



# ISRAEL

June 2023

## 2023 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR ISRAEL

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2023 Article IV consultation with Israel, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its June 12, 2023 consideration of the staff report that concluded the Article IV consultation with Israel.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on June 12, 2023, following discussions that ended May 11, 2023, with the officials of Israel on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on May 26, 2023.
- An **Informational Annex** prepared by the IMF staff.
- A **Statement by the Executive Director** for Israel.

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**International Monetary Fund**  
**Washington, D.C.**



# ISRAEL

## STAFF REPORT FOR THE 2023 ARTICLE IV CONSULTATION

May 26, 2023

### KEY ISSUES

**Context:** Following a remarkable recovery from the pandemic anchored in strong fundamentals, the outlook is for growth to slow broadly in line with potential, as inflation falls within the targeted range by end-2024. However, the risk balance is tilted to the downside, reflecting, among other things, external risks and the continued uncertainty around the proposed judicial reform.

**Policy recommendations:** Given downside risks, policy should protect buffers, reduce inflation, and maintain macrofinancial resilience, while remaining nimble in the face of high uncertainty. Enhancing potential growth remains critical.

- **Fiscal policy** should safeguard fiscal buffers while raising growth-enhancing spending. The fiscal stance seems adequate to preserve buffers, but additional fiscal space is needed for boosting potential growth and reducing inequality. There is scope to raise income tax revenues.
- **Monetary policy.** With a tight labor market, positive output gap, and headline and core inflation above the target range, the policy stance should remain tight. The Bank of Israel (BOI) should continue to closely monitor underlying price pressures and stand ready to further hike the policy rate if inflation surprises on the upside or inflation expectations rise past the target band while underlying pressures remain strong, risking de-anchoring.
- **Macrofinancial policies.** The recent retightening of macro-prudential tools is welcome and has helped to contain unwarranted risk taking. Further calibration of macroprudential tools should be driven by sector specific developments. Policies should strive to continue to bolster housing supply.
- **Structural policies.** To enhance potential growth, authorities must prioritize education reform and infrastructure investment. Improving the skills of minorities will foster an inclusive economy. Improving local transportation infrastructure is key to reducing congestion, improving job accessibility, and alleviating cost of living concerns.
- **Judicial reform.** Permanently lowering the uncertainty around judicial reform requires a politically sustainable solution that is clearly communicated and well understood both domestically and abroad.



## IMF Executive Board Concludes 2023 Article IV Consultation with Israel

FOR IMMEDIATE RELEASE

**Washington, DC – June 15, 2023:** The Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation<sup>1</sup> with Israel.

**Israel's impressive economic performance continued in 2022.** GDP increased 6.5 percent in 2022, led by domestic demand, with an increase in investment and consumption and with a minimal contribution from the government, as fiscal consolidation gained pace. Supported by strong economic growth and prudent fiscal policies, debt-to-GDP ratios fell to about 61 percent in 2022, down from about 71 percent during the Pandemic. Inflation remained high, at about 5 percent by end 2022, with the Central Bank of Israel following a tightening monetary policy to bring inflation rates on check. External demand was negative on net, as imports outgrew exports.

**Economic activity is expected to decelerate in 2023, and thereafter converge towards its potential.** Staff projects economic growth to slow to about 2.5 percent in 2023, as households purchasing power moderates and firms rein in investment. The labor market is expected to remain tight and the unemployment rate is expected to marginally increase. Fiscal buffers are expected to be maintained as public debt to GDP is projected to decrease further and stay below 60 percent. The external sector is projected to remain robust. As domestic demand starts recovering from 2024, the growth rate is anticipated to converge towards its potential rate, estimated at about 3.8 percent; thus, closing the output gap in the medium term.

### Executive Board Assessment<sup>2</sup>

Executive Directors commended Israel's remarkable economic performance and strong external position, noting that economic growth would slow down this year as it returns to potential over the medium term. Given downside risks to the outlook, Directors recommended that policies be geared toward protecting fiscal buffers, reducing inflation, maintaining macro-financial resilience, and enhancing potential growth. They also cautioned that the uncertainty created by the proposed judicial reform could have a negative impact on the economy and called for a politically sustainable solution. Also, as in any country, maintaining the strength of the rule of law would be important for economic success.

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<sup>1</sup> Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

<sup>2</sup> At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: <http://www.IMF.org/external/np/sec/misc/qualifiers.htm>.

They generally agreed that the fiscal stance is appropriate. Given the need to protect fiscal buffers, they considered that raising growth-enhancing spending in education and infrastructure will require additional revenue measures. Directors also encouraged the authorities to strengthen the fiscal framework, including by improving budgetary planning and considering the establishment of a fiscal council.

They commended the Bank of Israel's tight monetary policy stance given elevated inflation and a tight labor market. They stressed that monetary policy should remain tight until there are clearer signs that aggregate demand is cooling and welcomed the central bank's readiness to tighten policy further if needed. They emphasized that market forces should be allowed to continue to set the price of the shekel, with foreign exchange interventions limited to addressing disorderly market conditions.

They welcomed that the banking system remains broadly robust, while calling for close monitoring of risks, particularly those related to real estate lending. They also welcomed the tightening of macroprudential policies and encouraged efforts to raise the supply of housing. Further measures to improve the supervisory and AML/CFT frameworks would also be important.

They underscored the importance of enhancing potential growth and addressing inequality through reforms to close skill gaps, improve infrastructure, and increase competition. They emphasized that education reforms and active labor market policies are particularly important for better integrating minorities in the economy. Directors also stressed the importance of reducing barriers to product market competition to address rising cost of living concerns. Regarding the climate agenda, they encouraged the authorities to press ahead with their commitments to reduce greenhouse gas emissions and adapt to climate change impacts.

## Israel: Selected Economic Indicators, 2018–2028

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Projections										
<b>Real Economy (percent change)</b>											
Real GDP	4.1	4.2	-1.9	8.6	6.5	2.5	3.4	3.4	3.6	3.7	3.8
Domestic demand	4.5	4.0	-3.4	9.9	7.4	2.5	3.7	3.8	3.9	4.1	4.1
Private consumption	3.6	4.0	-7.9	11.1	7.7	2.8	3.8	4.0	4.0	4.0	4.1
Public consumption	4.0	3.0	2.8	4.2	0.7	2.3	3.2	3.6	3.6	3.6	3.6
Gross capital formation	6.9	4.9	1.2	12.6	12.4	1.9	3.7	3.6	4.1	4.5	4.5
Gross fixed investment	7.8	3.3	-3.9	11.7	9.0	0.9	2.7	3.7	4.1	4.5	4.5
Foreign demand (contribution to growth)	-0.4	0.2	1.6	-1.3	-1.0	0.3	-0.3	-0.4	-0.4	-0.3	-0.3
Potential GDP	3.7	3.9	2.0	5.9	3.7	3.7	3.8	3.8	3.8	3.8	3.8
Output gap (percent of potential)	0.6	0.9	-3.0	-0.4	2.2	1.1	0.7	0.3	0.1	0.0	0.0
Unemployment rate (percent)	4.0	3.8	4.3	5.0	3.8	4.0	4.0	4.0	4.0	4.0	4.0
Overall CPI (percent change, average)	0.8	0.8	-0.6	1.5	4.4	4.5	3.5	2.5	2.1	2.1	2.0
Overall CPI (percent change, end of period)	0.8	0.6	-0.7	2.8	5.3	4.1	2.9	2.1	2.0	2.0	2.0
Core CPI (percent change, average)	0.9	0.6	-0.3	1.2	3.6	4.7	3.8	2.8	2.3	2.2	2.2
<b>Saving and investment balance</b>											
Gross national saving (percent of GDP)	26.8	26.8	29.3	29.1	29.9	29.9	29.7	29.6	29.5	29.5	29.5
Foreign saving (percent of GDP)	-3.0	-3.5	-5.5	-4.3	-3.7	-4.1	-3.9	-3.8	-3.6	-3.5	-3.4
Gross capital formation (percent of GDP)	23.8	23.3	23.8	24.8	26.3	25.8	25.8	25.8	25.9	26.0	26.1
<b>Public Finance (percent of GDP)</b>											
Central government											
Revenues and grants	25.0	24.2	22.4	26.2	26.7	24.6	24.2	23.8	23.8	23.8	23.8
Total expenditure	27.9	27.9	33.6	30.5	26.2	25.6	25.3	25.7	26.0	26.2	26.2
Overall balance	-2.9	-3.6	-11.3	-4.4	0.6	-0.9	-1.0	-1.9	-2.2	-2.3	-2.4
Structural balance 1/	-3.1	-3.9	-10.3	-4.2	0.0	-1.2	-1.2	-2.0	-2.2	-2.3	-2.4
Interest payments	2.2	2.1	2.1	2.1	1.9	1.9	1.8	1.7	1.7	1.8	1.8
General Government											
Overall balance	-3.6	-3.9	-10.8	-3.7	0.6	-1.1	-1.6	-2.4	-2.7	-3.0	-3.1
Structural balance 1/	-3.8	-4.2	-9.5	-3.5	-0.2	-1.5	-1.9	-2.5	-2.7	-3.0	-3.1
Debt	59.9	58.8	70.6	68.0	61.0	57.9	55.7	55.0	54.7	54.6	54.5
<i>Of which:</i> Foreign currency external debt	8.4	7.7	11.3	9.4	8.8	7.7	6.1	5.7	5.2	4.6	4.2
<b>Balance of Payments (percent of GDP)</b>											
Current account balance	3.0	3.5	5.5	4.3	3.7	4.1	3.9	3.8	3.6	3.5	3.4
Goods and services balance	0.9	2.0	4.4	3.9	3.1	3.1	2.9	2.8	2.6	2.5	2.3
Exports of goods and services 2/	29.9	29.3	27.7	29.5	31.9	29.7	28.9	28.7	28.5	28.2	28.1
Real growth rate (percent)	5.7	3.7	-2.7	14.6	8.3	-1.9	1.6	3.3	3.4	3.5	3.5
Export prices growth (percent)	1.4	0.9	-0.2	10.4	6.5	-2.4	-0.6	0.2	0.2	0.4	1.0
Imports of goods and services 2/	29.0	27.0	23.2	25.5	28.6	25.6	24.8	24.6	24.6	24.5	24.5
o/w Oil imports (billions of U.S. dollars)	9.7	9.2	5.5	9.0	13.3	10.4	10.1	10.2	10.3	10.4	10.6
Real growth rate (percent)	7.2	3.2	-8.1	20.6	11.7	-2.9	2.4	4.6	4.6	4.5	4.5
Import prices growth (percent)	3.7	-2.7	-4.7	8.4	7.1	-1.8	-1.1	-0.6	-0.5	-0.1	0.6
Foreign reserves (eop, US\$ billions)	115.3	126.0	173.3	213.0	194.2	198.7	207.6	216.8	226.3	237.1	248.9
<b>Exchange Rate</b>											
NIS per U.S. dollar (period average)	3.59	3.56	3.44	3.23	3.36	...	...	...	...	...	...
Nominal effective exchange rate (2010=100)	118.6	123.5	129.1	135.0	140.1	...	...	...	...	...	...
Real effective exchange rate (2010=100)	106.3	109.1	111.5	114.3	114.6	...	...	...	...	...	...
Terms of trade (2010 = 100)	95.3	98.7	99.5	93.2	87.5	...	...	...	...	...	...

