 percent of the total registered establishments), workers and employers are allowed to pay lower contribution rates, totaling 18 percent (only 2 percent of workers belong to establishments that benefit from the lower contribution rate). Voluntary contributors also pay an 18 percent contribution rate.

The contribution for pensions and short-term benefits (e.g., cash transfers) is set at 21 percent, which is high and may be promoting the underdeclaration of wages and evasion. Indeed, the average wage necessary to generate the level of total contributions accrued to the SSO in 2001 of Rhials 13,527 billion (USD 1.8 billion) with a 30 percent payroll contribution (excluding

\(^{11}\) In 2003 SSO staff reports a maximum covered wage of 40,000,000 per month (see Ghorbanali, 2003).
contributions from the government) is estimated at Rhials 7.5 million per year (USD 1,000). At the time, however, the average wage of the covered population was estimated at 1.5 times the minimum wage or Rhials 10.8 million (USD 1,440) per year.\textsuperscript{12} Given the high ceiling on contributions, the 30 percent difference between the covered and average wage is most likely explained by the underdeclaration of wages and moratoria. The incentive to under-declare wages is particularly strong given that the pension paid is not linked to lifetime earnings. For instance, consider the case of an individual retiring after 25 years of work. If his/her pension is a function of the total number of contribution years and the average wage received during the last 2 years of work, then there is no incentive to declare the full wage during the first 20 years of work, since those years do not contribute anything to the final pension. Moreover, a payroll contribution acts as a tax on labor that distorts labor supply and demand decisions. Recent research in the case of Latin American Countries suggests that high payroll contributions to PAYG systems discourage enrollment (see Sections 6.1 and 7.4).

\textit{Between 1986 and 1997 the total number of contributors grew on average by an impressive 10 percent per year; this exceptional growth rate is expected to be halved during the next decade.} The total number of contributors in the SSO increased from two million in the mid-80s to six million today. This allowed the SSO to maintain a low dependency ratio (7 percent for old age). The expansion mainly involved private sector and voluntary contributors (see Table 4). The causes behind this expansion are unclear. The opening of the SSO to voluntary contributors in 1987\textsuperscript{13} may be part of the reason. Rapid economic growth during the First Five-Year Development Plan following the Iran-Iraq war is also a plausible explanation. Still, some other structural change is likely to have taken place either within the SSO or in the economy-at-large.\textsuperscript{14} Technical staff at the SSO suggest that the high growth rates reflect an underestimation of the number of contributors in the mid-80s, as a result of weak information systems. The important conclusion, however, is that growth rates of 10 percent per year are not likely to continue. In the future, the mission estimates that the total number of contributors could grow at best at 5 percent per year.\textsuperscript{15} A rate higher than the current 2 percent is possible given the “baby boom” that Iran experienced in the early 80s. Individuals born in the early 80s will soon enter the labor force. At the same time, female participation rates are expected to increase. Hence, the labor force could grow at 5 percent per year. With an estimated GDP growth rate of 6 percent per year, and factor productivity expected to grow at 2 percent per year, employment could expand at close to 4 percent per year on average. Hence, if the share of the employed population that is covered by the system increases, the share of covered labor force could remain constant. The growth rate would be lower, however, if those individuals who joined the system 10 years ago leave only to return to the system close to retirement.

\textsuperscript{12} Calculations by SSO’s Department of Economics Insurance and Planning. Takes into account the seasonality of income for workers in the agricultural sector.
\textsuperscript{13} The mission has not received the specific regulations.
\textsuperscript{14} This is an issue that will need to be explored further.
\textsuperscript{15} See Technical Appendix for a detailed explanation of assumptions for demographic, economic, and financial projections.
### Table 4: SSO, Evolution of the Number of Contributors by Type of Establishment (thousands)

<table>
<thead>
<tr>
<th></th>
<th>Government</th>
<th>Private Sector</th>
<th>Voluntary</th>
<th>Total</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>537</td>
<td>1,416</td>
<td>7</td>
<td>1,960</td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td>893</td>
<td>2,226</td>
<td>185</td>
<td>3,304</td>
<td>11.01%</td>
</tr>
<tr>
<td>1996</td>
<td>943</td>
<td>3,433</td>
<td>744</td>
<td>5,120</td>
<td>9.16%</td>
</tr>
<tr>
<td>1997</td>
<td>984</td>
<td>3,837</td>
<td>855</td>
<td>5,676</td>
<td>10.9%</td>
</tr>
<tr>
<td>1998</td>
<td>946</td>
<td>3,988</td>
<td>945</td>
<td>5,879</td>
<td>3.6%</td>
</tr>
<tr>
<td>1999</td>
<td>927</td>
<td>4,121</td>
<td>926</td>
<td>5,974</td>
<td>1.6%</td>
</tr>
<tr>
<td>2000</td>
<td>872</td>
<td>4,263</td>
<td>960</td>
<td>6,095</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

*Source: Mission calculations on the basis of MPO (2002).*

### 3.3. Benefits and Rates of Return on Worker Savings

The SSO provides a wide array of benefits that can be grouped into three categories: cash assistance and compensation, pensions, and health services. Cash assistance and compensation include maternity, sickness, and family allowances; grants for marriage and for funeral expenses; lump-sum transfers for physical disability; and unemployment benefits. Pension benefits include old-age, disability, and survivor pensions. In addition, the SSO offers outpatient and inpatient health services for the insured and the family of the insured (see Table 5 for a summary of the eligibility conditions and the formulas used to compute different benefits). The discussion here focuses on pension benefits.

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16 SSO staff have the right to various additional transfer.
### Table 5: Benefits Provided by the SSO

<table>
<thead>
<tr>
<th>Pensions</th>
<th>Condition</th>
<th>Benefit</th>
<th>Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old-Age</td>
<td>Today, minimum 10 years of contributions. A recent change in legislation gradually will increase the vesting period to 20 years. The minimum retirement age is 55 years for females and 60 years for males. Males with 30 years of work can retire at 50. Females who have contributed continuously for 20 years can retire at age 42. Individuals with 35 years in hazardous jobs can retire at any age.</td>
<td>For each contribution year, the insurer is entitled to 3.3% of his/her average wage during the last two years of work. The pension cannot represent more than 116% of this average. It cannot be below the minimum wage (set at RHials 600,000 per month, or USD 80, in 2001 - today the minimum wage is RHials 850,000 per month ). For individuals in hazardous jobs, each contribution year is worth 1.5 years.</td>
<td>Financed by 21 percentage points out of the 33% contribution.</td>
</tr>
<tr>
<td>Disability Total work-related</td>
<td>Certified over 66% disabled by Medical Committee due to a work injury. (No information about recertification ).</td>
<td>Receives 3.3% of average wage over the last two years for each contribution year (minimum of 50% and maximum of 100%). If there are dependents and the replacement rate is below 60% allowances are given to attain the 60%</td>
<td>Financed by 21 percentage points out of the 33% contribution.</td>
</tr>
<tr>
<td>Total non-work-related</td>
<td>Same calculation (see Note 2 of Article 72 of SSL).</td>
<td>Same calculation, but the resulting pension is multiplied by the degree of disability (see Note 2 of Article 72 of SSL).</td>
<td></td>
</tr>
<tr>
<td>Partial work-related</td>
<td>Certified between 33% and 66% disabled by Medical Committee due to a work-related injury (no information about recertification).</td>
<td>Spouse receives 50% of the pension; children 25% each; and parents 20%. The total cannot be above 100%. For insurers the pension is calculated at the time of death with the same rules as the normal retirement pension.</td>
<td>Financed by 21 percentage points out of the 33% contribution.</td>
</tr>
<tr>
<td>Survivor</td>
<td>Dependents of retirees or insurers who have contributed at least one year during the last 10 years and a positive amount during the last two years are allowed to receive a pension. Dependents of total disability pensioners if contributed 90 days during the last year.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash Transfers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marriage</td>
<td>Insurer is marrying for the first time, is working, and has contributed at least 720 days during the last two years.</td>
<td>Receives average salary of the last two years. If both spouses are insured, each receives a separate grant.</td>
<td>Financed by 21 percentage points out of the 33% contribution.</td>
</tr>
<tr>
<td>Maternity</td>
<td>The insured women needs to have 60 days of contributions during the last year preceding the pregnancy.</td>
<td>Receives 2/3 of her last wages during the 12 weeks preceding and following the delivery for breast-feeding mothers.</td>
<td>Financed by 21 percentage points out of the 33% contribution.</td>
</tr>
<tr>
<td>Sickness</td>
<td>Insured under treatment or needs rest as a result of work-related or non-work-related injuries or diseases.</td>
<td>During the period of treatment an insurer with dependents receives 75% of salary. An insurer without dependents receives 66%.</td>
<td>Financed by 21 percentage points out of the 33% contribution.</td>
</tr>
<tr>
<td>Lump-sum for physical disability</td>
<td>Certified 10%-33% disabled by the Medical Committee.</td>
<td>36 times the applicable disability pension (see disability benefit above) times the percentage disability.</td>
<td>Financed by 21 percentage points out of the 33% contribution.</td>
</tr>
<tr>
<td>Family Allowances</td>
<td>Insurer has paid contributions for a minimum of 730 working days.</td>
<td>An allowance is paid for each children (up to a maximum of 2). This allowance is equal to 2-3 times the daily wage of an unskilled worker.</td>
<td>Financed directly from the employees (outside the 30% contribution).</td>
</tr>
<tr>
<td>Unemployment</td>
<td>Been unintentionally unemployed and liable to the Unemployment Insurance Law.</td>
<td>55% of the wage. If the individual has dependents he/she will receive 10% of the min. wage for each (max. 4). Total benefits cannot be more than 80% of the wage or less than the min. wage. Benefits paid up to 36 months for singles and 50 months for married individuals.</td>
<td>Financed by 3% points of the 33% contribution.</td>
</tr>
<tr>
<td>Health Services</td>
<td>Be insured with the SSO. Minimum contributions not specified.</td>
<td>Insurer and dependents are allowed inpatient and outpatient services. Direct method: insurer and dependents use the SSO facilities for free. Indirect method insurer uses private facilities and pays between 10% and 25% of the costs.</td>
<td>Financed by 9% of the 33% contribution.</td>
</tr>
</tbody>
</table>

Source: SSO (2000), Social Security Research Institute (1997), and various interviews.
Today there are close to 1.2 million pensioners in the SSO receiving pension payments equivalent to 5,875 billion or 1 percent of GDP. Sixty percent of these expenditures are related to old-age pensions, 33 percent to survivor pensions, and only 7 percent to disability. Pensioner growth averaged 7 percent per year during the last decade. The fastest growing group, at an average of 9 percent per year, is old-age pensioners. They represent 34 percent of pensioners while the survivor and disabled pensioners represent 60 percent and 6 percent respectively (see Table 6).

Table 6: Evolution of the Total Number of Pensioners in the SSO

<table>
<thead>
<tr>
<th>Year</th>
<th>Old-Age</th>
<th>Disability</th>
<th>Survivor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>95,228</td>
<td>42,338</td>
<td>258,103</td>
<td>395,669</td>
</tr>
<tr>
<td>1991</td>
<td>170,455</td>
<td>55,981</td>
<td>383,316</td>
<td>609,752</td>
</tr>
<tr>
<td>1996</td>
<td>310,005</td>
<td>67,541</td>
<td>572,069</td>
<td>949,615</td>
</tr>
<tr>
<td>1997</td>
<td>323,192</td>
<td>68,789</td>
<td>592,906</td>
<td>984,887</td>
</tr>
<tr>
<td>1998</td>
<td>344,762</td>
<td>69,153</td>
<td>627,135</td>
<td>1,041,050</td>
</tr>
<tr>
<td>1999</td>
<td>369,784</td>
<td>69,112</td>
<td>660,567</td>
<td>1,099,463</td>
</tr>
<tr>
<td>2000</td>
<td>387,534</td>
<td>67,067</td>
<td>689,421</td>
<td>1,144,022</td>
</tr>
<tr>
<td>2001</td>
<td>419,078</td>
<td>69,009</td>
<td>720,540</td>
<td>1,208,627</td>
</tr>
<tr>
<td>Latest Estimate&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td>1,245,000</td>
</tr>
<tr>
<td>Average Growth 1996-2001</td>
<td>6.21%</td>
<td>0.43%</td>
<td>4.72%</td>
<td>4.94%</td>
</tr>
</tbody>
</table>

Source: Mission calculations on the basis of MPO (2002) and SSO staff numbers.
Note: (a) Ghobranali (2003)

The system offers high replacement rates across all income levels. Take the case of individuals who enter the system today and contribute for 30 years. If current minimum pensions and ceilings on contributions are assumed to be constant in real terms, then the majority of individuals, regardless of their income, would receive a replacement rate of 100 percent (see Figure 6). Only individuals with incomes above the current ceiling of 8 times the average wage (likely to be a handful) would receive lower replacement rates. Individuals with incomes below the current minimum wage (66 percent of average earnings) would receive replacement rates above 100 percent, but legally nobody is allowed to enroll with a wage below the minimum. If one assumes that the minimum pension and the ceiling grow in real terms, then individuals with incomes above 2.5 times average earnings would receive lower replacement rates.

Figure 6: SSO, Economy-Wide and Individual Replacement Rates by Income Level

Source: Mission calculations.
The systems offer a generous minimum pension equal to the minimum wage (Rhials 600,000 per month or USD 80 in 2001), or 66 percent of average earnings. This relatively high minimum pension is likely to create negative incentives to work. Moreover its lax eligibility conditions can create adverse redistributive effects. Take the case of a male worker entering the system late in life (age 50) with the average wage. Further, assume that all wages grow at the same rate. At age 60 this individual can retire, as he would have fulfilled 10 contribution years. His final wage will still be equal to the average wage. With a 33 percent replacement rate, however, his pension would be 50 percent below the minimum (set at 66 percent of average earnings). This relatively well-off individual will be eligible for the minimum pension, thus receiving considerably higher rates of return than low-income full-career workers. In general, the minimum pension is likely to primarily benefit workers who have entered the system relatively late in life, regardless of initial earnings. Full-career workers who experience positive growth rates in wages will tend to retire with pensions above the minimum. As a consequence of generous minimum pension, SSO appears to be largely a flat system, with an average old-age pension of Rhials 8.4 million per year (USD 1,121) compared to a minimum pension of Rhials 7.2 million per year (USD 1,000).17

Disability and survivor benefits appear to be generous as well, but the mission has had only limited information about implementation details. The same accrual rate that applies to old-age pensions applies to disability benefits (see Table 5). However, beyond generosity in benefit formulas, the usual problem in this type of system is that benefits are granted without appropriate certification procedures. Disability pensions often substitute for unemployment insurance. For the SSO it is unclear how the certification process operates and whether recertification is required. In the case of survivor pensions, there seems to be no limit on the age of dependent children. The treatment of divorced spouses is also unclear.

The SSO does not provide formal early retirement but has implemented generous exceptions to the statutory rule. Thus, while men and women are expected to retire respectively at age 60 and 55 with 10 contribution years, in the following cases retirement ages can be lower. Male employees who have contributed for 30 years can apply for retirement at age 50. Female employees who have contributed continuously for 20 years can apply for retirement at age 42 (however, in this case, the minimum pension does not apply). Workers in hazardous jobs who have worked at least 35 years can retire at any age without penalties. During the late eighties and early nineties, the SSO also retired 91,000 workers before eligibility conditions were met; however, the regulations giving the option/incentive for early retirement have been eliminated.18 However, the short vesting period and the fact that only the last two years of salaries are included in the pension calculation reward individuals who leave the system after 10 years and return to the system two years prior to retirement (see calculations on internal rates of return below).

Rules for transferring to other funds are complex and constrain the mobility of the labor force. When transferring to a different fund (e.g., an occupational fund), the new fund sets the conditions for the transfer. When workers transfer from an occupational fund to the SSO, they are required to pay a lump-sum equal to “late” contributions. “Late” contributions are computed on the basis of an 18 percent contribution rate applied to the last wage of the employee. The occupational fund gives the employee back his/her contributions without interest, and the employee is responsible for completing the required amount. These rules constrain the mobility of the labor force and reduce incentives to join the system.

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17 These numbers are for 2001.
18 The mission has not received information about the regulation(s) that allowed these retirements.
While the legal provisions to protect pensions from increases in the cost of living exist, an automatic indexation mechanism is not in place. In practice, adjustments are subject to discretion by government officials. Data on adjustments were not available at the time of writing this report, but according to the SSO staff, on average, pensions have been allowed to fall in real terms by a few percentage points per year. Hence, plan members are affected by uncertainty in terms of the evolution of prices.

Rates of return for individuals vary widely and depend on wage histories, life expectancies, time of enrollment, and strategies for retirement, giving place to potentially large intergenerational transfers. Figure 7 summarizes these rates of return. The first two panels present rates of return for males and females for different combinations of wage histories (0 percent, 2 percent, and 4 percent growth rates per year) and enrollment ages, under the assumption that retirement takes place as soon as eligibility conditions are met. A feature of DB systems is that rates of return increase with the growth rate of wages and life expectancy. In the case of the SSO, growth rates are also higher for workers joining the system late in life (this is particularly true for individuals who benefit from the minimum pension). Women receive higher rates of return than men. Among men, as compared to those enrolling between ages 25 and 35, men who join before age 25 enjoy higher rates of return because they have 35 contribution years and are allowed to retire before age 60. Workers receiving the highest rates of return, however, are those who leave the system after completing 10 contribution years (the minimum vesting period) and return to the system to receive their pensions two years prior to retirement (see the last two panels of Figure 7). Rates of return in this case can be higher than 10 percent real and even reach 20 percent real in the case of workers with fast-growing wages. This analysis suggests that rates of return within the SSO vary widely across individuals of the same generation. Individuals with low rates of return are implicitly transferring resources to individuals with high rates of return. It is not clear that these transfers favor low-income individuals. As discussed in the case of the minimum pension, these transfers may operate in the opposite direction. For instance, individuals with fast-growing wages and long life expectancies are likely to be healthy and well-educated workers.
3.4. Financing Mechanisms and Sustainability

Contributions from workers and employers are the major source of income for the SSO, accounting for over 90 percent of total revenues and representing 3 percent of GDP. Second are revenues resulting from investments; during the last decade these accounted, on average, for a mere 7 percent of the total. Other earnings, such as those resulting from late fees are marginal (see Figure 8).
Out of the 33 percent payroll contribution, 9 percentage points are used formally to finance health expenditures and 3 percent to finance unemployment insurance, thus leaving 21 percentage points to finance pensions and cash transfers. Out of the 21 percent for pensions and cash transfers, 18 percent supposedly is allocated to “long-term benefits,” which according to the SSO classification include old-age, permanent disability, and survivorship pensions (family allowances are also included among long-term benefits, but these are paid directly by employers). The remaining 3 percent finances cash transfers (short-term expenditures).

Expenditures in year 2000—including investment flows—approximated Rials 15,075 billion (USD 2 billion), or the equivalent of 2.5 percent of GDP. The share of investment expenditures has declined over time from 59 percent in 1988 to 10 percent in 2001. The share of health and pension expenditures, on the other hand, has increased considerably from 17 percent to 30 percent and from 25 percent to 60 percent respectively (see Figure 9).

In practice, none of the branches has an explicit financing mechanism linking contributions to expected expenditures. There is no transparent allocation of total contributions across benefits; neither is there an explicit accounting of cross-subsidies. Little is known about the unit costs of the interventions and the factors that affect their dynamics; therefore, it is difficult to define appropriate financing arrangements. While the 9 percent contribution (out of the 33 percent) allocated to the health branch is at present sufficient to cover expenditures (close to Rials 3 trillion in 2000), it is not clear that current unit costs and levels of spending are efficient. In the case of unemployment benefits, the 3 percent contribution rate in 2001 generated revenues in
excess of 16 percent of expenditures, yet no fund has been established to accumulate the surplus (see Table 7).

The pension branch is still displaying a surplus due to still-favorable dependency ratios and high contribution rates. The current average replacement rate for old age, as discussed in the previous section, is equal to 112 percent; yet, for old-age pensioners the dependency ratio is only 7 percent. This means that for each retiree there are still 14 workers contributing to the system. Thus, the equilibrium contribution rate for the old-age pension branch would be 7.8 percent (see Table 8) below the current implicit contribution rate of roughly 10 percent (since old-age pension expenditures represent close to 47 percent of total expenditures excluding health, unemployment and administration and these expenditures are financed by a 21 percentage points contribution rate). For the system as a whole, the average replacement rate is relatively low (64.8 percent), due to a lower average pension for survivors (Rhials 4.8 million, or USD 650 per year), and the dependency ratio is high (20 percent), leading to a higher equilibrium contribution rate (13 percent); yet, the contribution rate remains well below the current 17 percent implicitly allocated to pensions. Hence, the pension branch is still generating a surplus that is equivalent to 37.8 percent of the covered wage bill, giving the illusion of a healthy financial position.

