Chapter 6
The General Government and Its Financing

- The general government deficit was 11.9 percent of GDP in 2020, compared with 4.5 percent in 2019. The budget deficit was 11.6 percent of GDP, compared with 3.7 percent in the previous year. Most of the deficit increase reflected an upturn in expenditure totaling 7.1 percent of GDP.
- The increase in government spending did much to ease the blow to economic activity, the risks to businesses' survival, and the development of protracted unemployment.
- The public debt to GDP ratio increased from 60 percent to 72.6 percent—the highest since 2009 and slightly above the OECD median. The increase in this ratio was somewhat below the average increase among OECD member states.
- Israel had the sixth-highest deficit rate among OECD countries. This is more a reflection of Israel's high precrisis deficit level than of the increase due to the crisis.
- Several times during the year, the Knesset responded to the urgency of the health emergency by approving COVID-19 exceptional budget allocations as one-off budget increases for 2020 and 2021. The uncertainty surrounding the length of the acute crisis placed a burden on policy planning, causing policy in Israel, as in most countries, to be adjusted during the year as developments warranted.
- A lesson to be learned from the delays and difficulties that occurred in providing businesses and workers with relief is that it is important to create a permanent support mechanism, which is triggered byeconomic indicators, such that it is applicable without delay and phased out automatically as it becomes less necessary.
- The pandemic threatened to overwhelm the inpatient care system, which is chronically short of personnel and infrastructure. To make the system more resilient, the temporary personnel slots and beds allotted to the hospitals during the crisis need to be made permanent, academic training of nurses should be expanded, intensive-care units need reinforcement, and medical buildings should be designed and built in a way that will allow flexibility in states of emergency.
- Ongoing activity in the education system was badly impaired during and between the lockdowns. Investment in digitalizing schools and decentralizing authorities from the central government to local authorities and school principals, coupled with administrative and pedagogical autonomy, will help to improve the quality of education in Israel.
- The revisions of fiscal rules that were needed to cope with the COVID-19 crisis spilled into regular budget fields as well. Some changes in the rules of the interim budget have weakened the institutional limitations that give the government an incentive to pass its budgets on time. It is important for the next government to approve a regular budget promptly and to restore the control and audit mechanisms, tailoring the fiscal rules to the state of the economy and to responsible deficit targets that are in line with its future long-term objectives.
- The cumulative increase in the debt to GDP ratio due to the COVID-19 crisis will erode slowly even if the interest rate remains far below the growth rate. Therefore, the debt to GDP ratio in the coming decades will probably remain higher than what was predicted on the eve of the crisis, possibility leaving the government with less fiscal space to cope with further crises.
- As the advanced economies begin to recover from the crisis, there is an intention among them to move toward a "green recovery," in which measures taken to stimulate activity will yield long-term utilities as well. A similar process should be promoted in Israel.

1.MAIN DEVELOPMENTS

The general government deficit was 11.9 percent of GDP in 2020, compared with 4.5 percent in 2019. The budget deficit was 11.6 percent of GDP, compared with 3.7 percent in 2019.[1] The public debt to GDP ratio climbed from 60 percent of GDP to 72.6 percent, wiping out a decade of decline (Figure 6.1). The deficit was smaller at year's end than projections made during the year because the contraction of nominal GDP was unexpectedly milder, allowing tax collection to surpass expectations and leaving unperformed some of the budget increases that were made to cope with the COVID-19 crisis and some of the interim budget, which was below the statutory expenditure ceiling to begin with.

The growth of the general government deficit reflected an increase of 7.1 percent of GDP in spending and a decline of just 0.3 percent of GDP in revenue.

The historically sharp increase in the general government deficit reflected a 7.1 percent of GDP increase in expenditure (16 percent relative to the previous year) and a decline of just 0.3 percent of GDP in revenue (a 2 percent decrease in nominal terms relative to the previous year's revenue). The increase in expenditure was mainly due to greater support of businesses and transfer payments to households (4.8 percent of GDP) and, in smaller part, to a 1.5 percent of GDP increase in civilian public consumption and a 1 percent of GDP uptick in public investment (Table 6.1).[2]

Most governments responded to the pandemic by taking unprecedented measures to prevent its spread, including lockdowns, restrictions on business activity[3], and massive fiscal mobilization to boost healthcare system spending, give relief to vulnerable households, and sustain businesses in shuttered industries. The International Monetary Fund estimates that the budget measures adopted worldwide through the end of 2020 came at the cost of 8.4 percent of global GDP.[4] In addition, extrabudgetary measures totaling 6.1 percent of GDP were adopted through programs such as direct loans, state-guaranteed loans, and equity injections. In Israel, the government's measures for 2020–2021 are estimated at 15 percent of GDP (NIS 208 billion)—11 percent of GDP within the budget and 4 percent extrabudgetary. The unprecedented support of the unemployed and of businesses, along with further relief for households, appears to have prevented a further decline of 1.9–2.6 percent of GDP in 2020.[5]

[1] The general government is composed of the central government, the National Insurance Institute, local authorities, NGOs (HMOs, universities, yeshivot, etc.) that derive most of their income from the general government, and the National Institutions (the Jewish Agency for Israel, JNF-KKL, and the World Zionist Organization). Its activity is measured in accordance with the National Accounts definitions, which are different from those used in the government budget.

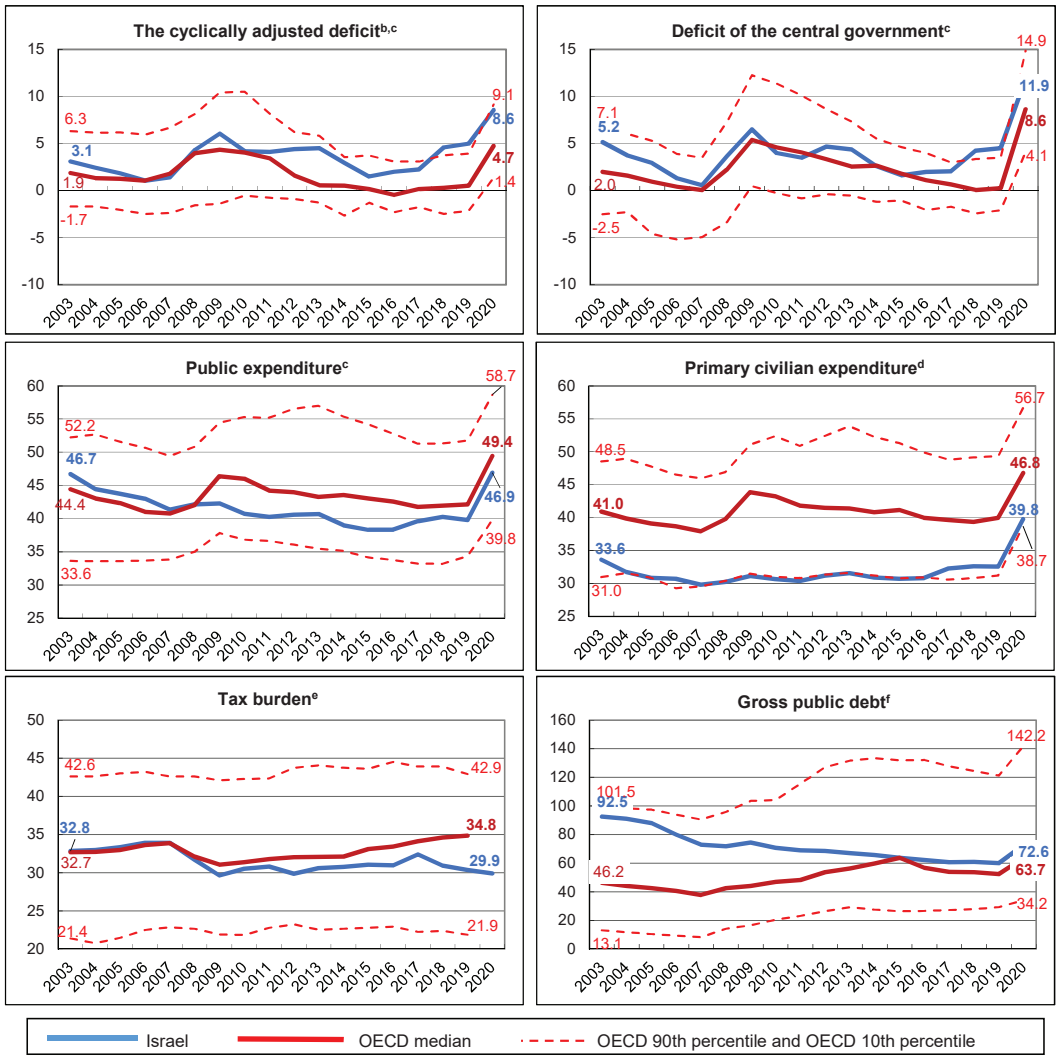
[2] Even though the government was operating under an interim budget, public investment was allowed to increase due to the maturation of large-scale infrastructure projects at Israel Railways and the Greater Tel Aviv light rail and, to a smaller extent, acceleration programs that the government pushed forward when the pandemic crisis began.

[3] For an international comparison of the severity of the restrictions, see Chapter 1.

[4] The IMF's reporting in GDP terms divides the total announced programs by a single year's GDP because different countries deploy the programs to different terms (1–4 years). The intent, however, is to compare the countries in terms of total measures announced.

[5] For discussion of estimates of the fiscal multipliers in the course of the crisis, see Chapter 2.

Figure 6.1
Israel's Fiscal Aggregates Compared to the OECD Average[a], 2003-2020 (percent of GDP)



[a] Data for OECD countries are the medians of all member countries for which there are data.
[b] Cyclically adjusted deficit data for Israel are according to the accepted international definition and taken from the OECD systems. OECD data are as of the beginning of December. In order to adjust the Israeli data to up-to-date Central Bureau of Statistics estimates, the difference between the overall deficit according to the OECD estimate and the overall deficit calculated by the Bank of Israel was deducted from Israel's cyclically adjusted deficit. This difference amounts to 1.7 percent of GDP.
[c] Excluding the reduction of expenses financed by the sale of land. See discussion in Footnote 2 of Chapter 6 in the 2019 Annual Report.
[d] Due to a lack of up-to-date data, defense expenditures in 2019 and 2020 are equal defense expenditures in 2018 for all countries except Israel.
[e] The graphs are presented up to the last year for which there are data in the OECD systems.
[f] Data are in line with the International Monetary Fund's definition, and are taken from the IMF systems.

Table 6.1
The main components of the general government's revenue and expenditures, 2014–2020

(percent of GDP)

	2014	2015	2016	2017	2018	2019	2020
Total public revenue	**36.4**	**36.7**	**36.3**	**37.6**	**36.0**	**35.3**	**35.0**
Income from property	0.7	0.7	0.5	0.6	0.5	0.5	0.5
Total taxes	**30.8**	**31.0**	**31.0**	**32.4**	**30.9**	**30.3**	**29.9**
Indirect taxes on domestic production	12.5	12.6	12.1	12.3	12.2	11.9	11.5
Indirect taxes on civilian imports	3.2	3.0	3.4	2.7	2.8	2.7	2.8
Direct taxes, fees and levies	10.0	10.3	10.4	12.1	10.7	10.5	10.5
National Insurance Institute revenue	5.1	5.1	5.2	5.3	5.3	5.3	5.1
Grants	1.3	1.4	1.4	1.1	1.1	1.0	1.0
Other[a]	3.6	3.5	3.4	3.5	3.5	3.4	3.6
Total public expenditure[b]	**39.0**	**38.3**	**38.3**	**39.6**	**40.3**	**39.8**	**46.9**
Current expenditure	35.0	34.4	34.3	35.2	35.7	35.3	41.5
Domestic civilian consumption	16.9	16.8	16.9	17.4	17.6	17.5	19.0
Domestic defense consumption	4.6	4.5	4.4	4.4	4.5	4.3	4.4
Defense imports	1.0	1.0	1.0	0.7	0.7	0.7	0.7
Direct subsidies	0.7	0.7	0.7	0.9	0.9	1.0	4.2
Transfer payments on current account	9.5	9.4	9.3	9.7	9.7	9.7	11.3
Interest payments[c]	2.5	2.1	2.1	2.2	2.4	2.2	2.0
Transfer payments on capital account[d]	0.5	0.5	0.5	0.6	0.6	0.6	0.5
Investments of the general government[b]	3.5	3.3	3.5	3.8	4.0	3.9	4.9
Primary civilian expenditure[b]	**30.9**	**30.7**	**30.8**	**32.3**	**32.6**	**32.6**	**39.8**
Total deficit of the general government[b]	**2.6**	**1.6**	**2.0**	**2.1**	**4.3**	**4.5**	**11.9**
Central government deficit (excluding provision of credit)[e]	2.7	2.1	2.1	2.0	2.9	3.7	11.6
Current deficit of the general government	1.9	1.2	1.4	1.1	3.1	3.5	10.1
Total cyclically adjusted deficit using international definition[b,f]	3.0	1.5	2.0	2.3	4.6	5.0	8.6
Net public debt[g,h]	62.5	60.6	59.0	57.5	58.1	57.9	68.4
Gross public debt[g]	65.7	63.8	62.1	60.6	60.9	60.0	72.6

[a] Includes transfer payments from the public on the current and capital accounts, imputed pensions, depreciation, capital transfers from abroad, and transfers from abroad

[b] Excludes the reduction of expenses financed by the sale of land.

[c] In 2018, the Central Bureau of Statistics revised the calculation for interest expenses from 1995 onward, and they are now calculated on a cumulative nominal basis

[d] Includes mortgage subsidies and transfers on the capital account to nonprofit organizations and businesses.

[e] The central government deficit is calculated based on cash performance and includes only the deficits of the government and the National Insurance Institute. It does not include municipalities, nonprofit organizations, or the national institutions. The fiscal targets relate to this measure, and not the deficit of the general government.

[f] Based on the OECD estimate, adjusted to revised Central Bureau of Statistics Data. For more information see footnote b in Figure 6.1.

[g] Excluding municipalities' debts to the government.

[h] Net public debt equals the gross public debt minus active loans minus government deposits with the Bank of Israel.

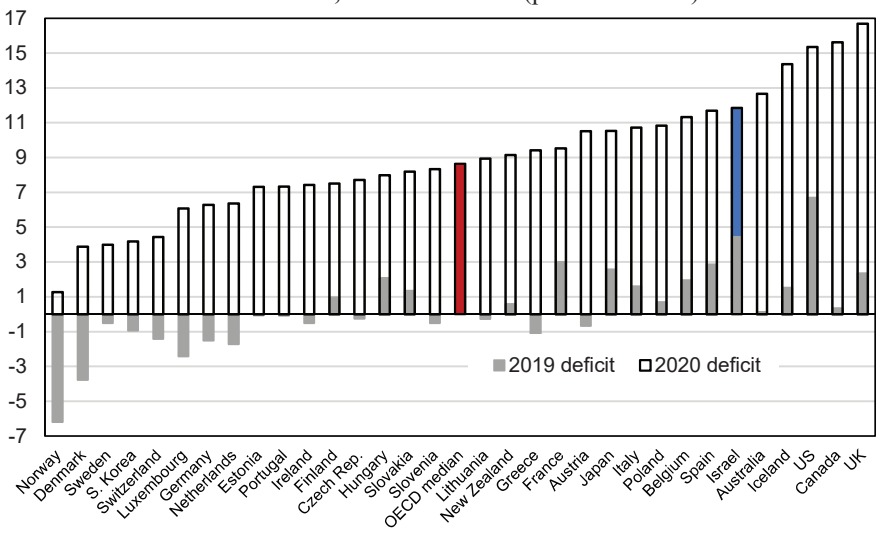
SOURCE: Based on Central Bureau of Statistics data.

Israel's deficit increase was slightly smaller than the OECD average but its deficit level remained high because it was large in 2019.

An international comparison of fiscal aggregates shows that Israel's deficit increase in 2020 was slightly smaller than the average among OECD countries—7.4 percent of GDP, compared with an OECD median of 9 percent. Due to its high deficit in 2019, however, Israel remained in the upper portion of the distribution of member states in terms of deficit level (Figure 6.2). It bears emphasis that the deficit increase in 2020, which was due to government decisions and the automatic stabilizers that Israel and other countries use, is temporary and will probably contract gradually as the economies recover. In contrast, the treatment of the structural deficit (excluding pandemic-related expenditure) was delayed due to other priorities and overlooked

by the government in 2020 for reasons including the need to avoid fiscal tightening, which would have aggravated the impact to the economy. As soon as activity recovers, particularly in view of the increase in debt in the reviewed year, ways to narrow the structural deficit will have to be discussed again.

Figure 6.2
Deficit[a] in OECD Countries, 2019 and 2020 (percent of GDP)



[a] Israel's total deficit is according to the international definition and excludes the reduction of expenses financed by the sale of land.
SOURCE: OECD Economic Outlook no, 108, December 2020, and Central Bureau of Statistics.

International comparisons usually include examinations of cyclically adjusted deficits and structural deficits, in order to present the fiscal picture net of the effects of economic volatility and one-off factors. There is little point in such comparisons this year because (1) the intensity of the economic shock makes it hard to estimate its impact on the budget aggregates, and (2) every country took exceptional policy measures that will be phased out at timing that is unclear but not far into the future. For this reason, it is best to examine the underlying fiscal picture on the basis of 2019 data and not by making ad hoc adjustments to 2020 data.