Sources: Bank of Israel; Central Bureau of Statistics; Haver Analytics; and IMF Staff estimates and projections.

1/ Percent of potential GDP.

2/ National Accounts data.

Approved By  
**Helge Berger (EUR)**  
**and Stephan**  
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Discussions took place in Jerusalem and Tel Aviv during May 1–11, 2023. The staff team comprised Messrs. Segoviano (head), Druck, Hassan, and Mazzone (all EUR). Mr. Tsur (OED) joined the discussions. Ms. Gao, Gonzales, Jarin, Vega, and Mr. Borraccia assisted in the preparation of the staff report. The staff met with Bank of Israel’s Governor Yaron and senior representatives, Minister of Finance Smotrich and senior representatives of the Ministry of Finance, the National Economic Council, the Ministry of Energy and Infrastructure, the Ministry of Environmental Protection, the Ministry of Transportation and Road Safety, the Ministry of Health, the Ministry of Labor, the Israel Tax Authority, the Capital Markets, Insurance and Savings Authority, the Israel Securities Authority, the General Labor Union, think tanks, associations, and other private sector representatives.

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## CONTEXT

**1. A new government coalition took power last December.**<sup>1</sup> Among the key policy initiatives are:<sup>2</sup>

- *Judicial reform*, with two main objectives: (i) reconfiguring the Committee for the Selection of judges providing for six out of eleven of its members to be from the governing coalition;<sup>3</sup> (ii) limiting the Supreme Court's authority to strike down laws, while empowering the Knesset (parliament) to either overrule such decisions or preemptively shield legislation from judicial review, in both cases by a simple majority.<sup>4</sup>
- *Policies to address the increase in the cost of living*, including improving market competition, by removing imports barriers and increase financial market competitiveness.
- *Transfers* to make child-care more accessible and for orthodox education.
- *Structural reforms*, including improving safeguards to ensure infrastructure projects are completed, and a reform of the property tax structure to promote house development.

**2. The proposed judicial reforms have triggered large-scale protests and social confrontation.** Widespread criticism from civil society groups, opposition politicians, and the international community, has focused on the scale of the proposed changes and the speed with which these changes have been proposed to Knesset.

**3. High economic growth masks the dual nature of Israel's economy with highly unequal economic performance across sectors.** While overall GDP in 2022 was about 13 percent higher than its pre-Covid level, with growth mainly driven by the highly productive high-tech sector—representing about 17 percent of GDP, 10 percent of total employment, and 56 percent of total exports—other sectors struggled to recover (Figure 2).

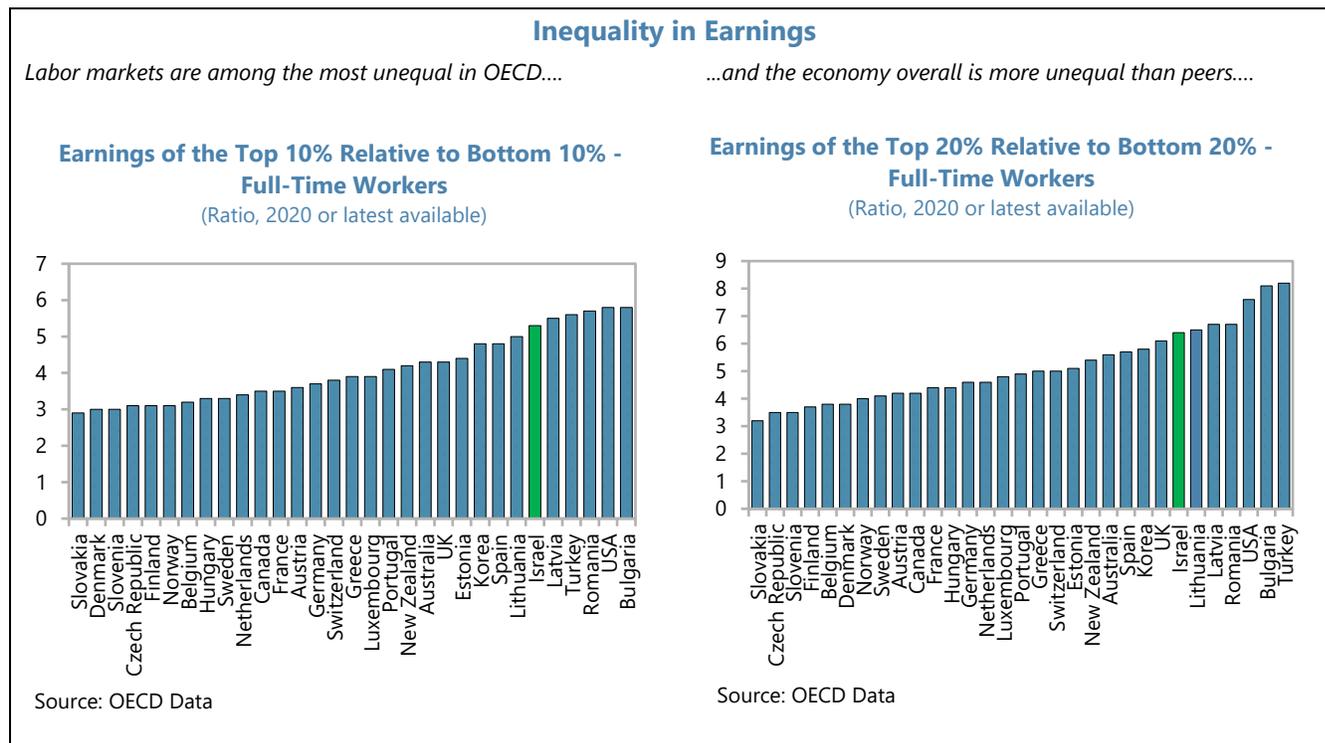
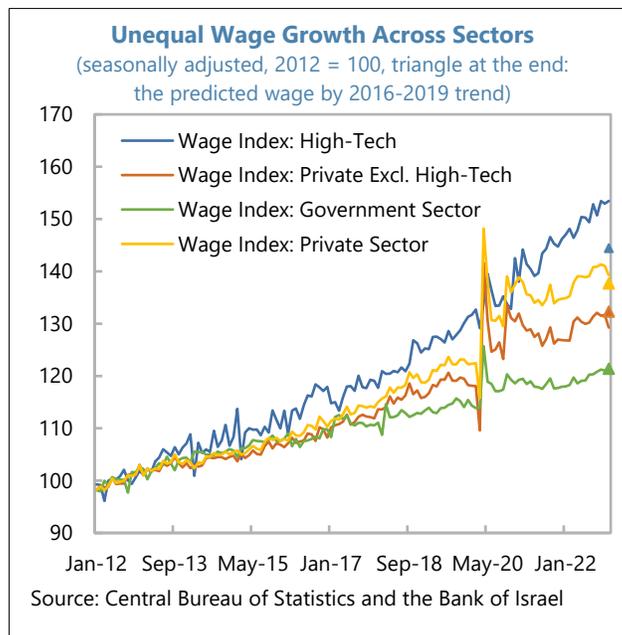
<sup>1</sup> The coalition is made up of the Likud, Religious Zionism, Shas and United Torah Judaism parties.