Table 7: Revenues and Expenditures in the SSO (billions of rhials)

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>Share of Total Expenditures</th>
<th>Share of GDP</th>
<th>2001</th>
<th>Share of Total Expenditures</th>
<th>Share of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Expenditures</td>
<td>10,921</td>
<td>1.88%</td>
<td>13,440</td>
<td>2.02%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pensions</td>
<td>4,422</td>
<td>40.5%</td>
<td>5,876</td>
<td>43.7%</td>
<td>0.76%</td>
<td>0.88%</td>
</tr>
<tr>
<td>Old-Age</td>
<td>2,629</td>
<td>24.1%</td>
<td>3,524</td>
<td>26.2%</td>
<td>0.45%</td>
<td>0.53%</td>
</tr>
<tr>
<td>Disability</td>
<td>329</td>
<td>3.0%</td>
<td>425</td>
<td>3.2%</td>
<td>0.06%</td>
<td>0.06%</td>
</tr>
<tr>
<td>Survivor</td>
<td>1,463</td>
<td>13.4%</td>
<td>1,927</td>
<td>14.3%</td>
<td>0.25%</td>
<td>0.29%</td>
</tr>
<tr>
<td>Cash Transfers</td>
<td>1,535</td>
<td>14.1%</td>
<td>1,591</td>
<td>11.8%</td>
<td>0.26%</td>
<td>0.24%</td>
</tr>
<tr>
<td>Family Allowances</td>
<td>716</td>
<td>6.6%</td>
<td>825</td>
<td>6.1%</td>
<td>0.12%</td>
<td>0.12%</td>
</tr>
<tr>
<td>Other</td>
<td>819</td>
<td>7.5%</td>
<td>766</td>
<td>5.7%</td>
<td>0.14%</td>
<td>0.11%</td>
</tr>
<tr>
<td>Health Benefits</td>
<td>3,607</td>
<td>33.0%</td>
<td>4,515</td>
<td>33.6%</td>
<td>0.62%</td>
<td>0.68%</td>
</tr>
<tr>
<td>Unemployment</td>
<td>613</td>
<td>5.6%</td>
<td>686</td>
<td>5.1%</td>
<td>0.11%</td>
<td>0.10%</td>
</tr>
<tr>
<td>Admin. Expenditures</td>
<td>745</td>
<td>6.8%</td>
<td>772</td>
<td>5.7%</td>
<td>0.13%</td>
<td>0.12%</td>
</tr>
<tr>
<td>Wages</td>
<td>464</td>
<td>4.2%</td>
<td>538</td>
<td>4.0%</td>
<td>0.08%</td>
<td>0.08%</td>
</tr>
<tr>
<td>Other</td>
<td>280</td>
<td>2.6%</td>
<td>234</td>
<td>1.7%</td>
<td>0.05%</td>
<td>0.04%</td>
</tr>
<tr>
<td>Total Revenues</td>
<td>14,673</td>
<td>2.52%</td>
<td>15,075</td>
<td>2.26%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contributions</td>
<td>11,894</td>
<td>81.06%</td>
<td>13,528</td>
<td>89.73%</td>
<td>2.04%</td>
<td>2.03%</td>
</tr>
<tr>
<td>Investments</td>
<td>1,061</td>
<td>7.23%</td>
<td>250</td>
<td>1.66%</td>
<td>0.18%</td>
<td>0.04%</td>
</tr>
<tr>
<td>Other</td>
<td>1,718</td>
<td>11.71%</td>
<td>1,298</td>
<td>8.61%</td>
<td>0.30%</td>
<td>0.19%</td>
</tr>
<tr>
<td><strong>BALANCE</strong></td>
<td><strong>3,752</strong></td>
<td><strong>0.64%</strong></td>
<td><strong>1,636</strong></td>
<td><strong>0.25%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USD (million)</td>
<td>500</td>
<td>218</td>
<td>2.02%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP (billion)</td>
<td>582,050</td>
<td>666,165</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data provided by SSO staff.

Note: Numbers have been recently revised by SSO Financial Department as follows. Short-term = Rhials 185 billion; Long-term (including pensions) = Rhials 7,539 billion; Medical care = Rhials 4,319 billion; Administrative = Rhials 1,215 billion; Total = Rhials 13,259 billion (see Ghorbanali, 2003).
Table 8: SSO, Basic Indicators of Financial Sustainability

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Covered Yearly Wage (USD)</td>
<td>1,000</td>
</tr>
<tr>
<td>Current, Implicit, Contribution Rate</td>
<td>17%</td>
</tr>
</tbody>
</table>

**Old-Age Pension**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Yearly Pension (USD)</td>
<td>1,121</td>
</tr>
<tr>
<td>Average Replacement Rate</td>
<td>112%</td>
</tr>
<tr>
<td>Dependency Ratio</td>
<td>6.98%</td>
</tr>
<tr>
<td>Equilibrium Contribution</td>
<td>7.83%</td>
</tr>
</tbody>
</table>

**All Pensions (Old-Age, Disability, and Survivor)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Yearly Pension (USD)</td>
<td>648</td>
</tr>
<tr>
<td>Average Replacement Rate</td>
<td>64.8%</td>
</tr>
<tr>
<td>Dependency Ratio</td>
<td>20.1%</td>
</tr>
<tr>
<td>Equilibrium Contribution</td>
<td>13.1%</td>
</tr>
</tbody>
</table>

Source: Mission calculations.

Note: (a): In practice there is not formal division of the 21 percent contribution rate for pension and short-term benefits. Since pension expenditures represent close to 80 percent of total expenditures, excluding health unemployment and administration, it is assumed that 17 percentage points are being allocated to pensions.

Over the medium and long term, the SSO’s pension branch is unsustainable with unfunded pension liabilities reaching 140 percent of today’s GDP for the period 2002-2070. Financial projections were conducted for three scenarios. The scenarios differ in the assumptions about economic growth, total factor productivity growth, labor productivity growth, and whether the system is open to new entrants or not (see notes to Figure 10). The base-case scenario assumes GDP growth rates of 6 percent over the next ten years, converging to 3 percent over the long run. The low-case scenario assumes a lower growth rate of 4 percent for the next 10 years.

Given assumptions about total factor productivity and labor force participation, unemployment rates and the share of the labor force covered by the system are computed endogenously. In the case of the baseline scenario, this share remains more or less constant at 35 percent during the next few years and then increases gradually, reaching 50 percent by the end of the simulation period. In the low-case scenario, coverage drops slightly—to 33 percent—during the next 10 years but rises to 50 percent by the end of the simulation period. The third scenario (closed-case) uses the same macroeconomic assumptions as the base-case scenario but closes the system to new entrants. The first two scenarios show that the system dependency ratio increases continuously from 10 percent today to 30 percent by year 2030, and close to 70 percent in year 2070. Required contributions to keep the system in balance would need to increase from 18 percent today to over 70-80 percent by the end of the simulation period. If contributions remain unchanged, then a growing deficit would be observed starting in year 2012. This deficit could reach 8 percent of GDP by year 2070. The deficit will be driven by a dramatic increase in total expenditures from 1 percent of GDP today to 4 percent in year 2030 and 10 percent by year 2050. Revenues will also grow as a share of GDP, but at a much slower pace, without ever reaching 3.5 percent of GDP. As a consequence, the SSO is accumulating considerable unfunded pension liabilities, in the order of 115 percent of today’s GDP (low-case) to 140 percent of today’s GDP (base-case) for the period 2002-2070. If the SSO was closed to new entrants, the value of unfunded pension liabilities would be equivalent to 100 percent of today GDP. This is the amount of resources that the government would need to transfer to the SSO today to guarantee the promises to current retirees and contributors.

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19 The financial projections need to be interpreted with caution given the limitations of the baseline data. Several assumptions have been required. These have been extensively discussed with SSO technical staff and have been constrained by the experiences in other countries (see Technical Appendix).
Effectively, it is a transfer from future generations—including poor workers—to those currently well-off and operating in the formal sector of the economy.20

20 These projections ignore the outcome of the current vesting period remaining constant at 10 years and those individuals who joined the system during the early 90s starting to leave it with the hopes of returning close to retirement. It is shown that this strategy increases the rates of return on savings. One of the implications is that coverage rates would be lower as new entrants are neutralized by those leaving the system. The other implication is that the length of service at retirement would be reduced.
Figure 10: Summary Results of Financial Projections in the SSO

Source: Mission calculations on the basis of the PROST model.

Scenario 1 (base-case). This scenario is based on the projections of the Iran Country Office (World Bank, 2002). GDP grows at 6 percent for the period 2001-2010, dropping to 4.5 percent by 2015, and to 3 percent by year 2025. During the same periods the growth rate of real wages is set respectively at 4 percent, 3.5 percent, and 2.5 percent, and total factor productivity at 2.4 percent, 1.8 percent, and 1 percent. The growth rate of employment is a function of the growth rate of GDP and the growth rate of total factor productivity. Over the period 2002-2012 it grows at an average of 3.6 percent per year. The male labor force participation rate is assumed to be constant. The female participation increases from 10 percent today to 20 percent by year 2012. Under these assumptions, unemployment rates go from 15 percent to 21 percent by year 2012. The system coverage of the employed population is assumed to grow slightly so that labor force participation does not drop.

Scenario 2 (low-case): Real GDP grows at 4 percent during the next 10 years, drops to 3.5 percent in 2015, and then converges to 3 percent. Wages and total factor productivity are adjusted downward. Assumptions about labor force participation rates are the same, thus unemployment rates are higher and coverage lower.

Scenario 3 (closed): Same as Scenario 1, but assumes the system is closed to new entrants. The discount rate is set at 5 percent. A 10 percent discount rate produces unfunded pension liabilities to 130 percent, 70 percent, and 65 percent respectively.
3.5. Management Policies for Fund Reserves

The SSO investment policy is in principle proposed by the High Council of the SSO and executed by the Managing Director of the SSO in coordination with its Board of Directors. The High Council is responsible for setting the general framework of the investment policy (e.g., limits of investment risks, classes of assets where the SSO can invest) and for defining the annual operations budget. Investment policies need to take into consideration the SSO's triple mandate: i) to provide health, unemployment, and pension benefits to its members; ii) to support social development (e.g., through investments in housing); and iii) to support economic development (e.g., through the financial support of national projects). The Managing Director and the Board of Directors execute these policies through the Deputy of Economic and Investment Affairs of the SSO and the managers of the different companies directly owned by the SSO—including the Social Security Investment Company (Shasta).

The Social Security Investment Company (Shasta or SSIC) was created in 1984 to manage the Social Security Organization's investments in the productive sector. Shasta is governed by a General Assembly comprised of Shasta Board members, SSO Board members, and SSO Economic and Investment Department representatives. Shasta's mandate is to maintain and increase the value of the SSO funds through: (i) investments in industrial, commercial, and mining sectors that impact economic development and yield a reasonable rate of return; (ii) short- and medium-term investments in manufacturing firms, such as those registered with the Teheran Stock Exchange; and (iii) management of industrial, construction, and commercial firms whose shares predominantly are owned by the SSO or Shasta. Shasta has a Managing Director who is selected by the SSO Managing Director in coordination with the SSO Board and High Council. The General Assembly meets once a year to review Shasta's performance and to approve new plans and programs: other meetings follow the mandates set by the Iranian Business Act. The General Assembly is responsible for defining the investment policy—including types of investments and minimum rates of return (usually not below bank deposits).

The other companies owned by the Social Security Organization report directly to its Managing Director and Board of Directors: while in theory autonomous, the companies are under close supervision. The following companies are SSO-affiliated institutions: the Iran Housing Construction Company (1986), the Social Security Consulting and Computer Company (1992), the Social Security Research Institute (1992), the Labor and Production Company (1992), Labor and Security Services (1992), the Social Security Auditing Company (1993), the Social Security Real State Agency (1993), and the Worker's Welfare Bank (1961). Each has its own Managing Director and Board of Directors. The preparation of nominees usually rests with the SSO Department of Economic and Investment Affairs; the selection of candidates is retained by the respective company's Managing Director and Board of Directors. The respective operating budgets, however, must be approved by the SSO Board of Directors and the High Council, and large financial operations require the approval of the High Council.

The size of the SSO portfolio has been declining as a share of GDP while the structure has changed, giving priority to direct and indirect investments over lending and loans (see Figures 11 and 12). Up to 1976, the SSO invested its cash reserve fund in the Worker's Welfare Bank in the form of fixed deposits. After the creation of the Social Security Fund in 1976, the SSO started to diversify its investment activities, but by 1989 still close to 80 percent of the portfolio was composed of long-term deposits. By year 2000, however, the share of deposits had dropped to 10 percent, while the shares of indirect and direct investment increased to 27 percent.

---

22 SSO owns 34 hospitals, 174 clinics, 31 polyclinics, and 3 day clinics.
and 43 percent respectively, or 70 percent of the total portfolio (see Figure 12). The companies owned by the SSO (directly and through Shasta) produce 43 percent of the pharmaceutical and hygienic products, 36 percent of the cement, 35 percent of the televisions, 25 percent of the fireproof products, 31 percent of the refrigerators and freezers, and 35 percent of the rubber. The SSO is one of the most active investors in the stock exchange, with 11.3 percent of the total portfolio belonging to the SSO in 2001. In addition, the SSO invests in government securities; provides financial support for public construction projects; and accords liquidity to the banking system; and gives financial assistance to pensioners and contributors (e.g., housing loans, marriage aid, etc.) at subsidized interest rates. In 2000, the SSO investment portfolio (excluding government debt) was valued at Rhials 7,000 billion (USD 933 million).

**Figure 11: SSO, Investment Portfolio as a Share of GDP**

![Graph showing Share of GDP](image)

*Source: Mission calculations.*

**Figure 12: SSO, Structure of the Portfolio of Investments**

![Graph showing Portfolio structure](image)

*Source: Data provided by SSO Economic and Investment Affairs Department.*

*Note: Indirect investment refers to investments through the Investment Company Shasta. Direct investment refers to investments in companies directly owned by the SSO.*

An important part of the fund reserves are invested through Shasta which by year 2001 had accumulated assets equivalent to Rhials 1,537 billion\(^{23}\) (USD 200 million). Today, Shasta owns some 86 companies, of which 65 percent are majority owned, in six major economic sectors (commercial services, non-metallic minerals, metal industry and household appliances, pharmaceuticals, agriculture, cellulose and chemicals, and commercial services) (see Figure 13).

\(^{23}\) See SSO (2002b).
Recently the Social Security Organization has added to its stock of companies those transferred by the government to cover part of its debt with the fund; the book value of the transferred assets is estimated roughly at Rhials 4,000 billion. By 2001, the government had accumulated a debt with the SSO, in large from unpaid contributions, estimated at Rhials 8,000-14,000 billion. To cover its debt with the fund, the government transferred assets from the following public companies to the SSO: 25.5 percent of the petrochemical companies in Khark, 8.5 percent in Arak, and 17 percent in Esfahan; 25.5 percent of the Ahwaz pipe-making company; 50 percent of national gas industries; 50 percent of Persi gas company; and 51 percent of cultural and scientific publishing houses. The SSO plans to keep some of these companies and sell others after restructuring and recapitalization.

Revenues from investments in year 2001 reached Rhials 1,383 billion (USD 184 million), which relative to total assets of Rhials 7,000 billion (excluding government debt) implies a real rate of return of -0.6 percent. The majority of revenues, or 80 percent, are generated by Shasta and other dependent companies (see Table 9). The assets invested in these companies approximate Rials 3,500 billion (USD 460 million). According to official figures, Shasta appears to be a profitable holding, generating in year 2001 a 3.5 percent real rate of return after taxes. The same is not true of the other dependent companies; in aggregate they generated a negative real rate of return after taxes (see Table 10).

---

24 Inflation in year 2001 was reported at 20.4 percent.
Table 9: Sources of Revenues from Investments in the SSO (billions of rhials in 2001)

<table>
<thead>
<tr>
<th>Source of Revenues</th>
<th>Total Revenues</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shasta</td>
<td>505</td>
<td>36.5%</td>
</tr>
<tr>
<td>Other Dependent Companies</td>
<td>596</td>
<td>43.1%</td>
</tr>
<tr>
<td>Deposits in WWB</td>
<td>24</td>
<td>1.7%</td>
</tr>
<tr>
<td>Banking Sector</td>
<td>148</td>
<td>10.7%</td>
</tr>
<tr>
<td>Government Securities</td>
<td>29</td>
<td>2.1%</td>
</tr>
<tr>
<td>Personal Loans</td>
<td>9</td>
<td>0.6%</td>
</tr>
<tr>
<td>Corporate Loans</td>
<td>25</td>
<td>1.8%</td>
</tr>
<tr>
<td>Management Dues</td>
<td>15</td>
<td>1.1%</td>
</tr>
<tr>
<td>Late Payments</td>
<td>15</td>
<td>1.1%</td>
</tr>
<tr>
<td>Real State</td>
<td>10</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

*Source: Data provided by SSO staff.*
*Note: (a) Original numbers do not add-up.*

Table 10: SSO, Profitability of Selected Companies, 2000 and 2001 (billion of rhials)

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital before Taxes</th>
<th>Profits before Tax</th>
<th>Profits after Tax</th>
<th>Rate of Return before Tax</th>
<th>Rate of Return after Tax</th>
<th>Inflation Rate</th>
<th>Real Rate of Return before Taxes</th>
<th>Real Rate of Return after Taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Shasta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>1,330</td>
<td>435</td>
<td>323</td>
<td>32.7%</td>
<td>24.3%</td>
<td>20%</td>
<td>10.58%</td>
<td>3.58%</td>
</tr>
<tr>
<td>2001</td>
<td>1,537</td>
<td>505</td>
<td>379</td>
<td>32.9%</td>
<td>24.6%</td>
<td>20.4%</td>
<td>10.38%</td>
<td>3.49%</td>
</tr>
<tr>
<td></td>
<td>SSO-Dependent Companies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>1,602</td>
<td>330</td>
<td>216</td>
<td>20.6%</td>
<td>13.5%</td>
<td>20%</td>
<td>0.50%</td>
<td>-5.42%</td>
</tr>
<tr>
<td>1999</td>
<td>2,069</td>
<td>468</td>
<td>353</td>
<td>22.6%</td>
<td>17.1%</td>
<td>20.4%</td>
<td>1.83%</td>
<td>-2.74%</td>
</tr>
</tbody>
</table>

*Source: SSO (2002b).*

All these numbers, however, need to be interpreted with caution, as current financial reporting practices are weak. An official evaluation of the SSO investment policies suggests that current reporting practices are not adequate. To date, a system that provides updated information about investments, revenues, and profits is lacking. There is high variability in the way that different companies calculate and report operational results, and the problem seems to be particularly serious among construction projects. Managers have also indicated inconsistencies between the budgeting system and the accounting system. The former, for instance, includes total revenues from investments as part of the total budget of the SSO. As far as the companies are concerned, only net profits matter.

Based on this review, the main problems facing the SSO in terms of its investment policies can be summarized as follows:

The governance structure and the practices in terms of disclosure, auditing, and custody are unlikely to promote accountability and incentives for a prudent management of reserves. The SSO has opted for a tripartite governing body (the High Council) with representatives from the government, plan members, and employers. As suggested by international experience, this type of governing body is rarely conducive to a prudent and
efficient management of reserves (see Section 7.2). In fact, the poor financial performance of the fund is to be explained, at least in part, by the current governance structure. First, the fact that the majority of the Board members are selected by high-ranking officials creates a governing body that is overly dependent on the government. This leaves room for the emergence of conflicts of interest between the government and the plan members. The decision to pay part of the government debt by transferring companies at prices above market value is an example of a conflict of interest. Moreover, there is little or no accountability regarding these financial decisions. For instance, the losses created by the transfer of the public assets are simply assumed by the members of the plan.

As previously discussed, there are problems in terms of the quality of the financial information flowing from the managers of the different companies owned by the SSO and Shasta to the Department of Investment, Economic, and Planning Affairs, to the SSO Board of Directors, and to the High Council. These problems are amplified when looking at the flow of information between the SSO and the plan members. The various companies, for instance, are not required to publish their financial statements. While the SSO publishes an Annual Report with a one-year delay, the information disclosed is insufficient to give to the plan members an idea of how their savings are being invested. Several brochures have been produced about the SSO and Shasta. However, these focus on publicizing contributions to social and economic development and on the impressive range of activities where the SSO is involved without providing any hint of how successful these activities are in terms of protecting and increasing the value of worker savings.

While all the companies conduct periodic audits, they are carried out by the Supreme Auditing Organization, which is a government body. This practice can also create conflicts of interest between the government and the plan members. Finally, where best international practices emphasize the need to have external, independent custodians, the SSO and its holding companies do not comply.

