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The Role of Rules in Fiscal Consolidation: Fiscal Rules in Israel since the 1990's

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1. Introduction

In this paper we examine fiscal policy performance in Israel since the early 1990s. During this period fiscal policy was based on a variety of fiscal rules in the form of constraints on central government budget variables, particularly the deficit.[2] Only limited progress was made towards reducing the fiscal deficit during most of the period under review, which makes a *prima facie* case that the rules were not particularly effective in supporting fiscal consolidation. However, experience after the 2003 shift towards rules focusing on the growth of expenditure tentatively suggests that this type of rule *may* be a more effective constraint on fiscal policy.

We start in Section 2 by presenting a brief historical background of macroeconomic developments before and after the 1985 stabilization program and then in Section 3 review the evolution of the main fiscal aggregates since 1990. In Section 4 we discuss the analytic arguments in favor of fiscal rules rather than discretion, and in Section 5 examine the various fiscal rules adopted in Israel since 1991. In Section 6 we discuss the performance of the cyclically-adjusted deficit under these rules, and some of their benefits and shortcomings. Tentative conclusions are presented in Section 7.

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[1] Respectively, Governor of the Bank of Israel, and Director of the Research Department. This is a revised version of a paper presented at the Euro-Mediterranean Conference organized by the ECB and the Banca de Espana in Valencia, March 28, 2007. We would like to thank Adi Brender, Saul Lach, Edward Offenbacher and Michel Strawczynski for valuable comments, and Meital Graham for excellent research assistance. An earlier version of this paper, authored by Flug, was presented at the Euro-Mediterranean Conference on November 27, 2006, and at the Annual Falk Institute Conference in December 2006.

[2] Brender (2007) presents a comprehensive review and analysis of similar material.

2. Fiscal developments before and after the 1985 stabilization

The first half of the 1980's was a period of rising inflation in Israel. Inflation reached an annual rate of over 400 percent in 1984 and a monthly rate of over 19 percent in April 1985. After a series of failed stabilization attempts, a successful stabilization plan was put into effect in July 1985. The plan was based on a massive fiscal tightening, which *ex post* reduced the budget deficit by 8 percent of GDP, combined with the pegging of the exchange rate and the temporary use of wage and price controls. It rapidly brought the inflation rate down to around 20 percent per annum by the fourth quarter of the year.[3]

The rising inflation in the first half of the decade was fueled by an expansionary – or out-of-control – fiscal policy, with inflation-adjusted public sector deficits averaging 12 percent of GDP (Figure 1). This, together with the indexation of the public debt to either the exchange rate or prices, led to the rapid buildup of public debt (Figure 2). The debt/GDP ratio soared by the mid-80's to almost 300 percent.

Figure 1: **The Deficit of the General Government**
(Percent of GDP, 1980-2006)

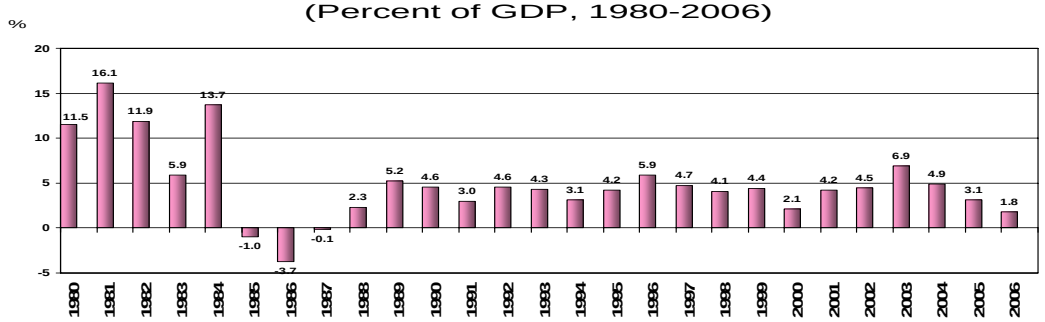
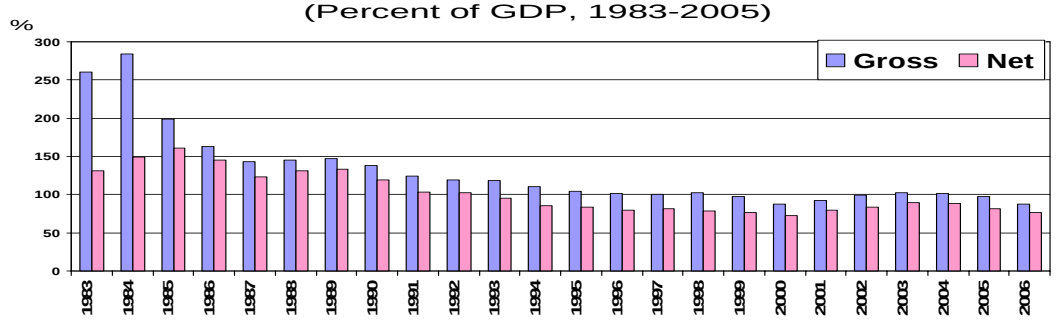


Figure 2: **Public Sector Debt**
(Percent of GDP, 1983-2005)