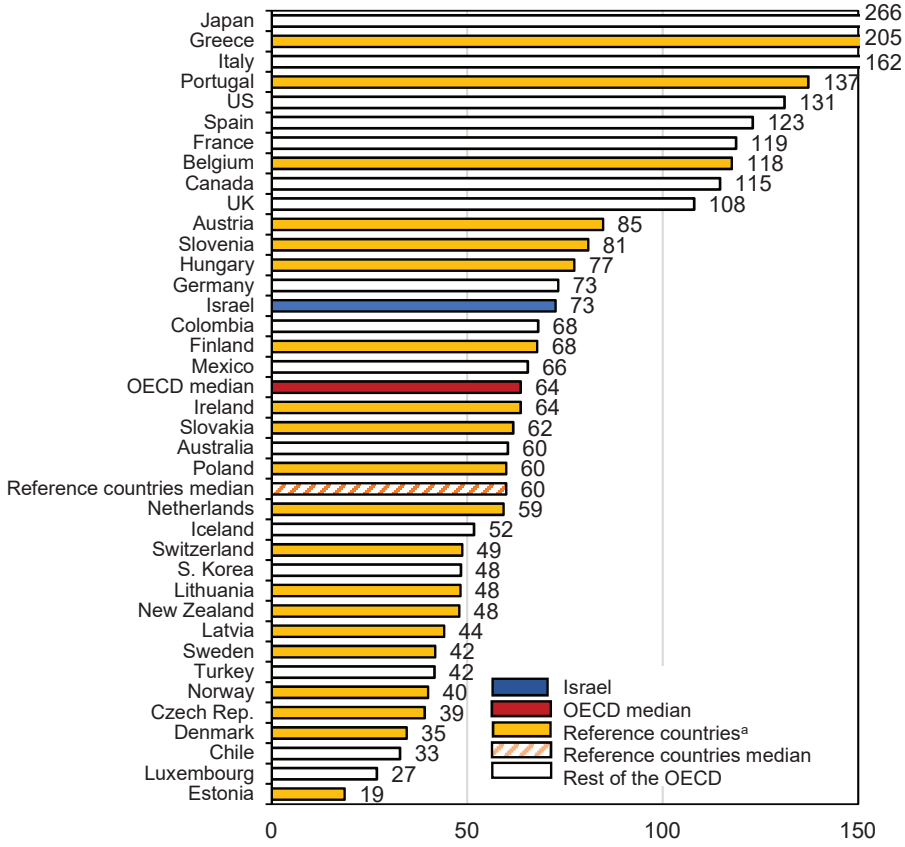
The gross public debt increased to 72.6 percent of GDP in 2020, largely due to the bulging deficit.[6] Although Israel's debt to GDP ratio had been declining since 2003, it still exceeds the median among advanced economies. Among Israel's reference countries[7], it ranked even more poorly (Figure 6.3).

Although Israel's debt to GDP ratio had been declining since 2003, it still exceeds the median among advanced economies. Among Israel's reference countries, it ranked even more poorly.

6 The contraction of GDP contributed 1 percentage point to the 12.6 percentage point total increase.
7 Non-G20 countries that have more than one million in population and more than USD 30,000 in per-capita GDP.

Government policy in 2020 was different from the way governments of Israel coped with previous economic crises. In the crisis of the early 2000s, the high debt and deficit levels, steep interest rate on the government debt, and the need for a monetary policy that would forestall an upturn in inflation and foreign-currency flight forced the government to tighten its fiscal stance, mainly by trimming public expenditure, which at first exacerbated the crisis. The reforms that were introduced in 2003, despite their problematic timing in terms of the business cycle, solved structural problems, thus lowering the deficit in the longer term.

Figure 6.3
Gross Public Debt in OECD Countries, 2020 (percent of GDP)



[a] The reference countries include countries that are not in the G20, have a population of more than 1 million, and have a per capita GDP of more than $30,000.

SOURCE: International Monetary Fund's Fiscal Monitor, January 2021, and Ministry of Finance.

Thus, Israel entered the 2008 Global Financial Crisis with more fiscal space after having slashed its debt to GDP ratio and attaining a sovereign-rating upgrade. Furthermore, the government in 2009 was transitional and, for this reason, limited in its ability to respond to the crisis until a new state budget was approved in mid-year. Therefore, it decided not to cut the deficit but to allow the automatic stabilizers to operate. Thus, most deficit growth that year was due to a decline in tax revenues, countered by neutrality in public expenditure.

When the COVID-19 pandemic broke out, unemployment was at a historic low, inflation was negligible, and the current account was in surplus. The debt to GDP ratio was also historically low, as were interest rates on the government debt—for reasons including central banks' intervention in bond markets since the Global Financial Crisis. From 2016 to 2019, however, the government allowed the structural deficit to increase to a high level by international comparison[8] and approved programs that were likely to increase it even more in the coming years.[9]

Although the deficit was high in 2020, the Israeli economy had matured enough to allow the government to finance it at lower cost than in previous crises. In addition, the nature of the impact to activity, expected to be temporary[10], left room for a massive fiscal response. This approach—increasing public expenditure and issuing large-scale debt to finance it—was backed by all multinational economic institutions and rating firms due to their belief that countercylical policy could improve debt sustainability[11] even in countries that had high debt to GDP ratios.[12] The sustained low yield on Israel's government bonds in 2020 reflected this outlook, and was made possible by quantitative easing (QE), in which the Bank of Israel purchased long-term government bonds on the secondary market, and by falling yields abroad as other central banks deployed parallel programs.[13]

The multinational economic institutions and rating firms backed the increased public expenditure and the issuing of large-scale debt to finance it, in the belief that countercyclical policy could improve debt sustainability even in countries that had high debt to GDP ratios.

[8] See Chapter 6 in the Bank of Israel *Annual Report* for 2019.

[9] See Bank of Israel, *Fiscal Survey: Trends and Outlines for Fiscal Policy in 2021 and for the Medium Term,* November 2020 [Hebrew].

[10] For a comparison of the characteristics of the current crisis with previous crises in Israel, see Chapter 1.

[11] *"In general terms, public debt can be regarded as sustainable when the primary balance needed to at least stabilize debt under both the baseline and realistic shock scenarios is economically and politically feasible, such that the level of debt is consistent with an acceptably low rollover risk and with preserving potential growth at a satisfactory level."* IMF (2013), *Staff Guidance Note for Public Debt Sustainability Analysis in Market Access Countries* (Section I).

[12] Auerbach and Gorodnichenko (2017), investigating the impact of unexpected changes in public expenditure on the debt to GDP ratio several years after their occurrence, found that an unexpected increase in public expenditure during a recession actually correlates with a decline in the debt to GDP ratio in the next four years. They trace this outcome to government support of economic activity, meaning that increasing the deficit at times of crisis improves fiscal sustainability. A. J. Auerbach & Y. Gorodnichenko (2017), "Fiscal Stimulus and Fiscal Sustainability," National Bureau of Economic Research (No. w23789).

[13] The Quantative Easing was effective at lowering the long-term bond yields. See Chapter 3 in this Report for more details. The transmission of QE to yields is described in Box 3.2.

In the year as a whole, Israel's measures were commensurate with the intensity of the shock. At the beginning of the crisis, however, the fiscal-policy response was slow relative to that of other advanced economies, particularly considering the severity of the restrictions that Israel imposed on economic activity relative to other countries at that time.[14] In the first morbidity wave of COVID-19, policy generally involved first aid to casualties of the lockdown by advancing unemployment benefits and grants to the self-employed. After the first wave, a series of incremental measures with no clear spending framework was approved, often with perceptible delays in making and implementing decisions that aggravated economic uncertainty. In early July, the government approved an expanded safety net that provided the unemployed and business owners with certainty until June 2021. Consequently, the second wave, in September, found the economy already equipped with a stable safety net. At this time, too, the government approved grants for all citizens irrespective of how badly the crisis had affected them. In the last quarter of the year, policy focused mainly on reallocating unutilized budgets: In lieu of a grant to employers for recalling furloughed staff, an employee retention grant (also partly taken up) and temporary accelerated depreciation for businesses were approved during the second lockdown. The government also approved partial unemployment compensation for those returning to work in a part-time capacity after lengthy unemployment, early payout of the 2021 earned income tax credit, increased grants for demobilized soldiers, and easing the terms for grants to the self-employed on the basis of unused balances from the budget item for fixed-cost grants to businesses. This reallocation of budget items helped to enhance the efficacy of support for population groups that sustained long-term harm.

An important change that improved government services to citizens between the first and second waves was more vigorous devolution of powers from the central government to other public entities.

Another important change that improved government services to citizens between the first and second waves was more vigorous devolution of powers from the central government to other public entities. The transfer of authority for COVID-19 testing to the HMOs in May allowed much more testing to be done. The HMOs also took over most of the broad vaccination system, and home hospitalization proved effective in treating COVID patients with mild to medium symptoms. In the last quarter of the year, the Minister of Finance approved an increase in transfers to local authorities beyond the indemnification for the muninipal tax discount that was given through June 2021, which was allocated to the creation of local epidemiological testing arrangements, and it was decided that municipal inspection and control would be bolstered commensurate with the level of COVID morbidity. It was also agreed to transfer budgets for procurements and communication with residents to local

[14] Of the twenty-five OECD countries included in the IMF database published in June 2020, Israel ranked nineteenth in the size of its budget program relative to its GDP and twentieth in the size of its extrabudgetary program. In other words, the program approved through the end of June was one of the smallest in the OECD.

authorities that rank low on the socioeconomic scale (index levels 5 and below).[15] In the education system, administrative and pedagogical flexibility was expanded somewhat after summer vacation: School principals were allowed to revise the number and composition of teaching hours when the schools reopened under government restrictions. (See discussion of the education system in Chapter 7.)

After two election campaigns in 2019 that ended without the formation of a government, a new government was established in May 2020. In the absence of a government following the 2019 elections, 2020 began without an approved budget and a restraining interim budget that was about 0.8 percent of GDP (about NIS 12 billion) lower than the statutory expenditure limit. The lack of a regular budget restricted ministries' workplans and required them to seek permission from exceptions committees for routine operations and *a fortiori* new ones, amid uncertainty about when they would be approved if at all. In addition, the procedures that surround an interimbudget limit long-term contracting due to the provisionality of this budget. They also set spending priorities in accordance with existing contractual commitments. Thus, for technical reasons, activities that are outsourced to NGOs and firms are cut back even though the government funds them regularly. The macroeconomic uncertainty due to the COVID-19 crisis escalated due to the transitional governments' lack of authority to make meaningful reforms and set long-term targets. Despite the lack of consensus around the Budget Law for 2020–2021, the broad coalition assembled after the March 2020 elections made it easier for the government to amend basic laws and ordinary statutes by means of ad hoc directives in order to fund pandemic-related programs via a separate provisional budget and to mitigate the fiscal tightening that the rules of the interim budget imposed in 2020. The passage of a regular budget law was deferred from August to December due to the lack of consensus within the government, and when the budget was not passed in December, the Knesset was dissolved and another round of elections, the fourth within two years, was scheduled.

After the Knesset was dissolved for failing to pass a budget for 2020–2021, the government engineered the approval of a permanent amendment to the Budget Foundations Law that expanded the ceiling of the interim budget in order to prevent the additional tightening that this budget probably would have imposed until a regular budget could be legislated, in June 2021 at the earliest. Although the budget framework was increased almost to the expenditure ceiling, the interim budget still lacks important traits of an ordinary budget, including deficit targets that would establish a framework in addition to the spending limit, an economic program (expressed in an Economic Arrangements Law) that would aggregate the measures that are needed to attain the budget targets, a systematic working process including

Although the budget framework was raised almost to the expenditure ceiling, the interim budget still lacks important traits of an ordinary budget, including deficit targets, an Arrangements Law, public transparency of budget priorities, and autonomous management of ministries' budgets.

[15] For recommendations on further improvement in devolving powers to local authorities, see Ariel Finkelstein, "All the Reasons to Transfer Powers to Local Government—In Ordinary Times and in the Coronavirus Era," Israel Democracy Institute, November 8, 2020, https://www.idi.org.il/articles/32785 [Hebrew]. Such recommendations have been around for years. See, for example, E. Razin and A. Brender, "Local Government Reform: Decentralization for the Fit and Accessorization for the Backward," Israel Democracy Institute, 2004 [Hebrew].

detailed planning and discretion in distributing the budget among the government's policy goals, public transparency reflected in parliamentary discourse over budget priorities, and management of ministries' budgets by the ministries instead of by the Accountant General at the Ministry of Finance. The dissolution of the Knesset also made it harder to advance structural reforms that would help to improve general-government efficiency and make the economy more productive.

2. FISCAL POLICY MEASURES TO COPE WITH THE COVID-19 CRISIS IN ISRAEL

a. Mid-year revisions of budget limits

The COVID-19 exceptional budget allocations were first legislated as part of the Basic Law: The State Economy to contain a provisional budget increase in April 2020, and were enlarged five times afterward. Only government programs for 2020 were budgeted at first. Subsequently, however, an allocation was added for 2021 and was enlarged twice in the course of 2020. The allocations were separated from the rest of the budget en bloc and were funded by debt and not by tax hikes in order to serve solely for their intended purposes: reinforcing the healthcare system and the civilian government ministries that helped to cope with the COVID-19 crisis; arranging transfers to households and support for the jobless, workers on furlough, the self-employed, and businesses; expediting infrastructure projects; and budgeting the risk imposed by state guaranteed funds that issued business loans under preferential terms.

The use of exceptional budget allocations to fund crisis-related expenses made it clear to the markets and the public that the government's commitment to increased spending on account of the crisis is temporary. Recurrent budgeting of new needs using such allocations instead of reallocating existing resources may diminish the government's fiscal credibility.

The use of exceptional budget allocations to fund crisis-related expenses made it clear to the markets and the public that the government's commitment to increased spending on account of the crisis is temporary. For example, in its "Numerator" document, released in March 2021 and presenting the government's financial undertakings on the basis of existing decisions, the Ministry of Finance estimated that direct spending on account of the COVID-19 crisis will be negligible after 2021.[16] The advantage of exceptional budget allocations is that they preserved the market's confidence in Israel's fiscal policies, amassed over a period of years, during the crisis as well. Given the intensity of the crisis and the extent of the solutions that it required, an exceptional budget allocation would have been needed irrespective of the kind of budget—regular or interim—in effect. Importantly, however, it is an exceptional instrument that is meant for emergencies. Recurrent budgeting of new needs using such allocations instead of reallocating existing resources may diminish the government's fiscal credibility.

The pandemic crisis was accompanied by acute uncertainty due to the inability of governments around the world to control and predict its spread, and the economic crisis that it brought in its wake. Uncertainty about the duration of the health crisis impeded

[16] Ministry of Finance, *Multiannual Budget Plan for 2022–2024,* March 2021 [Hebrew].

policy planning. In most countries, policy was revised during the year and fiscal rules were suspended in accordance with developments. The size and composition of the "COVID-19 budget" changed frequently and in many ways, burdening the regular monitoring of the pace of program performance. The exceptional allocations were expanded from NIS 50 billion in April to NIS 64 billion in June and NIS 94 billion in July, finally leveling off at NIS 97 billion in September.[17] The safety net approved in July 2020 was meant to systematically reduce the need for recurrent solutions and to engender confidence and certainty on the part of the public.[18] Even after it was unveiled, however, the government approved three additional allocations: for funding of the universal grant program, preparedness of the education system for the 2020/21 school year, and relaxation of the eligibility terms for the safety net in 2020–2021. In October, the frequent increases of the framework stopped and the composition of the COVID-19 budget was adjusted to the pace of performance of the programs, so that unutilized sums were reassigned to new government programs (Figure 6.4).[19] In the year as a whole, NIS 80 billion was spent and NIS 5 billion in new contracts were concluded. The under-utilized items were added to the COVID-19 allocation for 2021, which was originally budgeted (in July) at NIS 42 billion and now stands at NIS 71 billion (including additions).