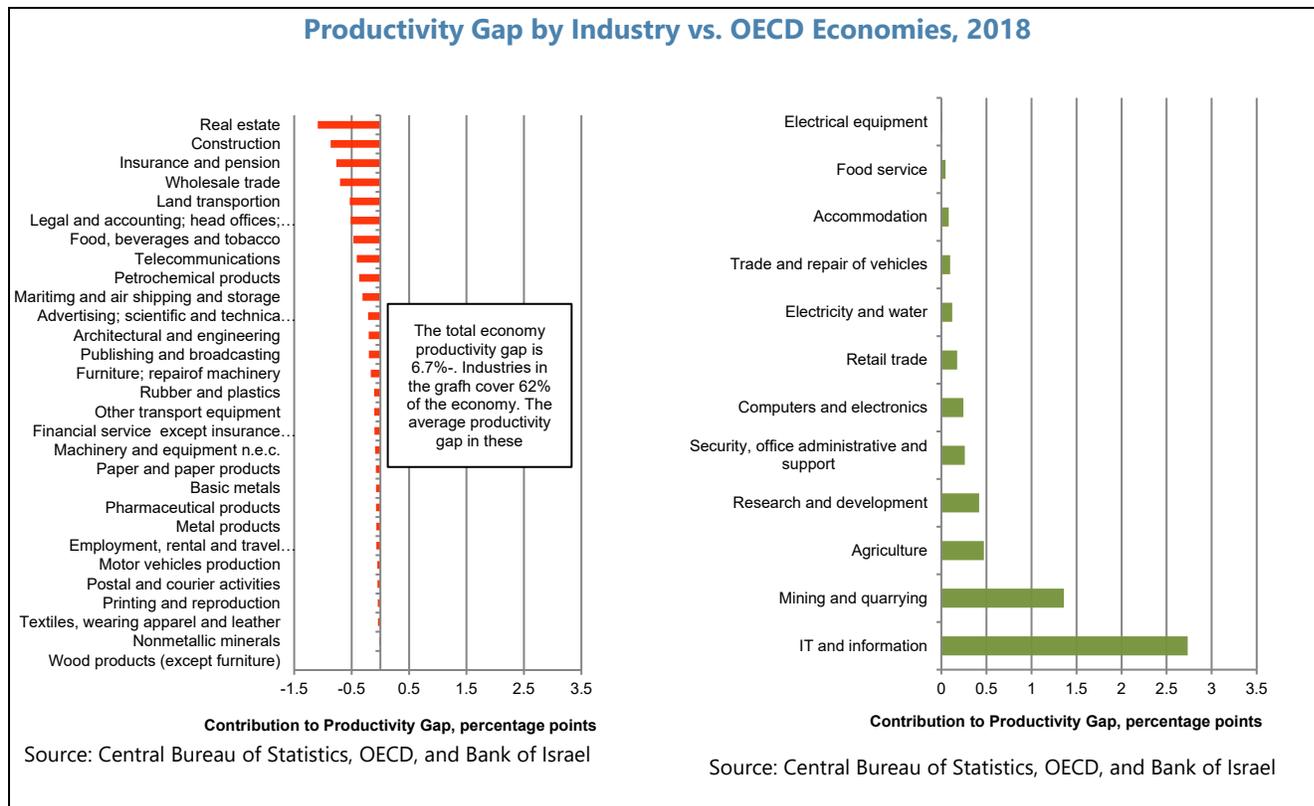
<sup>2</sup> The budget was still under discussion when this report was completed; therefore, revisions to proposed reforms embedded in the budget cannot be ruled out once negotiations are finalized.

<sup>3</sup> Under the most recent proposal as of late April 2023, the Committee would have 11 members: three from the Judicial, three government ministers and five members of Knesset (three from the governing coalition and two from the opposition). The first two supreme court judges' appointments in any given Knesset term can be approved by a simple majority of the Committee's members. If a third appointment is needed it must be approved by at least one Committee member from the opposition. If a fourth appointment is required, it must be approved—in addition—by a committee member from the Judicial.

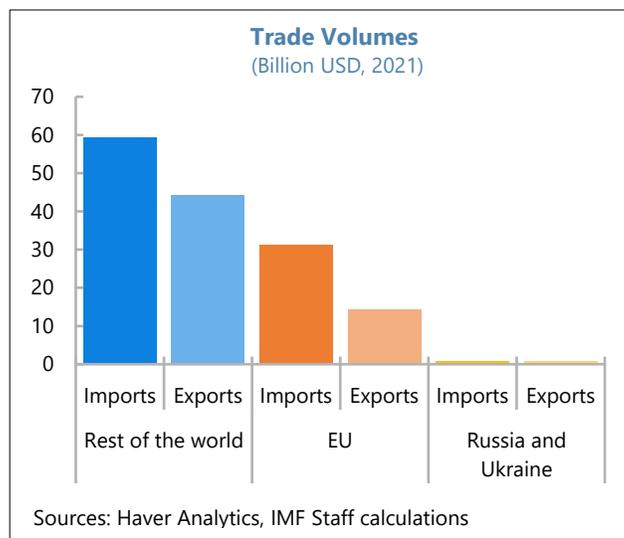
<sup>4</sup> For example, the full Supreme Court panel must sit for this decision, which must be approved by 12 out of its 15 members. Laws can only be stricken down (i) if they were not approved by the required parliamentary majority or (ii) when a Basic Law specifically contains provisions describing the cases in which it can be contravened.

**4. The asymmetric growth dynamics are contributing to relative high inequality compared to other OECD countries.** Israel leads other advanced economies in research-intensive sectors but there are significant productivity gaps in the rest of the economy (see text chart on Israel Productivity Gaps), exposing the Israel dual economy that explain the high inequality among OECD countries. Additionally, low labor market participation rates and skills among the Arab-Israeli and Haredi populations remains a significant challenge. Underfunding of active labor market policies and poor targeting of education spending have limited integration of the most vulnerable in the economy.





**5. Russia’s war in Ukraine has impacted trading partners, but spillovers have been limited so far.** Israel’s direct trade exposures to countries in the conflict are minor. Spillovers have so far been contained by the relative smaller share of trade with the rest of Europe. Israel’s energy dependence is moderate, with local production covering more than half of domestic consumption. The war increased immigration from Ukraine and Russia.<sup>5</sup>

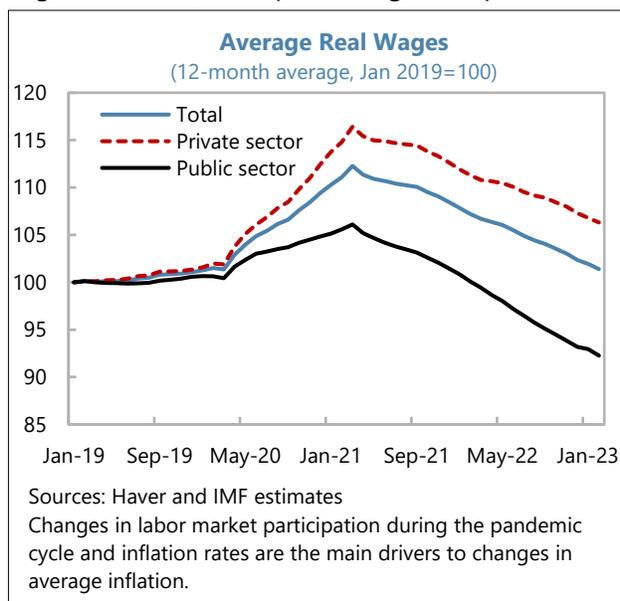


<sup>5</sup> Media reports suggest about 70 thousand people of working age (or 1 percent of Israel’s labor force) arrived from the conflict region in 2022.

## RECENT ECONOMIC DEVELOPMENTS

**6. Israel's impressive economic performance continued in 2022.** GDP increased 6.5 percent, led by domestic demand, with an increase in investment—broadly split between residential and nonresidential infrastructure—and consumption—due to an increase in employment and higher economic activity—with a minimal contribution from the government, as fiscal consolidation gained pace. External demand was negative on net, as imports outgrew exports. 2023:Q1 figures show that the economy started to slow.

**7. With the strong recovery from the pandemic, the labor market remains tight, with some differences across sectors.** As labor force participation recovered during 2022 and vacancies levels declined, unemployment slightly increased to 4.2 percent in December, from about 3.5 percent in July 2022 (Figure 4). However, the recovery in employment has been uneven. While employment in the construction and high-tech sectors has surpassed its pre-covid levels, other sectors are still lagging. Amid high inflation, private sector real wages have fallen but remain above their pre-covid levels, while public sectors wages have dropped below.

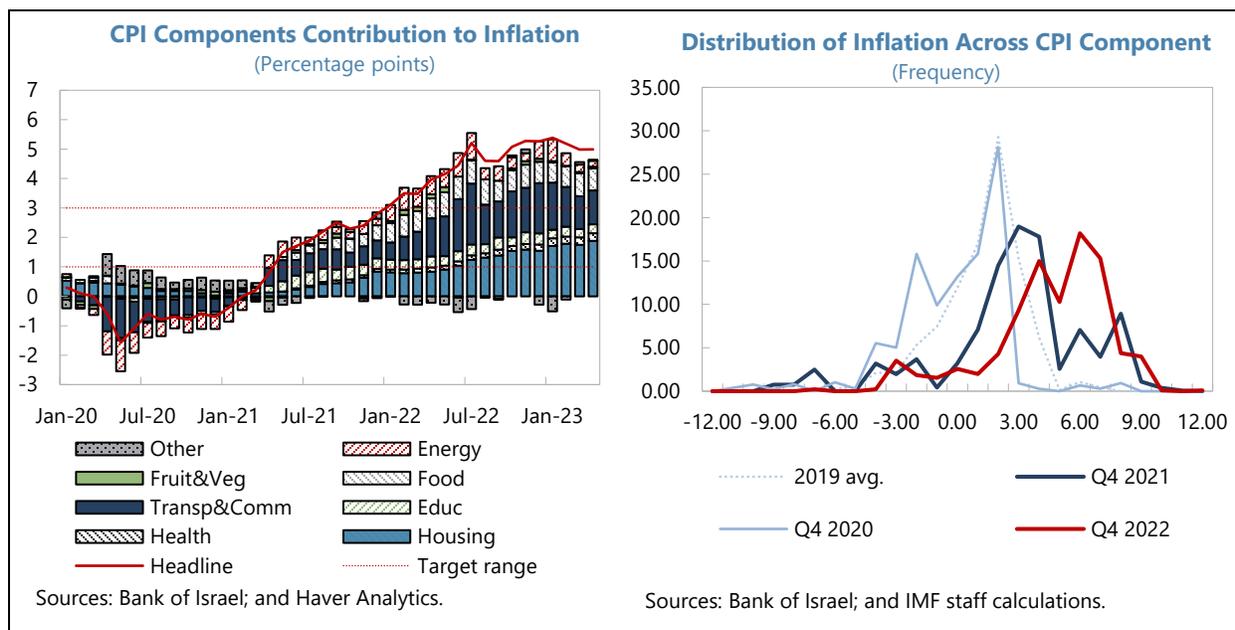


**8. Inflation is above target.** Headline inflation breached the upper bound of the target range (of one to three percent) in January 2022 and reached 5.4 percent y-o-y twelve months later, driven by increasingly broad-based price rises across tradables and non-tradables, before easing in the first quarter of 2023 (5 percent y-o-y as of April). Core inflation has oscillated around 5.1 percent between Q4–2022 and Q1–2023.<sup>6</sup> (Figures 3–4.) The largest driver of (core and headline) inflation has been housing, as rising



