# Palestinian Losses in 1948, Compensation Valuations and Israel's Ability to Pay

**Submitted to**

**Adam Smith International Ltd.**

**Submitted by**

**Atif Kubursi**
**McMaster University**

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# 1.0 Introduction

The Palestinian economy, which Israel usurped in 1948, was a viable and thriving economy with a significant flow of output and income that sustained a growing population of approximately 2 million people. The Zionist claim that Palestine was an empty and barren land is contradicted by the substantive and authoritative works of R. Loftus (1944), R. Nathan et.al. (1946) and The Survey of Palestine (1945-46) that estimated the Net Domestic Product of Palestine to have exceeded LP 123 million in 1944, with commerce, manufacturing and agriculture contributing almost equal shares. This income in 1944 translates into a total wealth estimate of over LP 3.1 billion using a modest 4% real rate of interest in the same year prices. The Arab share of this wealth is roughly estimated at 51.2% using Loftus' calculation of this share in total Palestinian Net Domestic Product (NDP) at the time. It follows that the Arab Share of this wealth was about LP 1.6 billion in 1944 and multiples of this in 2008 as estimated by Thierry Senechal (2007).

Regardless of how high these estimates are, a homeland is much too precious to be assigned a monetary value.  No financial award, however large, could compensate fully for its loss.  But Arab wealth in Palestine, which was confiscated by the Zionists in 1948, was substantial, and an accurate assessment of these assets would serve, at least, to indicate the magnitude of the losses and the difficulties the Palestinians had to endure in their absence. It also helps define the range of values that might be considered as basis for compensation should they choose this alternative. Estimating the losses and the discussion of compensation, however, do not override the basic issue, which is the right of return of the refugees. Compensation estimates are only meaningful within the overall context of the empowerment of refugees and the preservation of their options and choices. Compensation within this context is seen as a complement to the right of return and not as a substitute.

Surely, not all aspects of the traumatic loss of a homeland can readily be measured in monetary terms. The argument here is that monetary values may be assigned to these losses that might be acceptable to those who suffered as fair compensation. There are many precedents that can be used to delineate the range of values to put on such losses. Thierry (2007) has opted to use a special documentation that is verifiable, replicable and an audit trail.

This paper has a number of objectives but its main purpose is to use the careful and comprehensive estimates made by Senechal (2007) as basis of identifying and quantifying the Palestinian refugee losses in 1948 in today's prices, and to assess the economic ability of Israel to compensate the Palestinian for these losses using a scenario approach that specifies the payments under different time intervals and alternative interest rate specifications.

## 1.1 *The Theoretical Basis for Compensation*[i]

Economics is based on the fundamental premise that human beings when unimpeded would seek to arrange their economic affairs in such a way as to obtain the greatest possible satisfaction. Any arrangement that does not produce this outcome is inadequate and will soon be displaced by one yielding a higher level of satisfaction (or 'utility'). That is, individuals will take advantage of any opportunities for exchange to achieve the greatest possible satisfaction where their willingness to trade is matched exactly by their opportunity to do so. Circumstances outside the objective conditions of the market that preclude such an outcome imply lower levels of utility -- loss of welfare, as it is usually called. The size of this loss is indicated by the difference between the levels of satisfaction attainable in the two circumstances. Alternatively, it is equal to that monetary compensation that would permit the higher level of utility to be realized.

This conception of individual economic loss also suggests that social losses are the sum total of individual losses. This is true, however, only if all goods are private goods (those goods any individual's consumption of which reduces what is available to others in the market). In the case of public goods (those goods of which one individual's consumption does not diminish their availability to other members of the society), special adjustments would have to be made.

Essential to this analysis is the specification of each individual utility function and the determination of the effect on utility of the forced or imposed situations that lead to loss of welfare. Individual utility indices differ not only with respect to the arguments that define them; they also differ with respect to their nature. Typically all things that contribute to utility are included as arguments of those indices. This would make the list too long for any useful analysis. Alternatively, we may group these arguments under the following headings: private goods, public goods, individual psychological needs, and social psychological needs. Private goods include all the commodities and services desired and purchased by consumers; public goods include education, health services, etc.; individual psychological needs cover a wide spectrum comprising tranquillity, safety, absence of pain, family cohesiveness, etc.; and social psychological needs include national identity, cultural activities, etc.

Another widely used approach to measure the losses of injured parties is predicated solely on the income streams that would prevail in the absence of the injury as compared to the existing stream. This restricts the losses to purely income losses and diminishes the range of injuries and the way different people respond to them. The utility analysis is more general, allows for different valuations and is more inclusive. It is predicated on two main assumptions:

- Individuals shall be considered better off if they are in a position of their own choosing. Since we define utility as that which individuals attempt to maximize, it follows that they will rather choose more than less utility. An increase in utility can then be regarded as synonymous with being better off.

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- An individual utility depends entirely on the volume of commodities and services they consume and on the needs they satisfy. They will always be assumed to choose to consume more, or at least not less, of a commodity and to satisfy more of their needs rather than less.

This manner of defining the welfare function severely limits the form which social value judgements can take. If the welfare of society is held to depend upon the utility level of the members of society, and upon nothing else, then the only further social value judgements to be made concern the welfare significance of each individual's utility index. In a totally egalitarian society each person's utility would count equally, though some form of interpersonal compatibility of utility in cardinal terms would be necessary to give substance to the judgement. Alternatively, it might be held that some members of society are more deserving than others, and their utility indices would be weighted more heavily in the welfare function.

Whichever form is specified for the social welfare function, it is clear that individual losses are translated into social losses and the social welfare function can be used to assign valuation of these losses. The concept of compensation as developed by Hicks and Kaldor is a case in point.[ii] The concept underlying the compensation principle is that if a change in a situation would result in some persons being better off and others worse off, those who gain could compensate the losers in such a way that on balance everybody would be better off.

Consider the representation of an individual's utility map in Figure 1. The numeraire (or money) is measured on the vertical axis and the commodity X on the horizontal. Consider first an individual who receives income $OM_2$ and purchases $OX_1$ of X at price $P_2$, and attains equilibrium at point A on $U_1$. If price is reduced to $P_1$, he will purchase $OX_4$ of X, and be in equilibrium at point B on $U_{11}$ is the increase in his satisfaction; the problem is to express this in money. Seen differently, the individual is maximizing his utility at point B and a forced situation (a more binding budget constraint) is imposed on him which forces him to point A on $U_1$. His loss of satisfaction is the difference between $U_1$ and $U_{11}$ and the challenge is to assign a dollar value to this loss. This can be done easily along the following lines developed by Hicks.

Construct a line with slope $P_1$ tangent to $U_1$ (at D) to intersect the ordinate at $M_1$. If the individual income is reduced by $M_1M_2$ at the same time as the price is reduced, he will be just as well off at D as he was at A. The amount $M_1M_2$ is therefore a monetary measure of how much better off he is if the price falls and there is no change in his money income. Alternatively, $M_1M_2$ represents the financial compensation to be paid to the individual to take him back to his original utility level before the new imposed situation. $M_1M_2$ is called the 'compensating variation' for the price fall or for the forced situation.

Figure 1: The Principle of Compensation
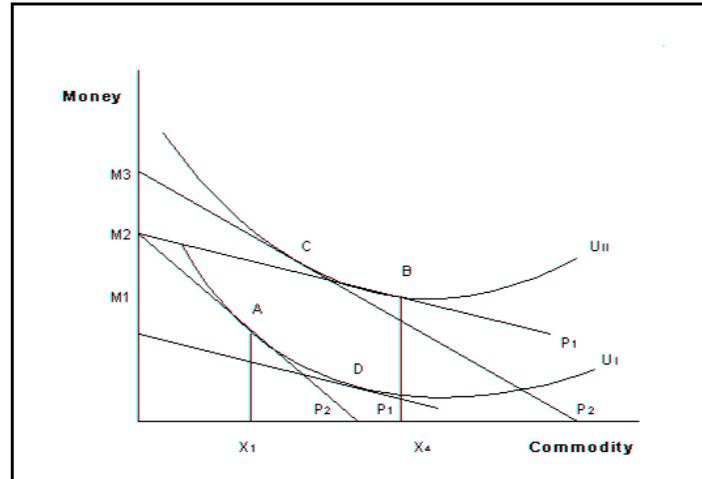


Compensation is, therefore, synonymous with indemnification in the legal meaning of the undoing of damage done and losses suffered. **Total indemnification means in essence, a return to a situation which existed before the loss was incurred**. If it is done by way of restitution, the old situation is restored in specie. If it is done wholly or partially by way of compensation, the consequences of the damage are liquidated although the old situation is not restored in the true sense of the word.[iii]

It is clear, however, that such a return to the old situation is possible only by way of total restitution or total indemnification and only when changes in the general financial, economic, social, and demographic situations are taken into account.

## 1.2 Valuations of Palestinian Losses

Several other attempts have been made to identify and assess Palestinian losses. The UN Land Specialist's evaluation was indeed a major contribution to this literature. However, it was restricted to a small sub-set of the losses and assigned exceptionally low values to them.[iv]  There is also the study of the **Arab Higher Committee** (AHC) which was first published in Cairo in 1955 under the title Palestinian Refugees: Victims of Imperialism and Zionism and then in Beirut under the title Statement in 1961. The AHC assessments were substantially higher than those of the UN study and included several additional non-real estate assets (e.g. factories, jewellery livestock, public transport facilities, etc.). Nevertheless, these estimates failed to include lost opportunities of income generation, the depletion of human capital stock, innumerable public and private assets (schools, airports), and private and social psychological damage.  While it represented an improvement on the UN Land Specialist's study, it fell short of computing the full range of losses and used below-market indices in the evaluation of real-estate losses.[v]

A third assessment was carried out by the **Arab League Expert Group** and produced similar results to those of the AHC.[vi] A fourth assessment was undertaken by Professor Yusif Sayigh (1964) who attempted to redress some of the omissions in the preceding assessments in his book The Israeli Economy (1964). His coverage was more extensive, his indices more realistic and generally in conformity with economic principles. While his analysis was more perceptive and original than all the preceding attempts, it failed to use the data on losses accumulated by the UN. Moreover, Professor Sayigh's estimates, although more extensive than preceding studies, did not cover the full range of lost assets and missed opportunities, and disregarded psychological damage, etc. Besides, some of the figures used by Professor Sayigh were pure estimates that needed confirmation by collation with the results of hard surveys, particularly those relating to real estate.

A fifth estimate was made by Hadawi and Kubursi (1988). The estimates were based property losses, sales and shares of refugees as collated by the UN; it did not cover all extensively the lost income opportunities. Senechal (2007) is the most recent and most detailed account that will be used here as the basis of firming up the total losses value in 2007 and 2008 prices.

### 1.3 Plan of the Paper

A brief outline of the rest of the paper is sketched here to set the tone for the development of our conclusions. The next section reproduces the estimates of Senechal (2007) and moves the values one year to 2008 using the same assumptions as Senechal (2007). A suite of scenarios are developed to amortise the Israeli compensation payments over a 15 or 20 years period using three different interest schemes. This was felt necessary to gauge the sensitivity of the payments to time intervals and to interest payments. An entire section will be devoted to a full review of the Israeli economy and to identify its capacity to pay the compensation values to Palestinian refugees in the event Israel does choose the restitution option. Different compensation regimes are possible and an attempt is made to model along UN regimes used to compensate victims of Iraqi invasion of Kuwait. Finally, we conclude with an overall evaluation of the capacity of Israel to compensate the Palestinian refugees for their losses in 1948 and the complexities that may arise from this general attempt to resolve the Palestinian Israeli conflict.

## 2.0 Palestinian Refugee Losses in 1948 in 2008 Prices

The baseline estimates of Palestinian Refugee losses in 1948 are the benchmark figures of the compensation values developed by Thierry (2007). His estimated value of the share of the refugees in 1948 prices exceeds $3 billion. In 2007 (December 31, 2006) prices taking into account inflation and real interest by using a 7.64% to cover for both and following the standard bank compounding practices of daily compounding, he arrived at a global estimate of $273.2 billion. We extended the estimate using his procedure to December 31, 2007 and put this value at $294.8 billion.