At the same time, the SSO over-expanded its mandate rendering it difficult now for managers to assess the performance of investment policies and implement corrective measures when necessary. Beyond problems of governance and disclosure, it is unclear if the SSO currently has the resources (human and physical) to effectively monitor the operations of the large number of companies it owns directly or through Shasta. Since the Managing Directors of the companies know the limitations of the monitoring system, they are more willing to take risks. Some SSO staff have observed, for instance, that the cost-benefit analysis presented by the Managing Directors of the companies to justify additional investments often lack realism. During implementation, results are usually far-off from predictions. Yet, these are approved during the meetings of the General Assembly. Another problem with the direct management of several corporations is that considerable resources need to be allocated to deal with administrative problems. These are resources that need to be taken away from the design and implementation of an effective investment policy.

Other SSO activities such as housing projects, lending to the corporate sector—including its own companies—and subsidized lending to beneficiaries, also bring administrative problems that divert the attention of the Board25 and create conflicts of interest.

The Department of Economic, Investment, and Planning Affairs is currently proposing to break Shasta into smaller holdings that are more specialized but that would respond to the same governance structure. This is unlikely to bring sizable improvements in management, as incentives would remain unchanged. Other alternatives are discussed in Section 7.2.

25 Example, Dealing with the complaints of beneficiaries in terms of the quantity and quality of housing services; pervasive delays observed in constructions projects or the difficulties involved in selling a house (see SSO, 2002).
The SSO has considerable market power in several economic sectors: this may impede private-sector development and interfere with corporate governance. As previously discussed, the SSO controls large shares of the market in sectors such as pharmaceutical, domestic appliances, and food. This gives a government institution considerable influence over the corporate sector. Conflicts of interest may arise, for instance, if protective policies are applied to keep inefficient companies afloat. The SSO also owns 11 percent of the assets traded in the stock market. The implication is that changes in the financial position of the fund may create large fluctuations in stock prices, which discourages the participation of private investors.

Current investment policies do not follow best practices in terms of exposure limits. Best international practices suggest that the pension fund not own more than 5 percent of the capital of any company, nor the investment capture more than 5 percent of the pension fund’s portfolio. In the SSO’s case there are no exposure limits, leading to a risky and illiquid investment portfolio.

The SSO is also negatively affected by an inappropriate regulatory environment. Besides the problems with its own regulatory structure, the SSO faces several institutional and legal constraints impeding a more efficient management of reserves. These are not only related to an over-regulated stock market but also to restrictions on foreign investment (the exact nature of which remains unclear), to an underdeveloped Iranian financial sector, and to a poorly diversified economy. These constraints limit investment opportunities.

26 While part of these assets in principle can be traded in the stock market, transactions seem to be suspended when stock prices drop below a given threshold.
4. THE CIVIL SERVANTS RETIREMENT ORGANIZATION (CSRO)

4.1. Institutional Issues

The Civil Servants Retirement Organization (CSRO) was created in 1922 to provide old-age, disability, and survivor pensions to government employees. Initially, the CSRO was part of the Ministry of Finance. In 1975 the fund became an independent institution, but its accounts remained under the Treasury’s control. Authorizations from the Ministry of Finance and Managing and Planning Organization (MPO) were required for financial transactions. Not until 1998 did the CSRO assume its own financial management.

The CSRO is governed by a Supreme Council where sits the Head of the Managing and Planning Organization (MPO), the Head of the SSO as a Deputy of the Ministry of Health, a Deputy of MPO, a Deputy from the Central Bank, and a Deputy from the Ministry of Finance. The last three are selected by the Heads of their respective organizations for a period of four years. The Director of the CSRO is named by the Head of MPO and reports to a four-members Supreme Council (see Figure 14). A new piece of legislation is currently being considered by the Parliament to include employers and plan members on the High Council.

The CSRO has 1,400 employees distributed in 28 regional offices covering all provinces in the country. The regional offices link contributions from close to 4,000 public institutions/units to the CSRO. In 2001 the CSRO’s total regular operational expenditures represented a modest 0.65 percent of total benefits paid. This low number is explained by the fact that the government (i.e., the central budget) directly finances part of operational expenditures. In year 2000 and 2001, these government transfers accounted for roughly 7 percent of total benefits paid. Wages account for 50 percent of operational expenditures. Nonwage expenditures are related to general administration (e.g., maintenance, banking, and legal fees) and account for roughly 47 percent of the total. Finally, expenditures related to corrective transactions (e.g., excess contributions returned) represent 3 percent of the total.

Figure 14: Organizational Chart of the CSRO

Source: CSRO.
During the last three years the CSRO has made considerable progress in strengthening institutional capacity by updating management and information systems, training staff, and streamlining the administrative process. The new information system, developed in-house, uses state-of-the-art technology and reflects the high quality of its technical staff.\footnote{Putting this system in place required analyzing and streamlining the different administrative processes carried out by the CSRO. Detailed documentation of these processes is available.} The system processes liquidations for new beneficiaries, emits payrolls, keeps track of bank accounts, and provides managers with detailed information about current pensioners. According to management, it has increased employee productivity threefold. However, given the lack of an updated database of contributors and employers (MPO is currently updating this database), data still need to be entered manually to process liquidations. These data are submitted electronically or in hard copy from the regional offices. Eventually, the wage and work history for all contributors should be loaded into the system and accessible from all regional offices. The CSRO also has computerized the accounting system. Iranian accounting law, however, does not follow international best practices and current regulations make it difficult to assess in a transparent and clear manner the financial situation of the pension fund. For instance, even when government contributions have not been transferred to the CSRO, they are registered in the income and profit statement.

4.2. Coverage and Contributions

The CSRO covers 1,572,825 public servants that represent 8.7 percent of the labor force; this number is expected to remain more or less constant over time. Despite the implementation of policies to reduce the size of the civil service, between 1990 and 2000 the average growth rate of the stock of public servants approximated 1.8 percent. There have been large fluctuations around this trend, partially reflecting discretion in the hiring process (see Table 11). Looking forward, however, the government seems to be committed to restricting the expansion of the public sector. The implication for the CSRO is that inevitably, over time, there will be a sharp increase in the number of pensioners per contributor.

The total payroll contribution to the system is set at 22.5 percent, but it is applied to the base salary, which represents roughly 75 percent of total earnings. Hence, effectively, the contribution rate is 16.8 percent of total earnings. From the 22.5 percent, workers pay 9 percentage points while the government pays 13.5 percentage points. The employee contribution rate was increased from 8.5 percent to 9 percent in 2000. Employees with more than 30 years of service do not pay their share of the contribution.

### Table 11: Evolution of Contributors in the CSRO

<table>
<thead>
<tr>
<th>Year</th>
<th>Contributors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>1,282,896</td>
</tr>
<tr>
<td>1991</td>
<td>1,329,544</td>
</tr>
<tr>
<td>1992</td>
<td>1,307,114</td>
</tr>
<tr>
<td>1993</td>
<td>1,353,000</td>
</tr>
<tr>
<td>1994</td>
<td>1,364,304</td>
</tr>
<tr>
<td>1995</td>
<td>1,389,482</td>
</tr>
<tr>
<td>1996</td>
<td>1,437,605</td>
</tr>
<tr>
<td>1997</td>
<td>1,459,748</td>
</tr>
<tr>
<td>1998</td>
<td>1,478,000</td>
</tr>
<tr>
<td>1999</td>
<td>1,536,300</td>
</tr>
<tr>
<td>2000</td>
<td>1,572,895</td>
</tr>
<tr>
<td>2001</td>
<td>1,572,895</td>
</tr>
</tbody>
</table>

Source: CSRO (2002)\footnote{Numbers obtained from CSRO do not seem to be observed data but rather some type of moving average.}
4.3. Benefits and Rates of Return

The system offers old-age, disability, and survivor pensions as well as contingency loans and family allowances; the system also covers health insurance contributions for pensioners (see Table 12).

Over the last ten years, there has been a fast increase in the number of beneficiaries, attributed in part to the government's efforts to control wage expenditures by reducing the size of the civil service. Not only has this lead to limited hiring, but also to the provision of incentives for early retirement (see below). Hence, during the last decade, pensioners grew at an average of 10 percent per year (see Table 13). As a consequence, the ratio between total old-age pensioners and contributors has deteriorated sharply, from 13.7 percent in 1990 to 33.4 percent in 2001. In a way, budgetary pressures in the general budget were implicitly transferred to the CSRO. Today, there are 662,786 pensioners in the CSRO—including old-age, disability, and survivors. In the absence of new policies that change retirement incentives, the number of pensioners is expected to grow at 4 percent per year.

\[29\] These are paid directly from the general budget.
Table 12: Benefits Provided by the CSRO

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old-Age Pension</td>
<td>To qualify for a pension, the individual needs to be 60 years old with no minimum number of years of contribution, or 50 years old with at least 25 years of service; if male, or no minimum age with 20 years of contribution if female. Males with 30 years of contribution do not have a minimum retirement age. The pension is computed on the basis of a 3.3% accrual rate. The replacement rate is applied to the average salary during the last two years. The salaries used in the calculations, however, represent only 75% of the total compensation. There is a maximum replacement rate of 100%. There is a minimum pension, which is adjusted yearly by Parliament, and set equal to the minimum wage (Rhials 600,000 (USD 80) per month in 2001; and Rhials 850,000 per month in 2003). Professions considered of high-risk allow individuals who have contributed for 20 years to retire with the same benefits as individuals who have contributed 25 years. Similarly, those who have contributed 25 years can retire with benefits equivalent to 30 contribution years. Individuals retiring before verifying retirement conditions obtain a lump-sum, which is financed by the government, equal to 3 months of salary for each year of service for unskilled workers, or 45 days of salary per each year of service for skilled workers. The CSRO gives back the contributions.</td>
</tr>
<tr>
<td>Disability Pension</td>
<td>Non-work-related: Individuals receive a pension equal to 0.033 * A * average wage for the last two years, where A = number of years of services + 3. A cannot be less than 15. Work-related: The pension is equal to the wage received by an individual with two more ranks. A rank is equal to 4 years of service. The wage of an individual is proportional to the rank. A disabled individual receives two additional ranks of salary.</td>
</tr>
<tr>
<td>Survivor Pension</td>
<td>Category 1: When an old-age retiree dies. The pension is divided by the number of dependents. Each dependent receives his/her share. Category 2: Contributor dies from work-related cause. The pension is calculated as in the case of a disability caused by a work-related injury. The pension is divided by each dependent. (Restrictions regarding dependency not specified.) Category 3: Contributor dies from non-work-related cause. The pension is calculated as in the case of disability caused by a non-work-related injury but with a 3 years bonus. The pension is divided by each dependent.</td>
</tr>
<tr>
<td>Family Allowances</td>
<td>There is an amount received by the spouse and by each child (up to a maximum of 3). The exact formula is cumbersome, but the allowance is basically a percentage of the basic wage, indexed with the growth rate of this wage). Family allowances are paid directly by the government and not by the CSRO.</td>
</tr>
<tr>
<td>Low- Interest Loans</td>
<td>Pensioners and contributors have the right to receive loans at a subsidized interest rate. This rate varies from case to case. In 2001 the average loan was equal to Rhials 4,000,000. Loans represent only a marginal fraction of the investment portfolio.</td>
</tr>
</tbody>
</table>

Source: Various interviews with the CSRO technical staff and Public Employee Act.

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30 This is a recent modification. Before 2001 the replacement rate was applied to the average salary of the last three years.
Table 13: Evolution of Total Beneficiaries in the CSRO

<table>
<thead>
<tr>
<th></th>
<th>Old-Age Pensions</th>
<th>Disabled</th>
<th>Survivor (Families)</th>
<th>Beneficiaries Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>236,348</td>
<td>5,949</td>
<td>90,144</td>
<td>332,441</td>
</tr>
<tr>
<td>1996</td>
<td>255,305</td>
<td>6,858</td>
<td>96,507</td>
<td>35,867</td>
</tr>
<tr>
<td>1997</td>
<td>273,355</td>
<td>7,744</td>
<td>102,835</td>
<td>383,934</td>
</tr>
<tr>
<td>1998</td>
<td>294,572</td>
<td>8,545</td>
<td>109,618</td>
<td>412,735</td>
</tr>
<tr>
<td>1999</td>
<td>320,051</td>
<td>9,336</td>
<td>116,764</td>
<td>446,151</td>
</tr>
<tr>
<td>2000</td>
<td>349,479</td>
<td>9,929</td>
<td>122,927</td>
<td>482,335</td>
</tr>
<tr>
<td>2001</td>
<td>401,549</td>
<td>10,82</td>
<td>125,395</td>
<td>537,766</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>662,786</td>
</tr>
</tbody>
</table>

Source: Mission calculations on the basis of computer reports provided by the CSRO IT Department.

As in the SSO’s case, the eligibility conditions and benefits that the system attempts to provide are generous by international standards. With regard to old-age pensions, if the individual is 60 years old or above, there is no minimum number of contribution years. Females can retire at any age as long as they have contributed for 20 years, and males can retire at age 50 if they have contributed for 25 years. In all cases the accrual rate of the system is set equal to 3.3 percentage points per year, but it also applies to 75 percent of wages. Hence, the effective accrual rate is 2.47 percent, still considerably high by international standards. The pension is computed on the basis of the last two salaries. Hence, an individual retiring after 25 years of contributions will obtain a pension that represents roughly 62 percent of his/her last total compensation. After 30 years of contributions the replacement rate will attain 74 percent. The maximum replacement rate has been set at 100 percent. Because the CSRO does not have a ceiling on covered wages, all employees regardless of income level receive the same replacement rate (see Figure 15).31

Figure 15: CSRO, Economy-Wide and Individual Replacement Rates by Income Level

While initial pensions are generous relative to contributions, like in the case of the SSO, pensioners do not count with an automatic indexation mechanism to protect them from increases in the cost of living. Article 4 of the Law on Coordinated Pay for Civil Servants

31 Recently a law has been approved to provide complementary plans to civil servants. The mission has not received information about the type of scheme nor the mechanisms used to manage these schemes.
states that the government should adjust yearly civil service employee wages and pensioner pensions by the consumer price index. The adjustment occurs after consensus is reached between the Managing and Planning Organization, the Minister of Finance, and the Central Bank. Discretion in the adjustments explains, in part, the erratic fluctuations in the real average pension observed between 1995 and 2001 (see Figure 16).

**Figure 16: Evolution of the Real Average Old-Age Pension**

![Graph showing the evolution of the real average old-age pension from 1995 to 2001.](image)

*Source: Mission calculations on the basis of CSRO individual records.*

*Like the Social Security Organization, the CSRO system offers a minimum pension, which is equal to the minimum wage of Rhials 850,000 per month; only a few of the new retirees have had the need to apply.* In year 2000, when the minimum wage was equal to Rhials 400,000, only 2.5 percent of total retirees received a pension equal to the minimum. However, 50 percent received a pension below Rhials 500,000 and often close to the minimum. In 2001, 2.7 percent of retirees received the minimum pension. Adjustments to the minimum pension have overcompensated for increases in the cost of living. For instance, between 1995 and 2000 the minimum pension increased 3.4 times (from Rhials 117,000 per month to Rhials 400,000 per month), while prices increased 2.3 times. Between 2000 and 2001 the minimum pension was increased by 25 percent, while the inflation rate was 15 percent.

*Disability and survivor benefits are disconnected from risk factors and from considerations of financial sustainability.* These pensions represent 23.5 percent of total pension expenditures. The same accrual rates used to compute old-age pensions apply, but workers are arbitrarily accredited with additional contribution years (see Table 12). In the case of disability pensions, the mission has not been able to assess the appropriateness of the current accreditation process. The system, however, does not appear to be prone to abuses, as these expenditures currently represent only 2 percent of total pension expenditures. The share of survivor pensions is considerably higher (21.5 percent). Eligibility conditions for dependency are not known at this point.

*Despite high contribution rates, the system offers rates of return that are not sustainable.* As previously discussed, over the long-term, the sustainable rate of return in a pay-as-you-go system is equal to the growth rate of the wage bill. In the CSRO, given that the size of the civil service is expected to decline as a share of the total population, the sustainable growth rate is given by the growth rate of the average wage plus at best 1 percentage point. Calculations under various assumptions about the growth rate of this average wage show that implicit rates of return are considerably higher and therefore unsustainable. For instance, under the assumption of a 2 percent average growth of real wages, internal rates of return for males would be in the 5-7 percent range (depending on the age of the individual when enrolling in the system), and for females in the 5-10 percent range (see Figure 17).
While statutory early retirement is not particularly attractive, special programs have been implemented by the government over the years as a way of reducing the size of the civil service. Individuals retiring early receive, in principle, a lump-sum equal to three months of salary for each contribution year in the case of unskilled workers, and 1.5 months in the case of skilled workers (see Table 12)\(^\text{32}\). This lump-sum is financed directly by the government. In addition, the CSRO gives back the contributions, without interest. These statutory rules, nevertheless, have often been overruled. For instance, in 1980, all employees with 15 years of services were given 15 additional years with no restrictions. In 1999, an act was approved that provided a lump-sum equal to two weeks of salary per contribution year to those individuals who agreed to retire before meeting requisite retirement conditions. In 2001, the act was modified to offer one month of salary per contribution year, up to a maximum of 30 years. In 1980, all employees with 15 years of services were given 15 additional years with no restrictions.

### 4.4. Financing Mechanisms and Sustainability

The CSRO is expected to mobilize revenues amounting to Rhials 5,170 billion (USD 689 million), or 0.9 percent of GDP, mainly from contributions and investments.\(^\text{33}\) Revenues from government and employee contributions in principle account for over 80 percent of the total. Revenues from investments in years 2000 and 2001 amounted to Rhials 528 billion (USD 70.4 million) and Rhials 600 billion (USD 80 million), or 12 percent and 11 percent of total revenues respectively. An implicit revenue is also generated by the fact that the government pays directly part of administrative expenditures. These payments in year 2001 were equivalent to Rhials 311 billion (USD 41 million), or 5.7 percent of total revenues.

Actual revenues, however, are lower as the government has not been paying in-full its contributions. The government suspended the payment of contributions in 1995. In 2001, for instance, unpaid contributions totaled Rhials 1,000 billion (USD 180 million), excluding penalties that amounted to Rhials 765 billion (USD 80 million). As a result of the moratoria, the government has accumulated arrears with the CSRO amounting to Rhials 17 billion (USD 2.3 billion). Recently, the government settled USD 500 billion of these arrears by transferring

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\(^{32}\) These lump-sum is financed from the general budget.

\(^{33}\) These revenues exclude non-regular entrances such as those related to the payment of late fees from the government, late contributions, or unaccounted revenues. In year 2000 and 2001 for instance, these unaccounted revenues reached Rhials 32 billion.
public companies to the CSRO (see Sub-section on Investment Policies in the CSRO below). It is expected that starting in year 2002, no new arrears will be accumulated.

The share in GDP of total expenditures in pension benefits has doubled during the last five years; today expenditures amount to Rhials 4,308 billion (USD 609 million), or 0.75 percent of GDP. The largest shares of expenditures are absorbed by old-age pensions (76.7 percent) and survivor pensions (21.4 percent). Disability pensions represent only 1.9 percent of the total. These shares have been roughly constant over time (see Figure 18). In terms of non-pension benefits, expenditures on health insurance contributions are very modest (0.45 percent of total pension expenditures). Family allowances are paid directly from the general budget and therefore are not included in the CSRO’s profit and losses report. Information on the total amount is not available.

The 2001 official profit and losses report for the CSRO, which counts as revenues the arrears accumulated by the government for its contributions and late fees, displays a positive balance of Rhials 1,764 billion (USD 235 million). When these fictitious contributions and late fees are removed, the operational balance generates a deficit of Rhials 186 billion (USD 24.8 million). Similarly, the official pension balance (total revenues from contributions minus total pension expenditures) is equal to Rhials 262 million. When government contributions are removed, pensions expenditures exceed revenues by Rhials 1,088 billion (USD 145 million). Since government contributions are being normalized, a better indicator of the financial situation of the fund is the operational balance excluding late fees and the losses for the valuation of assets. This balance equals Rhials 814 billion (USD 108 million). Thus, if government contributions are paid regularly, over the short term the CSRO could generate a surplus and accumulate reserves (see Table 14).