In addition to the COVID-19 budget allocations, the government revised the interim budget rules in two Basic Laws: The State Budget and Foundations of the Budget. In September, the interim budget framework for 2020 was expanded by NIS 11 billion to fund expenditures unrelated to the pandemic, and in December—after the Knesset was dispersed—legislative revisions, such as separating the debt-servicing and the business-enterprises budgets from the interim-budget base, were ratified permanently. These amendments were warranted irrespective of the crisis, due to the distortion that these budget items create in the government ministries' monthly spending trajectory

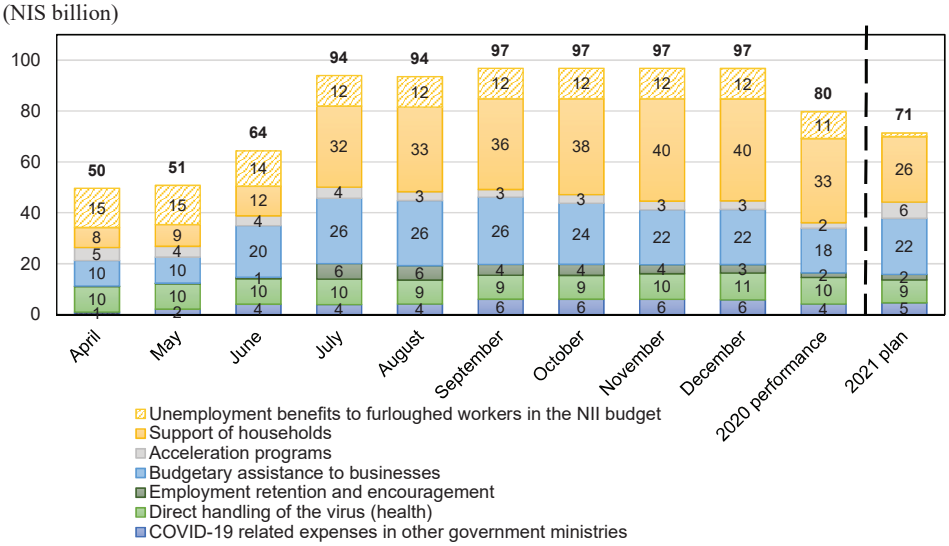
[17] The sums include the share of National Insurance but exclude extrabudgetary programs. (For a breakdown, see Figure 6.4.)

[18] The programs approved in the summer, and their budget, are elaborated in minute detail in Government Resolution 326 of August 16, 2020.

[19] Reallocaion took place throughout the period. In August, the government decided to budget NIS 1.75 billion to prepare the education system for the 2020/21 school year, whereas the NIS 1.2 billion budget for 2019/20, which was not fully utilized, was lowered by NIS 0.7 billion and the vocational-training budget was trimmed by NIS 0.3 billion. In late September, the safety net for 2020 was expanded by NIS 2.5 billion to fund the employee-retention program in September–October, move up the earned income tax credit payment to 2020, and broaden eligibility for a fixed-costs grant for businesses that suffered a 25–40 percent decline in revenues. Conversely, an employment-promotion program originally budgeted at NIS 5.5 billion was cut by NIS 2 billion. The budget for this program was reduced by another NIS 1 billion in November–December and the health budget was raised by the same amount. In October–November, the budget for support for the self-employed was enlarged by NIS 4 billion in cumulative terms and fixed-cost items were reduced correspondingly (in May–June 2021). In December, a grant was paid to workers who remained jobless for a protracted period, countered by cutting the budget for the unemployment measures announced as part of the safety net due to undertilization. Similarly, grants were distributed to demobilized soldiers, and the overbudgeting of early withdrawal from the Demobilized Soldiers Fund was reduced.

when the budget is limited to one-twelfth of its annual size per month.[20] It was also determined that the COVID-19 budget allocations would not be subject to the limits established by the interim budget framework, similar to budgeting the allocations above the spending ceiling in an ordinary budget year.

Figure 6.4
The Development of Budgetary Allocations for Dealing with the COVID-19 Crisis
(NIS billion)



Note: The lightly shaded orange area represents the increase in unemployment benefits that is not due to government decisions and is therefore financed from National Insurance Institute balances and not through the State budget (see Chapter 5). This increase in expenditure did not require a special extra-budgetary allocation beyond the expenditure ceiling, which limits only the State budget. In addition to the budget allocation, extra credit programs were put in place and increased in amount from NIS 29 billion in April to NIS 40 billion at the end of December. Actual utilization of the credit programs in 2020 amounted to NIS 26 billion, and the program for 2021 is estimated at about NIS 31 billion.

SOURCE: Based on Ministry of Finance.

On top of the technical changes in interim budget's definitions, the interim budget framework for 2021 was increased by NIS 20 billion. According to the amended Foundations of the Budget Law, the spending limit of an interim budget should be based on the statutory expenditure ceiling in the previous year raised by the average growth rate of population at the beginning of the interim-budget year.[21] The amendment enlarged the interim budget framework for 2021 from NIS 400 billion to NIS 420 billion, and set the statutory spending limit at NIS 426 billion. In addition, the rate of the NGO support budget that could be apportioned was increased, and

[20] For elaboration on the effect of the monthly path of debt servicing, see A. Barr (2020), "The Interim Budget Mechanism and the Government Program for Treatment of the COVID-19 Crisis—Analysis of Proposed Changes," Knesset Research and Information Center [Hebrew].

[21] The original government-sponsored bill included an increase linked to CPI inflation in the previous three years (0.6 percent). The Knesset Finance Committee, however, requested a revision that would peg the increase to the rate of population increase in those years (1.9 percent). This change by the committeeset the budget ceiling at NIS 420 billion, rather than NIS 414 billion in the original government's bill.

dispensations relating to spending authorizations and transfers of surpluses in the course of an interim-budget year were approved. These amendments enabled a sizable across-the-board de facto increase in the interim budget and made it less restrictive than the legislator had originally intended.

The government's conduct in the reviewed year emphasizes the trade-off of flexibility versus stability and credibility—two policy principles that, while important and desirable, sometimes clash. Institutional flexibility allowed the transitional government to amend Basic Laws in order to cope with an unprecedented economic and health crisis by allocating resources to the cause. This very flexibility, however, carried the risk of a blow to fiscal credibility by relaxing the rules that serve policymakers as long-term anchors. The exceptional action that Israel took in response to the emergency was essential and resembled that of the other developed countries. However, the spillover of these sweeping changes into the domains of the regular budget, which had been repeatedly deferred for lack of political consensus within the government, underscores the risks that this flexibility brought about. The conduct surrounding the approval of the regular budget showed more of the same: decision-making at the last moment and without comprehensive public discourse, and expanding the interim budget framework without grounding this move in transparent priorities or a long-term strategy.

Although it was advantageous from a short-term economic standpoint to lift the restrictions on government ministries' operations due to the unusual circumstances of the crisis, from institutional and long-term perspectives the ex-post revisions to the legal framework—including Basic Laws—that incentivizes the government to pass a proper budget create the potential for allowing ongoing conduct without an approved budget or for amending budget limits even with no emergency in progress. Such a phenomenon would amplify uncertainty, especially at a time when the economy needs stability. One of the most significant challenges that the next government will face is to converge toward a defined fiscal framework and put together a credible multi-year program of support for the economy until it reverts to full employment, without subverting Israel's fiscal sustainability.[22]

Although it was advantageous from a short-term economic standpoint to lift the restrictions on government ministries' operations due to the unusual circumstances of the crisis, from an institutional perspective the revisions made to the legal framework that incentivizes the government to pass a proper budget create the potential for allowing ongoing conduct without an approved budget or for amending budget limits even in ordinary times.

b. Expanding the economic safety net

Unlike economic crises that are due to a slump in aggregate demand—in which countercyclical policies are typified mainly by boosting public expenditure—the exceptional and temporary shock created by a global pandemic, and not by structural problems in the economy, focused the role of economic policy on supplying liquidity and helping individuals and businesses that had to halt activity, by providing transfer

[22] An example of this risk came up in S&P's affirmation of Israel's sovereign credit rating in late October. The rating agency noted that despite its stable rating outlook, downward pressure may build up if, beyond the pandemic-related measures, Israel fails to put together a medium-term consolidation program and if the debt continues to rise relative to the agency's forecast, which saw it leveling off at 80 percent of GDP.

payments and subsidies. Their purpose is to bridge the period in which the economy is shut down in order to preserve human and physical capital, help individuals to smooth their consumption despite the temporary loss of income, and prevent the inefficient loss of jobs.[23] Consequently, measures taken during activity restrictions should be temporary and short-term, relaxed between lockdowns and phased out gradually after the restrictions are removed as the negative output gap is closed. Since the health shock and the supply-side restrictions have a beginning and an end—even though the time of the latter is not foreknown—the policy goal in 2020 was to temporarily restrict activitywhile at the same time preventing graver damage to aggregate demand[24] and minimizing the scarring due to the blow to the economy, making a rapid recovery possible once the pandemic is contained.

At the beginning of the crisis, a rapid and broad response by means of simple mechanisms was needed in order to give households confidence. The longer the crisis persisted, however, the more the government had to make adjustments in order to deliver optimum relief to those most in need of it.

The COVID-19 crisis was typified by much heterogeneity in the extent of its damage to the economy. (See Chapters 2, 5, and 7.) For this reason, combined with the government budget constraint, an effective economic policy should focus the aid on those most affected as far as possible.[25] However, the authorities' lack of full information impairs their ability to deliver the most effective solution—a phenomenon that accompanies government support mechanisms even in ordinary times but stood out all the more in 2020 due to the speed and magnitude of the crisis. Therefore, if at the beginning of the crisis a rapid and broad response that would use simple mechanisms to give households confidence was needed[26]—even if it meant providing grants to those unaffected by the crisis as well—then the longer the crisis persisted, the more the government had to make adjustments in order to deliver optimum aid to those most in need.

In July, the government decided to disburse universal grants to every citizen at a budget cost of NIS 6.5 billion. The marginal utility of this move was limited, particularly because the restrictions were very mild that month relative to those during the rest of the year, and because by then the safety net for those harmed by the crisis had already broadened considerably. The declared purpose of the universal

[23] V. Guerrieri, G. Lorenzoni, L. Straub, & I. Werning (2020). "Macroeconomic Implications of COVID-19: Can Negative Supply Shocks Cause Demand Shortages?" National Bureau of Economic Research, (No. w26918).

[24] A. J. Auerbach, Y. Gorodnichenko, & D. Murphy (2020). "Fiscal Policy and COVID-19 Restrictions in a Demand-Determined Economy," National Bureau of Economic Research (No. w27366); P. O. Gourinchas, S. Kalemli-Özcan, V. Penciakova, & N. Sander (2020). "COVID-19 and SME Failures" National Bureau of Economic Research, (No. w27877).

[25] Universal transfers in the middle of a lockdown are likely to boost personal savings and not employment. Therefore, they are relatively ineffective. See Bayer et al. (2020), "The Coronavirus Stimulus Package: How Large is the Transfer Multiplier?" NBER WP; Chetty et al. (2020), "The Economic Impacts of COVID-19: Evidence From A New Public Database Built Using Private Sector Data"; Wu et al. (2020); "Consumption Vouchers During COVID-19: Evidence from E-Commerce"; Alstadsæter et al. (2020), "Norwegian and US Policies Alleviate Business Vulnerability Due to the Covid-19 Shock Equally Well."

[26] As in paying universal grants ahead of the Passover holiday to households with children, older adults, persons with disabilities, and recipients of old-age, income assurance, disability, and alimony benefits.

grants was to stimulate private consumption, but in the absence of the ability to distinguish in real time between high income individuals (or those with more assests and liquid resources) and those with less income and wealth, many grants went to households that had not reduced their consumption—except in contexts related to the health restrictions that the government had imposed (see Chapter 2.) Feldman and Heffetz (2020) found in an online survey that the grants encouraged only one-fourth of households to consume more in the short term, while the others used it mainly to increase their private savings (including payback of debt) or donated it to others.[27]

Alongside the relaxation of the terms of eligibility for unemployment compensation and expansion of aid to the jobless (as elaborated in Chapter 5), an expanded safety net was even more important for the self-employed, who in most countries are ineligible for unemployment compensation except in special cases due to difficulty of monitoring their earning capacity.[28] In the initial relief plan, self-employed persons who declared a loss of at least 25 percent of turnover received grants of 65 percent of their average monthly income up to NIS 6,000.[29] Farther on, eligibility was extended to employees who had a controlling stake in a closely held corporation.[30] The grant was increased to 70 percent up to NIS 10,500[31], and an increase was given to those with incomes below NIS 300,000 per year. In the Economic Safety Net program that was approved in July, the mechanism of payments to the self-employed was systematized so that once every two months, self-employed persons whose turnover in the most recent two months fell by at least 40 percent relative to the year-earlier period received a benefit. The monthly payment was set at 70 percent of the year-earlier average monthly income up to NIS 15,000 per bimonthly installment. In December, the government approved a nonrecurrent payment for self-employed persons and small businesses that suffered lengthy impairment.[32]

In addition to these disbursements, which offered the self-employed and small-business owners a substitute for unemployment compensation, businesses themselves received payments to compensate for accrued losses on account of fixed costs that they had to cover while their activity was restricted. These grants, based on mechanisms previously invoked to compensate businesses affected by military operations,

[27] Naomi E. Feldman and Ori Heffetz, "A Grant to Every Citizen: Survey Evidence of the Impact of a Direct Government Payment in Israel" (December 28, 2020), available at SSRN: https://ssrn.com/abstract=3752364.

[28] Eleven OECD member states give the self-employed access to unemployment compensation. Often, however, this is done via voluntary arrangements that require the self-employed to close their businesses and seek an employee post. Recent years have seen more and more discussion of extending unemployment compensation mechanisms to the self-employed. France and Spain introduced such arrangements in 2019.

[29] For details on the terms of the first installment of payments to the self-employed, see: https://www.gov.il/he/departments/news/sa020420-1 (in Hebrew).

[30] Owners of small businesses in which they are also employees.

[31] https://www.gov.il/he/departments/news/sa240420_0 (in Hebrew).

[32] A business with a 2019 turnover in the NIS 18,000–NIS 300,000 range that lost at least 25 percent of its activity between March–December 2019 and March–December 2020 received NIS 3,000–NIS 9,000, commensurate with the extent of the decline in revenue.

were calculated on the basis of the business's periodic Value Added Tax reports in consideration of their fixed costs. Businesses with annual turnover below NIS 20 million were eligible for the first installment. The program was later extended to larger enterprises provided they had taken at least a 60 percent hit. The terms of payments under the Economic Safety Net framework for May 2020–June 2021 are summarized in Table 6.2. Additional benefits for businesses included state-guaranteed loans, a discount on municipal tax, automatic extension of business licenses, relaxation of compulsory payment deadlines, accelerated income tax and VAT refunds, and various subsidies from the Small and Medium Business Agency. Businesses also received grants for recalling workers who had been furloughed (irrespective of their decline in turnover), the retention of staff during the second lockdown only (contingent on how badly the business was affected), and a grant for medium and large businesses for protracted damage.[33]

Table 6.2
Details of the fixed-costs grant as part of the "Economic Safety Net" program

	Small businesses (NIS 18,000–300,000)	**Medium businesses** (NIS 300,000–1.5 million)	**Large businesses** (NIS 1.5 million–400 million)
Minimum impact on revenue	Decline of at least 25%[a] in sales revenue	Decline of at least 25%[a] in sales revenue	According to annual revenue: Up to NIS 100 million: decline of at least 25%[a] NIS 100–200 million: Decline of at least 60% NIS 200–400 million: Decline of at least 80%
Amount of grant per bimonthly installment	NIS 3,000–6,000 depending on annual revenue in 2019	3–15% of the revenue in the corresponding period in 2019, depending on the rate of decline in revenue.	The fixed expenses coefficient in the revenue[b] (up to 30%), multiplied by the revenue in the corresponding period 2019, multiplied by 0.1–0.5 depending on the rate of decline in revenue.
Grant ceiling	NIS 6,000	NIS 500,000	NIS 500,000

[a] Originally, the condition was a decline of 40% in revenue, but it remained valid only in the May–August installments. From September, the group of eligible recipients was broadened to include those who had experienced a decline of 25% in revenue due to the second lockdown, and this leniency was extended every two months, even when there was no lockdown.

[b] The rate of sales revenue reflecting the business's fixed costs - those that could not be reduced even when there was less activity or activity was interrupted. These include, for instance, rent, financing expenses, and so forth. This coefficient is calculated according to the formula:

$$1-\frac{(\text{wage costs of furloughed workers} + \text{inputs}) \times 0.9}{\text{monthly turnover}}$$

SOURCE: Ministry of Finance.

[33] For businesses with NIS 300,000–NIS 400,000 in turnover in 2019 that qualified for three or more relief grants for participation in expenses disbursed by the Israel Tax Authority. This payment was set at 60 percent of the average fixed-costs grant that the business had received thus far on account of eligibility periods in 2020, and was capped at NIS 50,000.

The expansion of the government's safety net was a crucial move that made its greatest contribution to the most vulnerable households and businesses. The absence of a preexisting mechanism and the urgency that characterized the relief measures, however, led to difficulties in designing and implementing the various policies.[34] First, policymakers' response to the start of the pandemic was slow at first. From March to July, support was expanded in several short-term installments. It took until July to announce the safety net program that established terms of eligibility for unemployment compensation and payments to businesses and the self-employed through June 2021. Second, the criteria decided upon for the transfer payments did not fully cover everyone affected by the crisis[35], forcing the government to make additional legislative changes in mid-year to include other groups among those eligible. Third, the sheer number of unemployed and benefit claims led to technical difficulties in the National Insurance, Employment Service, and Tax Authority systems, impeding the implementation of policy at the onset of the crisis. Finally, the multiple authorities that citizens had to contact leads to low takeup of entitlements even in ordinary times, and even more so during times of crisis.[36]

The delays and difficulties in rolling out the safety net underscore the importance of automatic stabilizer mechanisms, particularly the kind that expand the safety net when crisis strikes and retract it afterward. An automatic mechanism has several advantages over discretionary measures. First, the time it takes to design, legislate, and implement relief programs exacerbates uncertainty, in turn slowing economic activity[37], and impairs the efficacy of government policy. Strengthening the safety net insures individuals against macroeconomic shocks that are beyond their control and mitigates precautionary saving even in ordinary times.[38] Second, policy measures that are applied at the government's discretion without synchronization with

[34] In 2020, the grants program was based on the Property Tax Fund mechanism that provides compensation to businesses. It took time, however, to scale this program from a short-term mechanism limited to certain geographical areas up to an inclusive and sustained nation-wide one.