Public expenditure in the first half of the 1980s averaged around 70 percent of GDP (Figure 3), with defense spending accounting for about one quarter of the public expenditure, and (real) interest payments for another 15 percent. The expansionary fiscal policy, combined with monetary accommodation and repeated large devaluations attempting to maintain competitiveness, led to rising inflation, which by 1984 had become a hyperinflation. The ever-rising inflation in turn led to a further deterioration of the fiscal accounts through a negative inflation tax that reflected primarily the erosion of partially indexed government credit to households and the business sector (Figure 4).[4] [5]

Figure 3: **General Government Expenditure**
(Percent of GDP, 1980-2006)

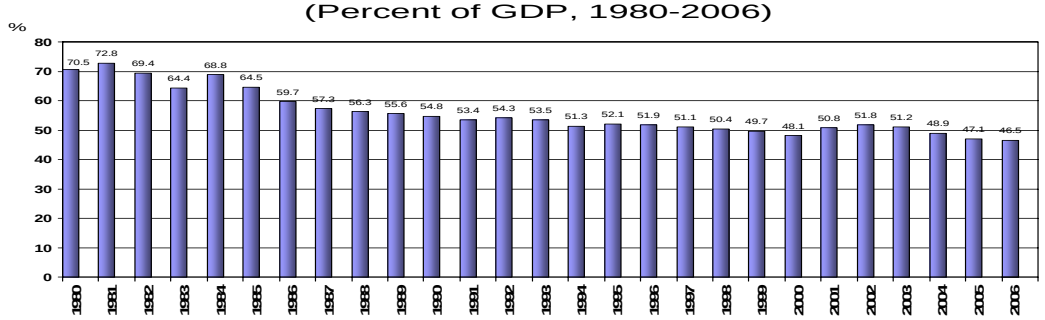
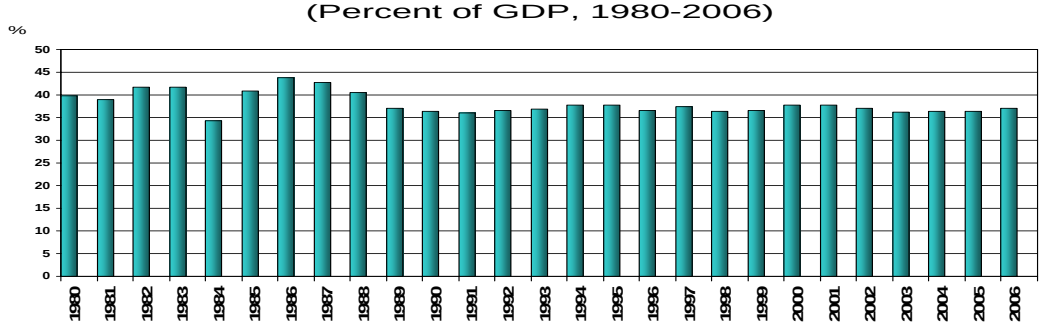


Figure 4: **The Tax Burden**
(Percent of GDP, 1980-2006)



This was the background against which the 1985 stabilization program was adopted. As a result of the fiscal correction embodied in the program, the budget

[3] See Bruno (1993) for a comprehensive account of the stabilization program
[4] For more on macro-economic management in the pre-1985 stabilization period, see Barkai and Liviatan (2007).
[5] In addition to tax revenues, government receipts include income from government owned assets (including public-sector owned companies), some transfer payments from the public, and government and private sector transfers from abroad.

deficit was eliminated and turned into small surpluses in the years 1985-1987 (Figure1). However, these surpluses were short lived, and by the end of the 1980's, moderate deficits in the general government accounts reemerged. At the same time the declining trend in public spending as a percent of GDP continued until the beginning of the 1990's (Figure 3). The debt to GDP ratio declined sharply after the stabilization program as a result of the appreciation of the real exchange rate,[6] but still remained at an extremely high level.

Table 1: Main Fiscal Variables

	Deficit of the General Government	Public Sector Debt	General Government Expenditure	Tax Revenues
	(Percent of GDP)			
1980-1984	11.8	272.3	69.2	39.3
1985-1990	1.2	156.0	58.0	40.2
1991-2006	4.1	102.8	50.8	36.9

Comparing the main fiscal aggregates in the pre-stabilization period (1980-1984) to those in the immediate post-stabilization period (1985-1990) and to the period since the beginning of the 1990's (1991-2006) (Table 1), one can clearly see the sharp decline in public expenditure from an average of 69 percent of GDP in the early 1980's to an average of about 58 percent of GDP in the post-stabilization period, and further to 51 percent in the following years.. This decline was used initially to reduce the fiscal deficit and later on to reduce the tax burden. The deficit declined sharply in the post stabilization period, but re-emerged and remained relatively stable at about 4 percent since the beginning of the 1990's; the tax revenue/GDP ratio declined only in the third period. The debt/GDP ratio declined throughout the period: in the second period due to the small deficits and the erosion of the foreign currency denominated debt, and in the third period largely due to high growth and large scale privatizations.