The composition of losses is restricted to Rural Land, Urban Land, Holy Places, Loss of Employment and Livelihood, Personal Property & Movable Assets, Business Losses and Arab Share of State-Owned Property (Table 1). Indeed, compensation for psychological suffering, pain and neighbourhood losses along the Programme of "Widergutmachen" that Jews used to detail their claims for compensation for German atrocities of the Holocaust would have add another substantial value. Since Senechal (2007) did not estimate the compensational value of these, we did not include them in our calculations.

**Table 1**
**Palestinian Property Losses: Share of Refugees**
**In Current Dollars**

| Valuation of | Losses in 1948 Dollars | Losses in 2007 Dollars | Losses in 2008 Dollars |
|---|---|---|---|
| Rural Land | $1,605,590,475 | $145,564,588,836 | $157,120,323,403 |
| Urban Land | $511,369,445 | $46,361,313,276 | $50,041,734,694 |
| Holy Places | $6,460,233 | $585,691,791 | $632,187,294 |
| The Loss of Employment and Livelihood | $494,871,422 | $44,865,584,464 | $48,427,266,528 |
| Persoanl Property & Moveable Assets | $180,844,923 | $16,395,598,547 | $17,697,173,239 |
| Business Losses | $116,132,267 | $10,528,678,365 | $11,364,503,983 |
| Arab Share of state-owned property | $97,593,152 | $8,847,901,919 | $9,550,298,063 |
| Total of Property Losses | $2,221,013,305 | $201,359,495,822 | $217,344,543,454 |
| Total Losses | $3,012,861,917 | $273,149,357,197 | $294,833,487,204 |

Source: First two columns from Thierrry J. Senechal, Valuation of Palestinian Refugee Losses
        Dec 15, 2007, P 5. Last column our calculations.

The share of property losses is about 74% of the total estimated losses. Of course Israel could chose to return this property back to the Palestinians and no real monetary compensation would be necessary. The presumption here is that the value of the property would reflect the capitalization of all of the foregone returns.

In what follows the value of $300 billion is used to reflect the continuous compounding of the losses and to round out the values to $300 billion. The scenarios displayed in Table 2 reflect this global rounded estimate. Two key parameters are allowed to vary to generate the menu of results in Table 2. First, we entertain two amortization schedules— one for 15 years and another for 20 years. Second, we benchmark the constant dollar value in 2008 dollars and allow for no change in interest rate. The estimates then reflect the 2008 constant dollar estimates and these would have to change upward by the nominal interest rates that would prevail until full payment of the global compensation value is paid. Alternatively a 3% real rate of interest is allowed to be charged on the remaining balances until the full amount is paid. The 3% value will need adjustment by the prevailing inflation rates between 2008 and the compensation payment. Finally, the 7.64% used over the period 1948 and 2008 is presumed to hold over the compensation period and values are scaled upward by this rate that would allow payments to be made in current year dollar.

**Table 2**
**Compensation Scenarios for Total Losses**

**Interest = 0%, 20 years**
**Loan Amortization Schedule**
**Millions of US Dollars**

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 | Year 15 | Year 16 | Year 17 | Year 18 | Year 19 | Year 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Opening Balance | $300,000 | $285,000 | $270,000 | $255,000 | $240,000 | $225,000 | $210,000 | $195,000 | $180,000 | $165,000 | $150,000 | $135,000 | $120,000 | $105,000 | $90,000 | $75,000 | $60,000 | $45,000 | $30,000 | $15,000 |
| Ending Balance | $285,000 | $270,000 | $255,000 | $240,000 | $225,000 | $210,000 | $195,000 | $180,000 | $165,000 | $150,000 | $135,000 | $120,000 | $105,000 | $90,000 | $75,000 | $60,000 | $45,000 | $30,000 | $15,000 | $0 |
| Payment | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 |
| Interest Payment | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Principal Payment | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 |

**Interest = 0%, 15 years**
**Loan Amortization Schedule**
**Millions of US Dollars**

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 | Year 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Opening Balance | $300,000 | $280,000 | $260,000 | $240,000 | $220,000 | $200,000 | $180,000 | $160,000 | $140,000 | $120,000 | $100,000 | $80,000 | $60,000 | $40,000 | $20,000 |
| Ending Balance | $280,000 | $260,000 | $240,000 | $220,000 | $200,000 | $180,000 | $160,000 | $140,000 | $120,000 | $100,000 | $80,000 | $60,000 | $40,000 | $20,000 | $0 |
| Payment | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 |
| Interest Payment | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Principal Payment | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 | $20,000 |

**Interest = 3%, 20 years**
**Loan Amortization Schedule**
**Millions of US Dollars**

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 | Year 15 | Year 16 | Year 17 | Year 18 | Year 19 | Year 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Opening Balance | $300,000 | $288,861 | $277,385 | $265,562 | $253,382 | $240,834 | $227,906 | $214,588 | $200,868 | $186,732 | $172,169 | $157,166 | $141,710 | $125,787 | $109,382 | $92,481 | $75,070 | $57,132 | $38,652 | $19,614 |
| Ending Balance | $288,861 | $277,385 | $265,562 | $253,382 | $240,834 | $227,906 | $214,588 | $200,868 | $186,732 | $172,169 | $157,166 | $141,710 | $125,787 | $109,382 | $92,481 | $75,070 | $57,132 | $38,652 | $19,614 | $0 |
| Payment | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 | $19,932 |
| Interest Payment | $8,793 | $8,456 | $8,109 | $7,752 | $7,384 | $7,005 | $6,614 | $6,211 | $5,797 | $5,369 | $4,929 | $4,476 | $4,009 | $3,527 | $3,031 | $2,521 | $1,994 | $1,452 | $894 | $318 |
| Principal Payment | $11,139 | $11,476 | $11,823 | $12,180 | $12,548 | $12,927 | $13,318 | $13,721 | $14,135 | $14,563 | $15,003 | $15,456 | $15,923 | $16,405 | $16,901 | $17,411 | $17,938 | $18,480 | $19,038 | $19,614 |

**Interest = 3%, 15 years**
**Loan Amortization Schedule**
**Millions of US Dollars**

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 | Year 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Opening Balance | $300,000 | $283,897 | $267,306 | $250,215 | $232,607 | $214,466 | $195,778 | $176,524 | $156,689 | $136,254 | $115,201 | $93,512 | $71,168 | $48,148 | $24,432 |
| Ending Balance | $283,897 | $267,306 | $250,215 | $232,607 | $214,466 | $195,778 | $176,524 | $156,689 | $136,254 | $115,201 | $93,512 | $71,168 | $48,148 | $24,432 | $0 |
| Payment | $24,829 | $24,829 | $24,829 | $24,829 | $24,829 | $24,829 | $24,829 | $24,829 | $24,829 | $24,829 | $24,829 | $24,829 | $24,829 | $24,829 | $24,829 |
| Interest Payment | $8,725 | $8,239 | $7,737 | $7,221 | $6,688 | $6,140 | $5,575 | $4,993 | $4,394 | $3,776 | $3,140 | $2,484 | $1,809 | $1,113 | $396 |
| Principal Payment | $16,103 | $16,590 | $17,092 | $17,608 | $18,140 | $18,689 | $19,254 | $19,835 | $20,435 | $21,053 | $21,689 | $22,344 | $23,020 | $23,716 | $24,432 |

**Interest = 7.64%, 20 years**
**Loan Amortization Schedule**
**Millions of US Dollars**

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 | Year 15 | Year 16 | Year 17 | Year 18 | Year 19 | Year 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Opening Balance | $300,000 | $293,287 | $286,052 | $278,253 | $269,847 | $260,787 | $251,021 | $240,495 | $229,149 | $216,920 | $203,739 | $189,531 | $174,217 | $157,711 | $139,920 | $120,743 | $100,074 | $77,795 | $53,781 | $27,898 |
| Ending Balance | $293,287 | $286,052 | $278,253 | $269,847 | $260,787 | $251,021 | $240,495 | $229,149 | $216,920 | $203,739 | $189,531 | $174,217 | $157,711 | $139,920 | $120,743 | $100,074 | $77,795 | $53,781 | $27,898 | $0 |
| Payment | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 | $29,048 |
| Interest Payment | $22,335 | $21,813 | $21,249 | $20,642 | $19,988 | $19,282 | $18,522 | $17,702 | $16,819 | $15,867 | $14,840 | $13,734 | $12,542 | $11,257 | $9,871 | $8,378 | $6,769 | $5,034 | $3,165 | $1,150 |
| Principal Payment | $6,713 | $7,235 | $7,799 | $8,406 | $9,060 | $9,766 | $10,526 | $11,346 | $12,229 | $13,181 | $14,208 | $15,314 | $16,506 | $17,791 | $19,176 | $20,670 | $22,279 | $24,013 | $25,883 | $27,898 |

**Interest = 7.64%, 15 years**
**Loan Amortization Schedule**
**Millions of US Dollars**

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 | Year 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Opening Balance | $300,000 | $288,766 | $276,657 | $263,605 | $249,537 | $234,374 | $218,030 | $200,413 | $181,425 | $160,959 | $138,899 | $115,121 | $89,493 | $61,868 | $32,093 |
| Ending Balance | $288,766 | $276,657 | $263,605 | $249,537 | $234,374 | $218,030 | $200,413 | $181,425 | $160,959 | $138,899 | $115,121 | $89,493 | $61,868 | $32,093 | $0 |
| Payment | $33,416 | $33,416 | $33,416 | $33,416 | $33,416 | $33,416 | $33,416 | $33,416 | $33,416 | $33,416 | $33,416 | $33,416 | $33,416 | $33,416 | $33,416 |
| Interest Payment | $22,181 | $21,307 | $20,364 | $19,348 | $18,252 | $17,072 | $15,799 | $14,428 | $12,949 | $11,356 | $9,638 | $7,787 | $5,792 | $3,641 | $1,322 |
| Principal Payment | $11,234 | $12,109 | $13,052 | $14,068 | $15,163 | $16,344 | $17,616 | $18,988 | $20,466 | $22,060 | $23,778 | $25,629 | $27,624 | $29,775 | $32,093 |

Source: Econometric Research Limited

The annual payments are lowest when the interest rate is put at zero and the period over which the compensation is fully paid is 20 years. Under this highly simplified and unrealistic scenario the annual payment is calculated at $15 billion. This value will of course rise to $20 billion per year if the period is cut to 15 years and interest remains at zero.

The highest values are associated with 15 year payments schedule with 7.64% interest. Here the annual payment rises to $33,416 million. It drops slightly if the period is extended to 20 years but the interest rate is kept at 7.64%. In this case the annual payment is put at $29,048 million. The annual payments with a 3% real rate show these payments

range between $19,932 millions for the 20 years amortization period and rise to $24,829 million for the 15 year period.

Surely, the capacity of the Israeli economy to pay these compensation values would depend on a number of considerations. First, is the Israeli economic performance sufficiently vigorous and productive to make these payments without compromising its vitality and viability? Are Israeli total savings, investments abroad, foreign assets, foreign aid, FDIs, exports proceeds singularly or in combinations large enough to defray in part or totally the compensation payments? Are there enough savings (avoided costs) on defence expenditures, security costs and are there large enough peace dividends that would accrue to Israel under peace that could cover in part or totally the compensation payments? Is there room in the taxation regime (tax rates and expenditures) and in adjusting the debt to GDP ratio that could raise the required funds for compensating the Palestinian refugees without unduly compromising Israeli economic performance?

These are substantive and practical questions that can be answered empirically and precisely. It is abundantly clear that if the Israeli economy is growing vigoursly, is generating significant surpluses, its export potential is rising, its debt to GDP is falling, its tax rates are relatively low, its share of FDI flows is increasing and there are large dividends to peace with the Palestinians be it lower defence expenditures, lower security defensive expenditures, larger tourism flows, higher FDIs, higher aid and support contributions, real and measurable increases in exports to Arab and neighbouring markets, access to cheap labour, lower dependency on the US and a host of other positive developments and good will that have real impacts but are hard to quantify then Israel would be in a better position to shoulder the compensation payments and invest in peace and stability.