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34 This includes the extraordinary expenditures related to the losses imposed by the transfer of government companies to the CSRO to settle part of the public debt (see Section 4.5). The losses result from the difference between the book value of the company, which was used to compute the value of the transfer, and the market value. For 2000 and 2001 these losses were estimated at Rhials 232 billion (USD 31 million) and Rhials 311 billion (USD 41 million) respectively.
Table 14: Revenues and Expenditures in the CSRO (billions of rhials)

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>Percent</th>
<th>Share of GDP</th>
<th>2001</th>
<th>Percent</th>
<th>Share of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL EXPENDITURES</strong></td>
<td>3,099</td>
<td>0.53%</td>
<td>4,356</td>
<td>0.65%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pension Benefits</td>
<td>3,048</td>
<td>98.37%</td>
<td>4,308</td>
<td>98.90%</td>
<td>0.65%</td>
<td></td>
</tr>
<tr>
<td>Old-Age</td>
<td>2,320</td>
<td>74.87%</td>
<td>3,306</td>
<td>75.90%</td>
<td>0.50%</td>
<td></td>
</tr>
<tr>
<td>Disability</td>
<td>60</td>
<td>1.94%</td>
<td>80</td>
<td>1.84%</td>
<td>0.01%</td>
<td></td>
</tr>
<tr>
<td>Survivor</td>
<td>668</td>
<td>21.56%</td>
<td>922</td>
<td>21.17%</td>
<td>0.14%</td>
<td></td>
</tr>
<tr>
<td>Health Insurance Contributions</td>
<td>20</td>
<td>0.65%</td>
<td>20</td>
<td>0.46%</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Operational Expenditures</td>
<td>31</td>
<td>0.99%</td>
<td>28</td>
<td>0.64%</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>General Administration</td>
<td>13</td>
<td>0.42%</td>
<td>13</td>
<td>0.30%</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Wages</td>
<td>12</td>
<td>0.39%</td>
<td>14</td>
<td>0.32%</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>0.18%</td>
<td>1</td>
<td>0.02%</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td>4,136</td>
<td>0.71%</td>
<td>5,170</td>
<td>0.78%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contributions</td>
<td>3,608</td>
<td>82.60%</td>
<td>4,570</td>
<td>83.38%</td>
<td>0.69%</td>
<td></td>
</tr>
<tr>
<td>Investments</td>
<td>528</td>
<td>12.09%</td>
<td>600</td>
<td>10.95%</td>
<td>0.09%</td>
<td></td>
</tr>
<tr>
<td><strong>BALANCE</strong></td>
<td>1,037</td>
<td>0.18%</td>
<td>814</td>
<td>0.12%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Interviews with the Director of the Financial Department.

Note: (a) The table excludes non-regular expenditures (e.g., losses imposed by the transfer of government companies) and revenues (e.g., unaccounted revenues, late fees from the government). (b) Operational expenditures do not take into account payments that are directly incurred by the government's central budget. (c) Contributions reported are legal contributions (i.e., do not take into account government arrears).

Looking forward, however, the financial situation of the system is expected to deteriorate as the number of retirees increases relative to the number of contributors. Under the assumption that the size of the civil service grows at half the growth rate of the population, actuarial projections show that the dependency ratio would double by year 2030, reaching 80 beneficiaries per 100 contributors (see Figure 19). To keep the system in balance, contribution rates would need to increase from 22 percent today to close to 60 percent in year 2075. If contribution rates and current benefits remain unchanged, then the balance of the CSRO will deteriorate, generating a deficit of 0.8-1 percent of GDP by year 2030. While the share in GDP of this deficit is likely to drop afterward, as the economy expands faster than the pension system, the absolute value of the deficit will continue to grow. The present value of unfunded pension liabilities is estimated at 30-35 percent of today's GDP, depending on assumptions about economic growth and labor productivity growth. If the CSRO is closed to new entrants, the additional resources necessary to honor the pensions of today and of future retirees approximate 20 percent of GDP.

35 As in the case of SSO, the financial projections need to be interpreted with caution given the limitations of the baseline data. Several assumptions have been required. These have been extensively discussed with the CSRO technical staff and have been constrained by the experiences in other countries (see Technical Appendix).
4.5. Management Policies for Fund Reserves

Investment policies are dictated by the Supreme Council of the CSRO and executed by the Director of the CSRO with the technical advice of an Investment Committee. Policies include the budget of the CSRO, the classes of assets where the CSRO can invest, and maximum allocations. While the law creating the CSRO imposes restrictions on the shares of new investments that can be allocated to loans (50 percent), bank deposits (25 percent), and stocks (25 percent), these do not seem to be respected in practice. The Supreme Council does not have the authority to remove the Director of the CSRO, who is selected by the Head of MPO. The Investment Committee only has an advisory role. The Committee is composed of the Director of the CSRO, an Economic and Investment Assistant (nominated by the Director of the CSRO), and the Managing Director of the CSRO's Investment Company (also nominated...
by the Director of the CSRO). Each of the Committee members has investment advisors—including affiliated stockbrokers.

There are two main types of investment activities: direct investments, which are executed by the Department of Investments and Economic Affairs of the CSRO, and indirect investments, which are executed by the newly created Investment Company. Direct investments refer to investments in companies (i.e., equity positions) that do not take place through the stock market. The level of CSRO ownership in these companies varies from 100 percent of assets, as in the case of the construction company, to less than 13 percent. Companies where CSRO ownership exceeds 50 percent of assets are managed directly; in companies where the CSRO owns between 13 percent and 50 percent of the assets, there are representatives on the Board of Directors; in companies where ownership is below 13 percent, there is no representation. Direct investment activities have intensified with the recent transfer of public companies to cover part of the government debt with the fund. Looking forward, however, the strategy is to prioritize indirect investment activities through the Investment Company.

The Investment Company was created to manage investments in the stock market; it currently has assets equivalent to USD 125 million, representing close to 5 percent of total reserves (see Table 15). To give the company some degree of autonomy from the CSRO, the Investment Company was created with its own Supreme Council. The Supreme Council of the Investment Company, however, is composed of the same members as the Supreme Council of the CSRO. The Board of Directors is constituted by the Head of the CSRO, the Director of the Department of Investment and Economic Affairs of the CSRO, the Managing Director of Behvar (a company owned by the CSRO), and the Managing Director of the Auditing Company (also owned by the CSRO). The Manager of the company is appointed by the Board of Directors. The company has three departments: the Stocks Department that is in charge of trading stock, the Financial Department that acts as a custodian, and the Research Department that provides recommendations in terms of investment (see Figure 20). There is no information about company-specific investment policies or strategies, except that investments cannot be above 15 percent of the capital of a given company (to avoid involvement in decisionmaking) and that above a given threshold approval is required from the Board of Directors.

Figure 20: CSRO Investment Company

Source: CSRO.
The CSRO has accumulated reserves equivalent to USD 2.5 billion, or 3.3 percent of GDP, although 70 percent assumes the form of government arrears. This government debt, even when interest and penalties are applied, generates negative real rates of return of close to −2 percent. An additional 20 percent of the reserves is captured by public companies recently transferred by the government to cover part of its arrears with the fund. Indeed, in 2001 the government transferred assets in 50 companies with a book-value of USD 500 million to the CSRO. The remainder of the CSRO reserves is allocated to the Investment Company (5 percent) and to government bonds, bank deposits, and loans to members and the CSRO companies (5 percent). Hence, in practice, fund managers have a very narrow margin of maneuver to reallocate assets and improve rates of return.

<table>
<thead>
<tr>
<th>Companies Transferred by the Government</th>
<th>500</th>
<th>19.60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment Company</td>
<td>125</td>
<td>4.90%</td>
</tr>
<tr>
<td>Construction Company</td>
<td>37</td>
<td>1.45%</td>
</tr>
<tr>
<td>Long-Term Deposits</td>
<td>25</td>
<td>0.98%</td>
</tr>
<tr>
<td>Government Bonds</td>
<td>63</td>
<td>2.45%</td>
</tr>
<tr>
<td>Loans</td>
<td>1</td>
<td>0.04%</td>
</tr>
<tr>
<td>Government Arrears—Including Interest and Penalties</td>
<td>1,800</td>
<td>70.57%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,551</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Mission calculations based on interview with the Head of the Investment Department.*

The Director of the CSRO with the support of the Investment Committee has decided to use the CSRO funds to recapitalize the companies transferred by the government and to restructure their management and production processes so that the companies achieve a minimum level of profitability and can then be traded on the stock market (through the Investment Company). When an agreement was reached between the CSRO and the government to pay part of the debt through the transfer of public assets, a list of companies operating in various sectors (e.g., telecommunications, transport, and energy) was proposed to the CSRO. Companies were then selected on the basis of six criteria: i) the volume of shares issued by the company in domestic and foreign markets; ii) the consumption patterns for the goods produced by the company; iii) the book value of the company in comparison with its market value; iv) the quality of its human resources; v) the level of technology; and vi) the financial performance of the company in recent years. The companies were appraised by qualified experts from the stock market and judicial specialists. Despite this selection process, however, only a few of the transferred companies can be traded in the stock market. The majority of the companies do not meet the necessary criteria. The CSRO has assumed control of these companies (through the Department of Investments and Economic Affairs) and plans to reform the management process in order to make the companies profitable. These reforms are being conducted by specialized groups of legal, actuarial, financial, and auditing experts.

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36 Conservative estimates by stock-market experts reflected in the state of profits and losses suggest that the revaluation of the assets (from book value to market value) cost the CSRO Rhials 132 billion (USD 17.6 million). Additional transfers equivalent to USD 1 billion are expected to take place in 2003.

37 Total arrears in 2003 are estimated at over USD 2,300 million (Rhials 19,000 billion).
The main weaknesses in current investment policies, similar to those of the SSO, can be summarized as follows.

**The governance structure is not conducive to prudent management of reserves.** As in the case of the SSO, the current governance structure of the CSRO does not follow best international practices in making fund governors and fund managers accountable to plan members. Investment decisions are made by a closed group of senior civil servants appointed by high-ranking officials. The fund therefore remains overly dependent on the government. While a proposal is currently being considered by the Council of Ministers to include workers and beneficiaries representatives on the Supreme Council, even if approved, the policy is likely to bring little or no improvement in the fund performance. Indeed, as shown by the SSO and the experience of other countries, tripartite governing bodies are not conducive to better governance (see Section 7.2).

There is no clear separation of governing functions from managerial functions, and there are no incentives in place for the Managing Director to optimize the performance of the fund. First, it is unclear whether the governing body has the technical capacity to design suitable investment policies and monitor performance. The Investment Committee is the technical body that brings together experts in the areas of economics and finance, but it plays a purely advisory role and has little influence on investment decisions. Second, the Supreme Council does not have the power to select and remove the Managing Director of the CSRO (who is appointed by the Head of MPO). The Managing Director is therefore not really accountable to the governing body. Finally, there is no mechanism linking the performance of the fund to the compensation of the Managing Director and the management team.

While the Investment Company was created with the objective of increasing the level of independence of investment policies, the current governance structure is unlikely to achieve this goal. The two bodies that share governing responsibilities, the Supreme Council of the Investment Company and its Board of Directors, are composed of top-level officials from the CSRO and the government. Again, it is not clear whether either of the two bodies has the technical capacity to design investment policies and evaluate the performance of the Managing Director. The Board of Directors of the Investment Company does have the power to select and remove the Managing Director, but there are no policies linking his/her remuneration to the performance of the fund.

**Disclosure, auditing, and custody practices do not promote accountability.** Managers have in principle full access to the financial information of the different companies and to the results of the various investment activities. This information, however, is not processed and reported in a simple way for the consumption by plan members. In fact, the CSRO does not produce the equivalent of an Annual Report for its members, and no formal process exists for a worker or beneficiary to access financial information.

Financial audits of the CSRO and the CSRO-owned companies are conducted periodically by the Supreme Auditing Organization, which is a government body. The fact that there are no audits by completely independent firms is a negative factor in terms of accountability.

Like the SSO case, the CSRO does not use an independent custodian. The custodian for the Investment Company resides in its own financial department. The custodian for the CSRO is also part of its financial department. The same is true of the Housing Company.
There is no clear statement of investment policies and investment strategies do not follow basic principles in terms of asset exposure limits. As in the SSO, the practice of limiting investment to 5 percent of the capital of any given company is not followed by the CSRO. For the Investment Company, the only restriction is that investments remain below the level giving the CSRO representation on the Board of Directors. There are no limits in terms of the share of a given company in the CSRO portfolio.

The current strategy to recapitalize and restructure the transferred public companies to improve profitability is highly risky. Due in part to an inappropriate governance structure, the CSRO’s activities are starting to deviate from the original mandate, imposing unnecessary risk on workers savings. As compared to the SSO, the CSRO is not mandated by law to implement social or economic development policies. The basic mandate is simply to collect contributions, manage reserves to the benefit of the plan members, and pay pensions. CSRO activities that relate to the direct management of companies are increasing, in part as a result of the transfer of the public companies. If some of these companies really have the potential to become profitable, it is not clear why the CSRO should assume all the risks involved in the restructuring process. Indeed, these companies could attract other investment partners who are willing to share the risks in exchange for higher profits in the future.

As in the case of the SSO, directly managing companies can create serious conflicts of interest. For instance, credits to the companies are likely to be approved without the proper assessment of risks. In an effort to improve the financial sustainability of the companies, anticompetitive practices may be put in place (e.g., subsidies, price floors). These practices can jeopardize the development of other companies operating in the sector.

The mechanisms that are being used to refinance public debt are costly and non-transparent. The government still has accumulated arrears with the CSRO amounting to USD 1,800 billion. To pay part of this debt, a new transfer of companies is being considered. This transfer could bring additional losses to the CSRO as the assets are not valued at market prices. Even if the companies are not directly managed by the CSRO, resources will need to be allocated to outsource management and/or find investment partners to restructure part of these companies. Hence, the CSRO is implicitly being converted into a government restructuring agency. As discussed in Section 7.2, other alternatives could be considered to refinance the public debt that do not put excessive risks on worker savings.
5. **Tax Treatment of Worker Savings**

The tax treatment of pensions has important implications for fiscal policy, individual saving/consumption decisions, and equity. A generous tax system can encourage pension savings but also bring costs in terms of forgone revenue. Adverse redistributive effects may also take place if high-income individuals benefit more from tax exemptions than low-income individuals. This short section benchmarks the Iranian pension system with best international practices. The tax treatment of non-pension income is not discussed.

In Iran, contributions and income generated by the investments of reserves in the SSO and the CSRO are taxed alike. Pensions are tax exempted. This is known as the tax, tax, exempted scheme (TTE). It is a comprehensive income tax, as consumption/expenditures and savings are both taxed. This is a rare form of taxation for retirement income. Among OECD countries only New Zealand seems to apply this scheme.

Best international practices suggest exempting interest income from retirement savings and taxing either contributions or benefits. In other words, consumption-type taxation is applied to mandatory retirement income. This is the mechanism used by most OECD countries as a way to induce long-term savings. The issue then becomes whether to tax contributions (the tax is front-loaded) or benefits (the tax is back-loaded). The majority of OECD countries exempt payroll contributions from taxes and tax pensions. This is known as the EET (exempt, exempt, taxed) treatment. It is also possible to have TEE schemes. While both schemes are likely to mobilize the same amount of resources, governments may prefer one or the other depending on liquidity constraints. For instance, some governments may not be able to afford EET schemes as tax revenues are delayed.

The Government of Iran could consider exempting the SSO and CSRO’s investment income from taxes. Nevertheless, it is important to notice that this does not mean introducing tax exemptions for the companies where the funds are invested. Indeed, this would create undesirable economic distortions. Companies owned by the CSRO or the SSO should have the same tax treatment as companies not owned by the funds. It is the after-tax profit from the activity of the companies that is distributed to the SSO or the CSRO that should be exempted from the tax (see Section 7.2).

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38 For a review of alternative practices in terms of tax treatment of retirement savings see Whitehouse (2001) and Lindeman (1999).

39 This assumes that the tax rate is constant and that the discount factor is equal to the interest rate on savings.
6. A FRAMEWORK FOR PENSION REFORM

Prior to presenting reform options for the pension system in Iran, this section outlines a framework to guide policy discussions. It starts by identifying the rationale for government involvement in the design and implementation of a public pension system and its social objectives. Then a typology of pension mechanisms that can achieve these objectives is proposed. Finally, a short review of international experiences regarding the implementation of these various mechanisms is provided.

6.1. Objectives of the Public Pension System, Costs, and Implementation Mechanisms

The question of what is the rationale for government involvement in the area of pensions is central to discussions about pension reform. Prior to deciding reform options, policymakers and civil society ought to have a clear idea of the social objectives that they are trying to achieve through the public pension system. In other words, why is it better for a given society to put in place a public pension system instead of letting individuals plan for their retirement through formal mechanisms (e.g., savings accounts) and informal mechanisms (family or community support)? There are at least three reasons. First, some individuals simply cannot save enough for retirement due to low-income levels and/or frequent periods of unemployment; these individuals may not always be able to count on their families for support. Second, individuals may have difficulties thinking about the future and as consequence consume excessively when young. Finally, even those individuals who have the means to save and are willing to save may face problems when managing the risks associated with the investment of their capital.

Here it is argued that pension reforms should be conducted with three main social objectives in mind for the pension system:40 i) guaranteeing a minimum pension at retirement to those individuals who did not have the means to save enough; ii) encouraging individuals to save for their retirement; and iii) assisting individuals to manage investment risks.

Pension mechanisms that can achieve these objectives, however, also bring costs. First, guaranteeing a minimum pension for low-income individuals involves transfers that are usually financed through taxation and that add distortions to the economy. Guarantees can also create negative incentives for work and impose large contingent liabilities on governments. Second, mandating savings can have adverse effects if the contribution rate is set too high (e.g., evasion, lower social welfare, excessive labor market distortions). Third, if the government assumes excessive financial risks, macroeconomic stability and the welfare of future generations can be compromised. Hence, when analyzing pension reform options, decisions need to be made in terms of the following: How large should the mandate to save and the targeted replacement rate be? How much redistribution is affordable? How should financial risks be distributed between the government, individuals, and private insurers? Who should manage and how to regulate investment policies? The objective of a pension reform program should be to maximize social objectives while minimizing micro- and macroeconomic distortions.

A large number of pension mechanisms could be considered to achieve required social objectives; they are characterized by four elements: i) how the benefits are computed; ii) how the system is financed; iii) who manages the system and how; and iv) who bears the financial risks. Benefits can be computed on the basis of work and wage history (the case of defined benefits schemes–DB); or on the basis of the total contributions accumulated, rates of return received on investments, and life expectancy (defined contribution systems–DC); or

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40 For discussions about the rational of the public pension system see for instance World Bank (1994).
combinations of both. In terms of financing, pensions can be paid from current contributions (the case of the pay-as-you-go system–PAYG); from accumulated savings (fully funded system–FF); or a combination of both. Management can be public or private with different proportions of mandatory versus voluntary savings, different types of regulations for the investment of fund reserves (e.g., centralized versus decentralized management), and different mechanisms for collecting contributions, keeping records, and reporting. Finally, financial risks can be distributed differently between the government, private insurers, and individuals. Hence, there is a large menu of pension mechanisms that could be put in place by selecting alternative options within each of the four dimensions outlined here. How efficient some of these choices are in achieving social objectives while minimizing distortions is next discussed.

**Social Objective 1: Protecting the Elderly Poor**

It is useful to distinguish between redistribution toward the core elderly poor, who are usually outside the contributory system, and redistribution within the contributory scheme, ideally from high-income workers to low-income workers.

*Redistribution toward the elderly poor involves social assistance programs, in-kind or in-cash transfers, that should be financed directly from the central budget.* The elderly poor, and those individuals likely to become poor during old age, are usually outside the contributory system. These individuals face liquidity constraints and short-term risks that outweigh the risk of longevity. For them joining a contributory scheme is usually welfare decreasing. Non-contributory schemes need to be in place to protect these individuals. These are discussed in more length in Section 7.4, which addresses the issue of how to expand coverage. Here it is only emphasized that these programs need to be implemented in a way that does not create negative incentives for working and for joining the contributory system.

*Most countries pursue another form of redistribution, from high- to low-income workers within the contributory system (usually a DB–PAYG scheme).* The costs of this redistribution mechanism, however, can outweigh the benefits. Whether redistribution from high- to low-income workers in the contributory system is desirable or not is a matter of social preferences. If it is, however, policy makers ought to consider the less-distorting redistribution mechanism. Achieving the redistribution through the pension system involves taxing labor and thus distorting labor markets. An alternative is to finance the transfers (e.g., guarantees on minimum pensions) directly from the central budget. Countries following this approach include Australia, Chile, and New Zealand.

Moreover, *in the case of a DB–PAYG system, transfers can be regressive, meaning that low-income individuals receive lower rates of return than high-income individuals; furthermore, future generations usually receive lower rates of return than current generations.* As exemplified in the discussions about the SSO and the CSRO, a given individual’s rate of return from the DB–PAYG system is determined by two main factors: the average growth rate of the real wage; and life expectancy. Individuals whose wages grow faster and who live longer, thus receiving pensions for longer periods of time, have higher rates of return. These individuals are often educated and healthy workers, more likely to belong to middle- and high-income households. In principle, the system can be designed so that low-income individuals receive higher rates of return than high-income individuals (for instance by introducing minimum pensions), but *progressivity is not an inherent feature of the DB–PAYG system.* Another characteristic of the DB–PAYG system is that the sustainable rate of return that the system can

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41 Transfers within the pension system are not a unique characteristic of defined benefit schemes with pay-as-you-go financing (DB–PAYG). Transfers can also be implemented in a fully funded defined contribution system with individual accounts (DC–FF–IA), for instance, by discounting a few percentage points from the contributions of high-income workers to guarantee a minimum pension to low-income workers.
pay decreases over time. The implication is that new generations receive lower rates of return than old generations. Thus, there is an implicit transfer of resources from the young to the old. Even if the system is designed with some degree of progressivity within generations, high-income members of the “old” generation can still receive implicit transfers from low-income members of the “young” generation.

