



**International
Labour
Office
Geneva**

Main conclusions of the International Labour Office Concerning the Sixth Actuarial Valuation of the Jordanian Social Security Corporation as at 31 December 2007

The Sixth Actuarial Valuation as at 31 December 2007 has been prepared in accordance with Article 15(a) of the Social Security Law No. 19 of 2001 to shed light on JSSC's future demographic and financial condition. By virtue of this article, JSSC is obliged to examine its financial position at least once every five years under the supervision of one or more actuary experts, noticing that the objective of such periodic valuation is to make JSSC's Administration, social partners and policy makers aware of the future financial condition in order to handle any possible factors that might impede JSSC from meeting its future financial obligations. It is important to share the results of the Sixth Actuarial Valuation at this particular juncture in time to help the social dialogue build consensus as soon as possible around corrective policy measures that will avoid the JSSC from entering into a serious financial situation in the coming 10 to 30 years and that will ensure it continues maintaining its relevance in delivering social security to the people of Jordan. Reforms could be reflected upon rapidly but carefully to ensure the JSSC continues to fulfill its mandate towards the achievement of Jordan's social policy and is compatible with employment objectives for the country.

In the context of the Decent Work Country Programme in Jordan, the ILO has been collaborating since 2005 with the JSSC to develop actuarial projection systems permitting the assessment of JSSC current benefit programmes and various parametric pension reform packages.

The Sixth Actuarial Valuation conducted by the ILO follows the Fifth Actuarial Valuation that was conducted by the WM Mercer (Geneva) as at 31 December 2002. The Sixth Actuarial Valuation has been conducted in conformity

with international guidelines for actuarial practice in social security of the International Actuarial Association as well relying on the long-established experience of the ILO and its actuarial modelling applications. The ILO has carefully studied the past experience and the benefit and financing provisions governing the JSSC.

The ILO has been satisfied with the actuarial valuation process in collaborating with the staff of the JSSC. It wishes to bring to attention that projections always carry inherent uncertainties that ILO has attempted to duly measure and transparently report on. The users of the actuarial valuation results should focus on interpreting results for their long-term trends rather than short-term expectations.

The Sixth Actuarial Valuation relates to the legal provisions governing benefits and financing measures as at 31 December 2007. The main findings thus only refer to the current situation disregarding the SSC pension reform proposals under consideration.

Main findings of Sixth Actuarial Valuation

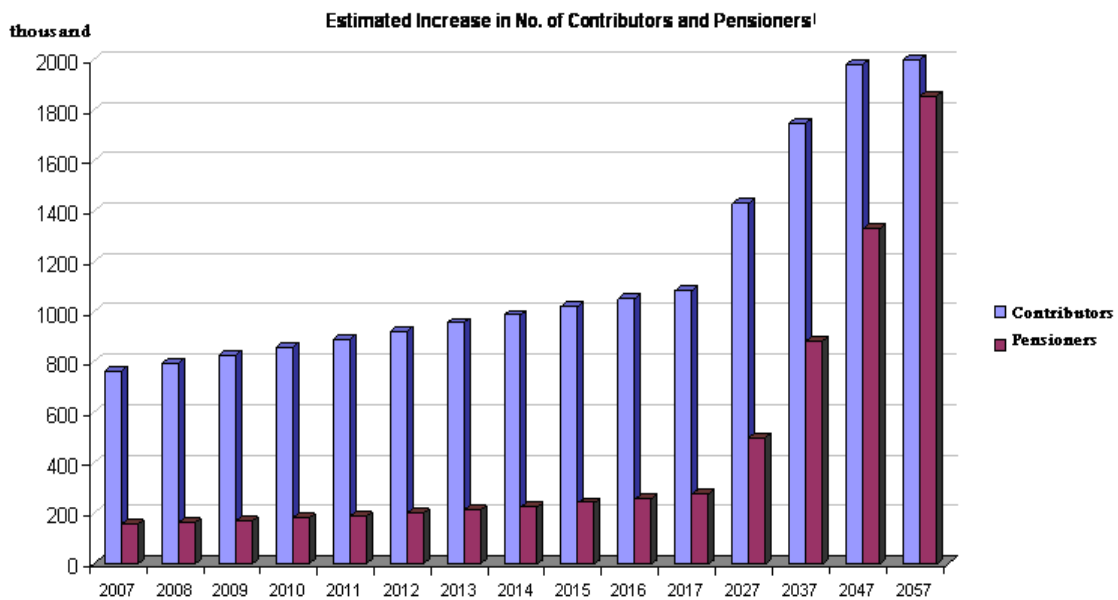
In the specific case of pension obligations promises made today by the JSSC, it is important to realise that their impact may extend over 100 years into the future as, for example, in the case of newcomers in the labour market of age 15 today who will retire in about 50 years, to then possibly survive another 35 years whilst their survivors could likely outlive them for another 15 years. This justifies the utmost importance for the actuarial projections to extend over 100 years so to appreciate the burden shared across generations in Jordan.