Indeed, there are a large number of combinations among these factors that could be organized to enable Israel to shoulder its responsibility to compensate the Palestinian refugees for their losses in 1948. There is no question and it is natural to believe that Israel would try its best to minimize its payments and/or to persuade the international community to shoulder with it a good part of its obligations to the Palestinians. Israel may also submit its own claims for Jewish refugees from Arab countries where Jews left without their properties and possessions. Whatever Israel may choose to do or not to do it is not possible to burden the Palestinians with issues they are not responsible for or reasonably able to deal with. Israel can not shirk its own obligations and this is an important premise for peace, justice and stability of the region.

## 3.0 The Israeli Economy: The Dynamic Record

The Israeli economy is dynamic, advanced, and highly connected to the global economy. Its GDP in 2007 is estimated to have exceeded $157.4 billion in current dollars or about $188 billion at Purchasing Parity Prices (Table 4). This sustains a per capita income of $28,800 in PPP dollars in the same year which situates Israel among the top advanced countries of the OECD (CIA Fact Book 2007). Between 2003 and 2007, the Israeli economy grew at the annual real rate of 5.1% which puts it in the top 10 of the fastest growing economies of the world and exceeds by far the average annual OECD (Figure 2).

**Figure 2. Israel: The Long View, 1996−2007**
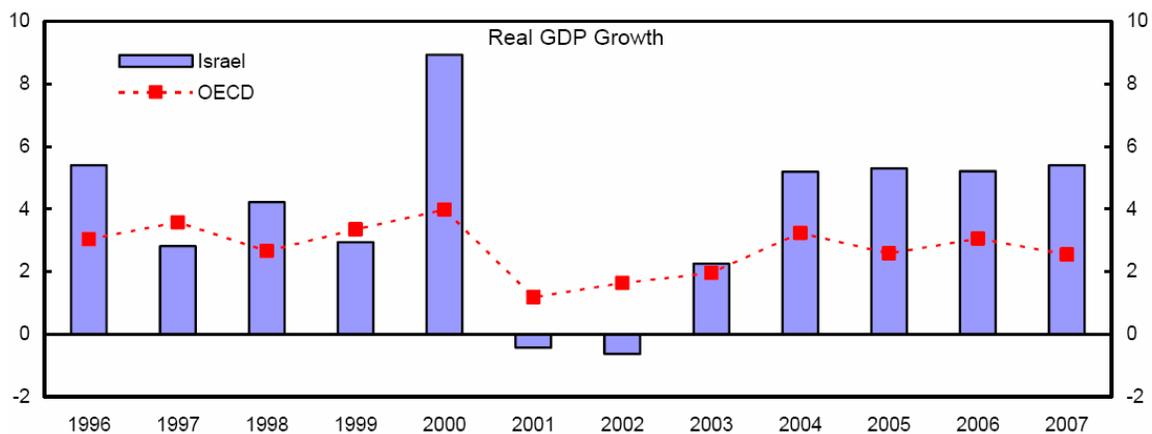


Source: Central Bureau of Statistics and IMF estimates.

The robust economic performance was supported by high corporate profitability, prosperous financial markets and an increasing household income, which boosted business confidence and spurred private consumption and investment. This exceptional economic performance was also underpinned by supportive external conditions that contributed to a strong export performance.

The current account surplus remained at a comfortable level of around 5% of GDP (Figure 7), and together with the high level of the net external asset position, supported the economy's external resilience. The positive developments in 2007 percolated to the labor market as the unemployment rate continued to decline, reaching the lowest level in decades at 7.5% (Figure 3), while the participation rate continued to grow. Fiscal policy, wedded to strict fiscal rules, kept the central government budget at balance with the deficit at less than 1% of GDP (Figure 4), and allowed a sharp reduction in the debt-to-GDP ratio to 82.7%. This is a major decline given that this ratio stood at 100% in 2001. On the monetary front, monetary policy sustained its high credibility and succeeded in keeping inflationary expectations well anchored within the inflation target range and where the inflation rate in 2006/07 stood at slightly above zero (Figure 5), and thus continued to support price and financial stability.

A detailed account of the current performance of the Israeli economy is presented below with figures and tables from Israeli official sources and from the IMF. They portray a healthy and vibrant economic performance and positive achievements. These developments are strongly suggestive that Israel's ability to pay compensation to the Palestinians for the losses of the refugees in 1948 is potentially there. These vigorous economic indicators will be used in the next section to calculate the exact sources from which Israel could tap to pay the estimated compensation values in Section 2.0 of this study.

A synopsis of the economic record of Israel, particularly in the last five years, is summarized below in figures and tables. The record tells a story of success and riches precisely at the same time the Palestinian economy is faltering and Palestinian refugees continue to willow in their poverty and misery for the past 60 years. The record of success serves to indicate that the Israeli economy has the capacity and means to compensate the Palestinian refugees for their losses in 1948, if it so chooses, without unduly compromising its performance indicators.

We begin with some general macroeconomic indicators and end up with special emphasis on fiscal variables.

- Israeli unemployment rates are at record low falling from a high of about 11% in 2002. The Israeli unemployment rate is still above OECD rates but the gap has recently narrowed down measurably (Figure 3).

## Figure 3. The Unemployment Rate



Source: Central Bureau of Statistics
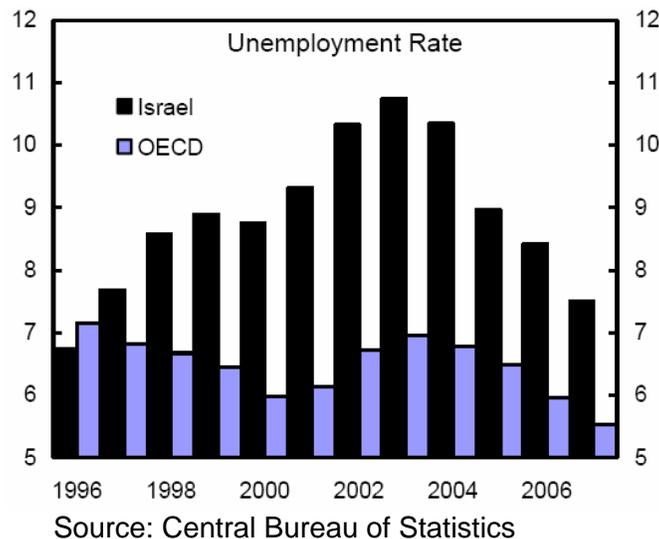
- Government deficits as a percentage of GDP is now quite low and even lower than the corresponding OECD ratios. It dropped to less than 1% in 2006 from a high of about 10% in 2002 (Figure 4).

**Figure 4. Government Deficit**
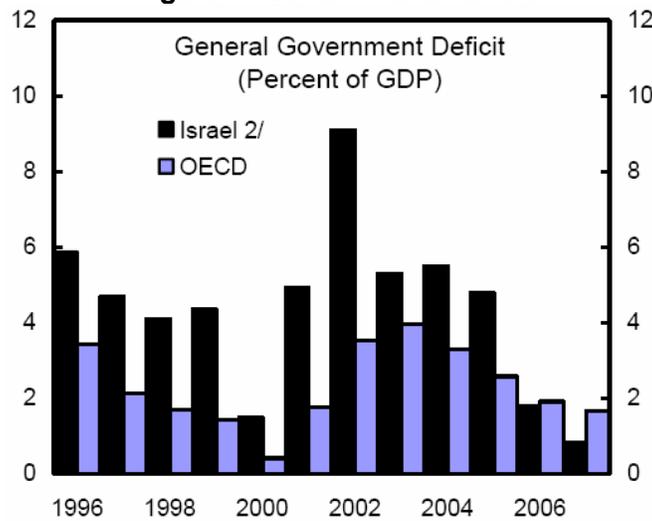


Source: Central Bureau of Statistics and IMF.

- Israeli inflation rates are typically high. In 1996 they were at about 12% per year. Since then the rate has declined sharply. In 2007 it is slightly above zero and significantly below its trading partners in the OECD countries (Figure 5).

**Figure 5. The Inflation Rate**
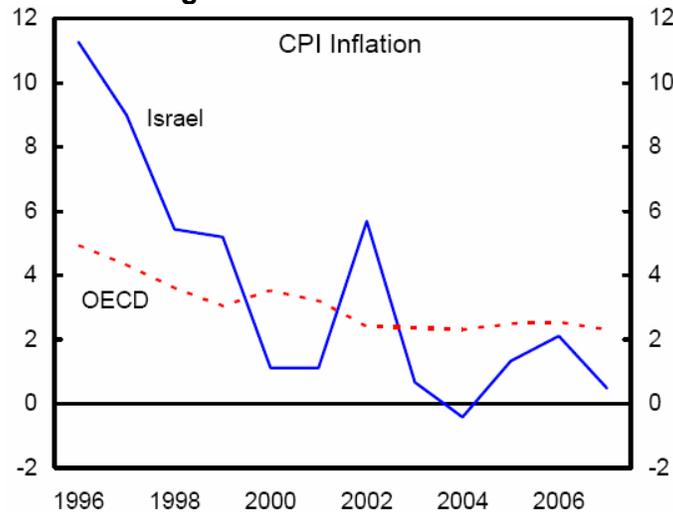


Source: Bank of Israel

- The growth of the Israeli economy is broad based with all components of aggregate (final) demand are making positive contributions but particularly exports and investment (Figure 6).

**Figure 6. Final Demand Components of Growth**

GDP Components Growth (Percent)

Legend:
- Public consumption
- Private consumption
- Exports
- Imports
- Fixed investment

(x-axis: 2001, 2002, 2003, 2004, 2005, 2006)

Sources: Central Bureau of Statistics; and IMF staff estimates.

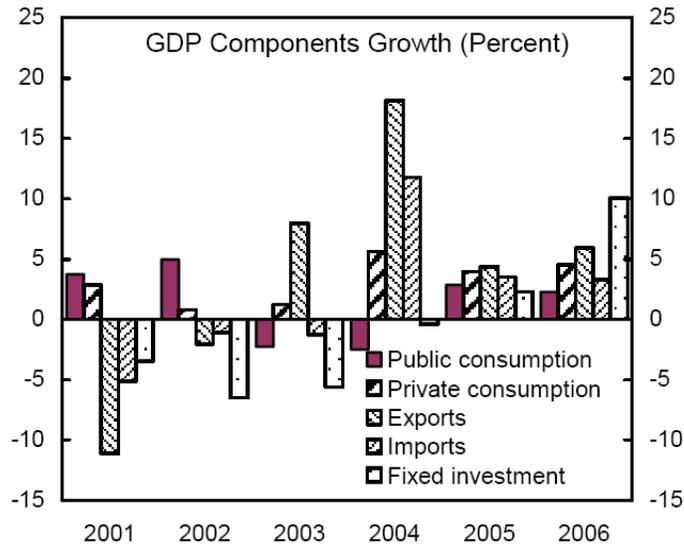- The endemic current account deficits in the 1990s turned into a surplus in 2003 and continue to be positive until today. The current account surplus reached 5.5% of GDP in 2006, up from 3.3% in 2005. Domestic investment has been recovering strongly and public savings have been rebuilt. Several factors are boosting private savings and the current account, most notably the 2005 tax reform on investments abroad, which has fostered record capital outflows.

**Figure 7. Current Account and the Real Exchange Rate**

Current Account and Real Exchange Rate
(Distance from 1986-2006 average; percent)

Legend:
- RER (deviation from period average)
- +1 standard dev. of RER
- -1 standard dev. of RER
- Current account (percent of GDP, right scale)

(x-axis: 1986, 1989, 1992, 1995, 1998, 2001, 2004, 2007)
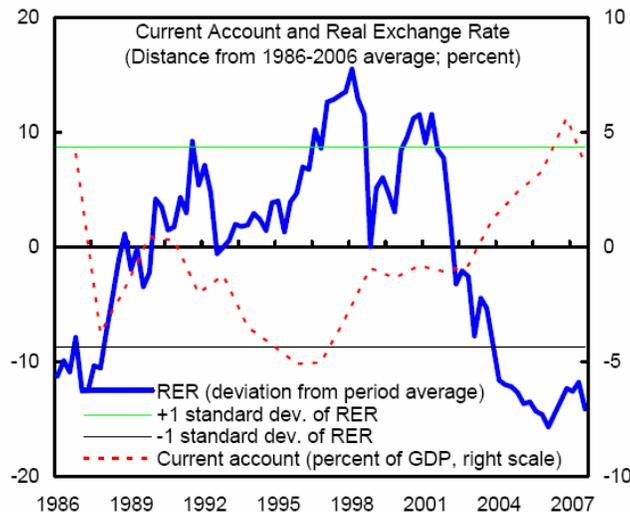
Sources: Bank of Israel; IMF, Information Notice System; and IMF staff calculations.