[6] The depreciation of the exchange rate relative to domestic prices led to the expansion of the public debt/GDP ratio during the pre-stabilization period. The fixing of the exchange rate as part of the stabilization plan in its early stages led to a real exchange rate appreciation which eroded the value of the foreign currency denominated debt, and largely accounted for the sharp decline in the debt/GDP ratio immediately following the implementation of the stabilization program (Figure 2).

3. Evolution of main fiscal aggregates since 1990

In December 1989, a massive immigration wave from the former Soviet Union began to arrive in Israel. Its absorption dominated economic developments in general and the fiscal area in particular for a number of years. By the mid-1990's, the influx of immigrants had led to an increase in the Israeli population by about 15 percent.

The rapid population growth, with its special absorption needs, increased the pressures to raise public spending (mostly civilian consumption and transfer payments) and halted the decline in the share of public spending in GDP, which had stabilized at about 53 percent. Between 1993 and 1997 public sector wages were raised sharply[7] and were an important component of the increase in public spending in real terms.[8] Looking at the composition of public spending (Figure 5) we see that, while defense spending and interest payments declined sharply between 1990 and 1995, transfer payments and other immigrant-related spending increased.

Tax receipts over the 1990's were relatively stable at about 36-38 percent of GDP, with a moderate decline in indirect taxes being offset by a slight increase in the revenue from direct taxes. Income tax rates were reduced sharply in 1987, and the corporate tax rate was reduced gradually during the period 1990-1996; these adjustments in tax rates acted to offset the rise in revenues during high growth periods.[9]

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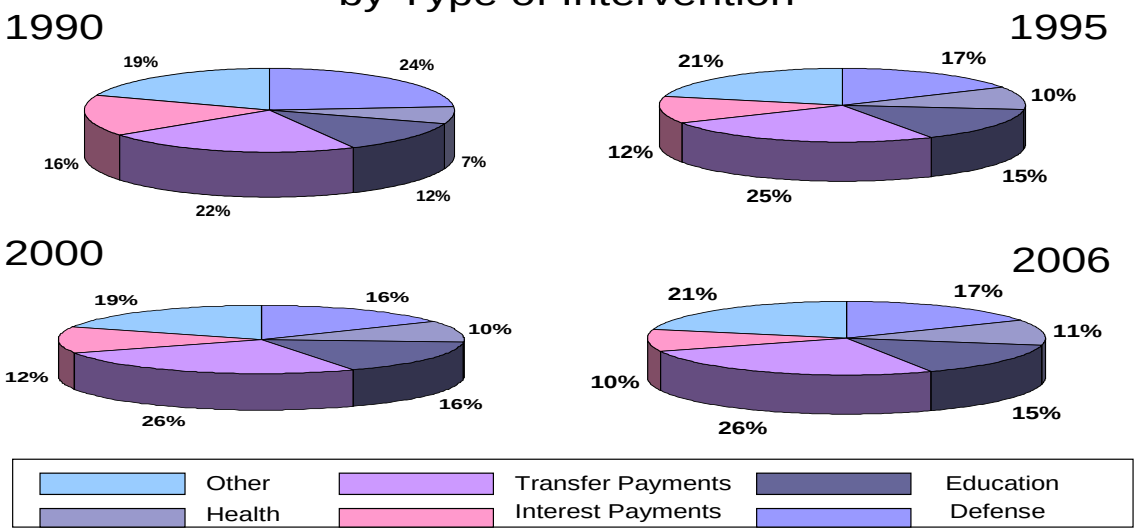
[7] The rise in public sector wages, resulting from agreements signed during 1993-94,was influenced by the formal and informal linkages between various groups in the public sector. Thus, wage agreements that were signed with some groups earlier on, were reopened later when other groups signed agreements with larger wage hikes (for more details on these wage agreements see Sussman and Zakai (2004)).

[8] Government spending in the years 1994-1999 rose in real terms on average by 4.5 % per annum, with civilian non-interest spending growing by 9%. The increase in government spending reflected primarily the growth of public sector wages, as well as transfer payments which rose at an annual average rate of over 6%.

[9] This point was made by Brender (2001), who showed that statutory tax rates were adjusted pro-cyclically, with rates being reduced during high growth periods.

Figure 5: General Government Expenditure, by Type of Intervention



The resulting general government deficits had increased in the early 90's and remained at about 4 percent of GDP during 1990-1994, rising to 6 percent of GDP in 1996, due to an economic slowdown that reduced revenues while public spending continued to expand . The expansion of the public sector deficit, combined with an investment boom, rapidly increased the current account deficit in the balance of payments which stood at over 5 percent of GDP in 1995-1996.

These processes led to the realization that fiscal adjustment was inevitable, prompting a cut in public spending in 1997. The fiscal effort continued and government spending as a share of GDP declined from over 54% of GDP in 1996 to 50% of GDP by 2000[10]; this decline was aided, in particular in the year 2000, by the exceptionally high GDP growth rate. The rapid growth of the economy during the early 1990's, together with the significant privatization of public companies, facilitated the continued decline in the debt/GDP ratio, in spite of the deficits. By the mid-1990's the debt/GDP ratio had declined to 110%.