First: JSSC demographics

JSSC demographics are directly related to overall employment developments in Jordan that in turn are affected by its economic development and the labour supply. The latter depends on the general population whose number, sex and age structure are dictated by (i) fertility that has been observed to follow a decreasing pattern in past years although at a still relatively high level; (ii) mortality that has shown significant improvements over previous decades; and (iii) net migration.

Based on the demographic changes in the Kingdom, the Sixth Actuarial Valuation estimates that the number of working-age persons per retirement-age

person in the general population will decline from nearly ten persons in 2007 to three by the middle of the century. For the JSSC, this translates into a situation whereby the ratio between the number of contributors (expected to rise from 764 thousands in 2007 to more than two million by 2057) and the number of pensioners and survivors (expected to increase substantially from 156 thousands in 2007 to almost two million by 2057) will deteriorate from roughly five contributors for each pensioner in 2007 to around three by 2027, and to one contributor against one pensioner by 2057. The substantial increase in the number of pensioners directly stems from the extensive use of the early retirement provisions as nearly 80 per cent of new retirees in recent years were effectively withdrawing from the labour market at ages prior to the normal retirement age of 55 for women and 60 for men. This is a demographic burden that would need to be carried by future generations of workers as shown in the figure below.



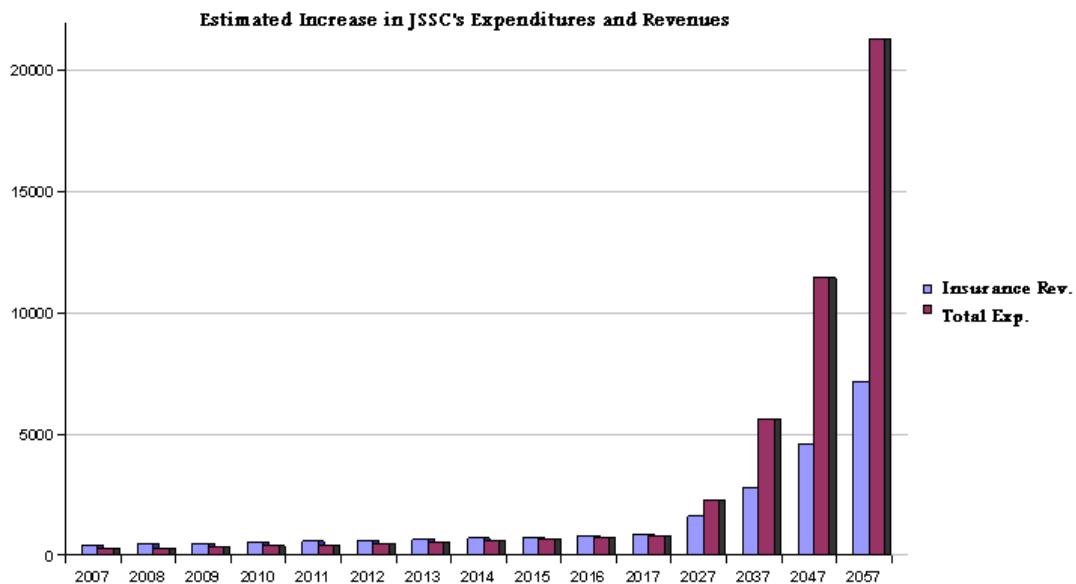
Second: JSSC benefit expenditure

In light of the above-mentioned demographic indicators, especially the increase in the number of JSSC total number of beneficiaries, the Sixth Actuarial Valuation reflects that JSSC total benefit expenditure will likely increase annually from JD 288 million in 2007 to about JD 2,300 million in 2027 and to JD 21,300 million in 2057. This represents an annual average increase in benefit expenditure of nine per cent that must be compared to an average annual increase in contribution

income of slightly less than six per cent over the same period. Herein below some of related details and rates as shown in the figure below:

- Old-age expenditure are projected to increase from JD 216 million in 2007 to almost JD 17,800 million in 2057 (increasing on average by 9.2 percent annually).
- Disability expenditure are projected to increase from JD 29 million in 2007 to JD 736 million in 2057 (increasing on average by 6.7 percent annually).
- Survivors' expenditure are projected to increase from JD 12 million in 2007 to JD 2,400 million in 2057 (increasing on average by 11.2 percent annually) .
- Contribution revenues from employers and workers are projected to increase from JD 423 million in 2007 to JD 7,100 million in 2057 (increasing on average by 5.5 percent annually).