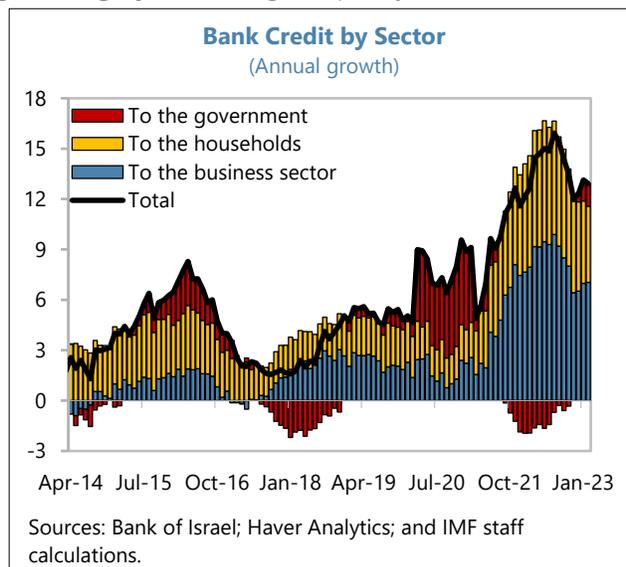
<sup>6</sup> Headline inflation has relatively small contributions from energy; hence the similar dynamics between headline and core inflation (see text chart). Israel is largely self-sufficient in natural gas, with prices fixed through long-term contracts between large buyers and domestic producers (last renewed in 2021, before the surge in natural gas prices in 2022).

prices pull housing-related services;<sup>7</sup> but inflation has reflected rising prices in all main categories of Israel's CPI.<sup>8</sup>



**9. The central bank has embarked on a tightening cycle, raising the policy rate from 0.1 in April 2022 to 4.75 percent by May 2023.** Near-term inflation expectations (one year ahead) fell back to the target range in late 2022—broadly moderating, but remaining near the upper bound of the target range and uncertain in the near term (Figure 3).

**10. The financial system has supported robust economic activity.** Loosening financial conditions up to mid-2022 reflected low funding constraints (Annex IX). Loan books grew rapidly, with annual growth in total credit outstanding peaking at 15.9 percent in July 2022, driven mainly by a 24 percent increase in loans to the business sector across all activity

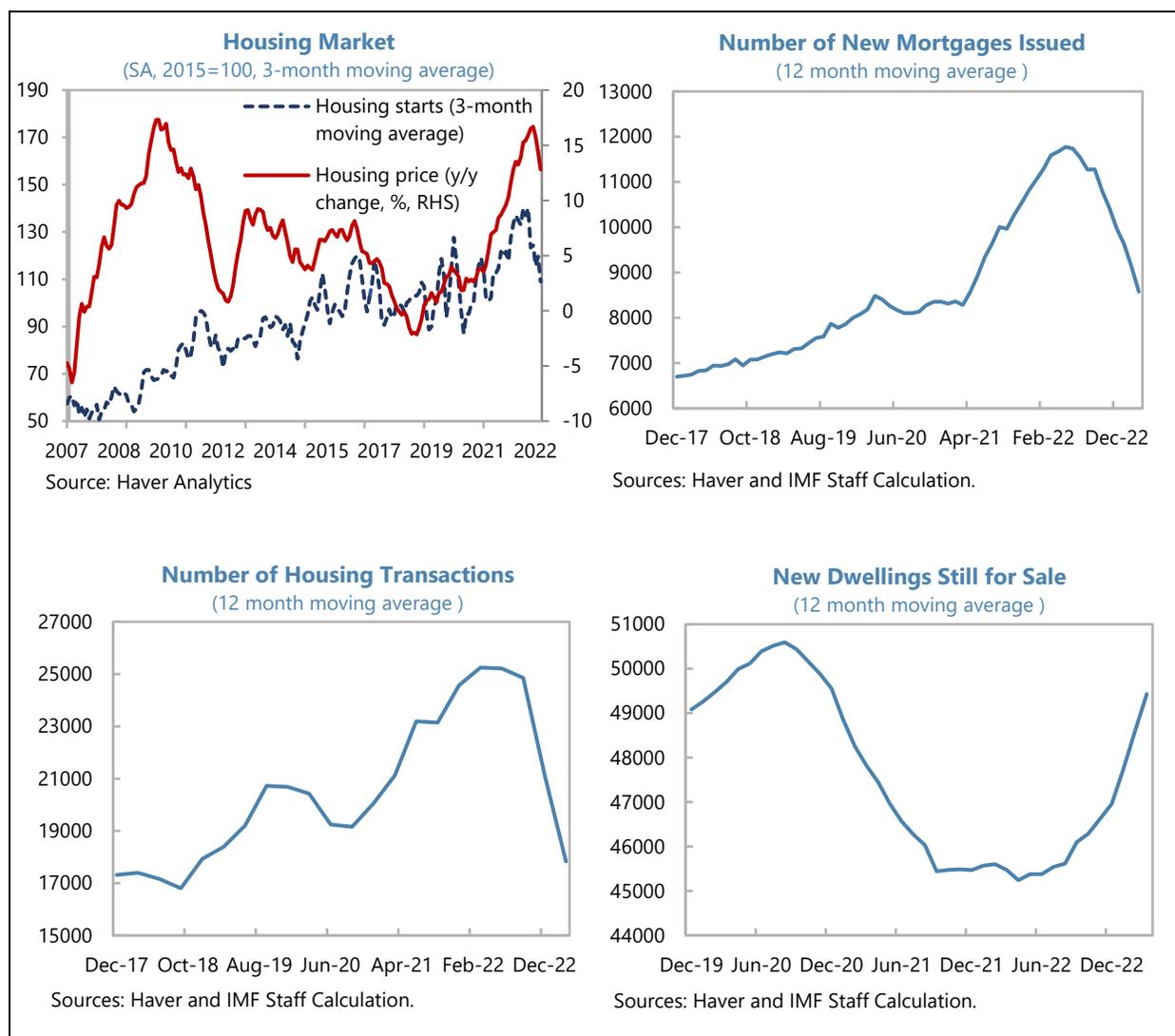


<sup>7</sup> Housing has a weight of 24.73 in Israel's headline CPI. It consists of owned dwelling services, rent, and other housing expenses. Year-on-year inflation for the first two sub-components (the bulk of the housing component) was still rising by January 2023. Rents can be expected to continue to rise further in the short term, given the combination of increased mortgage rates with still high house prices. The large contribution from transport and communication is primarily from rising domestic prices of private vehicles, with the anticipation of higher taxes on vehicles from early-2023 prompting front-loaded demand in 2022.

<sup>8</sup> As shown in the text chart, the distribution of price changes across all components of the CPI moved further to the right during 2022, showing year-on-year inflation above target for a larger mass of components, and fewer components of the CPI with falling prices and low inflation.

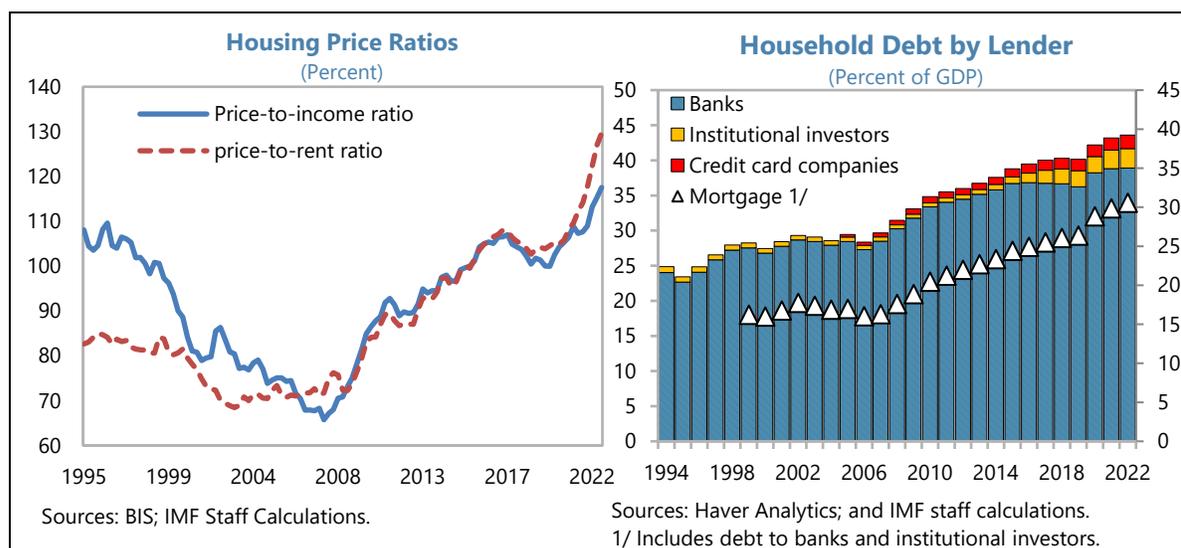
segments. Nonetheless, sectoral leverage ratios remain comparatively low, with household and non-financial corporate debt to GDP at about 44 and 70 percent, respectively.