**Social Objective 2: Encouraging Individuals to Save**

The challenge for policymakers is to design a pension system with the right balance between mandatory and voluntary savings.

Any type of public pension mechanism attempts to promote savings by mandating a minimum contribution rate. However, if the contribution rate and the rates of return are not set appropriately, the mandate can have adverse effects. When contributions are set too high, that is when individuals are being asked to save beyond their optimal rates (assumed to be unknown to them), the mandate will reduce and not increase social welfare. High contribution rates and low expected rates of return (resulting for instance from political uncertainty) can also promote evasion and underdeclaration of wages, thus undermining coverage and financial sustainability. Underdeclaring wages is another mechanisms to escape the mandate in order to obtain higher expected rates of return on savings or a better allocation of income between consumption and assets. Underdeclaration is more likely when part of the benefits received are not linked to the contributions. For instance, in a DB system when the pension is computed only on the basis of the most recently received wages, declaring in-full the wages received at the outset of the career contributes nothing to the final pension. In general, finding a mandate that proves desirable for a majority of individuals (at least when old) is a difficult undertaking.

An alternative mechanism to mandatory savings is to provide incentives that induce individuals to save. Popular instruments to encourage long-term savings include tax credits on interest income, preferential interest rates, and matching grants. If properly used, these instruments increase the relative rate of return that individuals receive on long-term savings (see Section 7.5). Nonetheless, by themselves these instruments are not sufficient. A necessary condition to promote voluntary savings is that households perceive a stable macroeconomic environment and trust the financial system. Voluntary savings are unlikely to develop in economies with high inflation rates, volatile exchange rates, restricted investment opportunities, and poorly regulated and supervised banks. Hence, prior to considering instruments that add points to the expected market rate of return on long-term savings, governments need to create a macroeconomic environment and regulatory institutions that raise the expected market rate of return.

**Social Objective 3: Helping Individuals to Manage Investment Risks**

The allocation of risks between individuals, private insurers, and the government depends on how benefits are computed and the type of guarantees provided by the sponsor.

When financial markets are underdeveloped, the rationale for government provision of pensions is the strongest. In this case, individuals may lack the necessary instruments to transfer income into the future or to manage their risk of longevity (e.g., annuity markets). Even if the instruments exist, an inappropriate regulatory and supervisory framework can make these instruments too risky. Individuals close to retirement can be extremely vulnerable to a sudden downturn in financial markets. Governments can mitigate negative impacts, for instance, by guaranteeing a minimum pension like in Chile, but the costs of these guarantees

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42 See Robalino and Sabatini (2003).
can be considerable. The DB-PAYG appears to be a mechanism to help individuals smooth consumption over time while shielding them from financial risks and the risks of longevity.

Still, DB-PAYG systems can transfer excessive risks to the government and therefore to future generations. In DB-PAYG systems the rate of return that individuals receive is not pre-determined, since it depends on the growth rate of wages and life expectancy. In the absence of appropriate indexation, individuals also face the risk of inflation that can erode the real value of pensions. The bulk of the financial risks, however, is assumed by the government. If the contingent liabilities of the government are too high, fiscal and macroeconomic stability can be compromised and with it the welfare of future generations.

A more equilibrated allocation of risks between the government and individuals can be achieved by combining defined benefit systems with defined contribution systems. By relating part of the benefits to the contributions made by the individual and macroeconomic and demographic developments, the government implicitly reduces its share of the financial risk. For instance, in the case of the NDC system (see Section 7.1), pensions received can be a function of contributions accumulated that earn an interest rate equal to the growth rate of the economy. Government guarantees can still be implemented and, thus, assure a minimum pension upon retirement after a full-career.

Secondary Objectives: Enabling Sustainable Economic Growth

Increasing the level of funding of a pension system while improving the management of reserves can contribute to the accumulation of long-term savings, financial-sector development and through this channel economic growth and lower output volatility. The traditional view regarding how a mandatory-funded pension system can contribute to economic growth focused on the level of savings of an economy. The argument was that mandatory-funded systems could increase national savings, thus promoting the accumulation of capital and growth. While there is some evidence that in financial markets where plan members have restricted access to credit, mandatory systems increase the national saving rate, there is in general scant support for the proposition. Moreover, even if savings increased, the effect on growth would depend on how the savings are allocated. If higher saving rates are simply accompanied by higher surpluses in the capital account, growth effects would be slim or nil. On the other hand, there is growing evidence that mandatory-funded schemes can alter the composition of savings (favoring long-term versus short-term savings) and can promote the development of securities markets, especially in countries with closed capital accounts making them more liquid and deeper as well as more sophisticated and innovative. At the same time, there is evidence that financial-sector development contributes to higher economic growth and lower output volatility. Since pension benefits are paid out of current GDP, regardless of how the system is financed, a pension system that promotes economic growth is at the same time promoting its financial sustainability and allowing its members to enjoy higher rates of return on their savings.

44 See Lachance and Mitchell (2002).
45 Bailliu and Reisen (2000).
46 Impavido, Musalem, and Tressel (2002); Walker and Lefort (2000).
47 Levine (1999); Levine, Loayza, and Beck (1999).
6.2. **International Experiences: One Size Does Not Fit All**

The purpose of this section is not to provide a complete overview of pension reforms around the world; other references are suggested for that purpose. Rather it is simply to give the reader an idea of the heterogeneity of reform efforts and the need to tailor reform programs to the initial conditions of individual countries.

*In practice, the reform of public pension systems generally takes one of two paths: non-systemic reforms and systemic reforms.* Non-systemic reforms refer to reforms involving parametric changes to key parameters, such as retirement ages, vesting periods, accrual rates, and so forth. Systemic reforms are more complex and typically affect the underlying management and financing of a pension system or its method of determining benefits. Three basic types of systemic reforms have been observed worldwide. These include (i) shifting—either in part or entirely—from a pay-as-you-go defined benefit scheme to a funded defined contribution scheme where funds are held in individual investment accounts and managed by private parties, (ii) shifting from a fully funded defined contribution scheme to a pay-as-you-go defined benefit scheme managed by the public sector (the exact opposite of the former approach), and, more recently, (iii) introducing notional defined contribution accounts (NDCs).

*What are the regional trends?* Of the countries that have reformed their public pension systems over the past few decades, most (roughly 70 percent) have pursued parametric reforms. The remainder have pursued systemic reforms. Funded individual accounts were introduced in most of the Latin American countries that undertook reforms (e.g., Argentina, Bolivia, Chile, Colombia, Costa Rica, El Salvador, Mexico, Peru, and Uruguay). Australia and the United Kingdom have also followed this approach. In funded individual accounts, contributions accumulate in individual investment accounts and earn market interest rates. At retirement, the capital in the account is transformed into an annuity (i.e., a pension paid until the beneficiary dies). The reverse approach—moving from a fully funded defined contribution scheme to a pay-as-you-go defined benefit scheme—is less common but has been pursued in some countries in Sub-Saharan Africa such as Nigeria, often to address the disappointing performance of state-run provident funds. The third approach to systemic reforms—NDCs—is relatively new, at least in its current form. This approach to reform changes the method used to compute pensions (from a classic defined benefit formula to a defined-contribution-type formula) without actually changing the scheme's underlying pay-as-you-go financing. It is being pursued by Latvia, Sweden, Poland, and Mongolia. In the case of the three European countries, NDCs are being augmented by funded individual accounts to encourage capital-market development and to increase total replacement rates at retirement.

*Within these general approaches to reform, however, considerable variation exists.* For instance, in terms of implementation schedules, methods of financing the transition costs, if there are any (transition costs arise, for example, when shifting from pay-as-you-go financing to a funded system, because invested contributions are no longer available to pay benefits to current beneficiaries), and whether the reform of the public system is done in isolation or as part of a multipillar approach which involves the introduction of mandatory or voluntary private pension schemes. Tables 16 and 17 illustrate the variations in terms of systemic reforms introduced in Eastern Europe and Central Asia, and Latin America.

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49 Ibid.
50 For a discussion of pension reform strategies being pursued in Africa see Bonnerjee (2001).
51 Valdes-Prieto (1999) points out that a scheme resembling NDCs was proposed in the United States in 1968 by Buchanan.
## Table 16: Pension Reforms in Eastern Europe and Central Asia

<table>
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<tr>
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<tbody>
<tr>
<td>Hungary</td>
<td>Legislated, Operating</td>
<td>Jan 1998</td>
<td>DB–PAYG</td>
<td>6%</td>
<td>31%</td>
<td>45%</td>
<td>Mandatory New Entrants, Voluntary Others</td>
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<tr>
<td>Kazakhstan</td>
<td>Legislated, Operating</td>
<td>Jan 1998</td>
<td>Guaranteed Minimum</td>
<td>10%</td>
<td>30%</td>
<td>100%</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Poland</td>
<td>Legislated, Operating</td>
<td>Jan 1999</td>
<td>NDC</td>
<td>7.2%</td>
<td>33%</td>
<td>70%</td>
<td>Mandatory &lt;30, Voluntary 30-50</td>
</tr>
<tr>
<td>Latvia</td>
<td>Legislated, Operating</td>
<td>July 2001</td>
<td>NDC</td>
<td>2% growing to 9%</td>
<td>20%</td>
<td>72%</td>
<td>Mandatory &lt;30, Voluntary 30-50</td>
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<tr>
<td>Croatia</td>
<td>Legislated</td>
<td>Jan 2003</td>
<td>DB–PAYG (point system)</td>
<td>5%</td>
<td>25-30%</td>
<td>60-70%</td>
<td>Mandatory &lt;40, Voluntary 40-50</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>Legislated, Operating</td>
<td>Jan 2002</td>
<td>DB–PAYG</td>
<td>2% growing to 5%</td>
<td></td>
<td></td>
<td>Mandatory &lt;42</td>
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<tr>
<td>Estonia</td>
<td>Legislated</td>
<td>July 2002</td>
<td>DB–PAYG</td>
<td>6%</td>
<td>20%</td>
<td>60%</td>
<td>Voluntary (opt-out +2%)</td>
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<td>Romania</td>
<td>Partially Legislated, Then Questioned</td>
<td>Jan 2003</td>
<td>DB–PAYG (point system)</td>
<td>8%</td>
<td>30%</td>
<td>75%</td>
<td>Mandatory &gt;20 Years from Retirement</td>
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<td>Macedonia</td>
<td>Legislated</td>
<td>Jan 2003</td>
<td>DB–PAYG</td>
<td>7%</td>
<td>26%</td>
<td>15%</td>
<td>Mandatory New Entrants</td>
</tr>
<tr>
<td>Russia</td>
<td>Partially Legislated, Operating</td>
<td>Jan 2002</td>
<td>NDC</td>
<td>2% (&lt;35) to 6% (36-50)</td>
<td></td>
<td></td>
<td>Mandatory &lt;50</td>
</tr>
<tr>
<td>Ukraine</td>
<td>Partially Legislated</td>
<td>Jan 2003</td>
<td>PAYG</td>
<td>2% growing to 7%</td>
<td></td>
<td></td>
<td>Mandatory New Entrants</td>
</tr>
<tr>
<td>Kosovo</td>
<td>Partially Legislated, Operating</td>
<td>Jan 2002</td>
<td>Minimum</td>
<td>10%</td>
<td></td>
<td></td>
<td>Mandatory</td>
</tr>
</tbody>
</table>

Table 17: Pension Reforms in Latin America

<table>
<thead>
<tr>
<th>Country</th>
<th>Date</th>
<th>FF/DC</th>
<th>Transition</th>
<th>Old System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>1981</td>
<td>Full</td>
<td>Optional</td>
<td>Phased-out</td>
</tr>
<tr>
<td>Peru</td>
<td>1993</td>
<td>Mixed</td>
<td>Optional</td>
<td>Reformed</td>
</tr>
<tr>
<td>Argentina</td>
<td>1994</td>
<td>Mixed</td>
<td>Optional</td>
<td>Reformed</td>
</tr>
<tr>
<td>Colombia</td>
<td>1994</td>
<td>Mixed</td>
<td>Optional</td>
<td>Reformed</td>
</tr>
<tr>
<td>Uruguay</td>
<td>1995</td>
<td>Mixed</td>
<td>Mandatory</td>
<td>Reformed</td>
</tr>
<tr>
<td>Mexico</td>
<td>1997</td>
<td>Full</td>
<td>Mandatory</td>
<td>Eliminated</td>
</tr>
<tr>
<td>Bolivia</td>
<td>1997</td>
<td>Full</td>
<td>Mandatory</td>
<td>Eliminated</td>
</tr>
<tr>
<td>El Salvador</td>
<td>1998</td>
<td>Full</td>
<td>Mandatory</td>
<td>Phased-out</td>
</tr>
<tr>
<td>Panama</td>
<td>1999</td>
<td>Full</td>
<td>Optional?</td>
<td>Phased-out</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>2001</td>
<td>Full</td>
<td>Optional?</td>
<td>Phased-out</td>
</tr>
<tr>
<td>Venezuela</td>
<td>2001</td>
<td>Full</td>
<td>Optional?</td>
<td>Phased-out</td>
</tr>
<tr>
<td>Brazil</td>
<td>200x?</td>
<td>UF/DB</td>
<td>Mixed</td>
<td>Decentralization</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>200x?</td>
<td>UF/DB</td>
<td>Mixed</td>
<td>Good Prospects</td>
</tr>
<tr>
<td>Ecuador</td>
<td>200x?</td>
<td>UF/DB</td>
<td>Mixed</td>
<td>Argentina 2</td>
</tr>
<tr>
<td>Guatemala</td>
<td>200x?</td>
<td>UF/DB</td>
<td>Mixed</td>
<td>Myriad</td>
</tr>
<tr>
<td>Paraguay</td>
<td>200x?</td>
<td>UF/DB</td>
<td>FF/DC</td>
<td>High Costs</td>
</tr>
</tbody>
</table>


Which reforms have been the most successful? Pension reform necessarily involves both political and economic costs and benefits. The troublesome reality for policymakers is that costs tend to be felt in the short term, while benefits tend to manifest over the long term.

- **Parametric reforms** typically generate relatively less political resistance and have fewer fiscal implications in the short term, particularly in cases where, as an alternative to parametric reform, officials are considering moving from a pay-as-you-go system to a funded system and must find the resources to fund the transition costs. Parametric reforms, however, usually leave some structural problems unresolved. These reforms typically fail to (i) reduce distortions in the labor supply and in individual decisions regarding savings and retirement timing; (ii) eliminate heterogeneity in rates of return; and, (iii) fully assure the long-term fiscal sustainability of a system, as there are no automatic mechanisms to adjust the parameters of the system in response to changes in economic and demographic conditions. In addition, these reforms may lack credibility among young generations which harbor unfairly pessimistic expectations about the capacity of the system to deliver on its promises (which may encourage evasion and, thus, fulfill expectations). Finally, parametric reforms fail to exploit the spillover effects that a funded system may generate for the economy by helping to promote financial-sector development.

- **Introducing funded individual accounts**, on the other hand, is complex and logistically and administratively challenging. It typically encounters more political resistance, invokes higher short-term fiscal costs, and imposes new risks on participants. It should be pursued only if key preconditions have been met. First, countries need to be in a favorable fiscal position to finance the transition. Second, countries must have sufficient regulatory capacity and a solvent banking system. A limited supply of financial instruments (e.g., corporate bonds and stocks), the absence of a secondary

52 See Holzmann 1998.
market for government debt, and limited human capital in pension fund management are all factors that should discourage the introduction of mandatory-funded individual accounts.

- **Replacing defined benefit systems with Notional Defined Contributions (NDCs).** While NDC systems generally remain unfunded (i.e., they continue to operate on a pay-as-you-go basis, perhaps with an investment fund to cushion long-term demographic changes), they have the potential to offer some of the benefits of funded individual accounts. By linking contributions to benefits in a more transparent way than can be done with a defined benefit (DB) formula, NDCs could reduce incentives to under-report income or evade the pension system altogether. NDCs can also improve financial sustainability by bringing the rate of return paid by the system towards its sustainable level, and by introducing automatic mechanisms to account for unexpected changes in life expectancy, macroeconomic shocks, and/or changes in preference for leisure and consumption. They can also facilitate the portability of funds, enable more substantial reforms to disability and survivor pensions, and, for countries seeking to do so, do not preclude the eventual introduction of mandatory-funded individual accounts. In theory, DB formulas can be set up in a way that exactly replicates NDC outcomes, thus generating homogenous and sustainable rates of return. The DB formula that achieves this, however, is considerably more complex. 53 For the average worker the link between the benefit and the contribution may be less transparent than in the case of the NDC formula. If different funds within or across countries have different DB formulas, transferring benefits from one fund to another is less straightforward than in the NDC case.

This brief review of international experiences elucidates the heterogeneity of pensions systems and therefore the complexity of designing a reform program. The main message is that policymakers ought to keep in mind how different choices—in terms of the size of the mandate to save and the targeted replacement rate, the way benefits are calculated and financed, the mechanisms used to manage and regulate investments, and the distribution of financial risks—affect the social objectives that the public pension system is supposed to achieve and the economic efficiency.

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53 See Robalino and Sabbatini (2003).
7. REFORMING THE IRANIAN PENSION SYSTEM

The main results from the analysis of the Iranian pension system can be summarized as follows:

1. The system targets very generous replacement rates at all levels of income that are neither affordable nor sustainable. Pension expenditures are growing fast and despite high contribution rates and still-favorable demographic conditions the system is heading toward a financial collapse. The unfunded pension liabilities of the SSO and CSRO for the period 2002-2070 surpass 170 percent of today's GDP. Thus, the government is assuming excessive risks that can ultimately compromise fiscal and macroeconomic stability and the well-being of future generations.

2. The situation is complicated by a structure of payroll contributions, benefit formulas, and eligibility conditions that distort labor supply, retirement, and savings decisions. High contributions may discourage enrollment, promote the informalization of the economy, and crowd-out other forms of savings. Benefit formulas and eligibility conditions provide incentives to underdeclare wages and to evade and game the system. A generous minimum pension rewards retirement over work.

3. The system is prone to generating adverse inter- and intragenerational transfers. First, given a benefit formula that penalizes low-income workers (blue-collar workers) by considering only the last two years of salaries in the calculation of pensions. Second, through a very heterogeneous structure of rates of return. Third, through eventual bailouts that favor workers in the formal sector, and cuts in benefits and/or higher taxes for future generations—including low-income workers.

4. Current investment policies are risky, complex, and not necessarily in the benefit of plan members. The pension funds are being transformed de facto into agencies to restructure public companies. The funds over-expanded their mandate and now have considerable market power in several economic sectors—including the stock market. This interferes with corporate governance and hampers the development of the financial sector. In part, inappropriate investment policies reflect weak governance structures, as processes to select and structure the governing bodies, define fiduciary responsibilities, and enforce accountability do not follow best international practices.

The objective of the reform of the Iranian pension system is to strengthen its social function (protecting the elderly poor, encouraging individuals to save, and assisting individuals to manage risks), while guaranteeing financial sustainability and reducing economic distortions. This section examines the type of policy interventions that could be considered. It starts by analyzing what could be done to provide sufficient, affordable, and sustainable income replacement at retirement, to improve equity, to create a better balance between mandatory and voluntary savings, and a more prudent distribution of risks. Then the section outlines a set of interventions to improve the management of the funds as well as mechanisms to promote the development of voluntary savings. The final section discusses how reducing distortions in labor markets could contribute to expand coverage and what options could be considered to cover vulnerable population groups operating outside of the formal economy.
7.1. Dealing with the Finances of Current Systems While Improving Equity, Incentives, Reallocating Risks, and Creating a Better Balance between Mandatory versus Voluntary Savings

The government and civil society need to make a decision as to what is an adequate and affordable level of income replacement for retirement and how this level of income should be generated by a combination of mandatory and voluntary savings. It has been evinced that the SSO and the CSRO currently provide high replacement rates to the majority of workers regardless of income levels (see Figure 21). In the sample of high-income countries studied, replacement rates for the average full-career worker range between 35 percent and 88 percent, the average being 57 percent. Hence, Iran needs to consider reducing current replacement rates of the mandatory system, particularly for high-income workers while designating a more prominent role to voluntary savings as a source of income for retirement. At the same time, the benefit formulas and eligibility conditions need to be reviewed to improve equity and incentives.