[35] Examples were businesses newly opened in January–February 2020 and women who were on maternity leave in 2019. For them, the extent of harm to turnover could not be compared with theparallel months during the previous year.

[36] The jobless had to sign up with both the Employment Service and National Insurance; businesses had to enroll with the Small Business Authority to receive the municipal tax discount and the employee retention grant; they also had to apply to the Tax Authority for the fixed-costs grant and to National Insurance about placing staff on unpaid leave. Businesses entitled to the employment stimulus payment had to report to the Employment Service about their employees' return, in addition to the employees' own reporting; and so on.

[37] A. Fatás & I. Mihov (2003), "The Case for Restricting Fiscal Policy Discretion," *The Quarterly Journal of Economics* 118(4): 1419–1447, IMF (2015); "Can Fiscal Policy Stabilise Output?" in *Fiscal Monitor*, April 2015: "Now is the Time: Fiscal Policies for Sustainable Growth."

[38] Baker et al. (2016), analyzing press clippings since 1985 in the United States and twelve other developed countries, find that uncertainty about policy leads to a decline in investment, output, and employment: S. R. Baker, N. Bloom, & S. J. Davis (2016), "Measuring Economic Policy Uncertainty," *The Quarterly Journal of Economics,* 131(4): 1593–1636. Fernández-Villaverde et al. (2015), using temporary unexpected shocks to US fiscal policy, find that declines in capital investment and production below potential levels are the main transmission mechanisms to impaired growth. J. Fernández-Villaverde, P. Guerrón-Quintana, K. Kuester, & J. Rubio-Ramírez (2015), "Fiscal Volatility Shocks and Economic Activity," *American Economic Review,* 105(11): 3352–84.

macroeconomic indicators may be terminated prematurely, before business activity gains enough strength, or may remain in effect even after the economy has proved that it no longer needs them.

The lessons of the current crisis should include the need to devise safety net mechanisms activated by economic triggers, such as the unemployment rate, that would be implemented without delay and phased out automatically when no longer necessary.

The lessons of the current crisis should include the need to devise safety net mechanisms activated by economic triggers, such as the unemployment rate, that would be implemented without delay and phased out automatically when no longer necessary. Policymaking in a noncrisis situation is also likely to be more successful in terms of planning and communication with the public. The optimal application of policy should include early deployment that leaves policymakers with discretion in tailoring the parameters of the system to the type of crisis instead of building such a system ex-nihilo each time. This advantage stood out in the tendency of most developed countries to activate existing labor market relief mechanisms at the onset of the crisis (as described in Chapter 5), basing themselves on existing institutional frameworks and adjusting parameters such as payment levels and terms of eligibility.

Establishing a government information system that all relief entities can use, possibly as part of the government's digitization project[39], may allow these entities to respond quickly by testing all relevant criteria for the provision of focused relief. In addition, it would be worth setting up a one-stop shop where all regulatory information would appear in language that the target population can understand. There, citizens may fill out and submit all requisite forms and communicate directly with the relevant offices, making the support system user-centered and no longer forcing them to apply to each entity separately.

c. Increasing public expenditure on health

Israel's healthcare services are characterized by universal access and good results by international comparison, even after controlling for Israel's young age composition relative to most developed countries.[40] However, the system faces several challenges that endangered its capacity as COVID-19 spread.

The low capacity of the inpatient system, particularly its internal medicine departments, commands news headlines every winter as excess demand mounts due to the lack of budgeted hospital beds in these departments and in continuing-care institutions along with the lack of home hospitalization alternatives.[41] When the international indicators are equivalized to the age composition of the population[42],

[39] See Government Resolution 260, July 26, 2020.

[40] OECD (2019), *Health at a Glance,* pp. 25 and 35.

[41] See recommendations of the Committee on Inpatient Departments, also known as the Tur-Caspa Committee after its chair.

[42] The population is equivalized on the basis of the age composition of each country and a capitation formula that determines the cost of healthcare services for each age group. For more on this methodology, see Eran Politzer (2013), "Health Expenditure in Israel—An International Comparison of Demographic Factors and Cost Structures," in Bank of Israel*, Recent Economic Developments* no. 135, June 2013, pp. 14–20.

it is found that the number of nurses and acute-care beds per thousand population in Israel is low by interenational comparison (Figure 6.5).[43]

The weaknesses of the inpatient system were laid bare even more in 2020 as the large scale of morbidity amplified concerns about the inability to respond optimally to the ill, prompting the government to impose more stringent social distancing restrictions than those of other countries (see Chapter 1). When Israel's first case of COVID-19 was diagnosed in late February 2020 and active cases climbed to 200 within 22 days, the government imposed the first general lockdown due to concern about the capacity of the inpatient system.[44] The arguments in favor of the second lockdown were also based on the full occupancy of COVID-19 wards in the northern district. In the third wave, the COVID-19 departments in Jerusalem reached full capacity despite preparations during the year, forcing many patients to move to hospitals in other districts.

As morbidity escalated rapidly in early March, the healthcare system was granted a NIS 10 billion budget—a nonrecurrent 27 percent increase in the Ministry of Health budget.

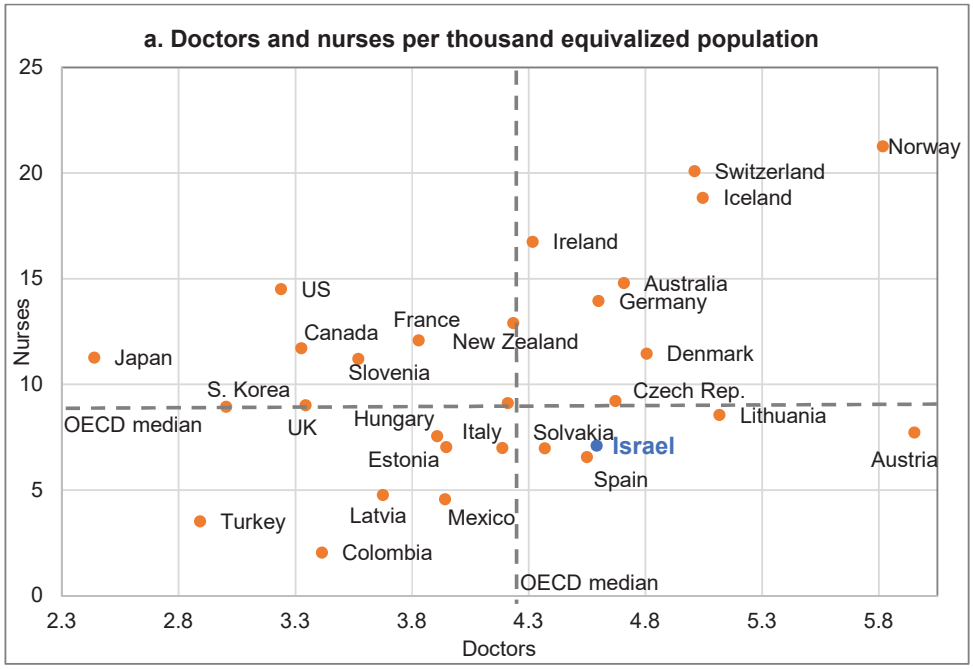
As morbidity escalated rapidly in early March, the healthcare system was granted a NIS 10 billion budget, reflecting a nonrecurrent 27 percent increase in the Ministry of Health budget.[45] The added increment was initially meant for the purchase of protective equipment for medical teams, ventilation machines, and the establishment of a COVID-19 testing system. As time passed, the capacity of the testing system was increased from several thousand tests per day during the first wave to around 100,000, the hospitals were given more personnel slots (600 doctors and 2,000 nurses), alternative inpatient facilities ("COVID-19 hotels") were deployed, and, from late December, vaccines were acquired and delivered to Israel (see details in Figure 6.6). COVID-19 health budget performance at the end of the year was 113 percent. An itemized analysis of budget items shows that most of expenditure went for short-term coping with the pandemic. Another portion was used to indemnify medical institutions for financial losses occasioned by the disruption of routine activity and adjustments to the COVID-19 restrictions. Four percent of the budget was earmarked for temporary increases in personnel slots at hospitals, geriatric and psychiatric institutions, and laboratories. Only 11 percent of the incremental budget was designated for opening temporary COVID-19 wards, construction projects, and purchasing medical instrumentation that would enhance the healthcare system's long-term preparedness as well.

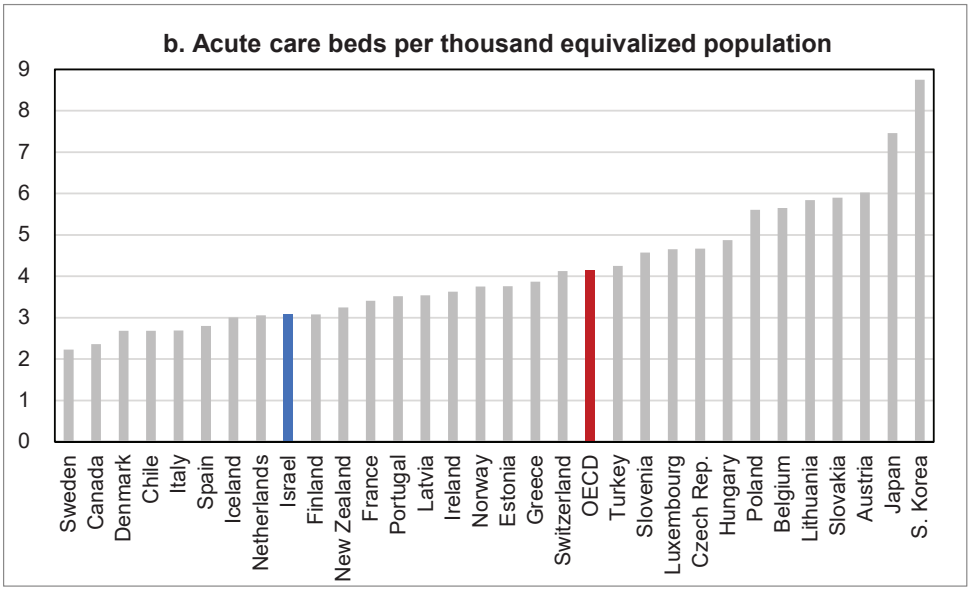
[43] The ratio of doctors per thousand population (age standardized) is relatively high in Israel but older doctors (60+) and women doctors—two groups of below-average labor input—have accounted for an increasing share of the physician workforce in recent years (Aviad Tur-Sinai et al., "Doctors in Israel: Trends in Their Characteristics and Training," Taub Center for Social Policy Studies, *State of the Nation,* December 2020.) According to the OECD, Israel in 2018 had the highest share of older (65+) doctors in the member states and a below-average rate of women doctors.

[44] https://www.gov.il/he/departments/policies/dec4891_2020

[45] This Ministry of Health budget is the net budget, which is the total excluding revenue-dependent expenditure and business enterprises (including government hospitals). Most of the extra increment was earmarked for the general hospital system but some was allotted to geriatric and psychiatric institutions as well.

Figure 6.5
International Comparison of Healthcare System Resources, Equivalized to the Population's Age Composition[a], 2018



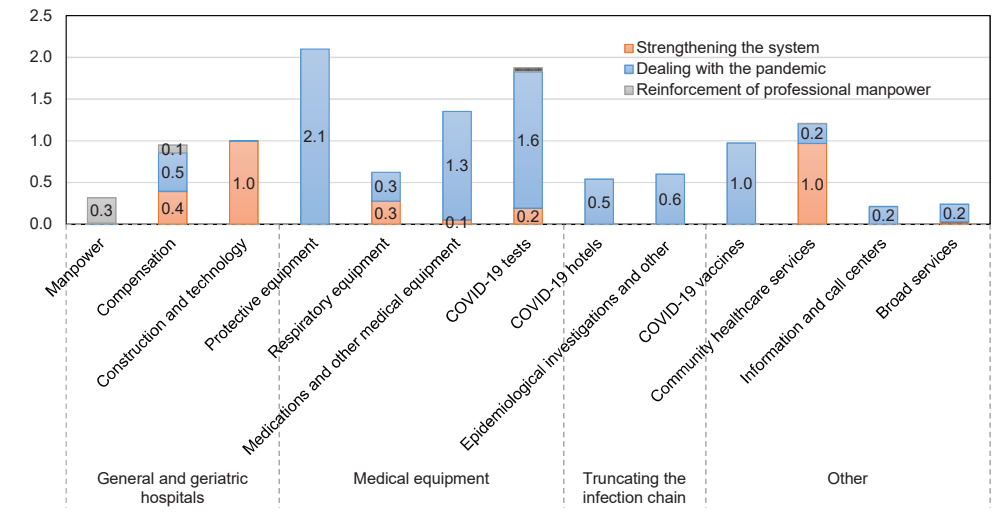


[a] The equivalization of the population is based on the age composition in each country and on a capitation formula that sets out the cost of healthcare services for each age group. For the methodology, see Eran Politzer (2013), "Health Expenditure in Israel - An International Comparison of Demographic Factors and Cost Structure" in Recent Economic Developments, 135, Bank of Israel.

SOURCE: Based on OECD.

The resilience and flexibility of the Israeli healthcare system were challenged in 2020. These characteristics are important for the care of COVID-19 patients, but also for the system's ability to continue providing routine services. During the first wave of morbidity, for example, the Ministry of Health ordered a halt to elective activity in hospitals due to the need to save resources for urgent cases only. Although the most extreme scenarios that the Ministry braced for did not come to pass, the quarantining of large numbers of healthcare personnel affected the way hospital staff was managed, and the added temporary posts were put to full use.

Figure 6.6
Ministry of Health's COVID-19 Budget Components for 2020 (NIS billion)



SOURCE: Based on Ministry of Health.

Unlike a pandemic—an ongoing event for which preparations can be made in midstream—emergencies such as earthquakes arrive in one stroke and may place the inpatient system's ability to deliver in even greater danger. The system has an insufficient safety cushion even in ordinary times. Its unaddressed structural problems worsened due to the duration of the pandemic and the burnout of medical staff. To make the temporary reinforcement permanent, the inpatient system needs ongoing budgeting on the basis of parameters that are transparent and standard among all participants, instead of financing various entities' structural deficits by means of ad hoc support programs. It is also recommended to make the temporary personnel slots permanent, expand the academic training of nurses, add some of the incremental beds from the COVID-19 wards to the regular inventories of internal medicine departments, reinforce the intensive care units, and build medical buildings in a way that will give

Unlike a pandemic—an ongoing event for which preparations can be made in midstream—emergencies such as earthquakes arrive in one stroke and may place the inpatient system's ability to deliver in even greater danger.

the inpatient system flexibility (e.g., temporary departments, some of which were set up in hospital parking lots).[46]

d. Adjustment of the education system during the crisis

Most countries shut down their education systems during the first wave of morbidity due to lack of preparedness. Following the summer vacation, however, many of them made adjustments to avoid further shutdowns. In contrast, Israel chose the option of closing the schools and switching to distance learning during the subsequent waves of the pandemic.[47] Distance learning performance was suboptimal[48] and the implications of its drawbacks may affect students in the long term as well (see Chapter 7). The budget increment that the Ministry of Education received during the first lockdown was only NIS 88 million.[49] It was expanded only in June to NIS 1.2 billion for what remained of the 2019/20 school year.[50] In August, another budget of NIS 4.2 billion was allotted for the 2020/21 year. Ultimately, the Ministry's "COVID-19 budget" came to NIS 2.4 billion in 2020 and NIS 3 billion more in 2021. The increment was earmarked mainly for promoting digitization in schools, equipping students from weak socioeconomic backgrounds with computers and tablets for use in distance learning, temporary extra hiring for capsule learning in young age groups, and extension of the school year by three weeks up to fourth grade (a summer-vacation school program and afternoon care programs) to compensate for lost days of study during the first lockdown.

Difficulties in implementing the new procedures[51] and delays in buying the computers, due to large orders placed all at once amid surging global demand, led to the underperformance of the "COVID-19 budget" for 2020, and its NIS 0.6 billion surplus was rolled over to 2021. Half of the performed budget was used for additional hiring, with the rest going for improvements in digitization and the purchase of computers. Additional changes in the education system were carried out from September onward at no budget cost. These included giving school principals more administrative and pedagogical flexibility, centralizing curricular contents in all grades (leading to a 10–30 percent cutback in quantity of materials), and reducing the number of external matriculation exams to only six.

[46] For further recommendations on this topic, see Israel Democracy Institute (2020), "Strengthening Healthcare-System Preparedness for Crises," the Eli Hurwitz Conference on Economics and Society, https://www.idi.org.il/media/15311/health.pdf

[47] From September to February, the Israeli education system was closed on 40 percent of study days, compared with an average of 14 percent in the OECD countries. (For a breakdown, see Chapter 7.)