**11. Housing price and mortgage credit growth remained buoyant in the first half of the year but have started to ease thereafter.** Housing price growth reached 20 percent in September 2022 y-o-y with the overall house price level increasing by 17 percent for the year. Mortgage credit growth reached 17.7 percent y-o-y in May with overall growth of 13.8 percent for the year.<sup>9</sup> However, amid the rapid rise in lending rates driven by the increase in the policy rate by the BOI and the tightening of financial conditions, the rate of housing price growth started to decelerate from October. Mortgage credit growth, issuance of new mortgages, and total housing transactions started to gradually decline during 2022, while the stock of new dwellings for sale is rising. In parallel, building starts increased significantly in 2022 (to the highest level since the mid-1990s).



<sup>9</sup> Housing loans grew 11.6 percent y-o-y in February 2023.

**12. Persistently strong house price growth has stretched affordability.** Average household indebtedness in Israel—about 44 percent of GDP—is low compared to the rest of Europe, but lower income households and those that purchased in overvalued areas or at the maximum of their budget are particularly vulnerable to price shocks, rising interest rates, and tightening financial conditions with potential spillovers to the real economy. Rising house prices pushed the price-to-rent and price-to-income ratios to a zenith in 2022 (albeit below the OECD average).



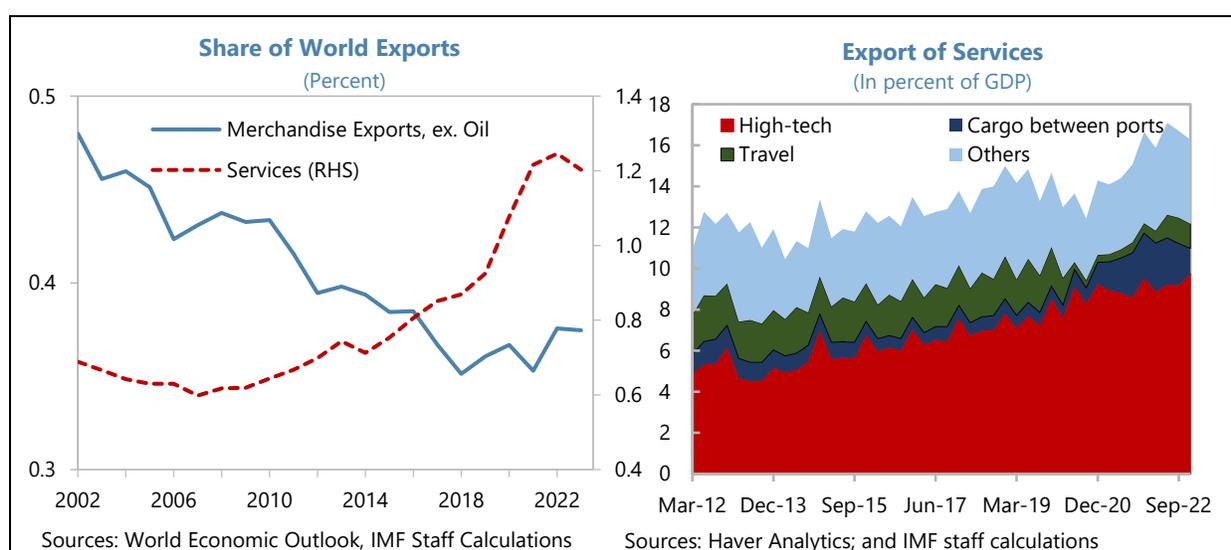
**13. The retightening of macro-prudential measures contributed to containing unwarranted risk taking.** Risk taking increased during a temporary relaxation of macroprudential measures adopted in response to the Covid-19 shock. These were re-tightened by end-2021 (Annex II).<sup>10</sup> An increase in the volume of new loans with high LTVs (defined as those between 60 and 75 percent, partly a reflection of the very fast increase in house prices) during early 2022 has reversed, with the average LTV on new housing loans stable around 55 percent. However, the average PTI reached 27.9 percent—increasing one percentage point during the first three quarters of 2022 alone—albeit with a significant increase in the share of loans with PTI between 30 and 40 percent, which is about 48 percent. Rising average debt payments-to-income reflect the impact of rapidly rising interest rates on monthly mortgage payments and the high degree of indexation, with purely fixed rate loans accounting for about one-quarter of mortgage balances.

**14. Amid buoyant growth, the 2022 fiscal outturn was better than expected and the replenishment of fiscal buffers accelerated.** The general government fiscal balance improved from a deficit of 3.7 percent of GDP in 2021 to a surplus of about 0.6 percent of GDP in 2022, explained by the reduction of Covid-related programs of about 3 percent of GDP, with tax buoyancy due to the strong recovery that further increase revenue during 2022, by about 0.8 percent of GDP, from already high levels observed in 2021, and a reduction in other spendings of about 0.4 percent

<sup>10</sup> Israel has a rich set of macroprudential policy measures to contain risks emanating from the housing market. These include caps on loan-to-value (LTV) ratios, and risk weights which increase with LTVs—reaching 75 percent for LTVs above 60 percent, which also trigger additional provisioning. The payment-to-income (PTI) ratio on new loans is capped at 50 percent, with a capital surcharge for those between 40 and 50 percent.

of GDP. The small fiscal surplus combined with the strong economic growth have helped to rebuild fiscal buffers in terms of debt-to-GDP ratios, which fell from near 71 to about 61 percent of GDP from 2020 to 2022 (Figure 5).

**15. The overall external position remains strong.** Driven by the vibrant high technology sector, Israel's share of world service exports continues to grow rapidly. As a result, the current account registered another surplus in 2022 (3.7 percent), despite the deficit in merchandise trade. The net international investment position remains positive (32 percent of GDP by end-2022), gross external debt is sustainable (about 30 percent of GDP), and gross international reserves (37 percent of GDP at end 2022) are comfortably above standard adequacy metrics. Staff assess the external position in 2022 to be stronger than fundamentals and desirable policy settings (Annex 1, Figure 6).



## OUTLOOK AND RISKS

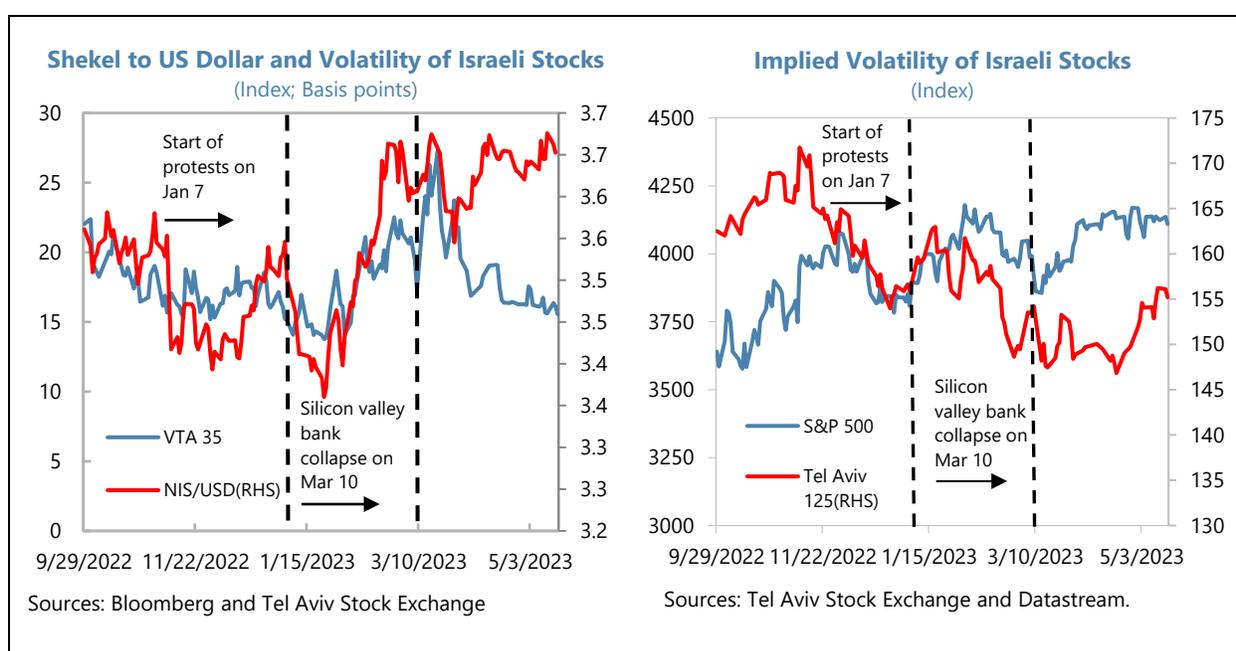
**16. Economic growth is expected to slow in 2023 and thereafter converge towards its potential.** Staff projects economic growth to slow to about 2.5 percent in 2023, as households purchasing power moderates and firms rein in investment, reflecting declining real wages and high interest rates. Despite some moderation, the labor market is expected to remain tight. Amid increasing labor force participation, the unemployment rate is expected to marginally increase. Fiscal policy will be supporting growth in 2023, even though fiscal buffers are expected to be maintained as public debt to GDP is projected to decrease further and stay below 60 percent. The external sector is projected to remain robust, with a moderate surplus in the current account, positive NIIP, sustainable external debt, and ample international reserves. As domestic demand recovers, the growth rate is anticipated to converge towards its potential rate; thus, closing the output gap in the medium term.

**17. Inflation is projected to reach the target range by end-2024,** as the tighter monetary stance acts—with a transmission lag of one-to-two years—on all demand-sensitive components of

the CPI, the output gap narrows, and as the effects of global supply disruptions dissipate. In the near term, imputed rents will remain a key driver of core and—subject to uncertainty about future commodities prices—headline inflation. Some pass-through of the shekel depreciation during the first half of 2023 is also expected to force headwinds on a faster return of inflation to target.<sup>11</sup>

### 18. Risks to the outlook are tilted to the downside and risks to inflation to the upside.

Spillovers from a weaker global outlook remain a downside risk. Economic activity and inflation could negatively be affected by a renewed surge in global energy prices, new supply chain disruptions or an increase in geopolitical tensions—including by a possible escalation of Russia' war in Ukraine, and possible broader geo-economic fragmentation. Heightened global financial volatility due to stress in foreign banking sectors could negatively impact pricing and availability of financing. Rising geopolitical tensions, or a falling interest rate differential versus major central banks, could exert further depreciation pressure on the shekel.