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- Israeli export performance has been strong. Exports increased annually and its share in advanced countries remains high.

**Figure 8. Market Share of Israeli Exports**



Source: IMF, *Direction of Trade Statistics*.
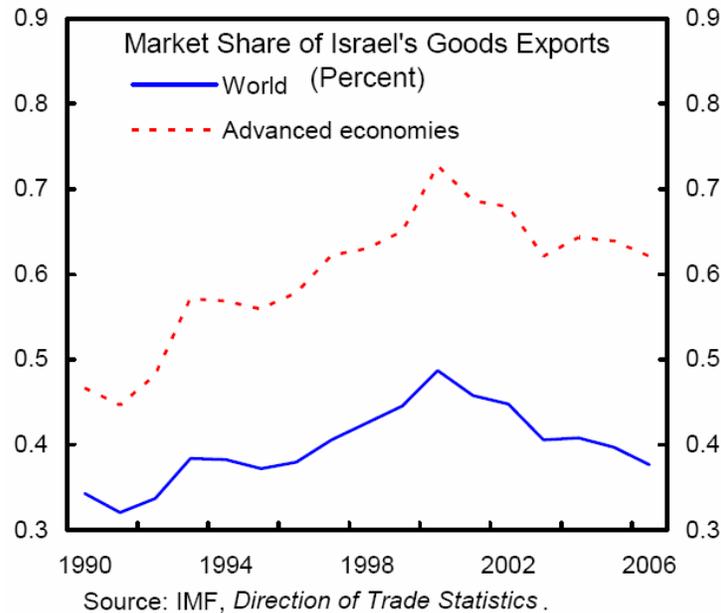
- Flows of non-resident investment into Israel and resident investment abroad together reached a record 40 percent of GDP in 2006, up from 22 percent of GDP in 2005, partly on account of some exceptionally large transactions. In 2007, gross flows are moderating toward 2006 levels (Figure 9). The increased flows have also pushed gross external debt to about 60 percent of GDP. While this may raise vulnerability to exchange rate shocks, this vulnerability is greatly diminished by the country's net external debt asset position of about 25 percent of GDP.

**Figure 9. International Investment Position**



Source: Bank of Israel.
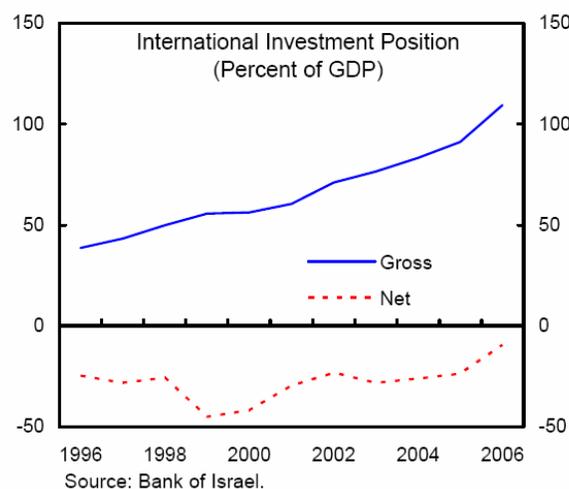
- In the past particularly before the Oslo Accords, Israel was not successful in attracting much FDI. Today Israel is a major destination for substantial FDI flows. In 2006 FDI flows constituted over 10% of GDP more than 6 times the average before 2001. These flows would likely continue and even escalate under peace (Figure 10).

**Figure 10. FDI and Portfolio Investment Performance**
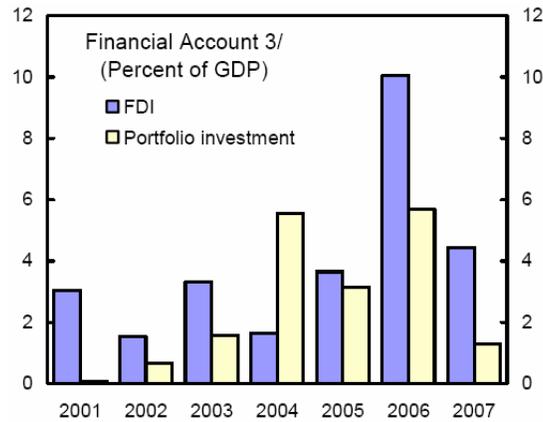


Sources: Central Bureau of Statistics; Bank of Israel; and IMF staff projections.
1/ Inclusive of goods and services; data for 2007 as of September.
2/ Data for 2007 as of November.
3/ Projection for 2007.

- A good barometer of economic buoyancy in Israel is the Israeli TA 100 stock index. It has maintained a steady rise for the past two years gaining almost 200 points between 2006 and 2007 (Figure 11).

**Figure 11: Israeli Stock Market**
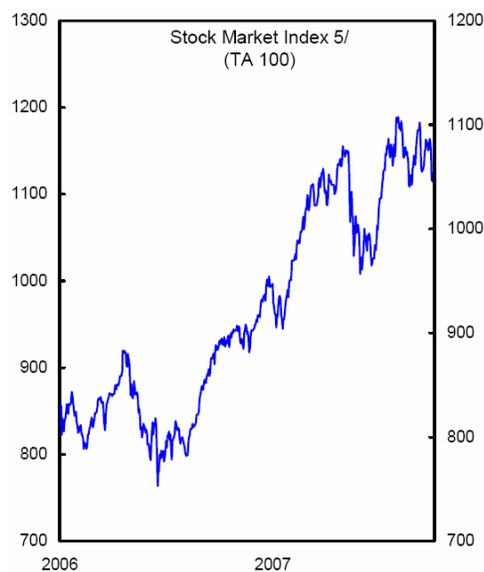


Source: Bloomberg.

Tourist arrivals continue to increase. They dipped in 2003 to below 500,000 during the Second Gulf war but had since climbed to 2.5 million. These numbers would expand exponentially under peace (Figure 12). Some have estimated that these numbers could easily to 12 million under a state of general peace.

**Figure 12. Tourist Arrivals**



Source: Central Bureau of Statistics

Public debt, which exceeded 95 percent of GDP in 2005, fell to 82 percent of GDP by end-2007. This far cry from the 2001–03 downswing which resulted from a confluence of global and security developments as the public debt ratio, which had been on a downward trend since the early 1990s, swung upward by 15 percentage points, to 102 percent of GDP. Strong fiscal performance with revenues turning much stronger than budgeted over the past couple of years and tight control of spending explain the steep decline in the public debt ratio to GDP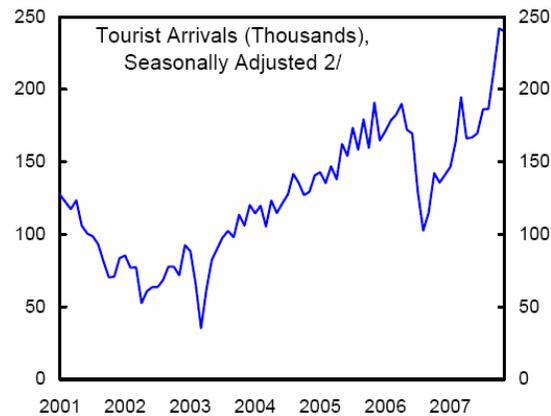 in 2006 and 2007. More specifically because higher-than-projected revenue has been allocated to debt reduction, but also because war-related expenditure has been offset through expenditure cuts, contrary to earlier budget plans to accommodate such spending. As a result, the central government deficit has been kept well below the 3 percent of GDP deficit ceiling, falling to 1 percent of GDP in 2006 and approaching balance in 2007 (Table 3 and Figure 13).

Israel's central government deficit ceilings are put at 1.6 percent and 1.0 percent of GDP for 2008 and 2009 respectively. The 2008 budget foresees no more than 1.7 percent real expenditure growth over the 2007 budget. In line with present law, this excludes the last instalments of spending on account of the 2006 war and West Bank/Gaza disengagement, which sum to about ½ percent of GDP.

Israel plans to reduce the ratio pf public debt to GDP to 60% in 2015. The IMF believes Israel can do so with strong commitment to abide by the fiscal rule. All this serves to show that Israel can easily shoulder higher debt to GDP ratios should it accept its obligation of compensating the Palestinian refugees as we shall show in the next section.

**Table 3**

Fiscal Projections for the Central Government, 2006−12 1/

(Percent of GDP)

|  | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|
| **Baseline (exp g = 1.7%)** | | | | | | | |
| Revenue | 35.2 | 36.1 | 35.8 | 35.4 | 35.1 | 35.1 | 35.1 |
| Expenditure | 36.2 | 36.1 | 36.2 | 35.5 | 34.8 | 34.1 | 33.4 |
| CG Balance 2/ | -1.0 | 0.0 | -0.4 | 0.0 | 0.4 | 1.1 | 1.7 |
| GG Balance | -1.8 | -0.8 | -1.3 | -0.9 | -0.5 | 0.2 | 0.9 |
| Public Debt | **86.8** | **81.4** | **77.7** | **74.4** | **70.8** | **66.7** | **62.2** |
| **Alternative (zero CG def 2010-12)** | | | | | | | |
| Revenue | 35.2 | 36.1 | 35.8 | 35.4 | 35.1 | 35.1 | 35.1 |
| Expenditure | 36.2 | 36.1 | 36.2 | 35.5 | 35.1 | 35.1 | 35.1 |
| CG Balance | -1.0 | 0.0 | -0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| GG Balance | -1.8 | -0.8 | -1.3 | -0.9 | -1.1 | -1.0 | -1.0 |
| Public Debt | **86.8** | **81.4** | **77.7** | **74.4** | **73.9** | **71.1** | **68.6** |

Source: IMF staff estimates and projections.

1/ Staff baseline projections (excludes credit).

2/ Baseline scenario assumes 1.7 percent growth in real expenditure, excluding war-related spending in 2007–08.

**Figure 13. Public Debt GDP Ratios**
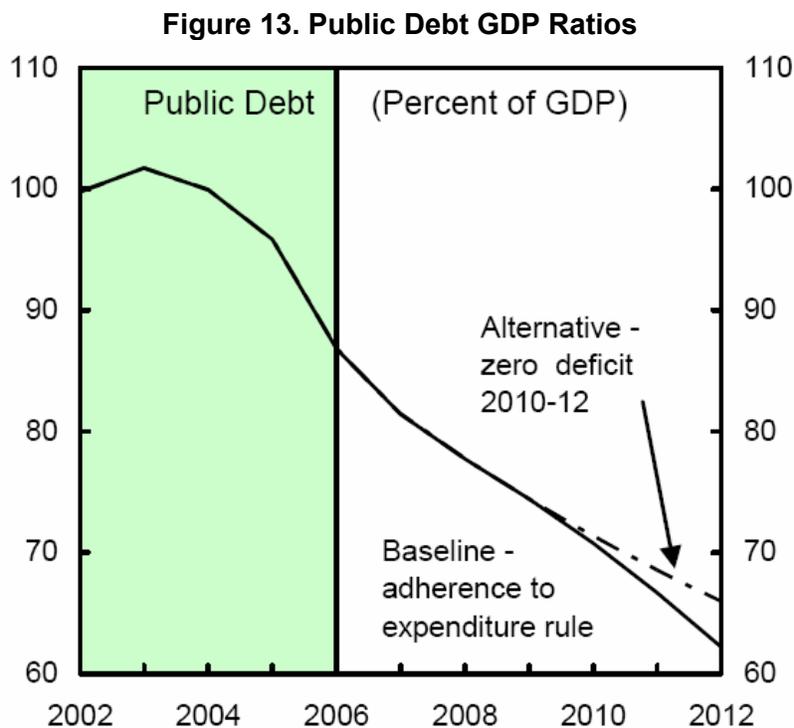


General government revenues and expenditures between 2001 and 2007 are presented in Figure 14. General Government expenditures used to exceed revenues by a large margin

in the 1990s and up to 2002. Thereafter the expenditures increased at lower rates than the revenues and government deficits fell sharply. It is clear that the Israeli economy is capable of financing deficits that were in the range of $8 to $10 billion a year. Surely the public debt increased and at one time was just over GDP. It has since declined and there are plans to lower the ratio of public debt to GDP to as low as 60%. This leaves a large room for Israel to assume a large new debt it owes to the Palestinians.