[48] See Sefi Bahar, "Preparedness for Distance Learning at the Student and School Levels—Insights from PISA 2018 and the Household Expenditure Survey," Bank of Israel Research Department, Annual Report 2019 Selected Studies (June 2020) [Hebrew].

[49] See Government Resolution 5013, April 24, 2020.

[50] See Government Resolution 326, August 16, 2020.

[51] For example, some of the original budget for hiring temporary staff proved unnecessary because the roadmap for capsules in afternoon programs was cancelled. The funds were allotted to other objectives in the "COVID-19 budget".

The regular activity of the education system suffered, and the conduct of the Ministry of Education and the government created acute uncertainty among teachers, parents, and students. The loss of school days and social interactions may affect students in the long term. However, expediting the delegation of powers to principals and local authorities, enhancing digitization—even if it is used only as a supplemental tool in the future and not as an alternative to classroom study—and drawing conclusions from the greater focusing of scholastic material and matriculation exams may create the conditions for meaningful reforms that will improve the quality of education in Israel in coming years. If the crisis period is utilized to restore routine current activity while investing more in digitizing schools and training teachers in digital instruction, assimilating pedagogical changes that have proved successful in the curricula, and making computers and Internet infrastructure accessible to pupils from all population groups, the education system will be able to exit the COVID-19 crisis strengthened and better suited to the twenty-first century.

Expediting the delegation of powers to school principals and local authorities, enhancing digitization, and drawing conclusions from the greater focusing of scholastic materials and matriculation exams may create the conditions for meaningful reforms that will improve the quality of education in Israel in coming years.

e. Employment of general-government workers under the COVID-19 restrictions

The ability of public sector authorities to maintain business continuity was also challenged by the eruption of the pandemic and the decision to impose social distancing at workplaces. Several collective agreements concluded during the year allowed improvements in the employment of public sector workers during the crisis in a way that will make it more flexible and efficient in the future as well. In late March, after a brief period of uncertainty, a collective agreement that placed 50–70 percent of staff on compulsory paid leave was signed.[52] After Passover, an additional accord prolonged the leave but docked workers for only half of the vacation days they were forced to take from the end of the holiday to the beginning of May.

When the first lockdown ended, the temporary collective agreement was adjusted to the "purple badge" requirements in order to allow the public services to continue operating even under restrictions on physical presence in workplaces. The agreement gave employers managerial flexibility in ways that included adjusting work hours (including shifts) and the work week, revising job definitions and contents, allowing staff mobility, and assimilating innovative technologies—all at employers' discretion, with labor peace, and without bonus increments. In cases where the restrictions precluded work after all these instruments of managerial flexibility were fully invoked, the agreement allowed employers to place staff on temporary "internal furlough" or to downscale their posts.[53] This unique period of time, which included important processes such as working from home, digitization of government services, and

[52] Except for the healthcare system, the defense system, and other essential services, which operated on relatively large scale or even at full capacity.

[53] Workers on internal furlough continue to receive their salaries, but only at 70 percent of the determining wage for full severance pay. Although this option was available, its takeup rates were rather low.

revision of working conditions, demonstrates the potential of adjustments that will enhance public sector labor productivity in ordinary times as well. It will be important to base future collective agreements in the public sector on such structural changes.

3. GOVERNMENT REVENUE

From an annual perspective, tax revenue in 2020 fell largely in tandem with GDP. The real macroeconomic variables that affect tax revenue, such as imports of consumer goods and the state of the capital market, did not change meaningfully during the year relative to precrisis expectations, and the growth in home sales in the precrisis quarters favored an increase in real estate tax collection. Bearing in mind the determinants of tax revenues according to the Research Department's tax model[54], the decline in tax revenues was somewhat larger than expected by the model, particularly in the second quarter of the year.

In the short term, an abrupt turnaround in activity usually impairs tax collection in a nonlinear way because the familiar elasticities in ordinary times lose their validity when crisis erupts and the decline in tax receipts is more rapid than the decline in output. By decomposing the loss of tax revenues relative to 2019 into periods differentiated by the acuity of the restrictions (Figure 6.7), one finds that while (gross) income tax collection plunged during the first lockdown, during the summer recovery period (June–August), and even during the second lockdown, direct tax collection surpassed the previous year's level so strongly that it closed the gap of the annual total relative to 2019. Indirect taxes, which respond more quickly to changes in economic activity, took a harsher blow during the first lockdown. Thus, even though domestic VAT receipts rebounded as activity gathered strength, import taxes remained low and increased in December only because motor vehicle purchases were moved up in order to preempt a tax increase on them in January 2021. The imposition of restrictions on movement was also reflected in a steep downturn in fuel-excise collection during the lockdowns.

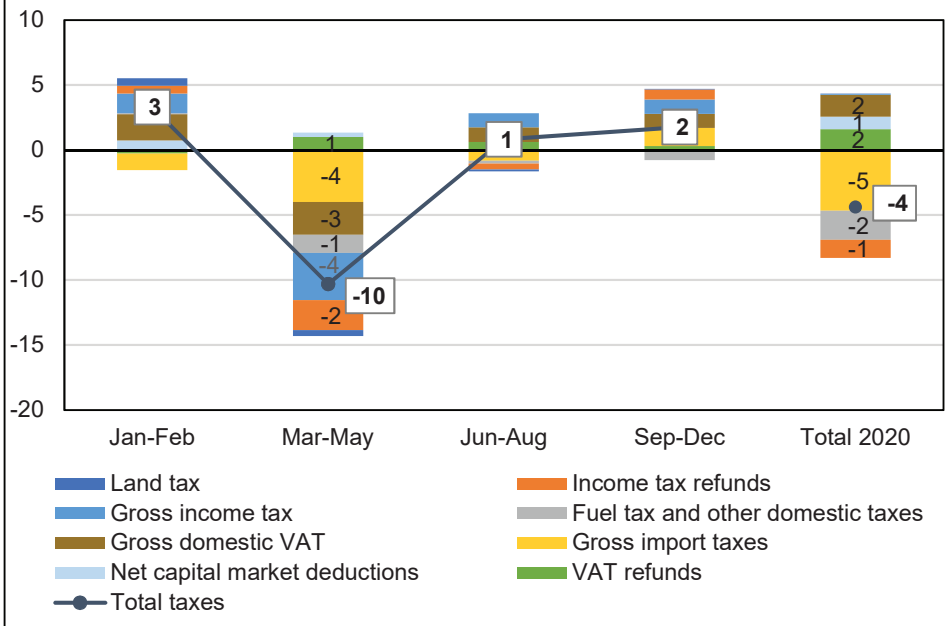
In the ten months following the onset of the crisis (March–December), tax revenue was NIS 7 billion below the same period in the previous year, but it surpassed expectations during that period.

In the ten months following the onset of the crisis (March–December), tax revenue was NIS 7 billion below the same period in the previous year, but it surpassed expectations during that period. This happened for two main interrelated reasons. First, the impact to GDP was milder than expected during the year. Second, the dual nature of the blow to the labor market was reflected in tax collection. That is, most workers who were furloughed or dismissed were low-wage earners who did not reach the income tax threshold or paid relatively little income tax beforehand. (For elaboration, see Chapters 2 and 5.) Thus, despite the grave blow to labor input, income tax revenue increased in March–December relative to the same period in the previous year.[55]

[54] For details about the tax model, see A. Brender & G. Navon (2010), "Predicting Government Tax Revenues and Analyzing Forecast Uncertainty," *Israel Economic Review*, 7(2): 81–111.

[55] Israel Tax Authority (2021). *State Tax Revenues in 2020, in the Shadow of the Crisis—Special Review* [Hebrew].

Figure 6.7
Contribution of Various Taxes to Change in Tax Revenue in 2020 Compared with 2019 (NIS billion)



SOURCE: Based on Israel Tax Authority.

4. BREAKDOWN OF THE GENERAL GOVERNMENT DEFICIT BY UNIT

All components of the general government deficit increased during the reviewed year, mainly due to increased spending. Revenue from the public declined roughly in tandem with GDP, leaving its level in GDP terms largely unchanged.

The central government foisted expenses on local authorities and public NGOs, but indemnified them for their increased expenditure and even beyond. The total deficit of the municipal authorities fell by 0.1 percent of GDP, mainly due to NIS 3.4 billion in transfers from the central government under exceptional COVID-19 budgeting, which included indemnifying local authorities for the municipal tax exemption given to businesses[56] and pandemic-related expenditures, as well as balancing grants for several financially disadvantaged authorities. The municipal tax exemption for businesses and its accompanying indemnification protected local authorities from a loss of revenue that they would have otherwise had to absorb because many businesses would not have withstood under the burden. Additional transfers were budgeted

[56] Local authorities were indemnified for the municipal tax discount that was given by order of the Minister of the Interior—100 percent for selected industries at first (March–May) and, from June 2020, a 95 percent discount for businesses that lost more than 60 percent of revenue relative to the same period in the previous year.

as part of the devolution of powers from central to local government in areas such as epidemiological investigations and increases in the number of tests, funded via financial incentives to local authorities in the last quarter of the year.[57]

The National Insurance Institute was indemnified for the government's decisions to expand the eligibility group for unemployment benefits and to distribute grants irrespective of the employment situation. However, the government did not indemnify the NII for the latter's own revenue loss or the increase in unemployment benefits to people on furlough who would have qualified for unemployment compensation under the National Insurance Law had they been fired.[58] In addition, an automatic cutback in current transfers to National Insurance, which are pegged to social security contributions from the public, freed NIS 2.3 billion from the interim state budget. This sum was reallocated to other expenditures for the public. While such transfers among components of the general government do not affect the total deficit, they did affect the National Insurance Institute's total balance, which turned into a deficit for the first time and was financed by cutbacks on previously accrued surplus balances (Table 6.3).

In ordinary times, the National Insurance Institute's unemployment program does not accumulate surpluses that may be used in the event of an economic crisis. Therefore, funding a National Insurance deficit by drawing on the Institute's inventory of bonds comes at the expense of funds accumulated for other actuarial liabilities.

In ordinary times, the NII's unemployment program does not accumulate surpluses that may be used in the event of an economic crisis. Therefore, funding a National Insurance deficit by drawing on the Institute's inventory of bonds comes at the expense of funds accumulated for other actuarial liabilities. Using the National Insurance fund to finance deficits originating in current economic shocks weakens the mechanism that requires the government to cover some of the long-term cost of benefits by means of payments of principal and interest. In the future, it will necessitate an increase in the government's current transfers to the National Insurance Institute, an increase in the public's contributions, or a cutback in benefits.[59] If the state wishes to preserve National Insurance as a system that accrues the public's savings in the present in order to pay out benefits in the future, developments in the reviewed year underscore the need to set apart the sources of funding for branches such as old-age and survivors' benefits by separating them from short-term activities in order to prevent cross-subsidization that overweights the present at the expense of the future due to decision-makers' myopia without disclosing the implications to the public.

[57] https://www.gov.il/he/departments/news/press_16112020_b

[58] The treasury's indemnification of the National Insurance Institute on account of unemployment compensation in 2020 included only the increase paid out on account of measures to expand eligibility for unemployment compensation: cutting the qualifying period from twelve months to six, shortening the minimum term of unpaid leave qualifying for unemployment compensation from thirty days to fourteen, extending the term of eligibility for unemployment compensation in accordance with the broad definition of the unemployment rate, and so on.

[59] For details, see Adi Finkelstein, "A Long-Term Forecast for Israel's National Insurance System," in *Selected Research and Policy Analysis Notes,* Bank of Israel, October 2019.

Table 6.3

Components of the overall deficit[a], by unit, 2019 and 2020

(percent of GDP)

		Central government	National Insurance	Municipalities	Public nonprofits and the national institutions
Revenue from the public	2019	24.8	5.3	4.0	1.1
	2020	24.7	5.1	4.0	1.2
Expenditures vis-à-vis the public	2019	19.9	6.7	6.0	7.3
	2020	23.5	9.5	6.3	7.6
Deficit/surplus (+/-) vis-à-vis the public	2019	-4.8	1.3	2.0	6.1
	2020	-1.2	4.3	2.4	6.4
Net transfers/receipts (+/-) within the general government	2019	9.9	-2.1	-1.9	-6.0
	2020	12.2	-3.4	-2.4	-6.4
Overall deficit/surplus (+/-)	**2019**	**5.1**	**-0.8**	**0.1**	**0.2**
	2020	**11.0**	**0.9**	**0.0**	**0.0**

[a] Excludes the reduction of expenses financed by the sale of land.

SOURCE: Based on Central Bureau of Statistics.

5. THE PUBLIC DEBT AND ITS FINANCING

After a decade of steady decline in the debt to GDP ratio, the gross public debt increased by 12.6 percent of GDP in 2020 due to an 11.6 percent of GDP deficit and a contraction of nominal product (the denominator of the ratio) that increased the ratio in percent-of-GDP terms. Conversely, the negative inflation rate and steep appreciation of the shekel contributed to a downward revalution of the public debt by 0.7 percent of GDP. In addition, the government over-issued debt by 1.6 percent of GDP due to higher deficit forecasts than the actual deficit and the wish to assure the availability of liquid sources in the event of a longer and deeper crisis. This over-issuing will make the burden of interest payments higher in 2021, when the deficit is expected to remain high by historical comparison, but it makes issuing easier in 2021 and mitigates uncertainty about future issuing terms.

Table 6.4
Components of the increase in the gross public debt, 2015–2020

(percent of GDP)

	2015	2016	2017	2018	2019	2020
Debt at the end of the previous year	65.7	63.8	62.1	60.6	60.9	60.0
Nominal growth of GDP	-3.2	-3.0	-2.2	-2.8	-3.3	1.0
Net capital inflow	1.7	1.8	1.2	2.5	3.2	13.1
of which : Government's cash deficit (excluding credit)	2.1	2.1	2.0	2.9	3.7	11.6
Net repayment of credit by the public[a]	-0.5	-0.2	-0.1	-0.1	0.0	0.0
Privatization proceeds	-0.3	-0.1	-0.1	-0.2	-0.1	0.0
Funding beyond the financing deficit[b]	0.4	0.1	-0.5	-0.1	-0.4	1.6
Revaluation of shekel-denominated indexed debt[c]	-0.3	-0.1	0.1	0.2	0.2	-0.2
Revaluation of foreign currency-denominated debt	-0.1	-0.2	-0.6	0.5	-0.7	-0.5
Adjustment to issuance costs	-0.2	-0.1	0.0	-0.1	-0.2	-0.4
Remainder[d]	0.2	-0.3	0.1	-0.2	-0.1	-0.5
Debt at year end	**63.8**	**62.1**	**60.6**	**60.9**	**60.0**	**72.6**

[a] Including the provision of credit and principal collection.

[b] Financing surplus.

[c] Effect of the increase in the Consumer Price Index during the year on indexed debt.

[d] As a result of roundings.

SOURCE: Based on Ministry of Finance.

The most acute change during the year was the sharp increase in foreign currency issues: 32 percent of total annual issuing, compared with an average of 13 percent in the past decade.

Apart from its unprecedented amount[60], debt-issuing in 2020 had a unique profile that, given the magnitudes involved, also affected the composition and total risk profile of the public debt. The most acute change during the year was the sharp increase in foreign currency issues: 32 percent of total annual issuing, compared with an average of 13 percent in the past decade (Figure 6.8). As a result, the share of outstanding debt denominated in foreign currency climbed from 8 to 12 percent of GDP (Figure 6.9). The increase in external debt-issuing despite its relatively high cost reflected the vast uncertainty that prevailed at the beginning of the crisis, as well as concerns about difficulty in financing the high deficit levels in the domestic market and hardships in issuing in the global market if the crisis would prove to be lasting.[61] The diversion of additional issues to foreign markets, along with quantitative easing (QE)—purchases of long-term government bonds on the secondary market by the Bank of Israel—

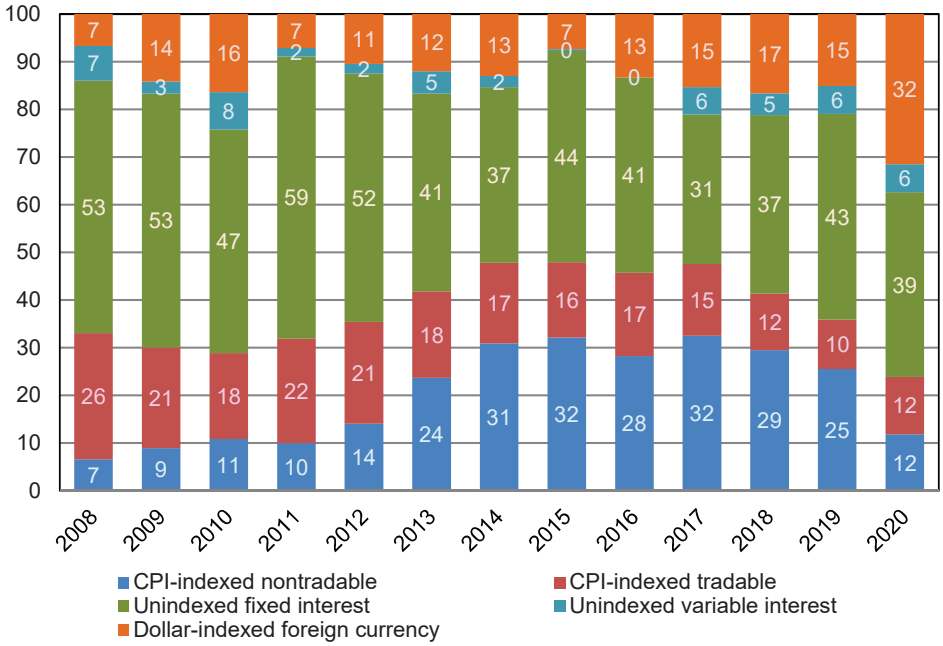
[60] Total domestic tradable bond issues (not including swap auctions) exceeded the 2019 level by 89 percent.