### 19. Continued uncertainty around the judicial reform presents a notable downside risk.

Absent the emergence of a durable and politically sustainable solution, high levels of uncertainty could persist and negatively affect economic activity. While it is very difficult to project the impact of uncertainty on economic activity, continued uncertainty could significantly increase the price of risk in the economy, which could tighten financial conditions and ultimately slow consumption and investment. Among the specific channels through which investment could be affected is the relocation of high-tech firms which, to different degrees, conduct cross-border activities, rely on international financing, and employ skilled, highly internationally mobile workers. If a large enough

<sup>11</sup> Research shows a faster and larger (positive) pass-through of the shekel exchange rate to inflation, than the (negative) pass-through from the policy rate of interest to inflation. See Ribon, S, 2021, Inflation and Monetary Policy, in Ben-Bassat, A., R. Gronau and A. Zussman (eds), The Israeli Economy, 1995–2017 (Cambridge: Cambridge Univ Press), and [recent estimates](#).

number of firms in the sector relocated, Israel's strong economic growth potential could be jeopardized, as the stock of capital and labor market productivity could be permanently damaged.

**20. Estimates of the impact on economic activity depend on how quickly uncertainty resolves.** BOI analysis links uncertainty around the judicial reform to increases in Israel's risk premium, adverse impact on exports, and declines in domestic investment and private consumption. Depending on the magnitude and persistence of these effects, the overall impact is estimated to lower the level of GDP by between 0.8 to 2.8 percent per year over a three-year period. Staff estimates based on the impact of a tightening of financial conditions on aggregate demand broadly confirm the order of magnitude of these effects (Annex VI). Following a different framework, staff from the Ministry of Finance (MOF) [estimates](#) a fall of about 0.8 percent in potential real GDP per capita.

### **Authorities' Views**

**21. The authorities agree with the staff's overall outlook and risks,** including from spillovers from a weaker global outlook and that continued uncertainty from the judicial reform would impact the economic activity. They noted that the diversified high-tech sector, strong buffers and prudent macroeconomic policy implementation place Israel in a good standing to face risks.

## **POLICY DISCUSSIONS**

*The significant policy actions already taken to protect buffers, reduce inflation, and maintain macrofinancial resilience remain broadly appropriate, but policy should stay agile to manage risks, while enhancing potential growth. Decreasing uncertainty related to the judicial reform will help contain risks to the outlook.*

**22. A lasting reduction of the uncertainty associated with the ongoing discussion of judicial reform is important to anchor the baseline.** Permanently lowering the uncertainty around judicial reform requires a politically sustainable solution that is clearly communicated and well understood both domestically and abroad. Also, as in any country, maintaining strength of the rule of law would be important for economic success.

## A. Fiscal Policy

**23. Staff assesses the fiscal stance to be appropriate.** The stronger-than-anticipated fiscal consolidation in 2022 allowed rebuilding fiscal buffers faster than envisaged. With a structural deficit projected at 1.5 percent of potential GDP in 2023—up from a deficit of 0.2 percent of potential GDP in 2022—the fiscal stance is projected to be expansionary. However, the widening of the deficit—in part due to the extraordinary revenues that lowered the deficit level in 2022—comes at a time of decelerating domestic demand, and the level of the structural deficit is expected to remain well below pre-pandemic levels—that averaged about 3.5 percent of GDP during 2017-19. The primary balance is

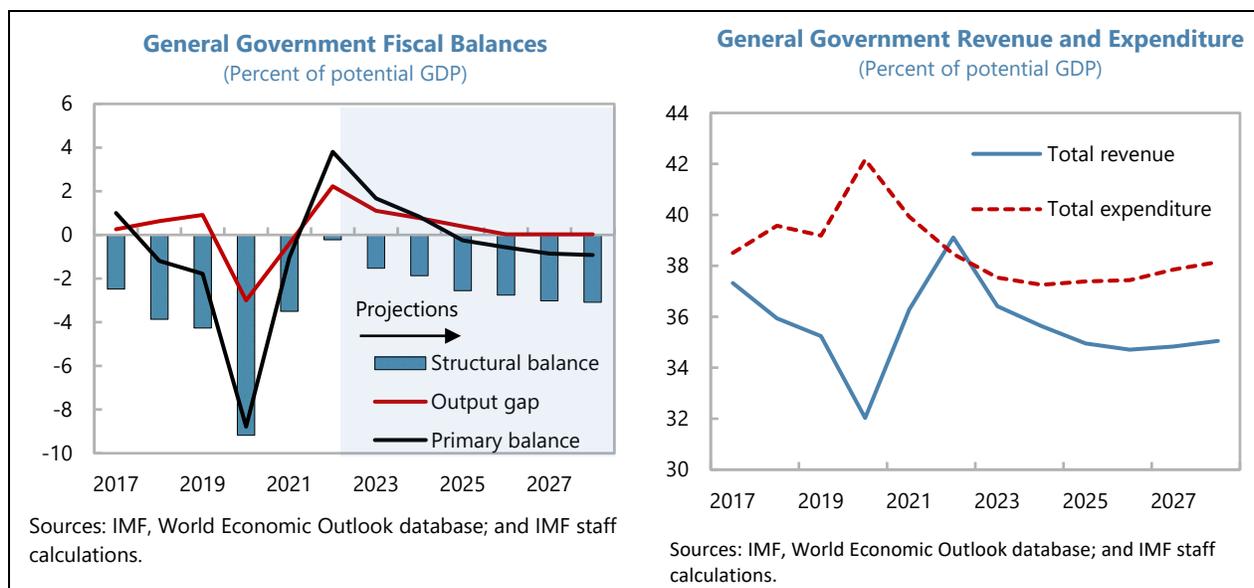
projected to be a surplus at 1.7 percent of GDP in 2023. Overall, staff views the fiscal stance as appropriate as it protects fiscal buffers, supported by conservative spending plans reducing expenditure to its lowest level in about 20 years.<sup>12</sup> However, care should be taken to protect growth-enhancing spending, including on education that provides market-relevant skills and infrastructure. For the medium term, revenue in terms of GDP is expected to continue falling broadly converging to its pre-pandemic level. As fiscal spending in terms of GDP is expected to remain low and broadly stable, the structural deficit is expected to converge to about 3 percent of GDP by 2028, while debt ratios are expected to continue falling to reach about 55 percent of GDP by 2028.

**24. But additional fiscal space will be needed to support growth-enhancing spending and the authorities' climate goals** (Section F).<sup>13</sup> Staff analysis suggests that additional government investment could boost GDP growth and reduce inequality. Further resources would be needed to support the authorities' climate agenda, including for accelerating investment in transport infrastructure, funding R&D in green technologies and for adaptation strategies.

General Government Expenditure (In percent of GDP)			
	2010-19	Est. 2022	Proj. 2023
<b>Total expenditure</b>	<b>38.0</b>	<b>36.8</b>	<b>36.6</b>
<b>Expenditure</b>	<b>38.0</b>	<b>37.3</b>	<b>36.7</b>
Compensation of employees	10.0	9.0	9.0
Purchases/use of goods & services	6.4	6.0	6.0
Interest	2.9	3.4	2.9
Social benefits	12.0	12.0	12.0
Expense not elsewhere classified	6.7	6.9	6.7
<b>Net acquisition of nonfinancial assets</b>	<b>0.0</b>	<b>-0.5</b>	<b>-0.1</b>
Sources: Ministry of Finance and IMF estimates.			
General Government Revenue (In percent of GDP)			
	2010-19	Est. 2022	Proj. 2023
<b>Revenue</b>	<b>35.9</b>	<b>37.4</b>	<b>35.5</b>
Taxes	25.3	27.8	25.9
Social contributions	5.9	5.6	5.5
Grants	1.1	0.8	0.8
Other revenue	3.6	3.2	3.2
Sources: Ministry of Finance and IMF estimates.			

<sup>12</sup> Further reduction in spending would likely need, against staff recommendations, a cut in capital spending (projected at about 2.7 percent of GDP in 2023) as civil spending of the central government (projected at about 21.3 percent of GDP in 2023) is already at low levels as noted by the authorities.

<sup>13</sup> Israel invested in transportation infrastructure on average of 1 percent of GDP per year during 2017–21. However, according to estimates of the BOI, Israel would need to invest in transportation infrastructure a yearly average of about 2–3 percent of GDP to close the gap with other developed countries.



**25. Israel should proactively take additional revenue measures to finance growth-enhancing spending while maintaining robust buffers.**

These include the possibility to raising tax revenue by increasing low-bracket tax rates while increasing the earned income tax credit to protect lower-income taxpayers; reducing tax incentives for selected groups and streamlining tax exemptions. On the corporate side, profit-base corporate tax incentives could be scale back while also increasing effective rates for intellectual property, and streamlining VAT exemptions.