Israeli tax rates are below advanced countries' rates. They are at least 8 percentage points below European or North American rates (Figure 15). If the tax rates in Israel were to rise to the advanced countries average of 46%, there will be large revenues collected for defraying Israel's compensation obligations to the Palestinians.

**Figure 14. Government Revenues, Expenditures, Deficits and Debt**
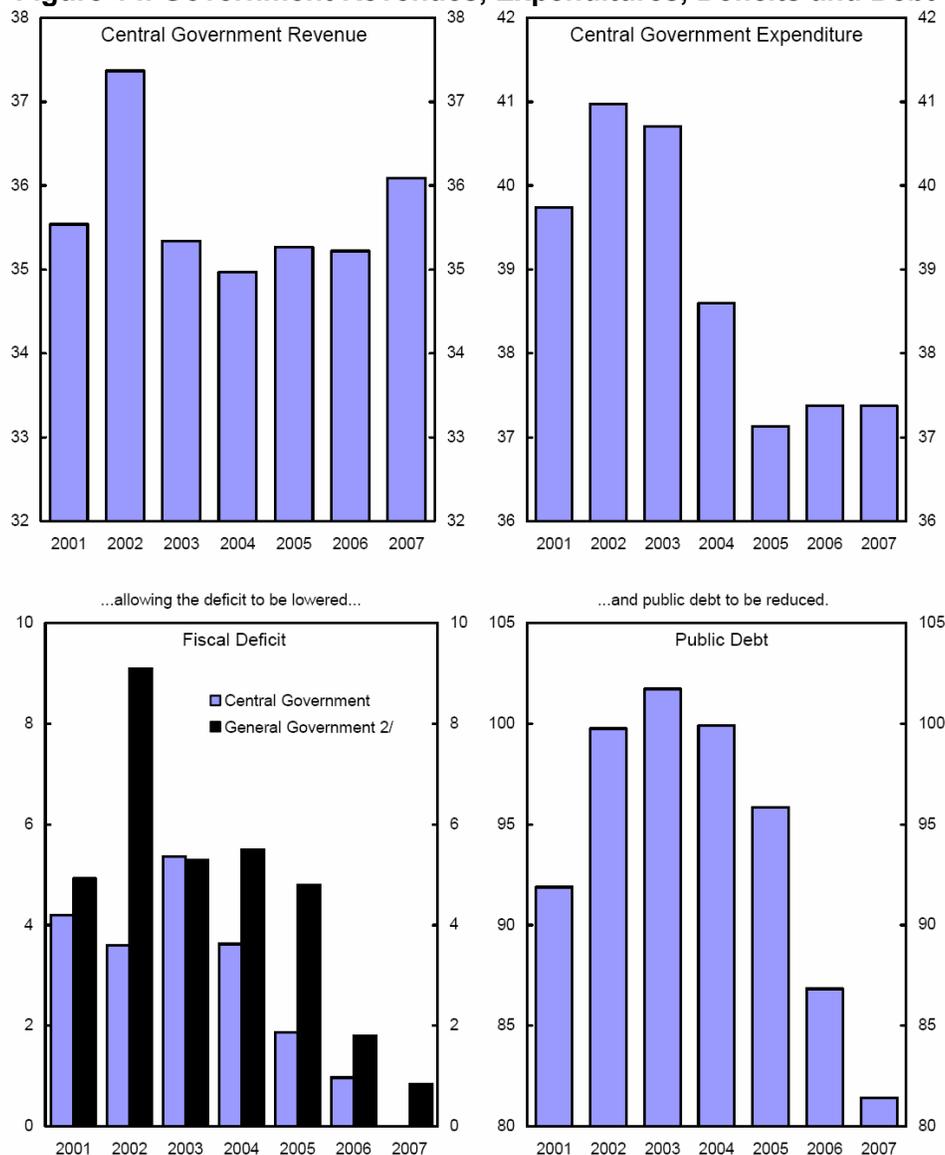


Sources: Ministry of Finance, national definition; and IMF staff estimates.
1/ Budget data for 2007.
2/ International definition, accrual basis.

**Figure 15. Advanced Countries Comparative Tax Parameters**



Source: World Bank and PricewaterhouseCoopers LLP, Paying Taxes 2008.
1/ For a medium-sized limited liability company in the second year of its operation.

**Table 4**
**Israel: Selected Economic and Financial Indicators, 2001−08**
**(Percent change, unless otherwise indicated)**

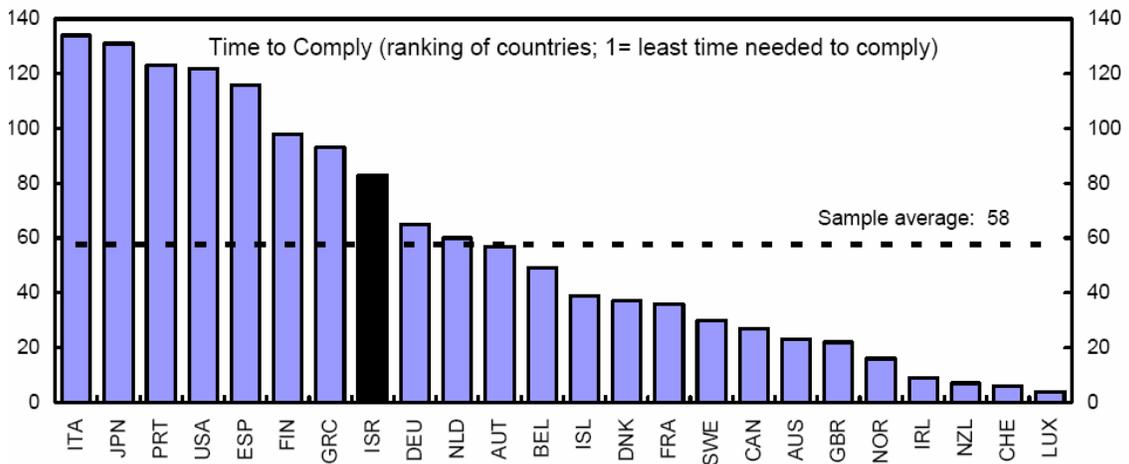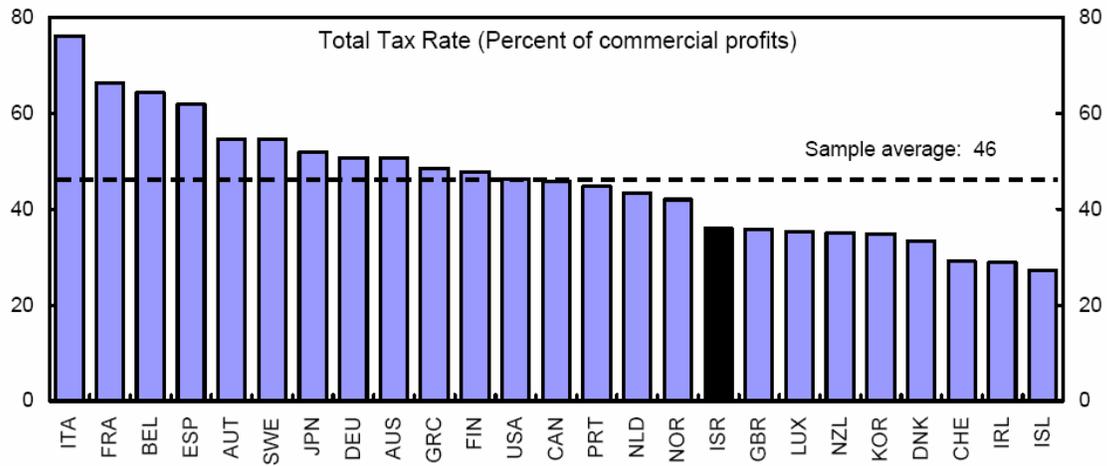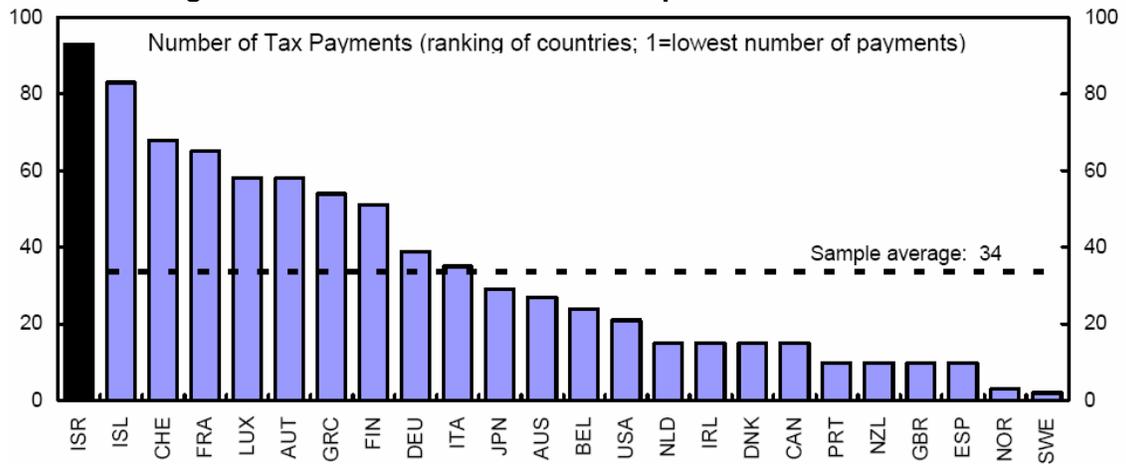| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 1/ | 2008 1/ |
|---|---|---|---|---|---|---|---|---|
| National accounts indicators (constant prices) | | | | | | | | |
| Domestic demand | 1.9 | -0.3 | -1.2 | 2.9 | 4.9 | 4.1 | 5.9 | 4.3 |
| Private consumption | 2.8 | 0.8 | 1.2 | 5.6 | 4.0 | 4.5 | 6.2 | 4.5 |
| Public consumption | 3.7 | 5.0 | -2.3 | -2.5 | 2.9 | 2.3 | 2.0 | 2.0 |
| Gross capital formation | -3.1 | -10.6 | -6.0 | 3.1 | 11.1 | 5.3 | 10.5 | 6.5 |
| Fixed capital formation | -3.4 | -6.5 | -5.6 | -0.4 | 2.3 | 10.1 | 10.4 | 3.8 |
| Imports of goods and services | -5.1 | -1.1 | -1.3 | 11.8 | 3.5 | 3.3 | 9.4 | 6.4 |
| Exports of goods and services | -11.1 | -2.0 | 8.0 | 18.1 | 4.3 | 5.9 | 8.0 | 5.3 |
| Real GDP | -0.4 | -0.6 | 2.3 | 5.2 | 5.3 | 5.2 | 5.4 | 3.8 |
| Output Gap | 0.0 | -1.6 | -2.8 | -1.7 | -1.0 | -0.3 | 0.6 | 0.4 |
| Savings and investment (current prices, percent of GDP) | | | | | | | | |
| Gross capital formation | 20.5 | 18.8 | 17.6 | 17.8 | 19.0 | 18.9 | 20.2 | 20.8 |
| *Of which*: public 2/ | 1.7 | 1.8 | 2.0 | 2.3 | 2.0 | 1.9 | 2.0 | 1.9 |
| Savings | 19.5 | 17.9 | 18.0 | 18.9 | 20.4 | 22.2 | 22.5 | 21.8 |
| Private | 21.3 | 19.8 | 22.5 | 21.5 | 21.2 | 22.0 | 21.3 | 20.8 |
| Public | -1.8 | -1.9 | -4.5 | -2.6 | -0.8 | 0.2 | 1.2 | 1.0 |
| Labor market indicators | | | | | | | | |
| Israeli civilian labor force | 1.2 | -0.3 | 1.6 | 3.6 | 5.4 | 3.8 | 4.3 | 3.9 |
| Employment | 1.8 | 0.8 | 2.1 | 3.1 | 3.8 | 3.2 | 3.3 | 3.1 |
| Unemployment rate (percent) | 9.3 | 10.3 | 10.8 | 10.4 | 9.0 | 8.4 | 7.5 | 6.8 |
| Real wages 3/ | 3.0 | -6.2 | -3.0 | 2.5 | 1.0 | 1.3 | 2.7 | ... |
| Business sector 3/ | 3.3 | -6.6 | -2.5 | 1.5 | 1.5 | 1.7 | 3.1 | ... |
| Public sector 3/ | 2.6 | -4.9 | -4.1 | 4.6 | 0.0 | 0.3 | 1.6 | ... |
| Prices | | | | | | | | |
| CPI (end period) | 1.4 | 6.5 | -1.9 | 1.2 | 2.4 | -0.1 | 3.0 | 2.0 |
| CPI (period average) | 1.1 | 5.7 | 0.7 | -0.4 | 1.3 | 2.1 | 0.5 | 2.7 |
| CPI (excluding housing and energy, end period) | 0.4 | 3.7 | 2.0 | 0.0 | 1.1 | 2.4 | ... | ... |
| Interest rates (average, percent): BOI policy rate 4/ | 6.8 | 6.8 | 7.5 | 4.2 | 3.7 | 5.1 | 3.9 | 4.3 |
| Money and credit (period average) | | | | | | | | |
| Private sector credit 5/ | 14.3 | 11.7 | -3.1 | 3.9 | 7.1 | 4.3 | 7.7 | ... |
| Narrow money (M1) 6/ | 14.2 | 15.6 | 0.5 | 18.0 | 17.5 | 13.7 | 18.1 | ... |
| Broad money (M3) 7/ | 15.5 | 6.1 | 2.2 | 4.6 | 7.9 | 7.4 | 16.2 | ... |
| Public finance (percent of GDP) | | | | | | | | |
| Central government revenue | 35.5 | 37.4 | 35.3 | 35.0 | 35.3 | 35.2 | 36.1 | 35.8 |
| Central government expenditure | 39.7 | 41.0 | 40.7 | 38.6 | 37.1 | 36.2 | 36.1 | 36.2 |
| Central government balance 8/ | -4.2 | -3.6 | -5.4 | -3.6 | -1.9 | -1.0 | 0.0 | -0.4 |
| General government revenue | 46.9 | 47.2 | 44.9 | 44.3 | 43.9 | 44.7 | 45.5 | 45.2 |
| General government expenditure | 51.8 | 56.3 | 50.2 | 49.8 | 48.7 | 46.5 | 46.4 | 46.5 |
| General government balance 9/ | -4.9 | -9.1 | -5.3 | -5.5 | -4.8 | -1.8 | -0.8 | -1.3 |
| General government primary balance | 1.4 | 0.7 | -1.1 | 1.0 | 2.2 | 3.0 | 4.0 | 3.5 |
| General government structural primary balance | 1.6 | 1.8 | 0.7 | 2.1 | 2.9 | 3.3 | 3.7 | 3.6 |
| General government debt | 91.9 | 99.8 | 101.7 | 99.9 | 95.9 | 86.8 | 81.4 | 77.7 |
| Balance of payments | | | | | | | | |
| Trade balance (percent of GDP) | -3.1 | -4.1 | -2.7 | -2.3 | -2.9 | -2.3 | -4.0 | -5.5 |
| Current account (percent of GDP) | -1.1 | -0.8 | 1.2 | 2.4 | 3.3 | 5.6 | 3.6 | 2.4 |
| Foreign direct investment (percent of GDP) | 3.0 | 1.5 | 3.3 | 1.6 | 3.6 | 10.1 | 4.4 | 3.0 |
| Foreign reserves (end period, billions of U.S. dollars) 6/ | 23.5 | 24.2 | 26.5 | 27.2 | 28.3 | 29.4 | 28.4 | ... |
| Exchange rate and terms of trade indices | | | | | | | | |
| NEER (period average) 5/ | 1.0 | -12.6 | -3.7 | -3.3 | -0.8 | 0.4 | 0.1 | ... |
| REER (period average) 5/ | -0.9 | -9.6 | -5.3 | -6.0 | -2.2 | 0.0 | -0.7 | ... |
| Terms of trade (index, 2000=100) | 98.9 | 99.3 | 97.9 | 96.0 | 96.5 | 95.3 | ... | ... |