[61] In addition to the steep deficit, there was concern at the beginning of the crisis about the extent of debt financing via issues of nontradable bonds to the pension funds due to declines in the capital market and much uncertainty about the development of domestic wage payments. Despite a steep downturn at the outset of the crisis, total annual issues (2 percent of GDP) resembled the average of previous years. For further information on the earmarked-bonds arrangement, see Bank of Israel (2017), *Annual Report* for 2016, Chapter 6, "The Public Debt and Its Financing."

eased the pressure on the domestic market. This was manifest in the preservation of relatively low yields throughout 2020.

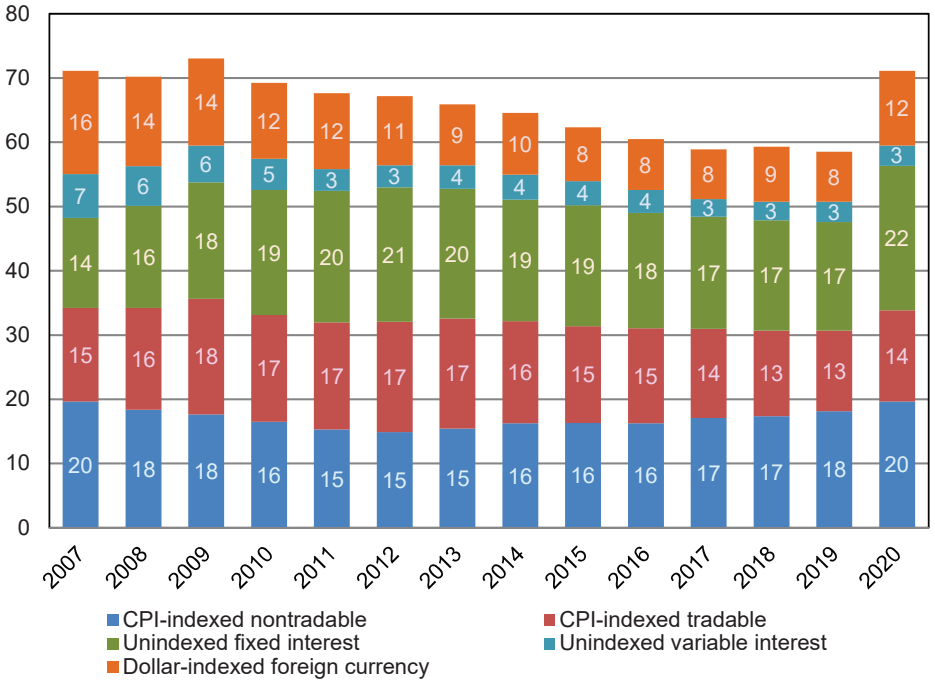
The proportional increase in self-underwritten issuance of long-term external debt extended the average maturity of the outstanding external debt from 8.8 years in 2019 to 15.6 years in 2020, further to the long-term trend of extending the average term to maturity of total government debt from a low of 6.6 years in 2011 to 9.3 years in 2020. Credit rating agencies and the bond market view this process favorably because it helps to mitigate debt rollover risk. Conversely, long-term debt instruments increase the burden of interest payments on the debt in the short term (due to the risk premium built into the costs of issuing long-term debt). Raising the share of foreign currency in debt also exposes the government to future depreciation and induces the Ministry of Finance to mitigate the risk by making hedging transactions of increasing volume.

Figure 6.8
Composition of Government Debt Issuances as a Percentage of Total Issuance, 2008–2020



SOURCE: Based on Ministry of Finance.

Figure 6.9
Outstanding Government Debt by Component, 2007–2020 (percent of GDP)



SOURCE: Based on Ministry of Finance.

6. FISCAL POLICY CHALLENGES AFTER THE PANDEMIC IS BROUGHT UNDER CONTROL

a. Sustainable retraction of the expanded economic safety net

The COVID-19 crisis is a shock of exceptional magnitude from a historical perspective— both Israeli and global. However, it is worth differentiating between the emergency period—in which the government had to act aggressively to cope with the pandemic and its implications for economic activity—and the recovery period, which will arrive once the pandemic is brought under control and the restrictions on businesses are lifted for good.

In view of its large-scale support of households and businesses, the question is when the government should start to downscale its expanded transfers and loans. Excessive prolongation of support may impair incentives to work, keep "zombie firms" alive[62], distort the reallocation of factor inputs, and raise the debt to GDP ratio. Conversely, premature desubsidization may unleash a wave of insolvencies in the most stricken industries, reduce labor demand even when the restrictions are revoked, and take a

[62] Companies that perform poorly over time but remain in the market by rolling over their debts. For elaboration, see Chapter 4.

toll on private consumption. Even without this scenario, the unemployment rate may remain high in the medium term, mainly among the most disempowered population groups, in the periphery, and among the less educated.[63]

European and US experience shows that an overly rapid retreat from an expansionary policy may impair the economic recovery.

Other countries' experience shows that an overly rapid retreat from expansionary policy may impair the economic recovery. The concern in the United States about a fiscal cliff that was supposed to have been reached in early 2013 due to a major cutback in federal spending and the expiration of provisional tax cuts aggravated uncertainty badly, moderating US activity even before the consolidation went into effect.[64] According to Fatás and Summers (2018), the austerity policies that eurozone countries introduced after the Global Financial Crisis impaired potential growth. Japan's attempt in 1997 to lower the deficit by raising the VAT rate by 2 percentage points failed, precipitating a recession that left the country worse off than before.[65]

Government aid should focus on smoothing the economy's transition from emergency to recovery by applying tools that promote employment and vocational training for those cast out of the labor market and supporting badly hit industries and businesses that are struggling to make investments. The automatic stabilizers should be strengthened so that the fiscal adjustment will be gradual and synchronized with the economic recovery.

Currently, the safety net for businesses and the self-employed is enshrined in law until June 2021, and the relaxed terms for unemployment compensation will also apply until then or until the broad unemployment rate falls below 7.5 percent, whichever comes first. These examples show that if the broad unemployment rate remains high in June 2021, it would be bad for the economy to withdraw the entire safety net in one shot.[66] Instead, government aid should focus on smoothing the economy's transition from emergency to recovery by applying tools that promote employment and vocational training for those cast out of the labor market and reinforcing monitoring of the inability to return to employment. Support should be focused on badly hit industries and businesses that are struggling to make investments and maintain liquidity.

b. Repairing the fiscal framework—the state budget and a multi-year plan

Institutional flexibility allows a government to forestall long-term harm to the economy by coping with unforeseen crises. Despite the inherent advantages of policy flexibility, experience in Israel and abroad shows that the ability to fund public activity by means of deficits often leads to choosing expenditures that may not be the most efficient and foisting the burden of repayment on future governments and generations. Accordingly, developed countries have adopted fiscal rules that enhance policy credibility.[67]

[63] See Bank of Israel (2018), *Annual Report* for 2017, Chapter 8, "Unemployment and Employment in Various Geographic Regions in Israel."

[64] T. Davig & A. Foerster (2019). "Uncertainty and Fiscal Cliffs." *Journal of Money, Credit and Banking,* 51(7): 1857–1887.

[65] A. Fatás & L. H. Summers (2018). "The Permanent Effects of Fiscal Consolidations," *Journal of International Economics*, 112: 238–250.

[66] We do not deal here with adjustments that will be needed in any event, such as determining the right to unemployment compensation in coming years for those who used up all previously accrued entitlements during the COVID-19 crisis.

[67] Adi Brender (2021). "Fiscal Policy: The Journey toward a Low Debt to GDP Ratio and Smaller Government." In *The Israeli Economy, 1995–2017: Light and Shadow in a Market Economy,* eds. A. Ben-Bassat, R. Gronau, and A. Zussman, pp. 41–72, Cambridge University Press.

The political instability that has typified the past two years underscores the need for a long-term institutional economic framework that can exist independently of short-term limitations. This framework should include effective fiscal rules that take account of the volatility of the macroeconomic environment and tax revenues, provide an orderly working process for the state budget, and reinstate the Numerator rules[68], preventing shortcuts that impair their efficacy.[69] Such a framework would support the attainment of the government's long-term objectives, such as improving national labor productivity and lowering the structural deficit by using long-term structural measures as opposed to intrinsically provisional measures.

The principles that should guide fiscal policymakers in 2021 and onward, set out in the Bank of Israel fiscal survey[70], are as follows: continued separation of the safety net from the spending framework of the regular budget; countercyclical use of the safety net commensurate with the pace of the economic rebound; avoidance of government decisions that would increase the structural deficit in 2021 and, conversely, fiscal adjustments such as tax hikes in 2021; and in the medium term: replacing the current spending rule with one focusing on converging the debt to GDP ratio to the long-term target that the government will set, and aligning the structural deficit with this target with symmetrical treatment of statutory changes in spending and tax rates.

c. Reducing the structural deficit

Policy during the crisis aimed to provide households with confidence and support the survival of businesses as long as economic activity was restricted for exogenous reasons. The need to implement such policy pushed the treatment of the economy's high structural deficit to a lower position on the public list of priorities. Given the powerful surge of the debt to GDP ratio, however, the matter is becoming important once again because there is currently less fiscal space than there was a year earlier, making the economy less resilient to future crises. (See Box 6.1.) The main channels through which the government can exert its strongest influence on the fiscal space are by cutting future structural deficits and boosting the potential GDP growth rate. This brings us to the core question that policymakers have faced in recent years: How should Israel's structural deficit be lowered in terms of the composition, timing, and pace of the consolidation?

Alesina and Ardagna (2013) sort consolidation events in twenty-one OECD countries between 1970 and 2010 into those that succeeded (lowered the debt to GDP

[68] The Numerator rules, based on Section 40a of the Foundations of the Budget Law, 57451985, set out that the government shall not advance legislation, administrative directives, regulations, contracts, or other undertakings that, when performed, increase government expenditure or reduce state revenue in a way that leads to deviation from the fiscal limits established in the Frameworks Law unless balancing actions that constitute a financing source are approved.

[69] For elaboration, see Bank of Israel (2018). "Fiscal Survey: Fiscal Policy in the Past Two Years and Projections for Coming Years," August.

[70] Bank of Israel (2020). "Fiscal Survey: Trends and Outlines for Fiscal Policy in 2021 and for the Medium Term," November.

ratio) and those that failed. They conclude that fiscal consolidation is more successful in cutting debt if it lasts longer, if economic growth during the consolidation is greater, if the cutback in all components of government expenditure (except public investment) is steeper, and if the increase in general-government employment is slower.[71] The relevance of this finding for Israel is dubious because Alesina and Ardagna attained their results mainly from countries that have large public sectors (a high share of public expenditure)—as was the case in Israel until 2003. In this situation, the marginal utility of increasing public expenditure by one shekel is smaller than it is in countries with low public expenditure.

In Israel currently, the high structural deficit (by international comparison) is mostly due to a relatively low tax burden and not to particularly lavish public expenditure. Since defense spending and interest expenditure in Israel are high relative to other developed countries, primary civilian expenditure is very low. This narrows the ability to cut the structural deficit along this channel. In 2012, the government tried to trim the deficit by cutting expenditure but its measures in that direction did not survive for long. The next government canceled the cutback and widened the structural deficit even more. Therefore, it will be hard to lower the structural deficit without raising tax rates. This, however, does not eliminate the need to make government spending more efficient by reducing certain spending items in favor of more productive ones, the kinds that will contribute to long-term economic growth and improve government services.

In Israel currently, the high structural deficit is mostly due to a relatively low tax burden and not to particularly lavish public expenditure. Since defense spending and interest expenditure in Israel are high relative to other developed countries, primary civilian expenditure is very low. This narrows the ability to cut the structural deficit along this channel.

The right time to begin the consolidation depends largely on information that will come into view in the coming year about when the crisis will end and the depth of the economic scars that it will have left. In 2021–2022, measures to expedite the economy's exit from the crisis may still be needed. If such is the case, they should focus on supporting the attainment of the long-term economic targets, including sustainable growth based on improvements in productivity, narrowing inequalities, and reducing greenhouse gas emissions, as many developed countries are doing. (See Box 6.2.) The onset and pace of the consolidation may be conditioned on macroeconomic indicators in such a way as to intensify the measures insofar as the economy approaches full employment, and suspend them if economic activity slows, be this for exogenous reasons or due to the consolidation itself.

The right time to begin the consolidation depends largely on information that will come into view in the coming year about when the crisis will end and the depth of the economic scars that it will have left.

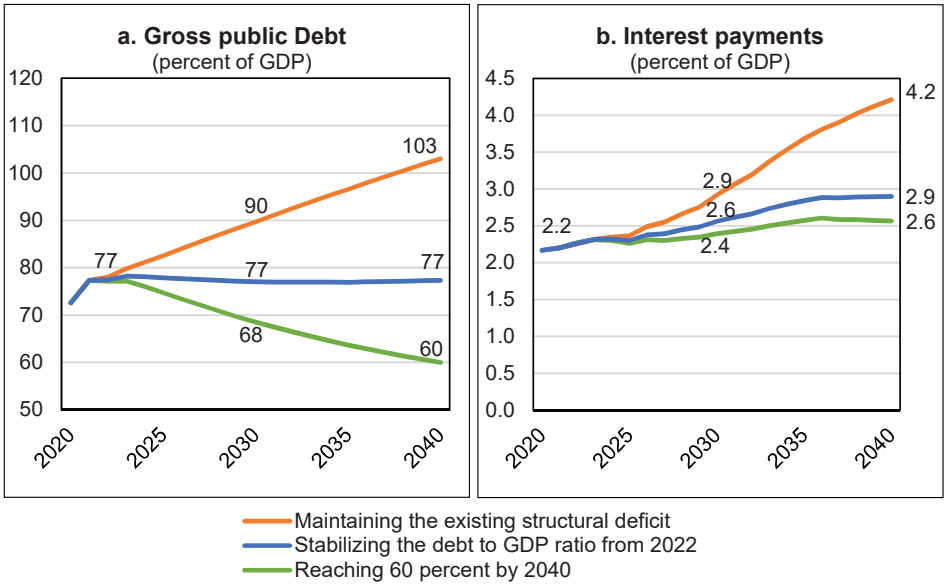
The decision on how quickly to cut the structural deficit should consider both fiscal space and fiscal credibility. Although fiscal space is hard to quantify, the Israeli government's ability to apply fiscal expansionduring a crisis appears to have grown since 2003. Yields and spreads on Israel's government debt have fallen in recent years and remained stable even during the crisis, attesting to the market's confidence in the country's ability to pay its debts. This propitious characteristic makes consolidation less urgent and allows it to take place gradually, thus minimizing its adverse effect on economic activity and citizens' wellbeing.

[71] A. Alesina & S. Ardagna (2013). "The Design of Fiscal Adjustments," *Tax Policy and the Economy,* 27(1): 19–68.

The disadvantage of a gradual program is in the problem of time inconsistency: a gradual plan forces future governments to persist with measures established in the past. Accordingly, for reasons of fiscal credibility, the main components of the consolidation should be frontloaded, i.e., implemented as soon as possible. The contrasting effects of Israel's fiscal space and its political instability, which has impaired the reputation of fiscal policy, can be reconciled by applying a multi-year plan that includes concrete measures and not only deficit/expenditure targets that previous governments chose to amend repeatedly since they were first legislated.[72]

A simulation of the path of the debt ratio and interest payments (Figure 6.10) demonstrates that if the structural deficit is maintained at its current level[73], the debt to GDP ratio and, in turn, the burden of interest payments are likely to continue rising unsustainably in the long term, eventually crowding out other expenditures or requiring tax hikes to finance it (the orange line in Figure 6.10). To stabilize the

Figure 6.10
The Fiscal Aggregates Under Various Policy Scenarios[a]



[a] The scenarios simulate the development of the debt to GDP ratio and the burden of interest payments as a result of various policy targets. The working assumptions include convergence to the long-term growth rate by 2023, an interest rate that is identical to the 2019 rate plus a risk premium in accordance with the increase in the debt ratio, and convergence of inflation to 2 percent in the medium term.

SOURCE: Bank of Israel.

[72] For a detailed account of the frequent revisions of the deficit targets and spending rules, see A. Brender (2021), "Fiscal Policy: The Journey Toward a Low Debt to GDP Ratio and A Smaller Government." In *The Israeli Economy, 1995–2017: Light and Shadow in a Market Economy,* eds. A. Ben-Bassat, R. Gronau, and A. Zussman, pp. 41–72, Cambridge University Press.