**26. To reinforce the conduct of fiscal policy, additional measures should be considered.** These include:

- *Measures to strengthen the fiscal framework.* A review of the fiscal framework to assess whether fiscal rules are binding, flexible, and transparent. To support the budgetary planning of growth-enhancing expenditure, including infrastructure projects and education; a framework to define priorities across competing needs could be developed. In this context, the “projections procedure” that provides MOF staff independence in the estimation of macroeconomic and financial projections is helpful. A mechanism to ringfence allowances for infrastructure and education projects could also be considered, while keeping fiscal envelope that protect fiscal buffers. This could improve transparency of available funding in the medium term, and support budgetary planning and implementation.
- *The establishment of an independent fiscal council should be considered,* to serve in an advisory role. It could propose criteria for projects to be included under the allowance for growth-enhancing measures and assess their enforcement. The council could also evaluate

<b>Capital Expenditure(GG)</b> (In percent of GDP)			
	Transport	Other	Total
2017	0.8	2.2	3.0
2018	0.7	2.4	3.1
2019	1.0	1.9	3.0
2020	1.4	2.1	3.6
2021	1.3	1.9	3.2
2022 1/	1.2	2.1	3.3
2023 (Proj.)	1.1	1.8	2.9
2024 (Proj.)	1.2	1.8	3.0

Sources: CBS, Ministry of Finance, and IMF staff calculations.  
1/ Total expenditure is actual data, expenditure in Transport and Others are estimates.

the fiscal stance, assess budgetary forecasts, and monitor the fiscal rule; and it could advise the government on the reprioritization of spending, including growth enhancing measures or further reduction of debt. Safeguards to guarantee minimum qualifications and avoid council members' conflicts of interest should be considered.

### **Authorities' Views**

**27. The authorities agree on the need to protect fiscal buffers and to increase growth-enhancing expenditure.** The MOF and the BOI view the fiscal stance to be adequate. On the process for budgetary planning, some view the framework as adequate, while others consider that improvements can be done to define priorities across competing needs and to ringfence allowances for growth-enhancing expenditure. There was consensus that any change should keep fiscal envelopes that protect fiscal buffers. On the fiscal council, the MOF considers the current framework as adequate. In others' view, a council could play a valuable advisory role.

## **B. Monetary and Exchange Rate Policies**

**28. The central bank has appropriately moved the monetary policy stance above neutral; it should maintain this stance while underlying inflation pressures remain strong.** Inflation continued to increase as of January 2023 (y-o-y), but at a slowing pace, and may have peaked, while inflation expectations (one-to-two years ahead) have, since end-2022, dropped back into the inflation target range. Yet, staff assesses the output gap as still positive; and the labor market, while cooling, remains tight. The real policy rate turned positive around November 2022 and staff estimates that the monetary policy stance became tight around January 2023.<sup>14</sup> Given a transmission lag from the policy rate to inflation of about one to two years, it would be prudent to keep the policy rate elevated and restrictive, ensuring the monetary policy stance stays tight until there are clearer signs that aggregate demand is cooling.<sup>15</sup> BOI should stand ready to further hike the policy rate if inflation surprises on the upside or if inflation expectations rise past the target band again, while underlying pressures remain strong, risking de-anchoring—a present risk due to exchange rate turbulence.

**29. Market forces should be allowed to continue to set the price of the shekel.** Amid elevated levels of domestic uncertainty and global financial volatility, the exchange rate has been volatile and depreciated, adding to inflation risks. Market forces should be allowed to continue to set the price of the shekel, with interventions limited to addressing disorderly market conditions.<sup>16</sup>

<sup>14</sup> Staff's estimates of the neutral real rate of interest in Israel suggest a likely (but very uncertain) range between 0 and 1. See Annex VI of the 2022 Staff Report, and [Ilek and Segal \(2022\)](#).

<sup>15</sup> Staff estimates indicate that the current level of the policy rate (4.75 percent) is roughly in the vicinity of the optimal level for Israel. These estimates are based on a standard New Keynesian model, with adaptive learning (instead of rational expectations), as featured in Annex X.

<sup>16</sup> FXI may be appropriate under certain shocks and circumstances, as outlined in the IMF's Integrated Policy Framework (IPF) ([IMF 2020a](#), [2020b](#)).

## **Authorities' Views**

**30. The BOI agrees with staff's assessment that the monetary policy stance needs to remain tight while underlying pressures remain high.** The BOI sees inflation as likely to have peaked and estimates output growth to converge to trend before end-2023. On balance and considering the risks to inflation, the BOI favors maintaining a tight stance and stands ready to increase further the policy rate, if needed. The authorities do not envisage intervening in the FX market under current conditions (unless markets become disorderly). They agree the external position is strong, but do not view the exchange rate—whose value is set by the market—as necessarily under- or overvalued.

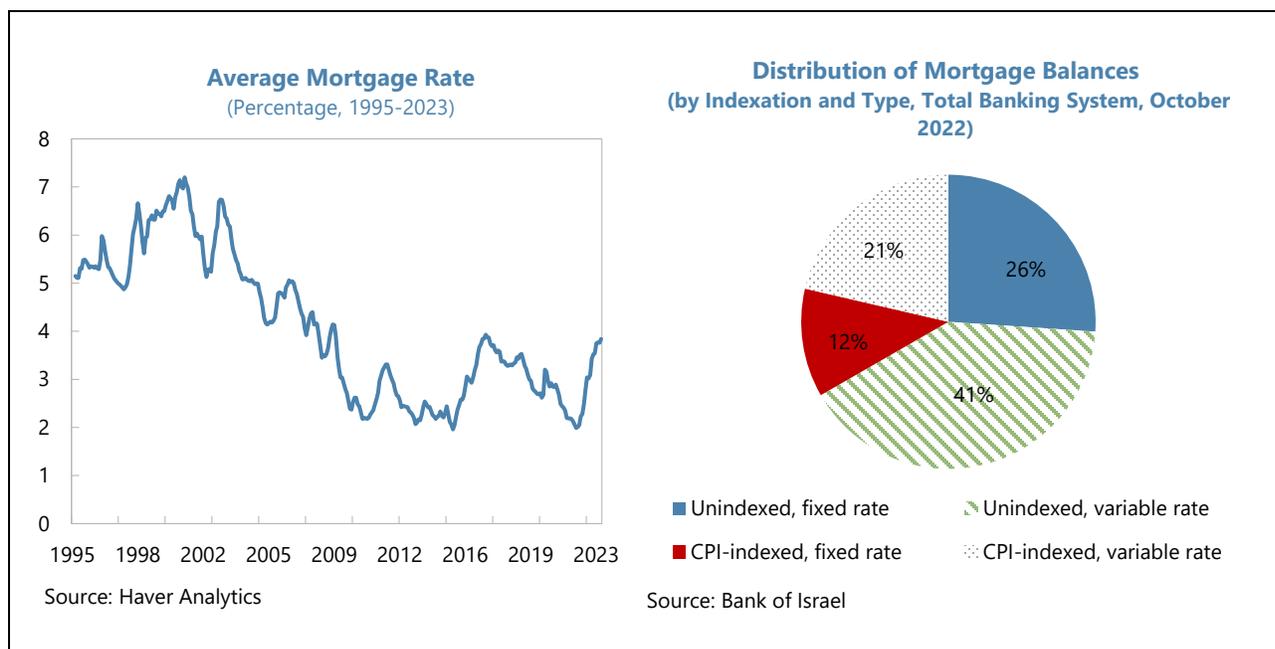
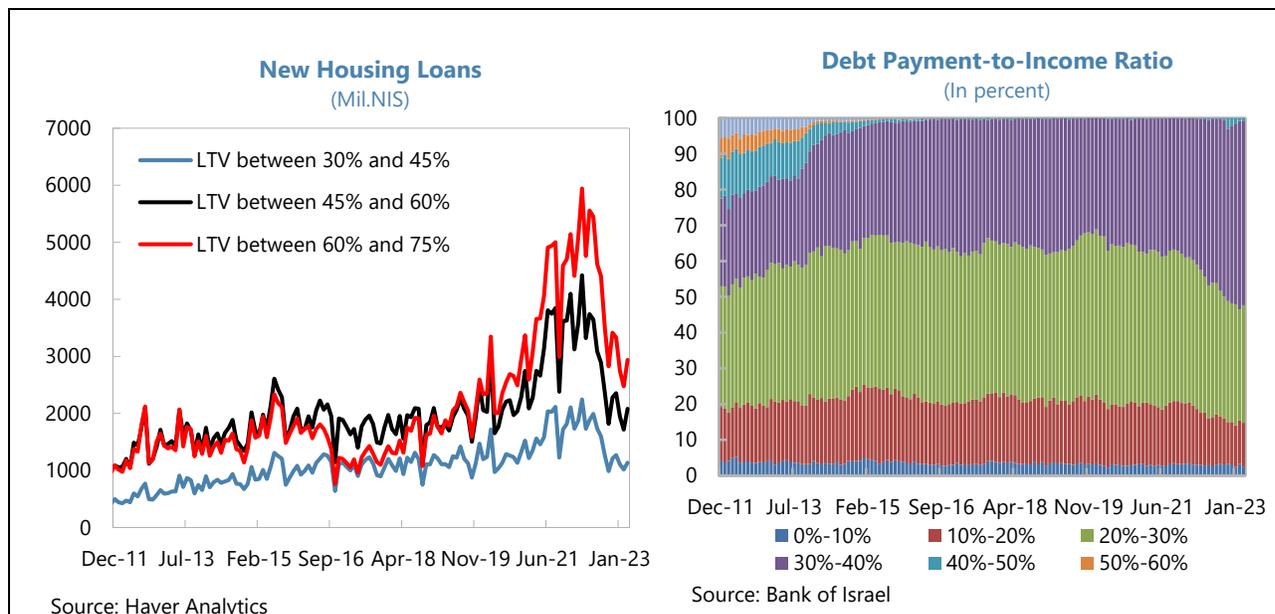
## **C. Macprudential and Real Estate Policies**

**31. Debt servicing capacity should be monitored.** While retightened borrower-based measures are increasingly binding for a growing number of borrowers, close monitoring of debt-servicing is warranted, especially if further increases in interest rates materialize or continued increases in the cost of living further limit the ability to service debt. Thus, further calibration of tools should be made conditional on sector specific developments, including risk-taking behavior and sectoral financial conditions (Annex IX). Borrower-based measures could be fine-tuned also to protect buffers and support new credit provision.