Figure 21: Individual Replacement Rates for the SSO, the CSRO, and Selected Countries

![Figure 21: Individual Replacement Rates for the SSO, the CSRO, and Selected Countries](https://example.com/figure21.png)

*Source: Whitehouse (2002) and mission calculations for the SSO and the CSRO.*

In this section three types of reform are proposed:

1. A first type of reform maintains the level of the current mandate to save (i.e., contribution rates are constant) through the DB system, considering it the unique source of savings for retirement. However, the targeted replacement rate for a full-career worker is reduced to 80 percent (close to Spain), in order to reduce long-term deficits. Additional parametric adjustments are introduced to improve financial sustainability and equity and to reduce negative incentives for working.

2. A second type of reform reduces the mandate of the mandatory system for new contributors, targeting a replacement rate of 60 percent for a full-career worker (40 years). This allows a reduction in the contribution rate. The reform provides room for the development of funded voluntary savings and eventually the introduction of a mandatory funded pillar.

3. A third type of reform reduces the mandate of the current DB–PAYG system for new contributors, but changes the benefit formula to an NDC type in order to reduce contingent liabilities, while generating a more transparent link between contributions and benefits and better incentives for work over retirement. This reform also targets the development of voluntary private funded pensions.
Reform Type I: current mandate is preserved and the system remains a DB–PAYG

Under this reform option, addressing the financial problems of the system is a more or less mechanical process that involves the following steps:

- Given the contribution rate, evaluate the unfunded pension liability, which in the case of a pay-as-you-go system is equal to the present value of future pensions, minus the present value of future contributions, minus current reserves.

- Depending on the severity of the unfunded pension liability and the non-pension deficit of the government, reduce the rate of return paid to individuals by reviewing the pattern of income replacement across levels of income, and tightening retirement conditions.

In addition, it is desirable to review a number of mechanisms that affect equity as well as individual incentives for evasion, underdeclaration, early retirement, or abuse. These include the number of years used in the calculation of the final wage, pension indexation mechanisms, rules for early retirement, and eligibility conditions for disability and survivor benefits. Next specific recommendations in each of these areas are discussed.

Reviewing pattern of income replacement. There are three key parameters that influence the pattern of income replacement: (i) the accrual rate; (ii) the minimum pension; and (iii) the maximum covered wage.

Accrual rates should be set in reference to a full-career worker (40 years) in order to reach the desired replacement rate. In the case of this reform, if the targeted replacement rate for a full-career worker is 80 percent, the accrual rate should be set at 2 percent per year. The adjustment of the accrual rate should also be gradual and should only affect new contributions.

The minimum pension should be set in a way that does create incentives for retirement over work. Allocating this minimum pension without a minimum number of years of contribution negatively affects the finances of the system and can be inequitable. Indeed, some workers will choose to enroll the system close to retirement. Because these individuals accumulate a low replacement rate, they are often eligible for the minimum pension (independently of their level of income). Their rates of return can increase considerably.

Introducing a maximum covered wage ensures that the public system limits pension expenditures on high-income individuals. Individuals with salaries above the ceilings effectively receive lower replacement rates, even if in absolute terms, their pensions are equal to those of individuals with salaries equal to the ceiling. This policy also allows high-income individuals to diversify their sources of savings. In the case of Reform Type I, however, there would be no changes in ceilings.

To summarize, in the case of Reform Type I, the following recommendations are made:

- Gradually reduce the accrual rate to 2 percent per year. The new accrual rate can be reached over a period of 10 years.

- On the basis of the latest household survey and estimates of the poverty line, conduct a study to determine the appropriate level of the minimum pension. The minimum pension should be set below the minimum salary. A maximum level of 70-75 percent of this minimum salary is suggested. At the international level minimum pensions represent 30-40 percent of the average wage. The study should provide estimates of the number of individuals who are likely to be candidates for a minimum pension and the cost of the policy intervention.

- Pay minimum pensions only to workers who have contributed for a minimum of 30 years.
Rationalizing retirement conditions. Further reductions in rates of return are achieved by increasing the period during which individuals make contributions, reducing the period during which individuals receive pensions, and reducing the pension of individuals who retire early. Three sets of parameters are adjusted in this case: the vesting period, the minimum retirement age, and the age-dependent penalties for early retirement. Each is discussed in turn.

Vesting periods. Three issues need to be kept in mind. First, adjustment to vesting periods should be gradual. Vesting periods should not increase faster than half a year each calendar year. Otherwise, individuals close to retirement would have to continue working until the new target is reached. As an example, if the current proposal in the SSO to increase the vesting period from 10 years to 20 years is implemented in a period of 10 years, individuals who are one year away from retirement will have to wait ten additional years. Second, when increasing vesting periods there is a danger of introducing incentives for evasion. For instance, workers aged 45 years or more are unlikely to join a system where the minimum vesting period is equal to 30 years. Third, changes in vesting periods can induce abrupt drops in the rates of return for older workers (see Figure 22). On the other hand, allowing workers to retire with a few contribution years without adjusting replacement rates can generate disproportionately high rates of return for workers joining the system relatively late in life.

Figure 22: Effect of Increasing Vesting Periods on Rates of Return

Source: Mission calculations on the basis of SSO rules.
Note: Individuals are assumed to retire as soon as retirement conditions are met. First panel considers a 10-year vesting period. Second panel considers a 20-year vesting period.

Retirement age and early retirement rules. A male worker retiring at age 60 today can expect to live until age 76. A female worker retiring at age 55 can expect to live until age 77. On average, pensions will be received for 16 and 22 years respectively. Ten years from now, a male worker retiring at age 60 will expect to receive a pension for 18 years and a female retiring at 55 for 25 years. As people live longer it is reasonable to expect them to work longer. Otherwise, the finances of the system cannot be sustained. In Iran, both the SSO and the CSRO could initially target retirement ages of 63 for both men and women. As in the case of the vesting period, retirement ages should not increase faster than 0.5 years per calendar year. Hence, the new retirement age for males could be attained in a period of 10 years, while for women it would require twenty years. Over the long run, it is desirable to have an automatic indexation mechanism that periodically adjusts retirement ages in-line with changes in life expectancies. Clearly, for various reasons, individuals may wish to retire before reaching the minimum age. This should be allowed with actuarially fair adjustments to pensions. In other words, if a pension is going to be received over a longer period of time, then the pension should be lower. Actuarial reductions in replacement rates increase with the numbers of years that the individual advances retirement.
In summary, the following recommendations are made to reduce benefits and rationalize retirement conditions:

- Eliminate multiple retirement conditions and benefit formulas and target a uniform rule for all workers, in both the SSO and the CSRO.
- Target a retirement age of 63-65 years for both males and females with no maximum retirement age. The new age could be reached in a period of 6-10 years for males and in a period of 16-20 years for females. Once the new retirement age is reached, it should be indexed by life expectancy.
- Gradually increase the vesting period to 20 years for both males and females. The new vesting period should be attained in a period of 10 years for males and 20 years for females.
- Allow for early retirement with actuarially fair reductions in replacement rates.

Reducing the strategic manipulation of wages and improving equity by gradually considering all wages in the calculation of the pension. As discussed in the diagnostic sections, underdeclaration of wages is in part explained by the fact that the final pension is not linked to the predominant career-wide wage level. Because blue-collar workers would benefit from an increased number of years included in the average wage used to calculate the pension, because they usually have peak earnings relative to the average in mid-career. Hence, for both funds the following recommendations are made:

- Update individual records of current contributors to include information of past wages.
- Change the benefit in such a way that each fiscal year an additional year of wages is included in the calculation of the pension.
- Index the wages included in the calculation by the growth rate of the system's average wage.

Protecting pensions from inflation. The laws regulating the SSO and CSRO operations mandate adjustments in nominal pensions to protect beneficiaries from increases in the cost of living. The way the current legislation is written, however, discretion in adjustments occurs. To ensure that pensions are not eroded by inflation an automatic indexation mechanism is needed. It is therefore recommended to:

- Modify current articles governing the indexation of pensions in a way that the responsibility to implement the adjustment is directly transferred to the department in charge of processing payments.
- The new article(s) should define the index that will be used to adjust the pension and the periodicity of the adjustment. It is recommended to use the growth rate of prices as the index.

This policy, however, should only be adopted if the other reforms have been implemented.

Adjustments in disability and survivor pensions. There is an ongoing debate over the best mechanism to provide disability and survivor benefits. Traditionally, DB systems are prone to abuses. Moreover, the way survivor benefits are implemented tend to provide little incentive for survivor spouses to enter the labor market; and, in the case of death of the latter, surviving children can be left unprotected. Questions to consider include whether the SSO and the CSRO could outsource the provision of these benefits, and/or whether is it desirable to have independent pension rights for both spouses with accumulated pension rights split after divorce or death. In the short run the new accrual rates used to compute old-age pensions should also
apply to disability and survivor pensions. The SSO and the CSRO should review the appropriateness of the current accreditation process and reinforce eligibility conditions. A more detailed study of current financing mechanisms should be conducted in the future. Over the medium term it is desirable that disability and survivor pensions be financed independently of old-age pensions.

**The downside of this strategy.** Introducing severe cuts in benefits is difficult politically. Even after introducing adjustments, a sizable unfunded pension liability is likely to persist. Another problem with the current strategy is that, even with demographic indexation of the retirement age, the system remains vulnerable to changes in the sustainable rate of return due to the vagaries of the economy. Indeed, there are no automatic mechanisms to adjust the system’s parameters to reflect changes in macroeconomic performance. This creates a credibility problem over fiscal policy, as the contingent liability for the government (and future generations) remains large. The reform also creates a credibility problem among beneficiaries who may generate pessimistic expectations about the capacity of the system to deliver its promises. This may encourage evasion thus fulfilling these expectations. In addition, the strategy leaves room for adverse redistributive effects.\(^{54}\) Moreover, contribution rates remain high, which discourages enrollment in the system, impedes the diversification of savings, and negatively affects labor markets. Hence, this strategy is considered only a temporary fix to the problems of the current DB–PAYG.

**Reform Type II: current DB system is downsized giving a more prominent role to voluntary savings and an eventual mandatory-funded system**

This reform considers that the current DB–PAYG will not be the only system replacing income for retirement. Therefore, it proposes reducing the size of the mandate to save (i.e., the contribution rate) and the targeted replacement rate, as well as imposing a cap on the covered wage of 3 times the economy-wide average, and a minimum pension of 70-75 percent of the minimum wage. The targeted replacement rate could be set initially at 60 percent for a full-career worker. This implies an accrual rate of 1.5 percent per year. The remainder of the replacement rate would be financed by capitalization, through a combination of voluntary and possibly mandatory schemes. **This reform would not affect current retirees or workers who are close to retirement.** The reform could proceed as follows:

- New workers in the SSO and the CSRO enter a new DB scheme with some degree of pre-funding where the contribution rate is lower (below 15 percent), where benefits are lower (an average accrual rate in the 1-1.5 percent range), retirement conditions are tighter (a minimum retirement age of 63 years for both males and females subject to demographic indexation), and pensions are computed on the basis of lifetime earnings. Wages are indexed by average earnings, and pensions are indexed by prices.

- For those workers in the current system, benefits and retirement conditions are adjusted accordingly to the recommendations of the previous section. For these workers, the unfunded pension liability is financed out of three sources: i) current reserves, ii) general revenues, and iii) probably part of the contributions of new workers.

- The remaining contributions could be accumulated in a separate fund that depends on the SSO and the CSRO but that is subject to different governance rules and investment policies (see Section 7.2).

\(^{54}\) This issue could be resolved if all wages are introduced in the calculation of the pension and a cohort-dependent accrual rate, which is a function of the contribution rate and the life expectancy at retirement of the members of the cohort, is introduced. No country, to our knowledge, uses this type of formula, probably in part due to its complexity.
• In parallel, necessary incentives and an appropriate regulatory and supervisory framework are put in place to promote voluntary savings in the form of contractual savings (see Section 7.5).

• Eventually, a DC–FF pillar could be introduced while the DB–PAYG is further downsized.

The downside of this strategy. Under this reform the financial sustainability of the DB scheme remains frail. While parameters could always be adjusted to reflect changes in demographic and economic conditions, in practice these adjustments can be subject to discretionary decisions. Another potential problem facing this strategy is related to the transition costs. Since the new contribution rate would be lower and part of the revenues could be accumulated, current pensions would need to be financed from general revenues. This imposes a fiscal burden over the short and medium terms that requires issuing debt, increasing taxation, or reducing non-pension expenditures. None of these options is neutral from a macroeconomic point of view.

Reform Type III: Downsizing the current DB–PAYG while introducing Notional Defined Contributions and promoting voluntary savings

In recent years Notional Defined Contribution Systems (NDCs) have evolved into a new alternative for reforming DB–PAYG pension systems. NDCs remain unfunded mechanisms, but attempt to emulate a defined contribution scheme. Indeed, the plan guarantees to its members a rate of return on contributions that approximates the sustainable rate of return of a pay-as-you system (a function of the growth rate of the covered wage bill). At retirement, the pension is calculated by dividing the sum of indexed contributions by a so called “G factor”, that takes into account the average life expectancy of the individual.

Advocates of this mechanism emphasize the following advantages:55

1. Overcomes issues of the political economy related to parametric reforms
2. Legally binds the financial sustainability of the system by linking rates of return to macroeconomic performance and demographic changes
3. Allows for an easy and rapid harmonization of retirement schemes across professions
4. Allows for more fundamental reforms of disability and survivor benefits
5. Eliminates perverse redistributive features of the traditional pay-as-you-go system
6. Provides incentives for work over retirement and may reduce incentives to evade.

Since the model is not a complete DC scheme, contingent liabilities persist, but part of the risks are transferred to plan members. Hence, there is a better distribution of these risks between current and future generations. Relative to a DC–FF scheme, however, risks are lower because the volatility of the return on Notional Accounts, the real wage bill growth, is lower than the volatility of the return on the funded system scheme, which depends on portfolio choice and the capital market).

It is emphasized that the NDCs outcomes could be approximated in a standard DB setting, if all wages are included in the calculation of the pension and a cohort-related accrual rate is introduced. For a cohort expected to retire at age \(a\) and time \(t\), the accrual rate is defined as the contribution rate divided by the \(G\) factor at age \(a\) and time \(t\). Clearly, those individuals in the cohort who for some reason retire before or after time \(t\) will receive higher or lower rates of return (since the accrual rate is defined ex-ante and is the same for all individual in the cohort).

55 See Disney (1998) for a review of the pros and cons of NDCs.
The complexity of the modified DB formula, however, suggests that if NDC outcomes are targeted, then the NDC formula should be used.

In Iran, the implementation of this reform could proceed along the following lines:

- New workers enter a new system where the total contribution rate is lower (below 15 percent), thus allowing for a better balance between voluntary savings and mandatory savings.

- Contributions accumulate in "virtual" accounts, earning an interest rate that is a function of growth rate of the covered wage bill. Stabilization mechanisms are also incorporated to reduce volatility in rates of return and ensure financial sustainability. At retirement, the accumulated capital is transformed into a lifetime pension on the basis of estimates for life expectancy (alternative mechanism can be used to index the pension). Current contributors are allowed to switch to the new system. For them, an initial capital is accredited to the "virtual" account, which is calculated on the basis of past contributions given the appropriate notional interest rate.

- Workers who remain in the current system face the type of adjustments described in the case of Reform Type I.

- In parallel, necessary incentives and an appropriate regulatory framework are put in place to promote voluntary savings in the form of contractual savings (see Section 7.5).

The administration of this scheme will necessitate improvements in management and information systems. Indeed, as in the case of a DB-PAYG, adequate management and information systems are required to track contributions, register life events, and compute and pay benefits. To fully realize the benefits of the new schemes, reporting mechanisms need also to be updated so that plan members are periodically informed on the value of the funds "accumulated" in their accounts.

The downside of this strategy. This type of reform has been introduced successfully in Sweden, Poland, and Latvia. The success of the NDCs system depends on the credibility of the rules determining the valorization of accounts and the rules determining the calculation of the \( G \) factor. If these rules allow for discretionary decisions, then the financial sustainability of the system is compromised. Even if there are no discretionary decisions, defining rules that allow for an accurate estimation of the valorization factor and the \( G \) factor can be problematic. The other limitation of this strategy is that the NDCs remains an unfunded system. This being the case, it fails to exploit the positive effects that a mandatory-funded system may have on the economy by contributing to developing financial markets and fostering economic growth.

Potential financial and fiscal impacts of the proposed reforms

For illustrative purposes, this sub-section summarizes the results of simulations for the period 2002-2070 of the financial and fiscal impacts of Reforms Type I (parametric reform of the current systems), Type II (downsizing of the DB-PAYG), and Type III (downsizing the PAYG scheme and introducing NDCs). The various reforms are summarized in Table 18.

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56 See Technical Appendix for a summary of methods to compute pensions and replacements rates in the NDC system.
Table 18: Proposed Reforms for the SSO and the CSRO

<table>
<thead>
<tr>
<th>Parameter (a)</th>
<th>Reform Type I</th>
<th>Reform Type II</th>
<th>Reform Type III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution Rate</td>
<td>Remains unchanged at 18% for SSO (only for long-term benefits) and 22% for the CSRO</td>
<td>Reduced to 14% (^b)</td>
<td>Reduced to 14% (^b)</td>
</tr>
<tr>
<td>Minimum Retirement Age</td>
<td>Increases to 65 years. For male the change takes 10 years; for women 20 years</td>
<td>Set at 63 for new workers (male and female).</td>
<td>Set at 63 for new workers (male and female)</td>
</tr>
<tr>
<td>Accrual Rate</td>
<td>Targets 80% replacement for FC worker.</td>
<td>Targets a replacement rate of 60% for new workers.</td>
<td>N.A.</td>
</tr>
<tr>
<td>Number of Years Used to Compute Base Wage</td>
<td>Increases by one year each year until full-career. Wages indexed with average earnings</td>
<td>Full-career. Wages indexed with average earnings</td>
<td>N.A.</td>
</tr>
<tr>
<td>Penalties for Early Retirement</td>
<td>Actuarially fair reductions to replacement rates adjusted on a yearly basis</td>
<td>Actuarially fair reductions to replacement rates adjusted on a yearly basis</td>
<td>N.A.</td>
</tr>
<tr>
<td>Rate of Return on Contributions</td>
<td>N.A.</td>
<td>N.A.</td>
<td>Growth rate of average earnings (^c)</td>
</tr>
</tbody>
</table>

Source: Mission design.

Note: (a) Other reforms, such as changes in minimum pensions and ceilings on covered wages, have not been simulated due to lack of the necessary data (i.e., wage and pension distributions). (b) The contribution rate could be lower if accumulated funds are not used to cover the deficits of the closed systems. (c) This mechanism is used simply for illustrative purposes and computational convenience. Other mechanisms are available, such as using the growth rate of the wage bill that also takes into account change in the size of the covered population. This index, however, is more volatile.

All simulations have been applied only to the baseline demographic and economic scenarios. In the case of Reform Type I simulations are conducted by introducing one policy at a time, in order to demonstrate their marginal impact. For Reforms II and III only the aggregate financial impacts of the policies are presented.

Illustration of the financial impacts of individual parametric reforms in the SSO. The simulation considers the following policies: (i) increasing the retirement age; (ii) allowing for early retirement with appropriate penalties, \(^57\) (iii) gradually introducing all wages in the calculation of the pension; and (iv) reducing the accrual rate. In Figure 23 it is observed that each policy on its own has non-negligible impacts on the finances of the system. The increase in the retirement age alone can reduce the present value of the accumulated deficits for the period 2002-2070 from 140 percent of current GDP in the status quo to 120 percent.

\(^{57}\) While in principle early retirement is not available, under special conditions individuals can retire before ages 55 (female) and 60 (males). Since retirement conditions for all workers are being normalized, early retirement with actuarially fair penalties is allowed. It is assumed that given the penalties, current probabilities of early retirement are halved.
Introducing penalties for early retirement can gain additional 20 percentage points. Moving to the full-career average can reduce the present value of accumulated deficit from 100 percent to 80 percent. Under this last policy, the effects on average replacement rates (pension divided by the average wage) differ by type of worker. Indeed, because wages are indexed by average earnings, those workers who had their highest salary (relative to average earnings) in mid-career (usually blue-collar workers) benefit from the reform. This reform also provides incentives for workers to declare in-full their salary and to contribute continuously. Thus, in the calculations it is assumed that the underdeclaration of wages is reduced by 10 percentage points. Finally, the reduction in accrual rates is simulated, which is the policy that has the largest impact on the finances of the system. This policy reduces benefits while providing incentives to join the system early rather than late, thus increasing the average length of service at retirement. When age-specific accrual rates are set as to generate a 2.4 percent average accrual rate, unfunded pension liabilities are reduced below 20 percent. If the average accrual rate is set to 2 percent, the unfunded pension liabilities for the period 2002-2070 are virtually eliminated. Nonetheless, the problem of financial sustainability over the long term is not resolved, as deficits above 2 percent of GDP persist.