4. The adoption of fiscal rules – description and analysis

The recognition that the large increase in public spending associated with the absorption of the immigration would lead to a deterioration of the fiscal position, and

[10] Excluding immigrant absorption-related expenditure, the share of government spending in GDP had declined to about 52% already in 1991.

that it would require a major effort to maintain fiscal discipline, prompted the adoption of the "Law of Deficit Reduction" in 1991. The adoption of the law was intended to send a message to the markets that the rise in the deficit was transitory, and also to try to tie the hands of the current government and its possible successors. The law specified a declining ceiling on the domestic deficit of the central government for each of the next 4 years, and was aimed at ensuring that the enlarged expenditure associated with the immigrant absorption would not turn into a long-term derailment of the fiscal deficit from a sustainable path.[11] Since 1991, a variety of laws have been introduced, each specifying multi-year target deficits.

While the case for monetary rules, particularly inflation targeting, is well known and while the inflation targeting approach to monetary policy has been accepted and implemented in a large number of economies, both large and small, the case for fiscal rules has received less analytic attention, and no particular form of fiscal rule has become generally accepted. Probably the most applied fiscal rule over the course of history has been a balanced budget rule.[12] More recently, the best-known fiscal rule was contained in the original Stability and Growth Pact that defined the conditions for acceptance of membership in the EMU. The original Maastricht criteria possessed a crispness that the revised criteria – introduced in 2005 to deal with the failure of some of the larger states to meet the Maastricht criteria – lack.[13] It may nonetheless be that there are lessons to be learned from the initial experience of the Maastricht criteria.[14]

The basic case for use of a monetary rule lies in the view that monetary policy made on a discretionary basis is dynamically inconsistent, which leads to an inflationary bias for the economy.[15] This approach has been extensively analyzed and

[11] The central government differs from the general government in that it excludes the National Insurance Institute, the municipal authorities, non-profit institutions (health funds, universities, etc.) that derive much of their income from the general government, and some other national institutions.
[12] For evidence of the effectiveness of balanced budget rules in the case of states of the United States, see Poterba (1996). As noted by Drazen (2000, Chapter 14), in some cases the requirement of balance applies only to current spending, and not to investment spending.
[13] See Papademos (2004) and Gonzalez-Paramo (2006) for discussion of the Stability and Growth Pact from the viewpoint of the ECB.
[14] Annett (2006) concludes that the Stability and Growth Pact has been a success in many EU countries, particularly the smaller and newer members, but less so for some of the larger countries.
[15] This point was developed initially in Kydland and Prescott (1977), and Barro and Gordon (1983).

developed, and provides the intellectual basis for the implementation of monetary rules, such as inflation targeting, and also for central bank independence.[16]

Although many of the concerns that motivate the search for a better monetary policy approach are also relevant to the case of fiscal policy – including the likelihood that the limited terms of governments and legislative bodies encourage short-term-ism in fiscal policy, leading to excessive deficits – the case for fiscal policy rules and the establishment of an independent fiscal authority has had far less impact than that for monetary policy. Blinder (1997) summarizes the case he presents for giving experts a greater role in fiscal policy decisions in the United States, along the lines of the accepted approach to monetary policy, as follows:

> Those who say big government is the problem have it wrong. The real problem is that government is pushed and pulled by interest groups and partisan politicking, often at the public's expense. Washington could learn from independent agencies like the Federal Reserve. Shift responsibility for things like tax policy from the politicians to the experts; besides knowing more, they work in a politics-free zone. Tossing the ball to the technocrats won't weaken democracy -- Congress can always take it back -- but it will produce better policy.

No government has come close to accepting or even apparently considering the Blinder approach which would set up an independent Fisc along the lines of modern central banks, probably because control over the public purse is seen as the essence of the political process. Nonetheless there have been suggestions that a group of experts be authorized to determine or advise on the macroeconomic parameters that define the budget, e.g. the deficit, the share of government spending in GDP. This approach has not won many adherents either.

In the international effort to promote standards and codes to encourage improved economic policy, by far the greatest emphasis in the fiscal area has been on *fiscal transparency*. In its 2006 paper "Fiscal Adjustment for Stability and Growth", the Fiscal Affairs Department of the Fund refers both to fiscal transparency and to *fiscal responsibility* laws, noting the latter have not been around for more than a few years in most countries. The Fund therefore draws only tentative conclusions about fiscal responsibility laws, among them:

- Such laws require broad political consensus to be successful *and are not a substitute for political commitment*;

[16] For subsequent developments of the literature, see Cukierman (1992) and Persson and Tabellini (2000).

- In countries with a weak track record of policy implementation, procedural rules may work better than numerical rules;
- Numerical fiscal rules can be helpful, but are not in themselves the solution to structural fiscal problems – and they can foster creative accounting and low-quality measures;
- Fiscal rules should be (i) well-defined regarding the fiscal indicator(s) to be targeted and escape clauses if any, (ii) simple and transparent, and (iii) monitorable;
- Institutions of fiscal management should be sufficiently developed to support the laws; and
- Enforcement mechanisms should be credible and effective.

The Fund's summary also notes that the "credibility [of a rule] ultimately depends on the government's track record and on political and social consensus."