Sources: Bank of Israel, *Annual Report*; Central Bureau of Statistics; IMF, *International Financial Statistics;* and IMF staff estimates and projections.

1/ IMF staff projections.
2/ Capital expenditure of the central government.
3/ Data for 2007 as of September.
4/ Data for 2008 as of January.
5/ Data for 2007 as of October.
6/ Data for 2007 as of December.
7/ Data for 2007 as of August.
8/ National definition, cash basis.
9/ International definition, accrual basis. On the difference between central and general government deficits during 2003–06: much of it is accounted for by the difference between accrual and cash bases accounting. On the latter, the key factor is the CPI indexation component that is paid on all NIS debt when it matures and is recorded below the line in the central government balance but above the line in the general government balance when it accrues.

**Table 5**
**Israel: Balance of Payments, 2004−12**
**(Billions of U.S. dollars)**

| | 2004 | 2005 | 2006 | 2007 1/ | 2008 1/ | 2009 1/ | 2010 1/ | 2011 1/ | 2012 1/ |
|---|---|---|---|---|---|---|---|---|---|
| Current account balance | 3.0 | 4.3 | 8.0 | 5.6 | 4.0 | 3.8 | 4.2 | 4.4 | 4.8 |
| Merchandise | -2.8 | -3.8 | -3.2 | -6.3 | -9.2 | -9.2 | -9.1 | -9.4 | -9.9 |
| Exports, f.o.b. | 36.7 | 40.1 | 43.7 | 49.3 | 53.4 | 56.1 | 59.3 | 62.7 | 66.6 |
| Imports, f.o.b. | 39.5 | 43.9 | 47.0 | 55.5 | 62.6 | 65.2 | 68.5 | 72.1 | 76.5 |
| Civilian imports | 37.6 | 41.7 | 44.5 | 53.0 | 60.0 | 62.4 | 65.5 | 68.9 | 73.1 |
| Military imports | 1.9 | 2.2 | 2.5 | 2.5 | 2.6 | 2.8 | 3.0 | 3.2 | 3.4 |
| Services | 3.2 | 3.7 | 4.3 | 3.4 | 4.3 | 3.9 | 4.6 | 5.3 | 6.0 |
| Exports | 16.0 | 17.4 | 19.3 | 21.1 | 22.8 | 23.8 | 25.9 | 28.2 | 30.6 |
| Imports | 12.8 | 13.7 | 14.9 | 17.7 | 18.5 | 19.8 | 21.3 | 22.9 | 24.6 |
| Factor Income | -3.7 | -1.6 | -0.6 | 1.0 | 1.3 | 1.5 | 1.1 | 1.0 | 1.1 |
| Receipts | 3.0 | 5.6 | 7.9 | 9.0 | 10.5 | 11.5 | 12.1 | 13.0 | 13.6 |
| Payments | 6.7 | 7.2 | 8.5 | 8.0 | 9.3 | 10.0 | 11.0 | 12.0 | 12.5 |
| Net transfers | 6.3 | 6.0 | 7.5 | 7.5 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 |
| Public | 3.5 | 3.2 | 4.4 | 4.1 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Private | 2.8 | 2.8 | 3.0 | 3.4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 |
| Capital and financial account balance 2/ | -3.7 | -8.1 | -7.8 | -5.6 | -4.0 | -3.8 | -4.2 | -4.4 | -4.8 |
| Capital account | 0.7 | 0.7 | 0.9 | 0.7 | 0.7 | 0.7 | 0.7 | 0.3 | 0.3 |
| Financial account | -4.4 | -8.8 | -8.7 | -6.3 | -4.7 | -4.5 | -4.9 | -4.7 | -5.1 |
| Direct investment, net | -2.5 | 1.9 | -0.1 | 1.0 | 1.0 | 1.0 | 1.0 | 3.0 | 3.0 |
| Foreign direct investment (in Israel) | 2.0 | 4.8 | 14.3 | 7.0 | 5.0 | 3.0 | 3.0 | 4.2 | 4.2 |
| Portfolio investment, net | 4.5 | -4.1 | -0.9 | -4.0 | -4.0 | -4.0 | -4.0 | -4.0 | -4.0 |
| Other investment | -6.1 | -4.6 | -7.4 | -0.6 | -0.6 | -0.8 | -0.8 | -0.8 | -0.8 |
| Change in reserves 3/ | -0.3 | -1.9 | -0.4 | -2.7 | -1.1 | -0.7 | -1.1 | -2.9 | -3.3 |
| Errors and omissions | 0.7 | 3.7 | -0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Memorandum items (percent of GDP, unless otherwise indicated): | | | | | | | | | |
| Current account balance | 2.4 | 3.3 | 5.6 | 3.6 | 2.4 | 2.2 | 2.2 | 2.2 | 2.2 |
| Civilian trade balance | -0.8 | -1.2 | -0.5 | -2.4 | -3.9 | -3.6 | -3.2 | -3.1 | -3.0 |
| Gross external debt | 60.7 | 56.7 | 58.5 | 53.3 | 50.3 | 50.4 | 50.1 | 49.5 | 48.7 |
| GDP (billions of U.S. dollars) | 123.6 | 131.3 | 142.2 | 157.4 | 167.6 | 177.1 | 188.7 | 201.3 | 214.8 |

Source: Central Bureau of Statistics, *Monthly Bulletin of Statistics*.

1/ IMF staff estimates and projections.
2/ Excludes reserve assets.
3/ Negative (positive) sign denotes increase (decrease) in reserves.