[73] The Bank of Israel estimates the current structural deficit, which does not include expenditure and revenue loss on account of the COVID-19 crisis, at 4–4.5 percent of GDP.

debt to GDP ratio at its projected level at the end of 2021, a gradual contraction of the deficit to 2.5 percent of GDP will be needed (blue line). Furthermore, to converge the debt to GDP ratio to a long-term target—say, 60 percent of GDP by 2040—the deficit will have to be lowered to 1.3 percent of GDP (green line). These targets are ambitious relative to the government's conduct in recent years and will entail major fiscal adjustments. The sooner the government designs and promotes a multi-year fiscal program, the more able it will be to spread the adjustments gradually so that their impact on the economy will be milder.

The sooner the government designs and promotes a multi-year fiscal program, the more able it will be to spread the adjustments gradually so that their impact on the economy will be milder.

d. Financing reforms and investment projects to enhance labor productivity in Israel

As an example of the investment projects needed to enhance productivity, here we examine policy scenarios that follow the Bank of Israel's recommendations on enhancing labor productivity[74]—recommendations for investment projects and reforms that, when implemented, are likely to deliver their main utility in the long run (after 2030) but incur major fiscal cost in the current decade.[75] The following analysis includes the examination of three alternative financing methods: raising tax rates, issuing debt, and a combination of both.

Under all three alternatives, the government invests 3.3 percent of GDP permanently[76] in improving the education system, incentivizing the private sector to invest in physical capital, upgrading transport and communication infrastructures, and improving the Israeli business environment. The investments affect growth in two ways: by increasing direct demand by the government, mainly through massive investment in infrastructure, and by improving labor productivity, stimulating private sector capital investment and boosting potential output in the long run. Assuming that the baseline policy scenario (no reforms) is such that the government decides to converge to a structural deficit that stabilizes the debt to GDP ratio in the long run (the blue line in Figure 6.10), Figure 6.11 demonstrates the implications of the way these reforms are funded for the fiscal aggregates and potential output.

Under the first alternative, the reform is fully funded by raising tax rates (black line). The structural deficit in the scenario without reforms is preserved but the tax hike offsets some of the increase in direct government demand and, by so doing, temporarily mitigates the reforms' contribution growth. While it is agreed in the economic literature that raising tax rates slows growth in the short term and that this effect dissipates after several years, there is no consensus about the impact of the level of the tax burden on growth in the long term. Studies reviewed by the Bank of Israel

By restraining the structural deficit while inducing rapid GDP growth by improving productivity in some industries in the first decade of the reform, the debt to GDP ratio can be brought down steadily amid long-term investment in increasing the national standard of living.

[74] Bank of Israel (2019). "Raising the Standard of Living in Israel by Increasing Labor Productivity," Research Department Special Report.

[75] For a breakdown of the cost-and-benefit calculations of reforms that propose to raise labor productivity, see Bank of Israel (2019). "Raising the Standard of Living in Israel by Increasing Labor Productivity," Research Department Special Report, Table 1.

[76] The investment rises gradually during the first five years of the program.

(2019) found no empirical connection between raising the tax burden and economic growth, whereas other authors find a correlation between a 1 percent of GDP increase in the tax burden and a 0.05–0.1 percentage point decline in the growth rate in developed countries, although this is a correlation and not evidence of causality. Use of this correlation means that full funding of investment in infrastructure by means of a long-term increase in tax rates of 2 percent of GDP may slow the annual growth rate by 0.1–0.2 percentage points. Thus, even if the effect exists, it offsets only some of the acceleration of growth, estimated at 0.5 percentage points per year.[77] The black line in Figure 6.11 shows that by restraining the structural deficit while inducing rapid GDP growth by improving productivity in some industries in the first decade of the reform, the debt to GDP ratio can be brought down steadily amid long-term investment in increasing the national standard of living. In 2040, GDP is expected to be 15 percent higher than in the no-reform, no-tax-increase scenario, and the debt to GDP ratio is projected at 69 percent under the reform, compared with 77 percent without any reforms.

Using a permanent increase in the structural deficit to fund investments in order to raise labor productivity would impose a steadily growing fiscal burden on the economy.

The alternative represented by the red line in Figure 6.11—funding infrastructure investment by issuing debt—shows that despite rapid GDP growth, using a permanent increase in the structural deficit to fund investments in order to raise labor productivity would impose a steadily growing fiscal burden on the economy and induce a protracted increase in the debt to GDP ratio and the burden of interest payments. The reason is that this alternative envisions a permanent increase in spending and not one-off investment. Although the return on the public investment exceeds the interest rate that the government pays, the taxes it collects from this increase in GDP do not fully cover the added expenditure because they constitute only one-third of output. In other words, for every permanent increase of NIS 1 billion in GDP, the government collects only another NIS 0.3 billion. According to Bank of Israel assessments, the proposed reforms would nudge the annual growth rate upward by half a percentage point on average. This increase in output would be too small to offset the increase in the structural deficit that is needed to pay for the investments.[78] In addition, the interest burden may grow due to the increase in the interest rate that occurs in response to the growth of the public debt[79], crowding out other expenditures or entailing tax hikes in order to keep the structural deficit from exceeding the addition needed to fund the investments.

Under the third alternative examined, half of the investment cost is funded by taxes. The debt to GDP ratio grows moderately until the return on the investment in

[77] For an expanded discussion, see Bank of Israel (2019), "Raising the Standard of Living in Israel by Increasing Labor Productivity," Research Department Special Report, p. 10.

[78] To demonstrate this: When the debt to GDP ratio is 75 percent, the acceleration of growth by half a percent of GDP contributes 0.3–0.4 percent of GDP to the decrease in this ratio (the denominator effect). In contrast, the rate of the added deficit is 2.3 percent of GDP on average. Thus, the debt grows by 2 percent of GDP per year, even before the cost of the increased of interest payments on the total debt is taken into account.

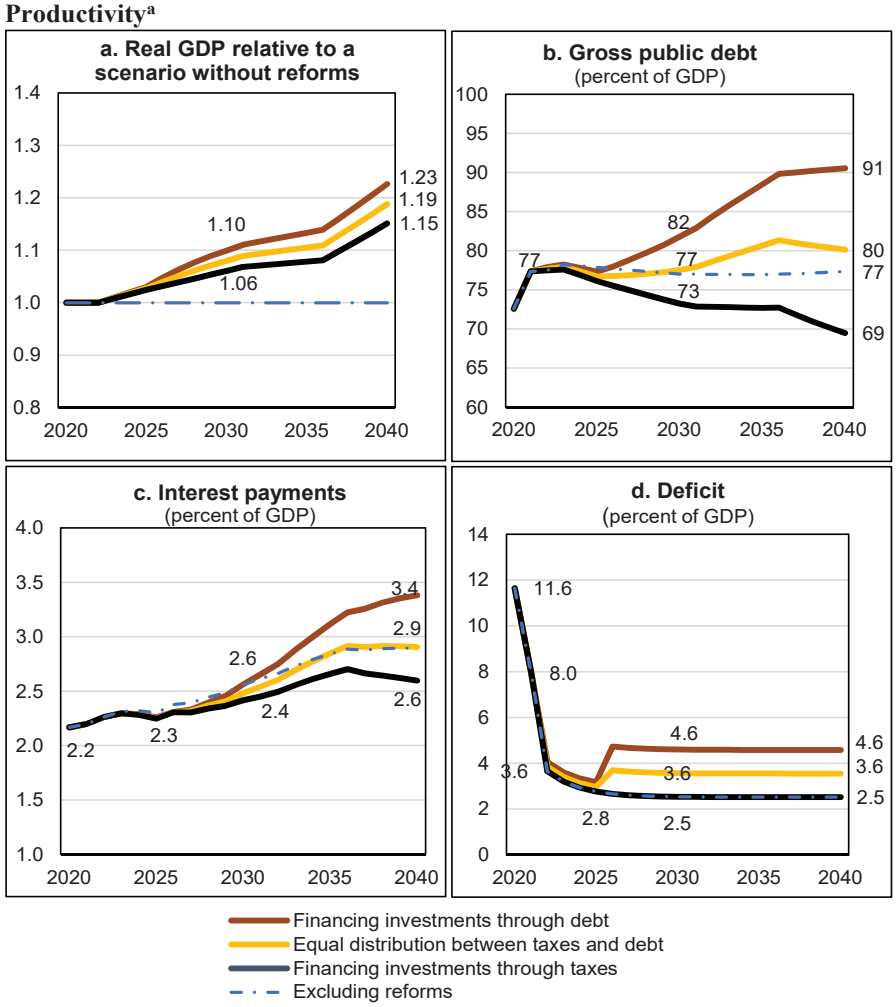
[79] See Note 11 in Box 6.1.

education begins to be realized. Afterward, rapid growth helps to bring about a change in trend toward a moderate decline in the debt to GDP ratio (the yellow line in Figure 6.11).

Before adopting this economic program, the government needs to set a long-term debt to GDP ratio target that takes into account both the importance of market trust in the government's fiscal responsibility and the need to carry out far-reaching reforms. The government programs should be funded by a mix of debt and taxes or optimization of public expenditure so that the debt to GDP ratio can converge toward the government's target.

Before adopting this economic program, the government needs to set a long-term debt to GDP ratio target that takes into account both the importance of market trust in the government's fiscal responsibility and the need to carry out far-reaching reforms.

Figure 6.11
The Fiscal Aggregates Under Alternatives in the Reform to Increase Productivity[a]



[a] The scenarios simulate the development of the fiscal aggregates and real GDP as a result of various financing alternatives to the recommendations that appeared in the Bank of Israel's 2019 productivity report. The working assumptions include convergence to the long-term growth rate by 2023, a real interest rate that is identical to the 2019 rate plus a risk premium in accordance with the increase in the debt ratio, and convergence of inflation to 2 percent in the medium term. The structural deficit, excluding the reforms, is the one that stabilizes the debt to GDP ratio at 77 percent in the long term.

Box 6.1

ISRAEL'S FISCAL SPACE

The concept of "fiscal space" describes a government's ability to apply a countercyclical policy and head off a protracted recession after an economic crisis without badly exacerbating the risk of a debt crisis.[1] Fiscal space also makes it possible to cope with long-term but transitory fiscal pressures such as population aging or support of potential output growth by means of government investment projects.

The rapid increase in many governments' debt levels, countered by the low cost of the increased debt, raises questions of whether they have enough fiscal space to cope with future needs and what debt policy is preferable in the coming years. In Israel, too, the availability of fiscal space has important ramifications for the government's ability to continue supporting the economy and making the necesssary investments to deal with structural issues without impairing debt sustainability.[2] This box analyzes the factors that have helped increase Israel's fiscal space since 2004 and presents the risks to the continuation of this trend.

a. The fundamentals of fiscal space

The theoretical principle underlying the fiscal space notion is that the government has an intertemporal budget constraint that forces the government to manage a balanced budget over an infinite number of periods but allows it to have deficits and surpluses at certain times as long as they cancel each other out over several years. The government's ability to issue debt depends on the market's confidence in the government's ability to pay back the debt in the future. It is this trust that allows a government to recycle existing debt; where it is lacking, a debt crisis may erupt.

Shifting the burden of government debt repayment from the present to the future comes at the cost of interest on the debt. Built into this cost, among other things, is the country's risk premium (which reflects the market's confidence in the government's ability to pay its debts) and returns on other financial and real assets at home and abroad. The cost is offset when the economy attains long-term growth[3]: Debt accrued in the current period is expected to impose a smaller burden in the future by increasing the economy's ability to produce and to finance itself. If interest on the debt is higher than the erosion of the interest burden due to GDP growth, the government has to create larger budget surpluses in the future to fund the present deficits. Conversely, if interest is lower than future growth, the sum of future surpluses can be smaller than the sum of deficits.

Market confidence creates a mechanism of self-fulfilling expectations. In 2008, governments were urged to spend aggressively when the financial system had ceased to function, in order to attenuate the macroeconomic shocks. At the recovery stage, however, although it was widely agreed that the support

[1] Benmelech and Tzur-Ilan (2020) find that the strength of the fiscal response to the current crisis correlates positively to per-capita GDP and country rating. According to Auerbach and Gorodnichenko (2017), fiscal multipliers tend to be greater when fiscal space grows because individuals have less expectations of future fiscal consolidation and therefore engage in less precautionary saving.

[2] For a definition of debt sustainability, see Note 11 in this chapter.

[3] Expectations of faster growth in the long run may increase the return on domestic investment and therefore, also, the underlying interest rate on the government debt. A low long-term underlying interest rate may reflect expectations of slower growth in the future.

should be phased out gradually, the market "lost patience" and responded earlier than expected to the high deficit rate and debt ratio. Thus, some governments in Europe had to apply such stringent austerity policies that their consolidations went much farther than cancelling the expanded subsidies and relief that had been given in 2008 (Marcel, 2014). Attempts to estimate an effective debt ceiling for each country that, if surpassed, would probably result in a debt crisis (Fournier and Fall, 2017) yielded a vast range of possibilities[4] due to the tremendous uncertainty that surrounds the development of the determinants of fiscal space and the simultaneous relation of these variables to the actual level of debt. Furthermore, a swiftly rising debt ratio may elicit a harsh response from the market long before the country reaches its effective debt ceiling. Therefore, it is hard to quantify fiscal space. Obviously, however, the smaller the debt, the less likely a debt crisis is.

b. Lowering Israel's debt/GDP ratio

The most important determinant in reducing debt in between 2004 and 2008 was the primary surpluses in the state budget.[5] In those years, Israel maintained strict fiscal discipline in order to lower its debt to GDP ratio on the basis of policy measures invoked under the 2002–2003 fiscal stabilization program. Tax cuts from 2005 onward, however, mitigated the contribution of the primary structural surpluses to lowering the debt ratio. In 2017, the primary structural surplus turned into a deficit, which reached 2.3 percent of GDP in 2019.[6] Thus, the deficits that accumulated in 2017–2019 wiped out the entire contribution of the 2010–2016 structural surpluses to lowering the debt to GDP ratio (the purple bars in Figure 1).

A decline in the effective interest rate on the government debt[7], coupled with rapid nominal GDP growth from 2010 onward, helped to sustain the downward trend of the debt to GDP ratio. The cumulative contribution of these factors between 2010 and 2019, however, explains only half of the reduction in those years. The rest was mainly due to extrabudgetary capital income (payback of government mortgage loans by the public and receipts from land sales), revaluation of foreign-currency-denominated debt, and lower CPI growth relative to the increase in the GDP deflator.[8] These factors were exhausted with the contraction of outstanding mortgage loans and a decrease in the unhedged share of the external debt. Their impact on changes in the future debt level is therefore likely to be marginal.[9]

The year 2020 was an extreme outlier compared to the period reviewed above. In 2020, the negative nominal growth rate contributed to an increase in the debt to GDP ratio instead of eroding it, and massive temporary expenditure quickly returned the debt to its 2009 level. However, while the growth forecasted for the coming years is again expected to help lower the ratio, it will take many years for debt raised to fund the large deficits to erode unless the government decides to cut the structural deficit in order to reduce the outstanding debt. (See Figure 6.10 in this chapter.)

4 The result for Israel, for example, places the effective debt ceiling within a range of 193–250 percent of GDP.

5 This approach to the deficit is different from Israel's customary fiscal rules: We focus on the primary deficit—the total deficit net of interest—whereas the budget deficit that the government reports includes interest payments. The difference between the budget deficit reported during those years and the primary deficit presented here originates in the very steep interest payments at the time (an average of 5.8 percent of GDP per year).

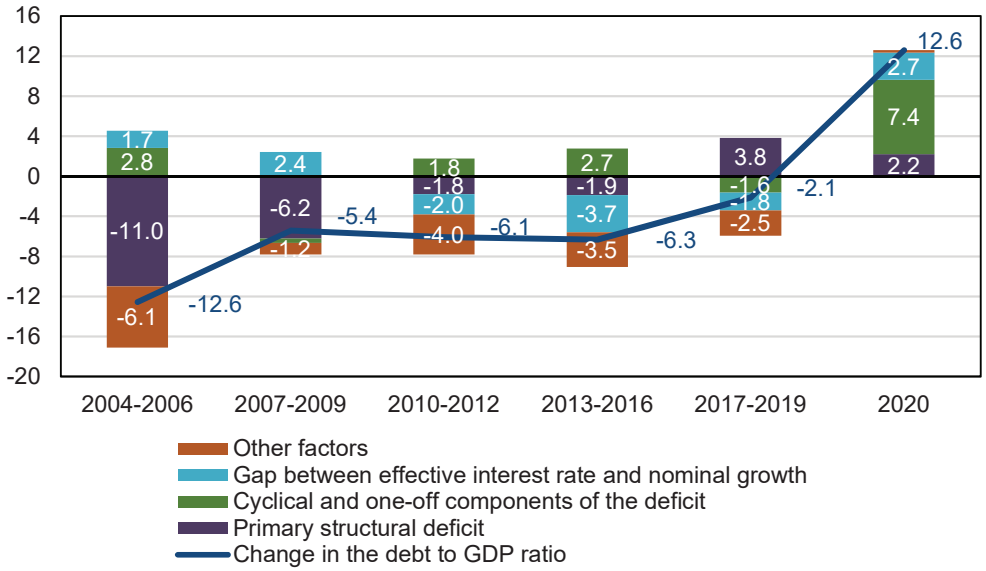
6 For a methodological description of how the Bank of Israel calculates the structural deficit, see Mazar (2014).