Before moving on to examine the Israeli experience of the last fifteen years, we note that the question of what variables to target if a numerical fiscal rule is established is of great importance. Two fiscal equations are relevant:

- *First*, the budget deficit is equal to government expenditures minus revenues – hence not all three of these variables can be targeted independently;
- *Second*, the equation for debt dynamics states that the debt increases with the budget deficit and decreases when non-budgetary revenues (most prominently, privatization receipts) are received; the debt/GDP ratio decreases more rapidly the more rapidly GDP grows.

The most common fiscal rule has been a budget deficit target. In some cases, the constraint – for example the requirement that the budget be balanced – has been applied to the *current* budget. This is the so-called *golden rule* that has been described by the current British government as a constraint on its budget, and it also applied in the cases of some U.S. states that have balanced budget laws. In some cases limits have been placed on either the growth of government spending, or the ratio of government spending to GDP. Limits on the ratio of government revenues to GDP can also be envisaged. In the Maastricht criteria there was also a debt/GDP rule, though it was more flexible than the deficit rule.

In each case the government does not precisely control the targeted variable. Nor is it economically optimal to maintain the same fiscal targets independent of the

state of the economy and of the society's needs – for instance during a war. There is thus a need to decide both whether it is (i) *budgetary variables* or *outcomes* that should be targeted, and (ii) what degrees of flexibility are desirable. Similar issues arise in the case of inflation targeting, since the central bank also does not control the inflation rate precisely, but there the policy problem appears simpler than that for the fiscal authority.

In those approaches that emphasize some form of equivalence between debt and tax financing (e.g. the Ricardian equivalence approach of Barro (1979)), the choice between deficits and tax revenues appears less critical, and the emphasis might switch to expenditure constraints. Our evaluation is that while the notion of Ricardian equivalence has some relevance to economic behavior, the equivalence is incomplete, and that it remains necessary for fiscal policy to differentiate between tax and deficit financing.

5. Fiscal rules: Israeli experience

From the initial adoption of a multi-year fiscal rule in 1991, until 2003, Israeli fiscal rules were all targeted at the government deficit, initially the domestic deficit, and later the overall deficit (Table 2). Starting in 2003, constraints were placed on both the deficit and the growth rate of government spending. All targets have related to the budget rather than to outcomes.

As can be seen from Table 2, the quantitative targets that were set by the 1991 law were revised by the third year (1994). In fact, every multi-year deficit path that had been adopted at some point by the Knesset has been altered during its planned horizon: in four out of five revisions of the specified deficit path, the targets were revised upwards. There were also frequent changes in the specific aggregate on which the target was set: initially the domestic deficit of the central government; later modified to the overall (domestic plus foreign) central government deficit; and further amended to exclude Bank of Israel profits.

In this context we note that Kopits and Symanski (1998) state that "a major advantage of rule-based fiscal policy over discretionary policy is time consistency, i.e. rules are useful in correcting the bias to run budget deficits". Clearly, the frequent changes of the rules in Israel indicate that this advantage did not materialize – though it remains to be discussed whether the rules might nonetheless have performed a useful role.

Table 2: Budget Rules and Targets 1990-2006

Decision year	Deficit Target	Notes
1990	1991 – 5.5% of GDP	-
1991	1992 – 6.2% of GDP 1993 – 3.2% of GDP 1994 – 2.2% of GDP 1995 – 0.0% of GDP	Adoption of declining deficit law. Ceiling on domestic deficit.
1992	1993 – 3.2% of GDP	-
1993	1994 – 3.0% of GDP And will be reduced over the next 3 years.	Upward revision of deficit target
1994	1995 – 2.75% of GDP	-
1995	1996 – 2.5% of GDP	-
1996	1997 – 2.8% of GDP 1998 – 2.4% of GDP 1999 – 2.0% of GDP 2000 – 1.75% of GDP 2001 – 1.5% of GDP	Moving from domestic deficit to overall deficit
1997	1998 – 2.4% of GDP	-
1998	1999 – 2.0% of GDP	-

continued

Decision year	Deficit Target	Growth rate of Government Total Expenditure	
1999	2000 – 2.5% of GDP 2001 – 2.25% of GDP 2002 – 2.0% of GDP 2003 – 1.5% of GDP	-	Upward revision of deficit target. The deficit was redefined during the fiscal year to exclude the Bank of Israel's profits.
2000	2001 – 1.75% of GDP 2002 – 1.5% of GDP 2003 – 1.25% of GDP	-	Downward revision of deficit target
2001	2002 – 2.4% of GDP 2003 – 2.0% of GDP 2004 – 1.5% of GDP 2005 – 1.0% of GDP	-	Upward revision of deficit target
2002	2003 – 3.0% of GDP And will be reduced by 0.5% every year from 2004 onward to a rate of 1% of GDP to be maintained onwards	-	-
2003	2004 – 4.0% of GDP 2005 Onward – 3.0% of GDP	2005-2010-1% real growth every year	-
2004	2005 – 3.4% of GDP	2005-2010-1% real growth every year excluding costs of disengagement	Deficit ceiling raised by 0.4% of GDP to account for costs of disengagement
2005	2006 – 3.0% of GDP	2006-2010-1% real growth every year	Expenditure growth excluding disengagement
2006	2007 – 2.9% of GDP 2009 Onward – 1.0% of GDP	2007 – 1.7% 2008 – 1.7% } Excluding war-related and disengagement transitory expenditure	In a coalition agreement it was decided that the expenditure growth rate ceiling will rise to 1.7%.