Figure 23: Marginal Financial Impact of Alternative Reforms in the SSO

Financial impacts by type of reform. The results of the simulations show that the three proposed reforms improve the financial situation of the funds significantly. In all cases, the present value of unfunded pension liabilities for the period 2002-2070 could be reduced below 15 percent. The results are sensitive to two key policy choices. The level of the accrual rates in the SSO and the CSRO (2 percent average in this case), and the contribution rate to the new DB or NDC systems (14 percent in this case).

A Type I reform could virtually eliminate unfunded pension liabilities in the SSO for the period 2002-2070 while reducing them below 11 percent of GDP in the CSRO. In the SSO deficits would be observed starting in year 2045 that could reach 3 percent of GDP by the end of the simulation period. The present value of fund balances for the period (2002-2070) is negative but could be covered by current reserves. In the CSRO deficits would persist for most of the period ranging between 0.1 percent and 0.3 percent of GDP. As discussed below, these deficits will require fiscal support (see Figure 24).

A Type II reform could shrink unfunded pension liabilities from 175 percent of GDP today (for both the SSO and the CSRO) to less than 10 percent, while reducing contribution rates and giving room for alternative forms of long-term savings. In the calculations of unfunded pension liabilities it assumes that the surpluses accumulated in the new system are used to finance the

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58 This considers current reserves of close to 3.3 percent of GDP.
deficits of the reformed systems that were closed. If this is not the case and the unfunded pension liabilities of the closed systems are financed through the central budget, then the new system could accumulate resources equivalent to 45 percent of today's GDP (see Figure 25). Contribution rates could also be lower in this case. Over the long-run, as the dependency ratio increases, the new system would generate a deficit of close to 1 percent of GDP. This implies that contributions would need to be adjusted upward or accrual rates downward.59

The Type III reform produces similar financial results as Type II. This simulation does not take into account potential changes in behavior, such as longer contributory periods. Still, the results show that if the surpluses accumulated by the new NDC system are not used to finance the closed systems, the present value of balances for the period 2002-2070 could also attain 45 percent of GDP (see Figure 26). In the projections for Reform Types II and III, it is assumed identical trends in coverage and length of services at retirement. In the latter, however, given the change in the benefit formula, coverage rates, length of service, and therefore reserves could be higher. Over the long term, the system could initially generate a deficit that reaches 1 percent of GDP by the end of the simulation period. This deficit, however, would be auto-corrected as rates of return (and therefore individual replacement rates) are reduced when either the growth rate of average wages or total contributors slows down.

59 Deficits are likely to be lower if demographic indexation of the retirement age, which has not being incorporated in the simulation, is considered.
Fiscal impacts. In the absence of reforms, the fiscal balance of the government could be seriously compromised, with transfers to cover deficits in the SSO and the CSRO starting at 1 percent of GDP within the next couple of years and surpassing 8 percent of GDP by year 2050. The calculations assume that reserves are liquid and that surpluses in the SSO can be used to finance deficits in the CSRO. The reforms discussed here can reduce considerably the demand for fiscal support over the next 60 years (see Figure 27 first panel). In the case of Reform Types II and III, this assumes that the surpluses of the new systems (DB or NDC) will be used
to finance the deficits of the closed systems. If this is not the case, then the resources required to cover the aggregate deficits of the closed SSO and the CSRO, after reserves have been depleted, would amount to 2 percent of GDP during the period 2020-2050, declining to zero afterward (see Figure 27 second panel).

**Figure 27: Fiscal Impacts of Alternative Reforms**

![Graph showing fiscal impacts of alternative reforms](image)

*Source:* Mission calculations.

*Note:* Assumes that current reserves are liquid and fungible across funds. Discount rate set at 5 percent (real terms).

**Welfare implications.** Clearly, the proposed reforms improve financial sustainability by reducing the rates of return on contributions. The targeted rates of return, however, are affordable while still generating replacement rates above 50 percent of the last salary. Moreover, Reforms II and III open the door to additional forms of long-term savings.

*With the current reforms, the redistributive power of the PAYG system would concentrate on low-income individuals.* To illustrate some of the welfare implications, replacement rates and rates of return for individuals at different points of the income distribution are reviewed. It is assumed that the individuals in question enter the system at age 30, retire at age 65, and live until age 73 (the current life expectancy at birth for males), and that wages grow at 3 percent per year. For illustration purposes, the minimum pension is set at 60 percent of the minimum wage and the maximum covered wage at 2.5 times the average wage. If minimum pensions and ceilings are allowed to grow in real terms, replacement rates across reforms would range from 80 percent in the case of low-income individuals to 26-36 percent for individuals earning 5 times the average wage. If the minimum pension and the ceilings are kept constant in real terms, then replacement rates would be lower, ranging between 50-70 percent in for low-income workers and 8-11 percent for high-income individuals (see first panels in Figures 28, 29, and 30). In terms of rates of return, these could range between 3-4 percent for low-income individuals and 2.5-3 percent for middle- and high-income individuals.

*In the absence of the reforms, unfunded pension liabilities will need to be financed either through abrupt reductions in benefits for future generations, budgetary reallocations, or higher taxation that will be welfare decreasing.* This will create adverse intergenerational transfers from the future poor to the present well-off.

*It can be argued that given low wages, reductions in replacement rates will not allow some retirees to satisfy basic needs.* This could be the case for a given segment of the population, but unfortunately it is not a problem that can be solved in a sustainable way through the contributory pension system, which in any case is not covering the long-term poor. Higher standards of living for the whole population can only result from higher economic growth. **Clearly, to minimize the social impacts of the proposed reforms, all adjustments to system parameters need to be implemented in a phased manner.**
Figure 28: Replacement Rates and Rates of Return under Reform Type I

Source: Mission calculations.
Note: Case of individuals entering the system at age 30, retiring at age 65, and living until age 73. All wages are assumed to grow at 3 percent in real terms. Graphs are for SSO. Results for the CSRO are similar.

Figure 29: Replacement Rates and Rates of Return under Reform Type II

Source: Mission calculations.
Note: Case of individuals entering the system at age 30, retiring at age 65, and living until age 73. All wages are assumed to grow at 3 percent in real terms.

Figure 30: Replacement Rates and Rates of Return under Reform Type III

Source: Mission calculations.
Note: Case of individuals entering the system at age 30, retiring at age 65, and living until age 73. All wages are assumed to grow at 3 percent in real terms. Notional interest fixed at 3 percent. Interest rate used to compute annuity set at 5 percent.
7.2. Improving the Management of Fund Reserves: The Need for Better Governance

During the last few years, the study of the determinants of pension fund investment performance, and in particular public pensions funds, has generated considerable interest. This is in part due to the practical relevance of the question. Indeed, today, 49 percent of the world’s labor force (close to 800 million people) is covered by mandatory, publicly managed, DB–PAYG systems that have accumulated reserves. The issue of management is relevant to some 62 public pension schemes in the world.60

The main message from the various studies is that while the macroeconomic environment places constraints on the potential performance of a pension fund, the governance structure of the pension fund is the key factor in achieving this potential. Governance refers to the manner in which authority or power is exercised to fulfill duties and obligations to a constituency of stakeholders.

A review of international experiences shows that, in general, public pension funds have failed to generate appropriate rates of return on investment for the plan members, in part given weak governance structures. A recent statistical analysis of cross-country data suggests that there is a strong correlation between the average real rate of return on pension assets and a governance index.61 Furthermore, the positive impact that improved governance appears to have had on rates of return is higher when the initial level of governance is low. A corollary is that changes in governance structures can have particularly high payoffs when initial structures are very weak. The public sector is not intrinsically a bad manager of pension funds. If the majority of public pension funds have displayed weak performances, it is because they have all followed similar bad governance practices.

This section starts by defining measures of governance and reviewing best international practices. It then presents policy recommendations specific to Iran that try to take into account local institutional constraints.

Basic principles of good governance

Governance is a multidimensional concept that is difficult to define and measure. Here the focus is on four dimensions that appear to be critical for the performance of a pension fund: i) how duties and obligations are specified; ii) how the governing body is structured and selected; iii) how the management of the pension fund is structured and selected; and iv) how accountability is enforced.

Duties and obligations. Duties and obligations should be specified by law. The objective or mission of the pension fund should be clearly stated in order to ensure the adoption of measurable goals against which the performance of the plan, its governors, and administrators can be evaluated.

The objective of the governing body of the pension fund is to ensure that resources are used to serve the interest of pension plan members. The governing body should not target social and development goals. Basic activities should be limited to collecting contributions, investing reserves, and paying benefits. Unfortunately, this last principle is too often not observed, particularly in developing countries. For instance, the fiduciary responsibility of SSO Governors toward beneficiaries is compromised, because the SSO has mandates to support the development of national projects such as housing and to intervene in areas such as corporate lending. In its 2000 Annual Report, the SSO even mentions the promotion and diversification of exports as one of its goals.

60 This section relies heavily on Impavido (2002) and Palacios (2002).
Pension funds should not be considered as lenders of last resort for the government. In this regard, an example of best practice is the Canadian Pension Plan Investment Board (CPPIB). Unlike funds in Japan, Korea, and the United States, the CPPIB is only required to make funds available to the government if it is consistent with investment targets.

The governing body. The governing body is the entity with the highest level of governance authority. In Western common law, the governing body usually is called the Board of Directors or Board of Trustees. The SSO equivalent is probably the High Council for Social Security, although it also has a Board of Directors. In the CSRO, the highest governing body is the Supreme Council.

International experiences suggest that in general tripartite governance bodies do not prudently and efficiently manage reserves. In the majority of developing countries, the governing body is composed of representatives of interested parties. These usually include the government (as plan sponsor), employers, and plan members. This is the case of the SSO High Council: it has seven government representatives, five employer representatives, and three worker representatives. In general, tripartite Boards end up composed of fiduciaries who lack the necessary technical expertise implicit to the job. Because in most cases the appointees are selected by high-ranking government officials, the resulting governing body lacks the necessary independence from the government. The lack of independence creates conflicts of interest between government objectives (for instance reducing the government debt with the pension funds) and plan members (receiving the best rate of return on this debt). This problem is pervasive even in more developed countries. A recent study of the United States shows that the weak performance of public funds relative to private funds is explained, in part, by the composition of the governing bodies. Funds in the private sector are governed by qualified professionals who have a clear economic mandate, while public sector governors respond to economic as well as political pressures.

Two questions that need to be addressed in order to improve the composition of the governing body are: i) what are the appropriate qualifications; and ii) how governors should be selected to ensure independence.

In terms of qualifications, governors should understand financial markets, risk management, and actuarial principles. They should be prepared to study and understand the promises and policies of the pension fund. Governors should understand the conflicts of interest and commit to resolve them in favor of the plan’s beneficiaries. Canada is again an example of best practices. The twelve members of the Board of the CPPIB are selected for their investment and business expertise in areas such as economics, accounting, actuarial science, finance, investment, banking, and business in general. The requirement for relevant expertise and experience is set out in the legislation.

In terms of the selection process, the goal is to ensure independence from the government; this requires an open and transparent process. One option is to have the selection made by an independent Selection Committee. Members of this committee can be nominated by representatives of the government in different provinces as well as employers and workers. The role of the Selection Committee is to identify prospective candidates for the Board of Directors or High Council from across the country to produce a shortlist. The shortlist is then presented to the relevant minister (usually the Minister of Finance or Planning), who in consultation with other high-level government officials, and with directors already appointed, selects the members of the Board from the shortlist. Selected members of the Board can serve for periods of three to four years, renewable for a maximum of three to four times. During a term, members cannot be removed except for illegal or immoral misconduct.
In terms of the size of the governing body it is important to consider the trade-offs between independence and effectiveness. As the number of Board members increases, independence increases; and the probability of collusion and moral hazard is reduced. On the other hand, effectiveness is reduced, first due to coordination problems, but also because incentives are given for free riding on the work of others. The size of the Board should be selected to maximize its overall performance.

The responsibilities of governors should be defined by the law of fiduciary duty; governors should act as the owners of the assets (to ensure accountability) and on behalf of the beneficiaries. Fiduciary obligations include: i) complying with legislative requirements; ii) communicating to members their rights and entitlements, iii) ensuring that actuarial valuations are performed routinely; iv) ensuring the required contributions are submitted to the plan on a timely basis; v) ensuring that funds are prudently invested; vi) ensuring that payments of benefits are accurate and timely; and vii) ensuring that the level of funding is appropriate.

The objectives of the governors should be stated in the relevant sets of regulations and should include: i) managing funds in the best interest of contributors and beneficiaries; and ii) maximizing investment returns without incurring undue risk of loss. Governors should not conduct any business that is inconsistent with these two objectives.

To meet their fiduciary obligations, governors need to define the main policies for the fund. These include: i) determine acceptable levels of balance sheet risk and targeted returns for a given level of risk; ii) approve the business plan; iii) monitor outcomes versus expected results and develop a system of compensation linking economic performance to the remuneration of management; and iv) hire and fire the Chief Executive Officer of the organization (see next section on Management).

The governing body can be divided into committees with separate responsibilities. A process should be in place to evaluate the performance of the committees and to report the outcome to the stakeholders. One of the critical committees is the Investment Committee. This Committee should establish both an investment policy and an implementation policy covering issues such as asset allocation and active versus passive management.

Management. Governing functions and responsibilities should be clearly separated from managing functions and responsibilities. Different individuals should belong to each of these groups. Management fiduciaries should be responsible for day-to-day operations and the execution of the policies established by the governing body. Members of the management team should be constituted as independent from the Board but report to the Board through the Chief Executive Officer.

In meeting its fiduciary obligations, operational management should assemble the necessary human and operational resources. It should define a strategy to meet the investment targets and to identify tactics for implementing the strategy. It should also develop a system to measure the performance of the strategy. It should report outcomes to the governing body.

Accountability. Accountability is fundamental to good governance structure. Accountability depends on the process by which management reports to and is evaluated by the Governing Board, and the process by which the Governing Board reports to and is evaluated by stakeholders. A strict system of internal controls is required to regulate the activities of fiduciaries and ensure the commitment to public transparency and reporting.

In private pension funds the legal basis for accountability is personal liability. Insurance for personal liability can further ensure the ability of the pension fund to recover losses in case of mismanagement. For public systems, implementing personal liability can be difficult, because the government assumes contingent liabilities and, therefore, becomes an important
stakeholder. Hence, the performance of the pension fund, which is the ultimate criteria to evaluate the Governors, often depends on policies that are beyond the Governor's control. For instance, investment regulation and contribution rates are often established by law and may be inconsistent with the fiduciary responsibilities of the Governors. If personal liability cannot be established, the members of the governing body should be made accountable to an independent body representing all stakeholders. A natural choice is the Parliament.

Since legal accountability is limited in public funds, transparency and information disclosure become the main mechanisms to ensure prudent management. All members of the pension plan should receive information on the objectives of the fund, its agenda to achieve objectives, and plan member rights. This information should be stated in a simple and easy-to-understand format. The governing body should report on investment strategies, implementation mechanisms, and the results of the operations— including rates of return on the different investments. Summary balance sheets should be regularly published. Plan members should receive periodic statements reporting accrued benefits and the overall performance of the pension plan.

Two additional mechanisms to improve accountability include external audits and independent custodians. The financial activities of the fund should be audited on a regular basis by an external auditor. The auditor should be required to verify that fund activities comply with all relevant regulations. The auditor should also conduct a periodic actuarial evaluation of liabilities and provide an analysis of funding levels. Custody should be provided externally only by an independent financial institution. The assignment of custody responsibility to an entity other than the asset manager is an efficient way to ensure the physical and legal integrity of the assets and to oversee the transactions of the assets manager. For a public pension fund, an ideal custodian would be a truly independent central bank.

Other internal controls that enforce accountability include requiring directors and employees to clear personal trades before execution and to report on their personal investment activities on a regular basis. The CPPIB has implemented these controls. In-line with the previous recommendations other measures adopted include: i) the appointment of an independent, external accounting firm to review the operations of CPPIB and to record and report directly to the Audit Committee of the Board of Directors; ii) a procurement policy covering the selection of outside organizations and suppliers; iii) an external custodian selected through a rigorous process of due diligence; and iv) the determination of signing authorities and limits to protect cash and portfolio assets. These are policies that have allowed CPPIB to earn public trust.

**Recommendations for the CSRO and the SSO**

The general principles discussed in the previous section are highly demanding and cannot be achieved overnight. However, policymakers and plan members should be aware that a large number of case studies at the international level indicate that unless these principles are adopted, the management of fund reserves is unlikely to improve in a sustainable way. Recommendations that could be gradually adopted by the SSO and the CSRO to improve investment policies are presented next.

Strengthen the role of current governing bodies by clarifying responsibilities and objectives and by modifying their composition and selection process. Today, the High Councils of the SSO and the CSRO, the Boards of Directors, and the Advisory Committees have overlapping functions that dilute accountability. Moreover, the technical competence and
independence of the High Councils can be improved. To this end are the following recommendations.62

- Create a new governing body or High Council that unifies the current High Council and Board of Directors while modifying its size and composition. Within the new High Council, different subcommittees could be created with specific functional responsibilities (e.g., administrative issues, investment policies).

- Change the selection process for members of the High Council. The Head of MPO, the Ministry of Finance, the Ministry of Health (in the case of the SSO), and the Central Bank could continue to have representatives on the High Council, but the other members would be nominated by a Selection Committee appointed by the Head of MPO on the basis of suggestions from other members of the cabinet. The Selection Committee’s mandate is to identify individuals to serve on the High Councils who have technical expertise in the areas of finance, economics, and actuarial analysis, and who have demonstrated through their professional achievements that they can contribute to prudent and efficient management of the pension funds.

- Focus the mandate of the High Councils on the management of the pension funds in the interest of its plan members. Eliminate other objectives such as pursuing social or economic development policies.

- Give to the High Councils the freedom to select and remove the Managing Director of the pension fund(s) and decide on compensation modalities.

- Make the High Councils accountable to Parliament.

Modify the current strategy used to refinance the public debt with the pension funds. The current strategy is risky and it is creating losses for plan members. The following recommendations are made:

- Stop the practice of accepting public companies as payments on the government debt.

- Conduct an external audit of current government arrears and agree on a total amount.

- Adopt a plan to collect arrears at fair value. The plan would involve issuing tradable bonds (both coupon and zero coupon bonds). The use of government bonds improves transparency and assures that even if the debt is not paid in cash to the pension funds, it continues to earn appropriate real rates of return. Clear clauses need to be put in place to protect the pension funds in the case of default. This policy is less risky than accepting public companies, often insolvent, and then investing resources in their restructuring.

Introduce changes in current investment policies to reduce risk, promote capital-market development, improve monitoring, and ultimately increase rates of return.

- Discard the current policy of restructuring the enterprises received in payment for cancellation of arrears. Instead find strategic investors with controlling ownership.

- Adopt a program to reduce the controlling stakes in corporations by holding minority participation. It is recommended that the SSO and the CSRO get out of the construction business.

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62 If pension funds are merged as discussed in Section 7.3, these recommendations would still apply to the new integrated pension fund.
Encourage the participation of other fund managers in addition to the fund’s own investment companies (Shasta-SSO and the Investment Company for CSRO) and have the different managers compete. The process for outsourcing is delicate; therefore, appropriate competition rules among prospective managers need to be put in place. International experiences suggest, however, that this strategy is likely to produce higher rates of return. Moreover, it reduces the problems associated with managing a large public fund in a small financial market. In particular, market performance becomes less sensitive to changes in the plan’s strategy, as other managers are allowed to compete and the market power of the public pension fund is reduced.

- Forbid the extension of credits to firms owned by the pension fund.
- Adopt a program to gradually reduce member loans and charge market interest rates.
- Adopt exposure limits to ensure maximum diversification on investments in shares: maximum 5 percent of the capital of any company should be owned by the fund; and a maximum of 5 percent of the fund assets should be invested in any company.
- Allow for investments outside the country.
- Eliminate taxes on profits from the investment income of fund reserves.
- Prohibit the SSO and the CSRO from having representation on corporate Boards and from exercising shareholder rights. Instead, authorize the pension funds to delegate the representation of shareholder rights to outside fund managers.

**Improve accountability**

- Conduct a mark-to-market valuation of current assets by an independent auditing company.
- Improve current reporting mechanisms. In particular, review the structure, scope, and outreach of current Annual Reports. These reports should be freely available to stakeholders and provide information, organized in a concise and clear way, about the finances and performance of the fund. Beyond standard accounting reports and the notes from the auditors, the Annual Report needs to provide information about the allocation of the portfolio of assets and the rates of return on different investments.
- Publish the balance sheets of the companies owned by the pension funds.
- Introduce periodic external audits, if possible by international consulting firms.
- Introduce external custodians.