7 Obtained by dividing annual interest payments by the outstanding debt at the end of the previous year.

8 About half of the government debt is indexed to the Consumer Price Index.

9 For a detailed analysis of the factors behind the contraction of the debt to GDP ratio in the past two decades, see Brender (2021).

Figure 1
Composition of the Change in the Debt to GDP Ratio, 2004–2020 (percent of GDP)



SOURCE: Based on Central Bureau of Statistics and Ministry of Finance.

The Debate on the Gap between Future Interest and Growth Rates

The persistence of growth rates higher than interest rates since 2008 is not unique to Israel. In recent times it has triggered a lively debate among economists over the extent of the need for active downscaling of public debt. Blanchard (2019) claims that the economic discourse about reducing debt derives from the perception of steadily rising rollover costs. This was the view until recently even though, historically, interest rates have been lower than growth rates, meaning that unless additional deficits are accrued the debt ratio would have fallen by itself in the long run, making it possible to maintain a deficit regime while holding the debt to GDP ratio stable. Furman and Summers (2020) claim that the decrease in interest rates is a structural change—a "secular stagnation"—that allows debt to be amassed without a major increase in interest payments. For this reason, they maintain, a government can improve fiscal sustainability by fiscal expansion that will fund itself if its return (the incremental GDP growth resulting from government programs) exceeds the interest rate on the public debt. Their main arguments assume full certainty and preservation of the gap between the interest and growth rates at its current level in the coming decades.

Will today's interest and growth rates continue to persist in the future? It is hard to say for sure, but central banks' intervention in government bond markets will almost certainly stop at some point, inflation expectations will rise again, demand for investment will grow, and, in turn, so will the nominal interest

rates that governments will pay on their future issues. Additionally, a low nominal interest rate may signal low expectations of future nominal growth. In other words, it may suggest that today's interest rate correlates with growth that is lower in the future than it is today. Israel's strong growth relative to other developed countries is mainly due to rapid population increase. Israel's per-capita GDP growth has not been higher in relative terms. In their baseline scenario, for example, Argov and Tzur (2019) project that per-capita GDP growth rates will fall steadily due to population aging and the growing share of the labor force whose human capital is irrelevant to employment.

Blanchard et al. (2020) and Sergeyev and Mehrotra (2020) contend that even if the natural interest rate remains below the potential growth rate in the future, a debt sustainability problem may arise and the effective debt ceiling will be much lower due to the feedback of interest rates and growth to the debt to GBP ratio. The main mechanisms through which growth may be impaired by high government debt are the crowding out of private investments, an upturn in the risk premium on private sector debt, and the contraction of liquidity in the market.[10] High debt levels propel the state's risk premium upward, raising the interest rate[11], such that the negative spread between interest and growth may narrow or even reverse its direction. Previous debt crises demonstrate that when the debt level crosses a certain threshold, interest rates rise exponentially with an increase in debt, creating a mechanism of self-fulfilling expectations of a debt crisis.

Given the tremendous uncertainty regarding macroeconomic variables, debt sustainability is a probabilistic concept because there is a chance, albeit small, of major shocks that can trigger a debt crisis very quickly. Even if the interest rate falls short of the growth rate on average, the gap can become positive and large at times of deep recession. Then, a high level of debt means an onerous burden of interest payments that cannot be alleviated in the near term. This possibility creates two kinds of equilibria—a "good" equilibrium, to which the debt converges in the long term, and a "bad" (unstable) one, in which the debt ratio is maintained until market access is lost, pushing interest rates far beyond the growth rate and launching the public debt into an upward spiral.

These arguments reflect the risk of amassing high levels of debt because the gap between interest and growth may narrow or even turn positive, which means an increase in the debt to GDP ratio in addition to its growth as a result of the funding of current government deficits. A possible way of mitigating this risk is to extend the maturity of the government debt in a way that locks in today's low interest rates for the long term—assuming that today's rates reflect a temporary market phenomenon and not the expectation of lower nominal growth in the future—thereby building additional fiscal space. This solution, too, is temporary from a long-term perspective. Therefore, it is important for governments to choose a debt trajectory that will take possible risks into account in order to lessen the probability of entering hazardous territory. Under any scenario, it is important to put the government budget to productive purposes that will allow sustainable GDP growth and, in turn, increase repayment ability in the future.

[10] In the model of Liu et al. (2020), an increase in the supply of government bonds has the advantage of lowering the liquidity premium for firms. High public debt, however, may impair growth by raising the risk premiums of both government and domestic firms. According to their model, calibrated to US data, the optimal level of debt in this trade-off is 60 percent of GDP.

[11] In Israel, Brender and Ribon (2015) find that the public debt to potential GDP ratio's effect on real yields has increased in the past two decades. Between 2001 and 2008, a 1 percent increase in the ratio led to a 0.05 percentage point increase in the real yield on ten-year government bonds. After 2009 the effect was 0.1 percentage points.

c. A nonrecurrent deficit increase vs. a long-lasting structural deficit

A nonrecurrent increase in debt due to a temporary deficit meant to prop up the economy during a crisis or for a temporary public investment plan is unlikely to impair fiscal sustainability because a government can spread repayment over a lengthy period, thus eroding the debt relative to GDP. The pace of this erosion, however, is contingent on the gaps between interest and growth rates, described above.

A simulation of the development of the probable marginal increase in the existing outstanding debt due to the COVID-19 crisis[12] (excluding future deficits) shows that the increment erodes very slowly even when the interest rate is below the growth rate. Table 1, showing plausible combinations of average interest rates and nominal growth rates in the next twenty years, makes it clear that even under very favorable macroeconomic conditions of 5.5 percent average nominal growth and 0.5 percent average nominal interest, the 13.6 percent-of-GDP excess deficit that will accumulate in 2020–2021 will boost the debt in 2040 to 5.4 percent of GDP—in addition to the effects of the deficit that the government will maintain during those two decades. To illustrate: If the government maintains a deficit path that before 2020 would have allowed the debt ratio to settle at 60 percent of GDP in 2040, the extra deficit accumulated in 2020–2021 will push the debt level in that year to 65.4 percent of GDP. In contrast, if the gap between the growth and interest rates proves to be smaller—say, 3 percent average growth and 3 percent average interest—the excess debt will not erode and the debt to GDP ratio will be 73.6 percent in 2040. The less favorable the macroeconomic conditions will be, the heavier the debt burden accumulated during the crisis is likely to be in the long term. Although the increase in debt due to the COVID-19 crisis did not endanger Israel's fiscal sustainability, it is narrowing the space between the actual level of debt and its effective long-term ceiling.

As described in Part B above, the dominant factor in the major narrowing of Israel's debt to GDP ratio in the first decade of this century was not the ratio of interest to growth or cyclical changes in the deficit, but the structural surplus. The erosion of the debt ratio caused by GDP growth will be totally offset if the government continues to maintain structural deficits at their current level. Despite the low cost of debt as of now, a protracted increase in the public debt will overshadow Israel's financial stability due to the transmission mechanisms mentioned above, possibly limiting the fiscal space with which additional crises may be tackled.

d. Conclusion

Although no agreed quantitative estimate of a country's fiscal space exists to date, the Israeli government's ability to apply fiscal expansion without risking a debt crisis appears to have grown since 2003. This ability has created convenient terms to cope with the current economic crisis and to meet the need for a major increase in government investment in human capital and infrastructure—something that Israel needs in order to close its productivity gap relative to other developed countries. The increased fiscal space was attained through two decades of declining debt to GDP ratios, driven at the beginning of the period mainly by structural surpluses but also by falling interest rates globally as well as in Israel,

[12] 13.6 percent of GDP—the primary deficit amassed in 2020–2021 less one percent of GDP, which is the primary deficit that was expected before the crisis, resembling the deficit targets in recent years.

Table 1
Additional debt in 2040 as a result of COVID-19 deficits

		Average nominal interest rate					
		0.5	1.0	1.5	2.0	2.5	3.0
Average nominal growth	2.5	9.4	10.3	11.3	12.4	13.6	14.9
	3.0	8.5	9.4	10.3	11.3	12.4	13.6
	4.0	7.1	7.8	8.6	9.4	10.3	11.3
	5.0	5.9	6.5	7.1	7.8	8.6	9.4
	5.5	5.4	5.9	6.5	7.2	7.9	8.6

Note: The table presents a simulation of the development of the additional debt (13.6 percent of GDP) created due to the COVID-19 crisis in 2020 and 2021. In this simulation, the interest and growth rates are set over the years 2022–2040, but this is a simplified assumption for illustrative purposes only, since the interest on debt issued in 2020 is already known. These variables will be influenced in the future by various factors, including the level of debt, as explained in this box.

along with a rapid increase in nominal GDP. This positive trend may slow or even turn around due to the government's high structural deficit, the difficulties the government has had in cutting it, and the expected slowdown of potential growth in the coming decades—challanges that may also cause the interest rate on the debt to rise.

The year 2020 as such did not perceptibly exacerbate Israel's debt risk. If the deficit increase this year and next is a transitory shock and the government acts to shrink the structural deficit by applying a credible multi-year program, the debt that was issued to finance the deficits in 2020 and 2021 will erode gradually. If a high structural deficit is maintained over time, however, the debt to GDP ratio is likely to trend upward from the level that it reached during the crisis, even under the most convenient of terms (low interest rate, strong growth). Given Israel's unique geopolitical risks, extra caution to forestall the development of such a trend is warranted.

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Box 6.2

"GREEN RECOVERY" AS A RESPONSE TO THE ECONOMIC IMPLICATIONS OF THE COVID-19 PANDEMIC IN DEVELOPED COUNTRIES AND IN ISRAEL

Fiscal expansion was a central tool in handling the economic implications of the COVID-19 crisis in many developed countries in 2020, and will probably remain so in the coming years. Initially it was meant to contend with the immediate blow that the pandemic dealt to employment and activity. In the exit and recovery stages that will follow the decline in morbidity, it is likely to focus more on investments to stimulate growth and create jobs.

There are two factors in the background of this expansion: relatively high employment, which it is meant to attenuate, and low interest rates. The cost to the economy of the sources necessary for investment are therefore lower than at times of economic upswing. Concurrently, economic logic affirms the need to exploit this expenditure to promote long-term growth and productivity by allocating it to deal with the economy's structural problems, which demand solutions no matter what, and by refraining from wasting sources on investments that are not in line with the state's long-term growth strategy.

Earmarking some of these rapid rebound measures for environmental causes is called "green recovery."[1] For Israel, the concept fits into the need to deal with long-term environmental problems, mainly climate change and its potential direct and indirect effects on the domestic economy. Among other things, Israel may have to accept the increasingly strict international norms that developed countries have been introducing in this field and are thinking of enforcing vis-à-vis their trade partners.[2] In addition, there are also environmental problems, more local in nature, that need to be dealt with anyway and can be tackled even now.

Budget funding of green recovery programs may pose dilemmas related to the difference between short-term and long-term considerations. The former point toward projects that mainly boost employment. In contrast, the latter favor projects that may not maximize employment or GDP growth or narrow the output gap, but have a long-term effect on the quality of the environment and of life while expediting the economy's adjustment to more stringent environmental norms than those currently in place.

Decision-making about the trajectories of the green recovery that Israel should pursue, and prioritizing specific green recovery projects, are therefore a complex and multifaceted policy issue that will require interaction and dialogue among government ministries, particularly in regard to adjusting to the new circumstances of exiting from the COVID-19 crisis.

This box examines the possibility of Israel's joining the green recovery trend as part of its response to the COVID-19 crisis in view of what is happening in other countries.

[1] For a lengthy list of such measures (the relevance of which varies from country to country), see appendices to the IMF position paper "Green Recovery: Making the Post-Coronavirus Global Economy Sustainable."

[2] Bank of Israel, *Annual Report* for 2019. "The Worldwide War on Global Warming and its Implications for Israel", Selected Studies, pp. 64–85; Also: https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf

a. What does "green recovery" refer to around the world?[3]

The relevant conceptual framework is described in an International Monetary Fund survey on fiscal relief packages in European countries: large-scale relief programs that European governments intend to implement in support of efforts to rebound from the COVID-19 crisis. These packages create an opportunity to expedite investments in green projects and technologies that will help to slow climate change—a central policy objective that the European Union has adopted. An example of such action is prioritizing the construction of infrastructures for passenger-intensive public and non-motor transport. This would support both employment and the reduction of emissions, and would be part of the deployment for restrictions on greenhouse-gas emissions by means of carbon taxes, carbon swaps, and other measures in the near future.

The requisite policy measures in connection with green recovery and the war on climate change are schematically spread across five economic domains that vary in relevance from one country to the next:

- Energy production and industrial activity: a major expansion of the ability to produce renewable energy, bolstering of electrical grid infrastructures, and creating the ability to store renewable energy, as is necessary due to the unevenness of renewable-electricity supply at different times of day;
- Transport: incentivizing the purchase of electric vehicles and developing charging infrastructures for them;
- Homes and workplaces: processes that will improve building insulation;
- Agriculture: reducing emissions of greenhouse gases such as methane from livestock and expanding carbon-absorbing initiatives such as bamboo forests;
- Environmental projects that, while unrelated to climate change, affect quality of life, such as the treatment of environmental pollutants.

b. Specific actions in developed countries

The green recovery policies of most countries that have announced them remain in formative stages. Some budget allocations related to them are not fully "green" but are pledged to other needs such as support of troubled industries.

Below are several examples of green recovery budget allocations in the context of coping with the COVID-19 pandemic:

c. Implications for Israel

As stated, the definitions, targets, and benefits of green recovery vary widely among countries. A standard and accepted framework for such endeavors is still lacking. Insofar as countries abroad start to translate their green recovery intentions into action, their transition may affect Israel's wish to act similarly. Even as the long-term benefits are examined, there is no overlooking the need to assure the contribution of

[3] This section is based on https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2020/09/16/Sectoral-Policies-for-Climate-Change-Mitigation-in-the-EU-49640

Table 1: Budget Allocations for Green Recovery Projects in OECD Countries*

(percentage of GDP in 2019)

	Nature of project	Implemented	Agreed upon only
UK	Investing in R&D and renewable energy and developing green transportation	0.4%	—
Colombia	Investing in renewable energy development	0.57%	—
Canada	Investing in renewable energy development, building insulation, and green public transit	0.25%	—
France	Investing in green energy development, building insulation, and green public transit	0.6%	0.7%
Germany	Investing in hydrogen energy development, building insulation, and green transportation R&D	—	1.1%
Sweden	Improving building insulation and developing green transportation	—	1.53%
EU	Green investments and reforms (37% of the COVID-19 rehabilitation and recovery program)	—	3.42%

* The schedule for performance of these projects varies from country to country. Most projects are intended for performance by the end of 2023. The EU reforms will be applied, in accordance with the resolution, by 2026.

such programs to activity and employment during the recovery from the crisis, as explained above. Furthermore, priority should be given to projects that, in addition to their long-term utility, have already been approved and are ready to be implemented.

Therefore, the prioritization of projects in accordance with clear and reasoned estimates of their impact on employment and GDP, as well as their long-term benefit for the environment, should underpin the implementation of green recovery measures in Israel. Such measures may include the acceleration of projects to advance public transportation; transition to electric buses in cities; cleaning and revitalizing watercourses; rehabilitation of urban nature sites and open spaces; and improvement of insulation in homes and workplaces.

The Ministry of Environmental Protection has published a list of twenty proposals— which are not prioritized—in various fields.[4] Five fields are specified for projects that can be implemented in the next few years. The following are examples from each field: (1) tackling the climate crisis—switching to renewable electricity production and making progress in renewable energy storage; (2) management of resources—bolstering the recycling industry; (3) improving the business environment and promoting cleantech—moving ahead with cleantech innovation pilots, R&D, and laboratories; (4) protecting open

[4] Ministry of Environmental Protection, "Roadmap for Exit from the COVID-19 Crisis by Investing in the Environment," May 31, 2020 [Hebrew].

spaces and biodiversity—revitalizing watercourses and nature sites; (5) reducing transport-related air pollution—switching to electric buses.

Another path of green recovery is expediting and consolidating regulatory treatment of environmental action in ways that can promote private investment in measures that have environmental benefit. Such a move may bring forward to the recovery period economic investments in new kinds of activity that will anyway be needed in the long term. Although this kind of acceleration will entail governmental attention and effort, it has the advantage of not necessitating additional budget expenditure. Action in this manner may stimulate employment in the business sector by paving the way to new kinds of activity. For instance, the regulation of charging points for electric cars can be accelerated, regulations under a clean air law that would force polluters to reduce their emissions can be enacted, and smart meters can be installed for electricity consumers in order to improve the efficiency of power delivery in the future, once the share of renewable energy grows.