In 2003 the declining deficit target was replaced by a constant ceiling on the deficit (set at 3 percent of GDP), together with a ceiling on the growth of government expenditures. This modification reflected the desire of the government to allow a reduction in taxes, and a shift from an emphasis on deficit and debt reduction only to a combination of goals including reducing the size of the government, reducing the tax burden and a continuation of a reduction in the debt to GDP ratio, albeit at a

slower pace[17]. The shift towards a spending rule was also motivated by the recognition that in order to achieve fiscal consolidation there was a need to tackle the rapid growth of real government spending, which (excluding interest payments) in real terms grew at almost five percent per year over the period 1994-2002.

The deficit and expenditure ceilings under the 2003 approach were both modified a year after their initial adoption by specifying some "special spending" as exempted from the ceilings. Initially, the exemptions referred to spending related to the disengagement from Gaza. In 2006, the very tight constraint of one percent per annum increase in budgeted real expenditures was raised to 1.7 percent per annum, equal to the rate of population growth. In addition, in the same year special allowances were made for spending related to the conflict on the northern border, with the needed adjustment to the defense budget to be spread over three years. However, the government committed itself to returning to the same *level* of spending in 2009 as it would have had under the original 1.7 percent growth path of spending from 2006 on – that is to say, it committed itself to making the needed spending adjustments a one-time event, which would not enter the baseline for government spending and thus would not become permanent.

6. Fiscal performance under fiscal rules

In spite of the frequent changes in the definitions and quantitative targets, it is still relevant to ask whether in the Israeli case the adoption of fiscal rules were an important factor in imposing fiscal discipline. We have no definitive means of answering the counterfactual question of what would have been the government deficit in the absence of the adoption of these rules. To try to form a judgment, we examine a number of performance indicators: (1) the extent to which the government met its quantitative targets[18], (2) the path of the more comprehensive aggregate -- the

[17] It should be noted that if GDP growth were to average 3 percent per annum (which equals the average growth rate since 1973) and if population were to grow at about 1.5 percent per annum, the debt/GDP ratio would not decline if the deficit were at its ceiling level of 3 percent of GDP. In practice so far the deficit has averaged well less than its ceiling level; in addition privatization receipts have helped reduce the debt/GDP ratio.

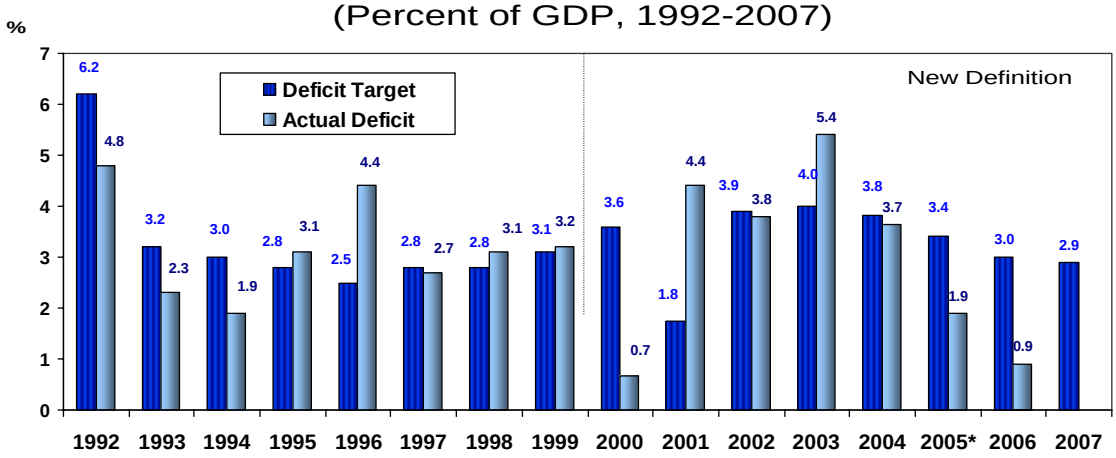
[18] We examine here the targets that were in place when the budget was formulated. These were generally higher than the initial targets for those years, when multi-year targets including that year were first put in place. Thus the judgment based on Figure 6 is more generous than it would have been had we examined the commitment to the original budget targets.

overall public sector deficit, and (3) the path of the cyclically adjusted overall government deficit.

Figure 6 shows that the government met its deficit targets in 9 out of the 15 years in which they were in place. It violated the deficit targets by a wide margin in 3 years (1996, 2001, 2003). These years were characterized by recessions, which led to a sharp decline in tax receipts. Clearly there is a considerable gap between the budget deficit target and the budget outcome in those years – the years of recession.