Table 6

## Israel: External Debt Sustainability Framework, 2002–12

| | Actual | | | | | Projections | | | | | | Debt-stabilizing non-interest current account 6/ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | |
| Baseline: external debt | 63.3 | 60.6 | 60.7 | 56.7 | 58.5 | 53.3 | 50.3 | 50.4 | 50.1 | 49.5 | 48.7 | -1.5 |
| Change in external debt | 8.6 | -2.7 | 0.1 | -4.0 | 1.9 | -5.3 | -3.0 | 0.1 | -0.4 | -0.6 | -0.7 | |
| Identified external debt-creating flows (4+8+9) | 4.6 | -6.7 | -7.2 | -11.2 | -12.3 | -9.2 | -6.9 | -3.8 | -3.8 | -4.8 | -4.8 | |
| Current account deficit, excluding interest payments | -2.4 | -4.3 | -5.4 | -6.1 | -8.5 | -6.2 | -4.9 | -4.7 | -4.7 | -4.7 | -4.7 | |
| Deficit in balance of goods and services | 3.1 | 0.8 | -0.3 | 0.0 | -0.8 | 1.8 | 2.9 | 3.0 | 2.4 | 2.1 | 1.8 | |
| Exports | 36.0 | 37.6 | 42.6 | 43.8 | 44.3 | 44.7 | 45.5 | 45.1 | 45.2 | 45.2 | 45.3 | |
| Imports | 39.2 | 38.4 | 42.3 | 43.8 | 43.5 | 46.5 | 48.4 | 48.0 | 47.6 | 47.2 | 47.1 | |
| Net non-debt creating capital inflows (negative) | -1.0 | -1.9 | -1.0 | -4.3 | -2.3 | -2.7 | -2.6 | 0.1 | 0.2 | -0.8 | -0.8 | |
| Automatic debt dynamics 1/ | 7.9 | -0.5 | -0.8 | -0.7 | -1.4 | -0.2 | 0.6 | 0.8 | 0.7 | 0.7 | 0.7 | |
| Contribution from nominal interest rate | 3.2 | 3.0 | 3.0 | 2.8 | 2.9 | 2.7 | 2.5 | 2.5 | 2.5 | 2.5 | 2.4 | |
| Contribution from real GDP growth | 0.4 | -1.3 | -3.0 | -3.0 | -2.7 | -2.9 | -1.9 | -1.7 | -1.8 | -1.7 | -1.7 | |
| Contribution from price and exchange rate changes 2/ | 4.4 | -2.2 | -0.9 | -0.5 | -1.6 | ... | ... | ... | ... | ... | ... | |
| Residual, incl. change in gross foreign assets (2-3) 3/ | 4.0 | 3.9 | 7.2 | 7.2 | 14.2 | 3.9 | 3.9 | 3.9 | 3.5 | 4.2 | 4.0 | |
| External debt-to-exports ratio (percent) | 175.7 | 161.2 | 142.4 | 129.3 | 132.2 | 119.2 | 110.6 | 111.9 | 110.8 | 109.6 | 107.7 | |
| Gross external financing need (billions of U.S. dollars) 4/ | 37.7 | 36.6 | 32.1 | 32.4 | 29.7 | 35.3 | 37.2 | 38.2 | 40.4 | 42.6 | 44.7 | |
| Percent of GDP | 34.4 | 31.6 | 26.0 | 24.6 | 20.9 | 22.4 | 22.2 | 21.6 | 21.4 | 21.2 | 20.8 | |
| Scenario with key variables at their historical averages 5/ | | | | | | 53.3 | 53.8 | 54.0 | 54.3 | 55.7 | 57.1 | -1.5 |
| Key Macroeconomic Assumptions Underlying Baseline | | | | | | | | | | | | |
| Real GDP growth (percent) | -0.6 | 2.3 | 5.2 | 5.3 | 5.2 | 5.4 | 3.8 | 3.6 | 3.8 | 3.7 | 3.7 | |
| GDP deflator in US dollars (change in percent) | -7.4 | 3.0 | 1.4 | 0.9 | 3.0 | 5.0 | 2.6 | 2.0 | 2.6 | 2.9 | 2.9 | |
| Nominal external interest rate (percent) | 5.3 | 5.1 | 5.3 | 5.0 | 5.6 | 5.0 | 5.0 | 5.3 | 5.3 | 5.3 | 5.3 | |
| Growth of exports (U.S. dollar terms, percent) | -2.7 | 10.5 | 20.9 | 9.2 | 9.5 | 11.7 | 8.4 | 4.7 | 6.8 | 6.6 | 7.0 | |
| Growth of imports (U.S. dollar terms, percent) | -1.6 | 3.8 | 17.6 | 10.1 | 7.5 | 18.2 | 10.8 | 4.9 | 5.5 | 5.9 | 6.4 | |
| Current account balance, excluding interest payments | 2.4 | 4.3 | 5.4 | 6.1 | 8.5 | 6.2 | 4.9 | 4.7 | 4.7 | 4.7 | 4.7 | |
| Net non-debt creating capital inflows | 1.0 | 1.9 | 1.0 | 4.3 | 2.3 | 2.7 | 2.6 | -0.1 | -0.2 | 0.8 | 0.8 | |

1/ Derived as [r - g - ρ(1+g) + εα(1+r)]/(1+g+ρ+gρ) times previous period debt stock, with r = nominal effective interest rate on external debt; ρ = change in domestic GDP deflator in US dollar terms, g = real GDP growth rate, e = nominal appreciation (increase in dollar value of domestic currency), and a = share of domestic-currency denominated debt in total external debt.

2/ The contribution from price and exchange rate changes is defined as [-ρ(1+g) + εα(1+r)]/(1+g+ρ+gρ) times previous period debt stock. ρ increases with an appreciating domestic currency (ε > 0) and rising inflation (based on GDP deflator).

3/ For projection, line includes the impact of price and exchange rate changes.

4/ Defined as current account deficit, plus amortization on medium- and long-term debt, plus short-term debt at end of previous period.

5/ The key variables include real GDP growth; nominal interest rate; dollar deflator growth; and both non-interest current account and non-debt inflows in percent of GDP.

6/ Long-run, constant balance that stabilizes the debt ratio assuming that key variables (real GDP growth, nominal interest rate, dollar deflator growth, and non-debt inflows in percent of GDP) remain at their levels of the last projection year.

## Israel: Public Sector Debt Sustainability Framework, 2002–12

| | Actual | | | | | Projections | | | | | | Debt-stabilizing primary balance 9/ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | |
| Baseline: public sector debt 1/ | 99.8 | 101.7 | 99.9 | 95.9 | 86.8 | 81.4 | 77.7 | 74.4 | 70.8 | 66.7 | 62.2 | 1.2 |
| Of which: foreign-currency denominated | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | |
| Change in public sector debt | 7.9 | 2.0 | -1.8 | -4.1 | -9.0 | -5.4 | -3.7 | -3.3 | -3.6 | -4.1 | -4.5 | |
| Identified debt-creating flows (4+7+12) | 5.5 | 3.1 | -1.2 | -0.9 | -6.4 | -3.4 | -3.0 | -2.9 | -3.2 | -3.7 | -4.2 | |
| Primary deficit | -0.7 | 1.1 | -1.0 | -2.2 | -3.0 | -3.8 | -3.5 | -4.0 | -4.3 | -5.0 | -5.7 | |
| Revenue and grants | 47.3 | 44.3 | 44.1 | 44.0 | 44.7 | 45.5 | 45.2 | 44.9 | 44.6 | 44.6 | 44.6 | |
| Primary (noninterest) expenditure | 46.7 | 45.3 | 43.1 | 41.8 | 41.6 | 41.7 | 41.7 | 40.9 | 40.2 | 39.5 | 38.9 | |
| Automatic debt dynamics 2/ | 3.9 | 2.2 | 0.5 | 1.1 | -3.9 | 0.6 | -0.1 | 0.6 | 0.7 | 1.0 | 1.2 | |
| Contribution from interest rate/growth differential 3/ | 2.0 | 4.2 | 0.9 | -0.6 | -1.9 | 0.6 | -0.1 | 0.6 | 0.7 | 1.0 | 1.2 | |
| Of which: contribution from real interest rate | 1.4 | 6.4 | 5.9 | 4.3 | 2.8 | 5.0 | 2.8 | 3.3 | 3.4 | 3.4 | 3.5 | |
| Of which: contribution from real GDP growth | 0.6 | -2.2 | -5.0 | -5.0 | -4.6 | -4.5 | -2.9 | -2.7 | -2.7 | -2.5 | -2.3 | |
| Contribution from exchange rate depreciation 4/ | 1.9 | -2.0 | -0.4 | 1.7 | -2.1 | ... | ... | ... | ... | ... | ... | |
| Other identified debt-creating flows | 2.4 | -0.1 | -0.7 | 0.2 | 0.5 | -0.2 | 0.7 | 0.4 | 0.4 | 0.4 | 0.3 | |
| Privatization receipts (negative) | -0.7 | -0.7 | -0.6 | -0.6 | -0.6 | -0.5 | -0.5 | -0.4 | -0.4 | -0.4 | -0.4 | |
| Recognition of implicit or contingent liabilities | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| Other (specify, e.g. bank recapitalization) | 2.8 | 0.3 | -0.2 | 0.6 | 0.9 | 0.2 | 1.0 | 0.7 | 0.7 | 0.7 | 0.6 | |
| Residual, including asset changes (2-3) 5/ | 2.4 | -1.1 | -0.6 | -3.2 | -2.6 | -2.0 | -0.7 | -0.4 | -0.4 | -0.4 | -0.3 | |
| Public sector debt-to-revenue ratio 1/ | 210.7 | 229.9 | 226.8 | 218.0 | 194.5 | 178.8 | 172.0 | 165.8 | 158.8 | 149.7 | 139.6 | |
| Gross financing need 6/ | 15.2 | 18.0 | 15.8 | 13.6 | 11.4 | 10.0 | 9.8 | 9.0 | 8.2 | 7.1 | 6.0 | |
| Billions of U.S. dollars | 16.6 | 20.9 | 19.5 | 17.9 | 16.2 | 15.8 | 16.4 | 16.0 | 15.6 | 14.4 | 12.9 | |
| Scenario with key variables at their historical averages 7/ | | | | | | 81.4 | 79.3 | 77.2 | 75.1 | 73.1 | 71.0 | -0.4 |
| Scenario with no policy change (constant primary balance) in 2002–12 | | | | | | 81.4 | 77.5 | 74.4 | 71.3 | 68.5 | 65.9 | 1.3 |
| Key Macroeconomic and Fiscal Assumptions Underlying Baseline | | | | | | | | | | | | |
| Real GDP growth (percent) | -0.6 | 2.3 | 5.2 | 5.3 | 5.2 | 5.4 | 3.8 | 3.6 | 3.8 | 3.7 | 3.7 | |
| Average nominal interest rate on public debt (percent) 8/ | 5.8 | 6.0 | 6.0 | 5.6 | 5.4 | 5.8 | 6.3 | 6.6 | 6.9 | 7.2 | 7.6 | |
| Average real interest rate (nominal rate minus change in GDP deflator, percent) | 1.5 | 6.5 | 6.1 | 4.7 | 3.2 | 6.1 | 3.7 | 4.6 | 4.9 | 5.2 | 5.7 | |
| Nominal appreciation (increase in U.S. dollar value of local currency, percent) | -6.8 | 8.2 | 1.6 | -6.4 | 8.9 | ... | ... | ... | ... | ... | ... | |
| Inflation rate (GDP deflator, percent) | 4.3 | -0.5 | -0.1 | 1.0 | 2.2 | -0.2 | 2.6 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Growth of real primary spending (deflated by GDP deflator, percent) | 2.5 | -0.7 | 0.0 | 2.1 | 4.9 | 5.7 | 3.6 | 1.8 | 2.0 | 2.0 | 2.0 | |
| Primary deficit | -0.7 | 1.1 | -1.0 | -2.2 | -3.0 | -3.8 | -3.5 | -4.0 | -4.3 | -5.0 | -5.7 | |

1/ Indicate coverage of public sector, e.g., general government or nonfinancial public sector. Also whether net or gross debt is used.

2/ Derived as [(r - π(1+g) - g + αε(1+r)]/(1+g+π+gπ)) times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; α = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

3/ The real interest rate contribution is derived from the denominator in footnote 2/ as r - π (1+g) and the real growth contribution as -g.

4/ The exchange rate contribution is derived from the numerator in footnote 2/ as αε(1+r).

5/ For projections, this line includes exchange rate changes.

6/ Defined as public sector deficit, plus amortization of medium and long-term public sector debt, plus short-term debt at end of previous period.

7/ The key variables include real GDP growth; real interest rate; and primary balance in percent of GDP.

8/ Derived as nominal interest expenditure divided by previous period debt stock.

9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

## 4.0 Israel's Ability to Pay

We have estimated the Palestinian refugee losses in 1948 in 2007 values to range between a low of $15 billion annual payments if no interest was charged and for a period of amortization of 20 years. This value rises to about $33.5 billion annually when the nominal rate of interest is fixed at 7.64% and a 15 year period is assumed for the full payment of the agreed upon compensation. A median value of about $20 billion is also calculated to represent the case of a 3% annual real rate of interest and an amortization period of 20 years. Surely, a large combination of scenarios can be developed to estimate the compensation annual values depending on the amortization period and the interest rate chosen.

A strategic choice is made here to evaluate the capacity of Israel to pay the largest value of the estimated compensation package. This is because if Israel is shown to be in a position to pay the largest amount without bearing a major burden then any smaller amount would be feasible.

There are a number of areas where savings, adjustments or reallocations can be made to come up with the stipulated amount. Our preference is to draw on several sources rather than to focus on a set of limited sources. This way several alternatives can be identified and different proportions can be entertained, giving Israeli policy makers room to manoeuvre. Moreover, some of the choices are interconnected and may therefore require a package arrangement approach. A few of these packages will be identified.

The funds collected could be earmarked to an Escrow Fund in Israel or outside it and can be modelled along the Escrow Agreement in 1981 among the US, Iran and Algeria where Banque Centrale d'Algerie acted as Escrow Agent, or the Development Fund for Iraq under SCR 1483(2003), or the Escrow Fund for Iraq under SCR 778(1992), and/or the Escrow Account under SCR 986 (1995). These regimes provide varied legal and institutional frameworks that could be customized to deal with administering the Compensation Fund (Fund) for the Palestinian refugees.