The generosity of the current benefit formula to calculate JSSC benefit provisions appears in the average replacement rate for old-age pensioners that indicates that the replacement rate of the average individual old-age pension in 2007 was equivalent to 108 per cent of the average insurable earnings. The average old-age pension individual replacement rate is expected to decrease to roughly 72 per cent of insurable earnings by 2057 as the profile of JSSC insured members will change over time.



Third: JSSC expenditure in terms of insurable earnings

The current contribution rate collected from employers and workers is of 16.1 per cent of insurable earnings. The financial situation of the JSSC is best depicted

through the development over time of the pay-as-you-go cost rate reflecting the annual benefit expenditure in terms of annual insurable earnings, in other words the required contribution rate that would be necessary every year to cover annual benefits. The pay-as-you-go cost rate is projected to increase from 11 per cent of insurable earnings in 2007 to approximately 48 per cent by 2057.

If policy makers were to have decided on adopting a single contribution rate effective as at 31 December 2007 to ensure the JSSC would be in financial equilibrium over the next 100 years, it would have had to set the contribution rate equivalent to nearly 36.2 per cent of insurable earnings, referred as the general average premium. This implies that the JSSC benefits are under-funded over the next 100 years by a measure equivalent to 20.1 per cent of insurable earnings. This gap in financing need to be appreciated in relation to the current contribution rate of 16.1 per cent of insurable earnings. Solutions to restore this financial disequilibrium would require either increasing income and/or decreasing benefit provisions in addition to possible rationalization measures.

Fourth: JSSC moving from an annual financial surplus to a deficit

In 2007 JSSC total benefit expenditure amounted to 2.6 per cent of the gross domestic product (GDP).

Until 2016, annual contributions are expected to be more than enough to cover annual benefit expenditure, according to the Sixth Actuarial Valuation, thus allowing JSSC to accumulate an annual surplus to build up its reserve fund. Starting in 2016, annual contribution income is expected to become insufficient to cover all of JSSC annual benefits such that the gap will need to be covered by its annual income earned on the investment of JSSC reserve fund. By 2026, it is foreseeable that the sum of annual contribution income and investment income will be insufficient to cover the full cost of annual benefit expenditure thus resulting in the necessity to sell some of JSSC reserve fund assets to meet the gap. At that time, JSSC would have to begin liquidating its reserve fund assets to cover its annual deficit. By 2036, the JSSC reserve fund is projected to be fully depleted in the unlikely event where no corrective action were implemented beforehand. JSSC would be confronted with a difficult situation of having to find means to pay all benefit obligations which will be equivalent by that time in 2036 to 8.6 per cent of GDP.

Comparison between the Fifth Actuarial Valuation and Sixth Actuarial Valuation

The Sixth Actuarial Valuation shows a significantly worst situation in relation to the projected situation according to the Fifth Actuarial Valuation that was conducted as at 31 December 2002. This is largely explained by an observed experience since 2002 that was less positive than expected as of the end of 2002. One of the main differences resides in the fact that there were many more new old-age pensioners that elected to go on retirement before the normal retirement age of 55 for women and 60 for men. The Sixth Actuarial Valuation took this situation into account by reflecting this retirement behaviour would continue in future if no reform is adopted.

The following table shows the comparison of the key findings between the Fifth and the Sixth Actuarial Valuations.

	The 2002 Valuation	The 2007 Valuation
Year expenditure first exceeds contribution income	2017	2016
Year expenditure first exceeds total income from contributions and investments	2051	2026
Year JSSC reserve asset fund depleted	2063	2036

The past performance review covered by the Sixth Actuarial Valuation sheds light on the fact that despite the relatively good investment performance, an increase in the number of insured workers and higher contribution revenues that JSSC witnessed over the period since 2002, there will be a resulting increase in pension liabilities in the long-term, partly associated with the accrued rights of the newcomers who are expected to espouse a retirement behaviour similar to the one of new retirees today.

The ILO encourages the JSSC and the Government of Jordan to explore further ways to extend income security and social security coverage to all the people of Jordan in future through the JSSC and other programmes of social protection, such as social pensions and universal benefits.

The ILO actuarial team has presented the main findings of its Sixth Actuarial Valuation report to the Board of Directors of the JSSC on 9 July 2009.