Figure 6: **Budget Deficit***

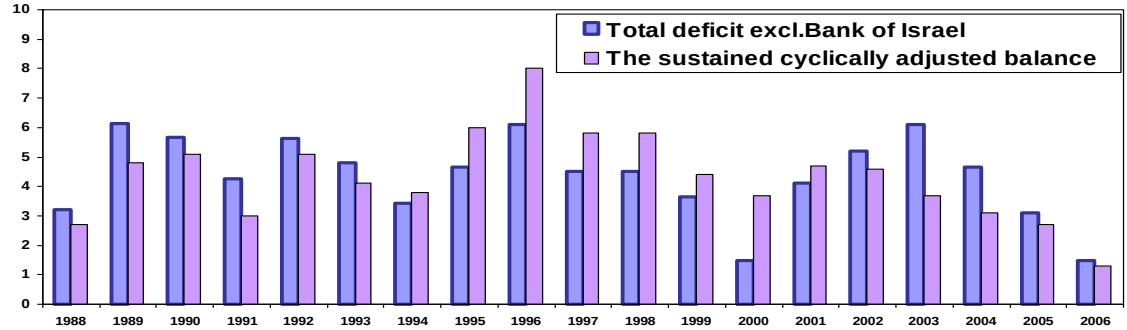
(Percent of GDP, 1992-2007)



*Percent of GDP; excluding credit extended. Until 1996, domestic deficit; from 1997, total deficit. The data from 2000 refer to the deficit excluding the Bank of Israel's profits.

Figure 7: **General Government Deficit : actual, and "sustained" cyclically adjusted***

(Percent of GDP, 1988-2006)



Assumptions:

(1) The potential GDP per capita grows at the rate of 1.5% per year. (2) In 1997 the GDP was equivalent to the potential GDP.

(3) Expenditures and non-tax income are not affected by the change of GDP. (4) Tax revenues change in proportion with the change in GDP.

* The "sustained" cyclically adjusted balance is calculated in the same way as the cyclically adjusted deficit but with respect to the an output level which is calculated by multiplying potential GDP by the average level of actual GDP relative to its potential in the past 20 years.

Reproduced from: Adi Brender (2007), If You Want to Do, Do, Don't Talk: The Role of Formal Targets in Israel's Fiscal Consolidation Efforts 1985-2007, paper .presented at the 8th Banca D'Italia Conference on Fiscal Policy, Perugia, March 29-31.

Examining the period under fiscal targets as a whole reveals no clear trend in the central government fiscal deficit (see Figure 6): a slight upward trend can be detected during 1995-1999 but that was followed by a major decline in 2000, a year of more than 8 percent growth. There is then a period of high deficits during the 2001-2003 recession and into 2004. The deficit has declined sharply since then. A similar trend, although with somewhat lower fluctuations, is observed in the overall public sector deficit (the deficit of the general government presented in Figure 2), with the overall deficit fluctuating around 5-6 percent of GDP in 1992-1999, and on average below that in the period 2001-2006. Brender (2007) concludes that the rules appear to have had little impact on fiscal consolidation: "only two periods during the last 22 years, 1985-1992 and 2003-2006, can be characterized as episodes of sustainable consolidation, and one of them preceded the introduction of the ceilings."

It is clear from the data that divergences between the budget and the fiscal outcome each year are heavily affected by the growth rate of the economy. Accordingly a somewhat more favorable picture is revealed when looking at the cyclically adjusted overall public sector deficit (Figure 7). The cyclically adjusted deficit, after peaking at more than 7 percent of GDP in 1996, declined considerably and, following a moderate increase in the 2001-2002 recession years, resumed a declining trend in 2003.

It should be noted however, that the improved fiscal deficit since 2003, which can be also seen in a much slower increase in public spending than in earlier years, coincided with a period in which the fiscal deficit rule itself was less stringent than before – a ceiling of 3 percent throughout the period (with some spending being exempted from this ceiling) – but it was combined with a tight ceiling on the growth of government spending.[19]

Moreover, this period was characterized by significant changes in spending rules, such as changes in pension entitlement, in retirement age, in the rules for updating transfer payments, and other changes that have had a significant effect in reducing the inertia in the growth of public spending. Furthermore, during this period more rigid rules in allowing the transferring of unutilized budget from under-executed

[19] The ceiling was initially set at a growth rate of 1% in real terms, and than raised in 2006, in the context of forming a new coalition government, to 1.7% which is the rate of growth of population in Israel.

items to fully executed items led to lower execution rates of the budget than in earlier years.

Thus, it seems that while we can not rule out some effect of the declining deficit laws in strengthening fiscal discipline over the last 15 years, there is no clear evidence for their having had a powerful effect. Fiscal restraint seemed more effective in the last three years, when the rules were more focused on public spending, and were accompanied by structural budgetary reforms. In addition, the period since 2003 has been one of sustained rapid growth, so that the Israeli expenditure constraint approach has not yet faced the test of an economic slowdown.