In general, the following array of Israeli funds can be examined as possible sources of deposits into the Fund.

- Raising the Israeli Public Debt/GDP ratio to 2001 level or alternatively raising the external debt/GDP ratio sufficiently to generate equivalent values.

- Raising the Israeli tax rate to the OECD average rate of 46%.

- Continue the reduction in defence expenditures experienced over the last decade and transfer the savings to the Compensation Fund.

- Impose an export tax on new Israeli exports to Arab and/or Muslim countries as part of the peace dividend and/or sharing part of Israel's current account surpluses with the Compensation Fund.

- Charging a surcharge on each cubic meter of water used particularly those 600-800 million cubic meters known to be derived from the Palestinian aquifers.

- Sharing part of the foreign aid and subsidies Israel receives from the US and other governments with the Fund. Israel by any standard is a developed economy that needs no aid and is in position to actually give aid itself.

- Sharing the peace dividend whether that expected from the rise in tourism by imposing a poll peace tax on each tourist, assigning a share of FDI flows to the fund as these have and would be quite sensitive to general peace, and raising the capital gains tax on the expected real gains in Israel TA Index that peace would engender by a small percentage that would be earmarked for the Compensation Fund.

While all of the above and many more sources can be considered as feasible sources of funds for the Compensation Fund, the real challenge is to quantify the possible contributions of each and compare the totals to the stipulated maximum amount of $33.5 billion a year.

### Raising the Deficit and Debt/GDP Ratio

In 2002 Israel shouldered a deficit of $8.6 billion and debt/GDP was 100% (Table 6 and Figure 13 ). In the years that followed, Israel succeeded in reducing the deficit to almost zero and debt/GDP to 82% in 2007. Israel is now seeking to reduce this ratio to 60% by 2015. It is quite legitimate to believe that a deficit in the order of $8 to $10 billion is within the capacity of Israel and this deficit's burden will fall as GDP is expected to grow at a 3.7% annual rate (IMF projections) at least. Under peace this growth rate will pick up substantially and larger amounts can be earmarked towards beefing up the Compensation Fund.

### Raising the Israeli Tax Rate

The current average Israeli tax rate is about 38% (Table 3 and Figure 15). The corresponding rate in advanced countries is around 46%. There is room to raise the Israeli rate by 8 percentage points. Although this rate is on commercial profits, it is a fact that Israeli tax rates are below the European and North American taxes by a similar percentage. If the Israeli rates were to rise to European or North American average rates a total of $7.6 billion can be raised in additional revenues. The details of this calculation are as follows: We started with $36.1 billion as the general government revenues in 2007 (Table 3). This was multiplied by the ratio of 46/38 (Figure 15) which results in $43.7 billion in revenue that the government of Israel could collect if it matched European or North American average tax rates. This frees the $7.6 billion for the Fund above.

It is worth noting that the combination of these two sources can account for 50% of the total requirements of the largest compensation amount and for the entire minimum value.

## *Reductions in Defence Expenditures*

Israel has been successful in reducing its military expenditures as a share of GDP throughout the early 2000s and this despite security issues and local military conflicts. The defence expenditures In Table 7 show that $10 billion in constant dollars are the most recurrent figure (mode). This suggests that Israel could easily stabilize its expenditures at this level under general peace conditions and release at least $3 billion in 2007 prices to the Compensation Fund.

**Table 7**
**Israel's Military Expenditures**

| Year | B. New Shekels | Constant (2005) USD | Percent of GDP |
|------|------|------|------|
| 1988 | 9.3 | $7,855 | 13.2% |
| 1989 | 10.6 | $7,433 | 12.3% |
| 1990 | 13.1 | $7,862 | 12.3% |
| 1991 | 20.3 | $10,231 | 14.8% |
| 1992 | 17.7 | $7,988 | 10.8% |
| 1993 | 20.1 | $8,177 | 10.6% |
| 1994 | 22.5 | $8,148 | 9.7% |
| 1995 | 24.3 | $7,996 | 8.6% |
| 1996 | 28.4 | $8,399 | 8.6% |
| 1997 | 31.4 | $8,519 | 8.5% |
| 1998 | 34.3 | $8,827 | 8.4% |
| 1999 | 37.4 | $9,149 | 8.3% |
| 2000 | 39.5 | $9,553 | 8.0% |
| 2001 | 40.6 | $9,712 | 8.1% |
| 2002 | 47.4 | $10,735 | 9.2% |
| 2003 | 44.7 | $10,050 | 8.5% |
| 2004 | 45.8 | $10,339 | 8.3% |
| 2005 | 56.2 | $12,522 | 9.7% |
| 2006 | 52.3 | $11,373 | N/A |

Source: SIPRI Military Expenditure Database

If peace conditions warrant the level of military expenditures can be further reduced and the savings reallocated to the Compensation Fund.

**Figure 16**

## Israeli Military Expenditure
### (Millions of 2005 USD)



**Figure 17**

## Israeli Military Expenditure
### (Percent of GDP)
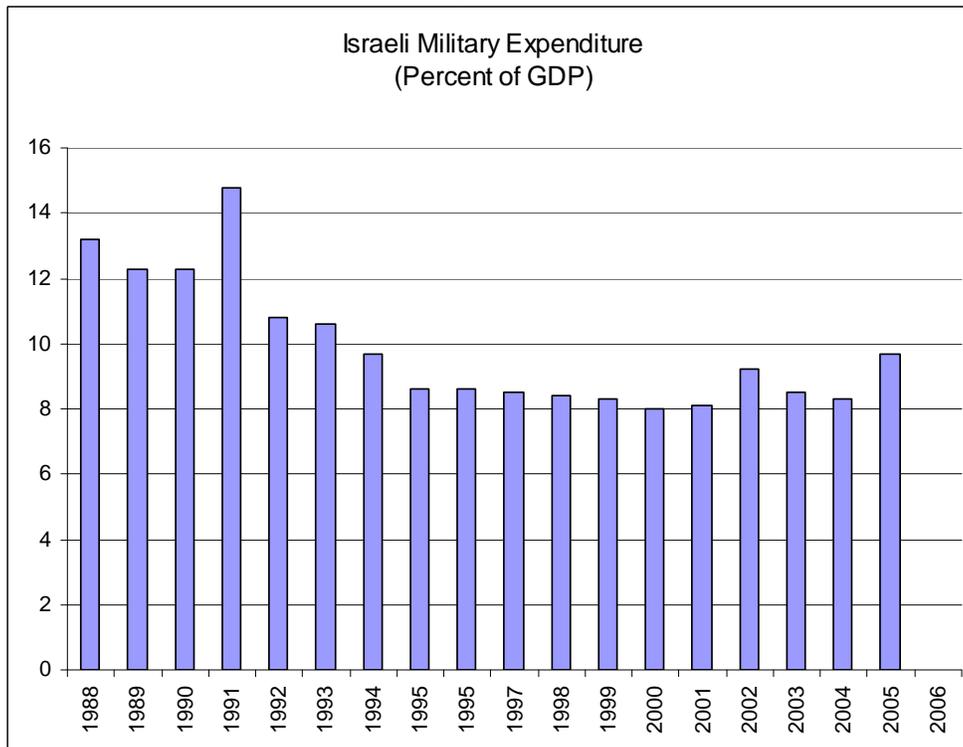
## Taxes on Exports to Arab and Muslim Countries

The Israeli economy is an export oriented economy with a long record of success in exporting to advanced economies and more recently to many other countries, particularly on the heals of the Oslo Accords. Earlier studies of the concordance indices of Israeli exports with Arab imports (structure of Israeli exports matched to Arab structure of imports by commodity) were estimated to be quite high suggesting the potential for increased trade with these countries is real and substantive. Under peace, it is quite reasonable to believe that the current Israeli exports of goods and services which in 2007 exceeded $70.4 billion (Table 5) can easily expand, in short order, by 50%. This translates into a $35 billion increase. If a 10% tax is placed on these exports and the revenues are allocated to the Compensation Fund, this would contribute another $3.5 billion annually (assuming a very low price elasticity of demand for these exports).

## Water Surcharge

Israel is known to tap into about 800 million CM/Year that accumulate over the West Bank aquifers. Israel is notorious for under charging for water use which has lead to excessive use and reckless waste of this scarce resource. There is room for charging a marginal price of $0.5 per CM (this is the shadow price of an additional cubic metre of water assuming it cost this much to produce it by desalination, the most expensive source). This should raise $400 million annually (if the price elasticity of water demand is perfectly inelastic, if it is not, then this amount may fall slightly because estimates of water price elasticities have generally found these values to be quite low).

## Peace Poll Taxes on Tourist Arrivals

Currently less than 2.5 million tourists visit the holly lands. Under peace this number is expected to 12 million. Many countries exact a head tax or a visa charge on tourists for a number of reasons. A peace poll tax of $100 will raise about $1.2 billion for the Compensation Fund. I wonder if there would be any resistance to this tax knowing that it contributes towards peace and tranquility in the holly lands.

## Sharing Foreign Aid

Israel receives large transfers from world Jewry and many foreign governments particularly from the US, where Israel is believed to receive the largest part of the total US Official Development Aid (ODA). Public transfers to Israel in 2006 reached $4.4 billion (Table 5). Private transfers recorded a net position of $3 billion in the same year. Israel is an advanced country that should and could give aid to other countries less fortunate than it. If Israel were to abide with UN rule of .7 of one percent of income this would raise (157.4*.007) around $1.1 billion annually that could be earmarked to the

Compensation Fund. This amount is less than a third of what it receives in public transfers

*Other Sources*

Foreign direct investment in Israel reached $14.3 billion in Israel (Table 5). The attractiveness of Israel for investment has a great deal to do with its skilled people and technological networks but this FDI was a trickle in the past and only started to rise after Oslo Accords in 1993. Surely a share of these flows can be shared with the Palestinians and credited to the Compensation Fund. The Tel Aviv stock market TA 100 index has been rising steeply in the past two years and could rise even more if peace was achieved (Figure 11). The buoyancy of the stock market, new FDI flows, higher and generous private transfers from world Jewry and international public transfers can be tapped into as investments in peace and can easily shoulder the $6.6 billion short fall between the $26.8 billion and the $33.4 compensation value.

*Adding Up the Contributions*

A total of about 26.8 billion annually can be collected from the designated sources and $6.6 billion from undesignated sources (Table 8). Even if no contributions are made from Other Sources the total of $26.8 billion may fall short of the largest compensation value but exceed all other compensation estimates including the median value of $20 billion over 20 years amortization and 3% real rate of interest or even the $25 billion annually over 15 years amortization and 3% real rate of interest.

If the Palestinians were to succeed in persuading Israel to pay the annual compensation value of $33.4 billion, the remaining $6.6 billion can easily be raised if for no other reason than considering it as an international investment in peace.

**Table 8**
**Israeli Contributions to the Compensation Fund**
**(Billions of USD)**

| | |
|---|---|
| Adjusting Debt to GDP Ratio | 10.0 |
| Tax Rate Adjustment | 7.6 |
| Defence Expenditure Reductions | 3.0 |
| Export Tax | 3.5 |
| Foreign Aid | 1.1 |
| Water Surcharge | 0.4 |
| Peace Head Tax | 1.2 |
| Other Sources | 6.6 |
| | |
| Total | 33.4 |

## Endnotes

[i] See J.R. Hicks, A Revision of Demand Theory. Oxford: Oxford University Press, 1951; and D.M.Winch. Analytical Welfare Economics. Baltimore: Penguin, 1971.

[ii] See Hicks (1951).

[iii] Nechmiah Robinson. Indemnification and Reparation: Jewish Aspects. New York: International Press, 1944, Pp. 84-85.

[iv] The value of land for instance was derived as the capitalization of taxes. This has led to substantial underestimation inasmuch as these taxes were very low and were out of line with the market value of the assets.

[v] The detailed assumptions made by AHC in assessing these losses will be dealt with in the next section.

[vi] Unfortunately, we do not have the full details of the methods and procedures used by this Expert Group.