### 7.3. Institutional Issues to Consider over the Short and Medium Terms: Strengthening Institutional Capacity and Merging Pension Funds

**Information systems and human resources**

The operation of a pension fund involves several administrative processes—including registration of new members and their employers, follow-up of life events, tracking and collection of contributions, processing of claims, payment of benefits, monitoring of investments, bookkeeping, and reporting. These processes need to be supported by appropriate management and information systems and a human resource base that is coherent in size and

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63 Notice that this recommendation does not imply that the profits of companies in which SSO has invested should not be taxed (see Section 5).
skills mix. This section presents recommendations for the SSO and the CSRO to improve institutional capacity.

The CSRO has developed a state of the art information system, based on a detailed analysis of the different administrative process: the software problem is resolved. The challenge now is to define and implement procedures so that information can be collected/updated into the system on a routine basis, particularly in the case of contributors. The following activities need to be completed over the short run:

- Update databases of current contributors—including the creation of a unique identifier number and when possible wage histories.

- Develop a mechanism for routinely collecting and updating information about new contributors and life-events. This could be done at the central level on the basis of manually filled forms, printouts from special software, or electronic support sent by the local branches. The best alternative, however, is to provide the regional offices access to a centralized database.

- Develop a mechanism to routinely collect information on contributions paid by current and new beneficiaries. Today, the collection of contributions takes place at the local offices of the CSRO. Then contributions are deposited in the local branches of the banks where the CSRO has accounts. A more efficient mechanism is to have contributions directly deposited in the bank’s local branches, these can send electronic records to the central office on the basis of the unique identifier. The information can then be easily updated at the central database.

- Optimize the processing of claims and the transfer of payments. For new beneficiaries this process should be automatic. Claims could be submitted electronically or in manually filled forms to the central office where the information systems will perform the calculations using the information already collected in the databases. Payments can then be transferred to the bank’s local branches along with a list of identifiers for individuals who should receive the payment. For current contributors, especially those close to retirement, processing the claims will first require manually updating information about wage and work history and life-events.

- Conduct an analysis of the needs in terms of information technologies (computers, fax, e-mail/internet) at the central and local levels and estimate implementation costs.

The SSO lags behind in the development of its management and information system and the definition of a coherent human resource policy. The design and implementation of the MIS is being conducted by a software company owned by SSC. To date, several technical problems have been identified in the design (see Section 2.1). Furthermore, since the SSO is involved in a large number of activities that go beyond those proper to a pension fund, it has been difficult to define a coherent strategy in terms of information needs, human resources needs, and the best organizational structure for the institution. Looking forward the following interventions are considered priorities:

- Explore the possibility of transferring the current MIS of the CSRO to the SSO.

- Develop administrative guidelines for routinely collecting information about new contributors and their employers in the local branches and assign a unique identifier number. Today, data on contributors are aggregated by employer.

- Review the current system used to record the information about new beneficiaries to include the work histories used by the local branches to compute benefits.
• Conduct an audit of the current databases of beneficiaries.
• Develop a plan to update the databases of current contributors—including a unique identifier number.
• Develop a plan to update information technologies at the central and local levels.

Merging the pension funds

Over the medium term it is desirable to move to an integrated National Pension Fund. This fund would merge the CSRO and the SSO, while also extending to individuals currently covered by occupational plans. Occupational plans would then become complements to and not substitutes for the National Pension Fund. The integration of funds would generate economies of scale while facilitating labor mobility and improving financial sustainability. Indeed, the financial sustainability of a PAYG system needs to be evaluated at the aggregate level. Pension funds need not be sustainable by sector or subsector. Beyond improving aggregate financial sustainability, having a single system allows for reductions in management costs (personnel, infrastructure). Indeed, in a pension fund a large part of operation costs are fixed.

In the case of Iran the integration could proceed along the following lines:

• Either the pension branch of the SSO or the CSRO would become the basis for the new system; in this discussion it is called the National Pension Fund (NPF). This implies that all new contributors (from the private sector and public sector) will join the NPF. The fund will have two types of contributors: i) current contributors, who are subject to a parametric reform, Type I; and ii) new contributors, who might join a Type II or Type III system (see previous section).

• If reforms Type II or Type III are implemented, current contributors from the CSRO and the SSO could be given the choice to switch to the "new" system within the NPF. Workers who transfer are subject to the same rules as the new plan members. This often involves lower benefits. If the government finds it appropriate to honor worker-accrued rights, the necessary resources to finance the additional benefits need to be transferred to the new pension fund or guaranteed by the central budget through recognition bonds that mature when workers retire. If the "new" system in the NPF is an NDC (Reform Type III), capital equal to past contributions plus appropriate interest earnings is transferred to worker notional accounts.

• The accounts of the plan members who remain outside the NPF could also be managed by the new NPF. Another alternative would be to leave the accounts under the pension fund that is being phased out. The latter is an easier option to implement, but it means that reforms to improve management and the information system need to be coordinated separately with two funds. Jordan, for instance, has recently adopted this strategy. Indeed, the Civil Servants and Military pension funds are being phased out. New civil servants and military recruits now enroll in the Social Security Corporation, which previously was open only to workers from the private sector. The accounts of current civil servants, military personnel, and pensioners continue to be managed by the Civil Servants and the Military pension funds.
There are three necessary conditions for the merger: i) the newly integrated pension fund needs to be financially sustainable (the reforms discussed in the previous sections would need to have been adopted); ii) it has to have the capacity in terms of information systems and human resources to manage the merger; and iii) transfers of the current plan members to the new system should not involve transfers of pension liabilities.

The merger in Iran ought to be accompanied by reforms mandating that new employees in firms that currently have occupational plans join the new system. Appropriate financing mechanisms could also be put in place to allow current plan members to join the new system. As previously observed, occupational plans would be maintained, but as complementary regimes not substitutes. A detailed analysis of the financial sustainability of these plans is necessary as well as a review of the current regulatory and supervisory framework.

A merger is a complex process that needs to be carefully planned and orchestrated, as it involves changes to current administrative structures, management and information systems, and accounting systems. To implement the merger in Iran, a multi-year program would be need to developed.

7.4. Expanding Coverage

The Iranian contributory systems covers approximately 50 percent of the labor force, which is a relatively high percentage given the country's level of income. As in other countries, however, workers in the informal sector and some populations living in rural areas remain uncovered. Ideally, Iran would like to achieve universal coverage through the contributory pension system. As discussed below, pension reform can contribute to expand coverage. Structural reforms leading to faster economic growth and better opportunities of employment in the formal private sector can contribute as well. Nonetheless, neither a reformed pension system nor a more dynamic economy are likely to suffice, at least over the medium term. Policymakers should keep in mind that there is no automatic increase in coverage with economic development. This implies that social assistance programs targeted to the elderly will remain an important component of the government strategy to ensure an adequate level of income during old age.

Expanding the coverage of the contributory systems

Recent research has shown that two aspects of the payroll contribution affect coverage: its level and its allocation between DB and DC schemes. High contribution rates, in any type of pension system, are detrimental to expand coverage. This occurs not only because expected rates of return decrease, but also because when the mandate to save is too high relative to individual preferences, these individuals are worse off if joining the pension fund. Finally, some individuals may face liquidity constraints and therefore simply cannot afford the payroll contribution. There is also evidence that for a given contribution rate and a given rate of return, moving from DB to DC schemes increases the probability of joining the system. This suggests that individual expectations about rates of return in a DC system are higher, maybe as a result of a more transparent link between contributions and benefits and less political uncertainty.

In the case of Iran, reducing the contribution rate and implementing a credible reform program that ensures a better balance between mandatory and voluntary schemes could contribute to expand coverage. If a DB system is preserved, computing pensions on the basis of full-career wages will also reduce incentives to evade.

A key challenge will be to reduce unemployment rates and the size of the informal sector. Labor force growth will soon accelerate as a result of the “baby-boom” in the mid-80s and

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64 Packard (1999 and 2001).
increasing female participation rates. Even under the hypothesis of a 6 percent GDP growth rate, an insufficient number of jobs are likely to be created and unemployment rates could be driven to 20 percent within 10 years. Better employment opportunities will require focusing efforts on job creation (through private sector participation) rather than on job protection. As part of the review of the current social protection systems, Iran should also carefully scrutinize current passive and active labor market policies.

Policymakers should avoid developing sector-specific public pension programs, such as those covering housewives or agricultural workers, with the objective of expanding coverage. In many countries, different professions are covered by their own public pension system (e.g., teachers, miners). Iran has also allowed the emergence of multiple occupational funds that have implicit government guarantees. The proliferation of “personalized” pension systems reduces transparency, can bring equity problems, and complicates management and financing. Ideally, over the medium term, Iran will have a single pension system applying to all individuals the same rules. It is often argued that housewives who are dependent on the income of their spouse would be in a vulnerable situation in the case of a divorce and that therefore the government ought to put in place special pension programs to protect them. This is a serious problem that requires government consideration. One alternative would be to separate the rights of both spouses. Thus, in the case of a divorce, part of the retirement pension can be vested to the wife in the same way that a share of current earnings is vested.

Nonetheless, the government should encourage the emergence of complementary/voluntary programs that are designed, financed, and managed by private associations (for-profit or non-profit). One mechanism to do this is to provide preferential tax treatment for long-term savings (other options are discussed in Section 7.5). Another mechanism to support the emergence of these programs is to provide information and training. Hence, the government could help finance seminars and workshops for interested organizations and disseminate experiences from other countries. The government, however, should not be directly involved in the design and financing of these complementary programs. Instead, it should focus on developing adequate regulation and supervision.

Expanding coverage through social assistance programs and demogrants

It is unlikely that contributory schemes will reach vulnerable groups such as the lifetime poor. They usually have to focus on addressing short-term risks rather than planning for the future. For them, joining a contributory system would be welfare-decreasing. The implication is that in-line with the reform of the pension system, social assistance programs that target the elderly-poor need to be carefully assessed, both from the demand and supply side. In terms of the demand, policymakers need to have a clear understanding of the size and socioeconomic characteristics and geographic distribution of population groups not covered by contributory regimes. From the supply side, it is necessary to assess whether current programs are meeting demands.

Of particular import is to benchmark current targeting mechanisms and monitoring systems with best international practices. By now there is some evidence regarding the costs of the various systems, their strengths and weaknesses. Self-targeting mechanisms (provision of goods/services that are mostly demanded by the poor) are less costly to administer but unlikely to be effective for large transfers. Moreover, this system imposes costs on the beneficiaries, which reduces the net benefit of the transfer. Categorical transfers are also easier to administer, yet these can be subject to substantial leakages when the goal is to reach the poor. For instance, one could think about a system that provides a transfer to all the elderly not covered by the

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See Subbarao et al. (1997).
contributory system. Some of the elderly, however, are nonpoor. Geographic targeting is demanding in terms of the necessary baseline data. For large geographic units considerable leakages can be observed. Effectiveness depends on the institutional capacity of local governments. Proxy means tests use a synthetic score calculated on easily observed characteristics—household structure, location and quality of housing, ownership of durable goods, etc. They are increasingly popular although implementation and administrative costs are higher. Finally, some countries have considered community-based target systems, which use existing local actors (teachers, nurses, clergyman) or a new civic committee to decide who receives the transfers. Local actors may have better information. However, local institutions (formal and informal) may affect negatively the actors’ performance. There is the risk that elites capture most of the benefits. To date, there is still little empirical evidence of the effectiveness of these programs.

Another option that the Government of Iran could consider to protect the elderly poor is to provide a universal grant or demogrant.66 The demogrant is a special form of cash transfer that is restricted to the elderly, not solely the elderly poor. While in the case of the nonpoor elderly the transfer brings negligible benefits, for the elderly poor it can represent a sizable share of their total income. While the grant is universal and therefore there is no need to establish targeting mechanisms, administration issues should not be underestimated, particularly in the case of a large country like Iran. On the other hand, there are no funds to invest and the estimation of the present and future cost of the grant is a relatively straightforward task. Today, providing USD 200 per year (roughly 20 percent of the minimum wage) to all of the population older than 65 (2.9 million individuals in year 2001) would cost between 0.4 percent and 0.7 percent of GDP (see Figure 31).

![Figure 31: Estimated Cost of a USD 200 Demogrant in Iran](image)

*Source:* Mission calculations.  
*Note:* Calculations based on base-line demographic and macroeconomic scenario.

When designing any type of non-contributory system to protect the elderly poor, basic to the concept is evaluating the incentive effects on the contributory regime. If benefits under the non-contributory system are too high, they will induce some individuals to drop out of the contributory system. Hence, benefits have to be designed in a way that only the core poor are benefited. In Chile, for instance, the minimum pension of the contributory regime is set at 75 percent of the minimum wage, while in the non-contributory regime it only reaches 25 percent of the minimum wage.

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66 See Dulitzsky et al. (2000).
**Summary of recommendations to expand coverage**

- Adopt a pension reform program that allows for a lower contribution rate and a better balance between DB and DC schemes.

- Conduct appropriate surveys to estimate the coverage gap and its causes. The objective of this activity is to identify population groups that are not covered by the system, as well as their geographic and socioeconomic characteristics. Only on the basis of this information it is possible to define specific activities to expand contributory and non-contributory schemes.

- Conduct a review of current social assistance programs for the elderly—including estimates of costs, benefits provided, number of beneficiaries, and their socioeconomic characteristics. The review will assess management, targeting, and monitoring mechanisms and will present recommendations in terms of the need to expand, eliminate, and/or design additional programs. The review should include detailed estimates of financing needs.

- Conduct a viability study for the implementation of a demogrant in Iran.

**7.5. Promoting Voluntary Savings and Developing Capital Markets**

As discussed in Section 7 of this report, one of the objectives of the public pension fund is to encourage individuals to save for their retirement (given “myopia”). A mandate that is too high, however, can discourage enrollment or reduce individuals’ welfare. An appropriate balance between the mandatory and the voluntary components of a pension system is therefore an important feature of its design.

*Among voluntary schemes, contractual savings (CS) appear as a promising mechanism for developing countries.* Contractual savings are savings accounts created to promote long-term saving and to manage social risks. These savings can be used to finance funded pensions plans (accumulation period), annuities (pension pay-out periods), life insurance, funded unemployment benefits, end of service indemnity, and other contingencies such as the down payment for a house, education, weddings, or funerals. Thus, they constitute a mechanism to improve the management of social risks.

*While the impact that CSs have on the savings rate of the economy remains controversial, particularly if voluntary, there is evidence that they can contribute to the development of capital markets and, through this channel, economic efficiency and growth.* Indeed, CSs can have the following effects on financial markets:

1. Increase depth and liquidity by increasing the demand for shares and bonds, market capitalization, and volume traded
2. Increase the demand for long-term bonds and the supply of long-term loans
3. Create incentives to improve regulations and transparency
4. Foster financial innovation, competition, and efficiency
5. Improve corporate governance.

*CSs also contribute to reduce financial risks and therefore output volatility.* This occurs through three channels. First CSs reduce the debtor—including the government—refinancing risks by lengthening the maturity of debts. Second, CSs reduce the pressure on banks to engage in excessive term transformation risks. That is borrowing short-term (from savings deposits)

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while lending long-term. Finally, CSs increase the demand for the equity of firms and induce an increase in the equity/debt ratio. A higher equity/debt ratio implies lower risks to fluctuations in interest rates and demand shocks. Indeed, while the value of a company’s debt remains constant during a contraction, the value of its equity (the debt with stakeholders) decreases.

Over the medium term, the government could consider putting in place the necessary regulatory infrastructure to stimulate the development of contractual savings in Iran. A variety of international experiences can guide this strategy. The development of CSs could become part of the agenda that the government is currently putting in place in the area of private sector development and financial sector reform. It is particularly timely today when the government is in the process of privatizing insurance companies. Indeed, life insurance companies are natural providers of private pension products. An important element that will need to be evaluated is the tax treatment of different types of savings. There is no robust evidence supporting the view that tax exemptions can increase the aggregate level of savings. At worse, the preferential tax treatment can create income effects that reduce savings. Nonetheless, if the preferential treatment focuses on long-term savings, it is likely that it will change the composition of financial intermediation favoring long-term funds.

In summary, to develop voluntary savings and contractual savings in particular the government should consider the following interventions:

- Initiate studies to develop an appropriate regulatory and supervisory framework for the providers and managers of contractual savings. The lessons from several international experiences are available to guide this task.
- Review the regulations in the Tax Law related to income taxation and evaluate the fiscal viability of alternative forms of tax exemptions for long-term savings.
8. DESIGNING AND IMPLEMENTING A REFORM PROGRAM

This section addresses questions related to the political economy of pension reform. In particular, what are the triggers of a reform program? What are the necessary conditions for a successful reform? It then outlines a series of short-term actions to initiate the process.

8.1. Triggering a Successful Reform Program

Several of the more substantial reforms in the world, unfortunately, have been initiated as a result of a severe crisis. Reforms in East European countries are the best example. While the financial problems of a pension fund system can be detected long before the most undesirable symptoms appear, governments have shown a tendency to delay the cure until the patient is seriously ill. This tendency can be explained, in part, by a disconnect between the planning horizon of policymakers (usually short-term) and the relevant planning horizon for analyzing the finances of a pension fund (necessarily long-term). The economic and political costs of a reform program manifest in the short term and therefore affect the government in power, while the bulk of benefits materialize over the long term.

Reforms can also take place as a result of demonstration effects; hence, if a given country undertakes a successful reform, other neighboring countries are likely to follow. This is more or less the experience of Latin America during the 90s. The reform of the Chilean system was crucial for inspiring and guiding subsequent reforms. In the MENA region, however, structural reform of the pension system has yet to occur in any country. The region is still waiting for the leader to appear.

In Iran the conditions to initiate a comprehensive reform program are in place; the risk is that the relatively healthy financial position of the SSO gives room for complacency. Among policymakers and some groups within civil society awareness about the problems of the pension system is rising. The government has taken initiatives to increase institutional capacity within the pension funds, and technical groups are now evaluating options for reform. Moreover, the actions that the government is undertaking to improve economic management, rationalize public expenditures, and strengthen the regulatory framework for the banking and the financial sector, in general, create an environment that increases the likelihood of success of a structural reform program. If the momentum is preserved, Iran could become the first country in the region to solve the problems of the pension system in a sustainable way. The challenge for policymakers and civil society is not to take the operational surpluses that the SSO is still generating as a sign that only minor adjustments are necessary.

There are two necessary conditions for the initiation and successful completion of a pension reform program: adopt a comprehensive approach and have a long-term commitment. First, pension reform should be part of a comprehensive reform of the public and private sectors. Indeed, there are several synergies that need to be taken into consideration. As an illustration, the reform of the civil service will affect (and has already affected) CSRO finances. Similarly, realistic reforms in the area of pensions depend on the types of reforms that are introduced to develop capital markets and implement appropriate regulatory institutions (e.g., Stock Exchange Commission, Insurance and Pension Commission). More importantly, financial reforms in the pension system are closely linked to expectations about the non-pension balance of the government. The second condition is to have a long-term commitment for pension reform. Reforms do not occur overnight and often extend over a decade. To create continuity, it is important to establish a Reform Commission with a structure that is independent of changes in the government. Clearly, a successful reform program also requires some luck.
Unexpected internal or external shocks can jeopardize reform efforts by switching resources and attention to restoring the equilibrium.

8.2. Next Steps for Iran

The Management and Planning Organization has initiated the reform process by producing an analysis of the major challenges facing the Iranian pension system and identifying reform alternatives. Looking forward, the following steps are proposed:

- **Creation of a Pension Reform Commission.** To date, the various organizations involved in pension reform are moving in their own direction with little coordination. The role of the Pension Reform Commission is to act as coordinator and manager of the reform process. Hence, it is the Pension Reform Commission that is given the responsibility of studying, consulting, and proposing a reform program to the government.

- **Dissemination of the current report.** One of the first activities of the Pension Reform Commission would be to disseminate the current report within the government and among representatives of civil society. The goal is to create awareness about the challenges facing the pension system and the options for reform.

- **Preparation of a White Paper on pension reform.** On the basis of the various discussions and the feedback received from stakeholders, the Pension Reform Commission should prepare a short White Paper that presents the key element of the government strategy to reform the pension system.

- **Preparation of detailed integrated multi-year reform program.** Once a final reform strategy/course of action has been established, the various activities necessary to implement the strategy and their distribution over time can be outlined. A first set of activities basically relates to the preparation of additional studies to define the final structure of the pension system, the level of different parameters, and the most appropriate transition mechanism. A second set of activities relates to the preparation of the new legislation. In parallel, it is necessary to develop activities to reinforce the institutional capacity of the pension funds (e.g., training, review of management and information systems, investment policies). If the new legislation is approved, then the final phase of implementation can be carried out.
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