An alternative view would be that what determines the fiscal path is the commitment of the government to fiscal discipline, and that the adoption of an ambitious fiscal rule is merely a reflection of such a commitment. Having watched some of the dynamics of putting together an Israeli budget, we doubt that the situation is so simple: the adoption of a fiscal rule may reflect the commitment of the government to fiscal discipline, but it is also a useful coordinating and disciplinary device when a coalition government is developing its budget and having to contend with a situation in which every minister is in favor of budget discipline in the abstract and for other ministries but not his or her own. We do not want to overstate this point, but it seems clear that the formal declaration of constraints on the budget does to some extent constrain the subsequent actions of the government.

Several shortcomings of targeting the central government deficit as in Israel have become clear over the years:

1. Setting the ceiling on the central government deficit and not that of the consolidated public sector – a choice made because of the greater control the government has over its own budget – runs the risk of transferring part of the spending/deficit pressure to the local authorities;

2. The ceiling is set on the budgeted deficit, while the actual deficit is the ex-post outcome. This provides an incentive, if there is no full commitment to the target, to provide overly optimistic macroeconomic and tax projections that would show a low deficit at the planning stage. While this is indeed a theoretical possibility, Israeli budget planners have not in recent years succumbed to the incentive, and have tended to base the budget on conservative macroeconomic forecasts;

3. The target is set on the actual rather then on the cyclically adjusted deficit, which builds in a pro-cyclical fiscal policy. The reluctance to specify a target on the cyclically adjusted deficits stems from the lack of consensus regarding the appropriate measurement of a cyclically adjusted deficit. It was also based on the

initial perception that the debt/GDP ratio was so high that a countercyclical fiscal policy was a luxury that Israel could not afford. This judgment was reinforced by the markets in the 2001-2003 recession, when it was difficult for the government to borrow.

The question of counter-cyclical fiscal policy and the need for flexibility in the operation of the rules is an important one. In Israel the flexibility was attained in practice by adjusting the targets frequently. While this indeed allowed for flexibility, it reduced the credibility of the fiscal rules. Flexibility can be attained by targeting the cyclically adjusted deficit, or more flexibly yet, by requiring budget balance over the cycle. However, since the length and depth of business cycles varies, such a rule can only be used by a government that has already built up its credibility.

As noted above, in the Israeli case with the high debt/GDP ratio, the markets limit the extent to which it would at this stage be possible to use a strongly counter-cyclical fiscal policy. This problem was exemplified during the 2001-2003 recession[20]. The sharp rise in the government deficit in 2001 and the inability to reduce it in 2002 were reflected in a rise in the long term interest rate on public sector debt from 6.8% to 9.2%. This occurred despite the fact that most of the increase in the deficit was directly related to the decline in tax revenues due to the recession as reflected in the rather modest increase in the cyclically adjusted deficit. Thus, the tolerance of the markets to the conduct of even a mildly expansionary fiscal policy (letting the automatic stabilizers work) was very low due to the high debt/GDP ratio at that time. This reaction may have been intensified by the difficulty of assessing the expected duration of the crisis, namely whether the shock to the economy was transitory or permanent.

Finally, in drawing the lessons of the Israeli experience, we return to the IMF's lessons about fiscal responsibility laws, with our conclusions stated in italics:

- Such laws are not a substitute for political commitment – *clearly so*;
- Numerical fiscal rules can foster creative accounting and low-quality measures – *yes*;

[20]This procyclical behavior is characteristic of developing countries as pointed out in Alesina and Tabellini. (2005), who also note the exceptionally pro-cyclical behavior of fiscal policy in Israel given its level of development. For the documentation of this point for developing countries see Talvi and Vegh (2005), and for developed countries see Lane (2002).

- Fiscal rules should be … (iii) monitorable – *yes, and this has been a problem in the Israeli case in that the rules apply to budgeted magnitudes, and not to the budget as implemented*;
- Enforcement mechanisms should be credible and effective – *this should be the case, but was not the case in Israel, and accordingly the constraints were changed frequently*

7. Concluding comments.

The experience of 15 years of conducting fiscal policy in Israel based on fiscal rules specifying the path of the government deficit suggests that these rules played, at best, a marginal role in attaining fiscal discipline. The frequent changes in the quantitative targets and in the aggregates upon which the targets are set, and the fact that fiscal deficits have not shown a sharp downward trend over most of the period, all suggest that the rules were not very effective in supporting fiscal consolidation. However, that is not to say that they had no effect: we believe that at various stages the existence of a constraint and the loss of credibility from having to change it may have to some extent constrained fiscal policy.

The improvement in fiscal performance since 2003, when the rules changed from focusing on a declining deficit to a combination of ceilings on the size of the deficit and the growth of government spending, suggests that these rules may be more effective in the phase of fiscal consolidation than the declining deficit target alone.

However, the relatively short experience with the expenditure rule, and the fact that its adoption coincided with other structural fiscal reforms – particularly affecting entitlements – prevents us from at this stage drawing definite conclusions about the effectiveness of the new set of fiscal rules. This is particularly so given that since the introduction of a spending growth ceiling for 2005 and onwards, the ceiling was raised once, and some specific categories of spending (those relating to the disengagement from Gaza , and those related to the second Lebanon war) were exempted from the ceiling. Furthermore, the new rules of operation need to be tested during a complete business cycle in order to assess their effectiveness during recessions.

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