**32. Continued increases in the supply of housing could alleviate real estate price and affordability pressures.** Staff supports the authorities' plan to revise the property tax structure to boost housing supply. Local governments have a fiscal incentive to grant more building permits to business than to residential housing (because of favorable tax rates). To reduce this incentive, the government plans to establish a housing incentive fund, which will be allocated to the local authorities based on residential building permits. This fund will be financed by the business property tax and a supplement from the budget. These measures should be supported by investment in complementary infrastructure in areas where residential building is needed. Recent measures designed to encourage faster issuance of building permits and completion of projects should help reduce historically very long lags from planning to completion of construction.

## **D. Financial Sector Policies**

**33. Staff assesses the banking sector to be broadly robust.** The capital ratio in the sector was about 14 percent at 2023:Q3 with Tier I capital beyond minimum requirements. Banks' profits rebounded strongly in 2021 and 2022 with ROE and ROA well above pre-pandemic levels, driven by banks' surplus of CPI-linked assets over liabilities and improvements in operational efficiency. Liquidity coverage remained comfortably above the 100 percent minimum requirement with LCR at 125 percent in 2022:Q3, reflecting a high share of liquid assets and client deposits exceeding client loans. The net stable funding ratio was 126 percent for the average bank in 2022:Q3. The ratio of nonperforming loans to total loans in 2022:Q3 felt to a decade low (Figure 7).



**34. Nevertheless, pockets of vulnerability require close monitoring.** Bank loans for residential and commercial real-estate combined reached 54 percent of total in 2022:Q3, up by approximately 10 percentage points in the last five years. Against the backdrop of recent rapid house price increases, a sudden correction of real estate prices or a shock to household incomes jeopardizing their ability to repay could have a system-wide impact on regulatory capital buffers with potential spillovers to financial stability. While stress tests by the BOI indicate that banks have

sufficient capital to absorb shocks under a severe adverse scenario, lending to the private sector could be curtailed with spillovers to aggregate demand.<sup>17</sup>

**35. Staff welcomes the authorities' response to the buildup of risk but further improvements in risk measurement and management should be considered.** Staff welcomes the implementation of liquidity alerts to monitor liquidity risks. Given the importance of rebuilding buffers, staff supports the BOI's retightening of capital requirements and minimum leverage ratios during the post-pandemic rebound. Recent measures by the BOI to strengthen the management of credit risk (adopted in March 2022), including a requirement to allocate additional capital against highly leveraged land financing, are welcome. Making use of existing credit bureau information, staff recommends improving supervisory models for the measurement of risk at the individual exposure level to ensure adequate risk absorbing capacity in the system. This micro-prudential framework would complement the Israeli macroprudential tool set.<sup>18</sup> Moreover, staff suggests combining the proposed micro framework with macroprudential stress tests to quantify potential losses due to contagion across Israeli financial entities. A legal framework to clearly delineate activities and to clarify what are banks and non-banking institutions, including payment services, needs to be developed to enhance consumer protection and safeguard financial stability.

**36. Staff cautions against interference in the setting of market interest rates.** Recent initiatives to impose minimum payments on retail deposits and caps on mortgage rates would distort risk-taking and pricing mechanisms of banks, as well as the transmission of monetary policy. Such measures may also arbitrarily interfere with established contracts and market principles.

**37. Israel should continue strengthening its AML/CFT framework.** Authorities have improved the AML/CFT regime by strengthening risk-based supervision of some previously unregulated entities (dealers in precious metals). The regime should be strengthened further by inclusion of real estate agents, trusts and company service providers under the AML/CFT framework. Banks should continue applying enhanced due diligence and appropriately issue sufficiently dissuasive sanctions for failure to implement the AML/CFT preventive measures and ensure that beneficial ownership information is adequate, accurate and current. The same should apply to other financial institutions. All of these AML/CFT tools would also assist in strengthening Israel's anti-corruption efforts.

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<sup>17</sup> BOI's stress tests to be published in 2023, show that the banking system is stable under stress scenarios, which involve significant shocks from the current baseline—including drastic falls in activity and markets, significant rising of interest rates and persistent higher inflation—with none of the banks experiencing its capital ratio falling below the minimum common equity tier 1 capital ratio.

<sup>18</sup> Information in credit bureaus could allow developing risk measurement models to estimate probabilities of default and loss given default parameters at the individual exposure level, which could be used to estimate expected and unexpected losses; hence, estimates of provisioning and capital requirements for each individual at banks' portfolios.

### **Authorities' Views**

**38. The authorities broadly agree with staff's assessment.** The BOI agrees that the combined weight of mortgages and commercial real estate in banks' loan portfolios is high. They see the risks as well contained and asset quality as strong. Delinquencies are extremely low, the bulk of housing is owner-occupied, and mortgage loans are recourse. Stress tests indicate that banks—each of which is closely supervised by a team of on-site BOI officials—can withstand stress scenarios with capital staying above the minimum. The BOI will look into the merits of staff's recommendation to further enhance supervisory risk measuring.

### **E. Contingent Policies**

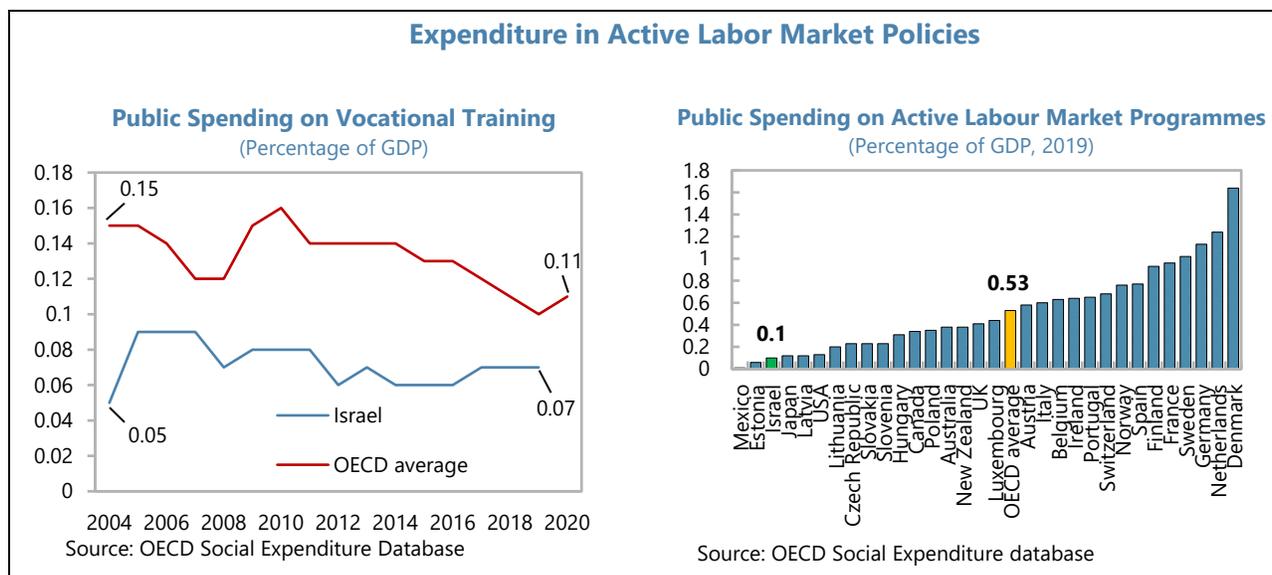
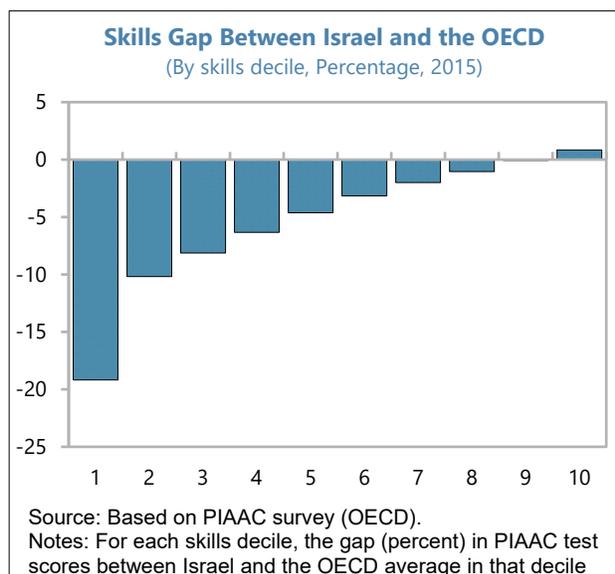
**39. If downside risks materialize with significant shocks to Israel's risk premium, policies need to remain nimble,** using the available policy space carefully and effectively, while securing medium-term sustainability.

- *Fiscal policy* can play a counter-cyclical role. If adverse shocks warrant going above the deficit or expenditure ceiling, it would be important to clearly communicate the reasons and the path for returning to the targets, with a view to securing medium-term fiscal sustainability and mitigating any impact on the country risk premium.
- *Monetary policy* should carefully balance risks to output, inflation and financial stability. BOI should stand ready to further tighten monetary policy if the inflationary effect of the shock (exchange rate) can be expected to dominate potential disinflationary effects (output, financial stability), impeding efforts to move inflation towards target. If growth decelerates substantially or inflationary pressures subside faster in a sustained manner, monetary policy can respond with a more accommodative stance.
- *Financial sector policies* should be adjusted to support credit provision, while protecting buffers and mitigating risks to financial stability. Calibrated and targeted fine-tuning of sectoral prudential policies may be appropriate to weather a severe downturn, but these should continue being coupled with enhanced supervision and an assessment of risks.
- *Foreign exchange intervention (FXI)* may be appropriate under certain shocks and circumstances. The IMF's integrated policy framework (IPF) outlines country characteristics, including financial frictions and vulnerabilities, and the nature of shocks that could warrant the use of FXI.

### **F. Structural Policies**

**40. Education reform and infrastructure investment would improve productivity, foster participation and prevent further widening of inequality.** Policies should focus on providing marketable skills, improving infrastructure, and removing product market barriers.

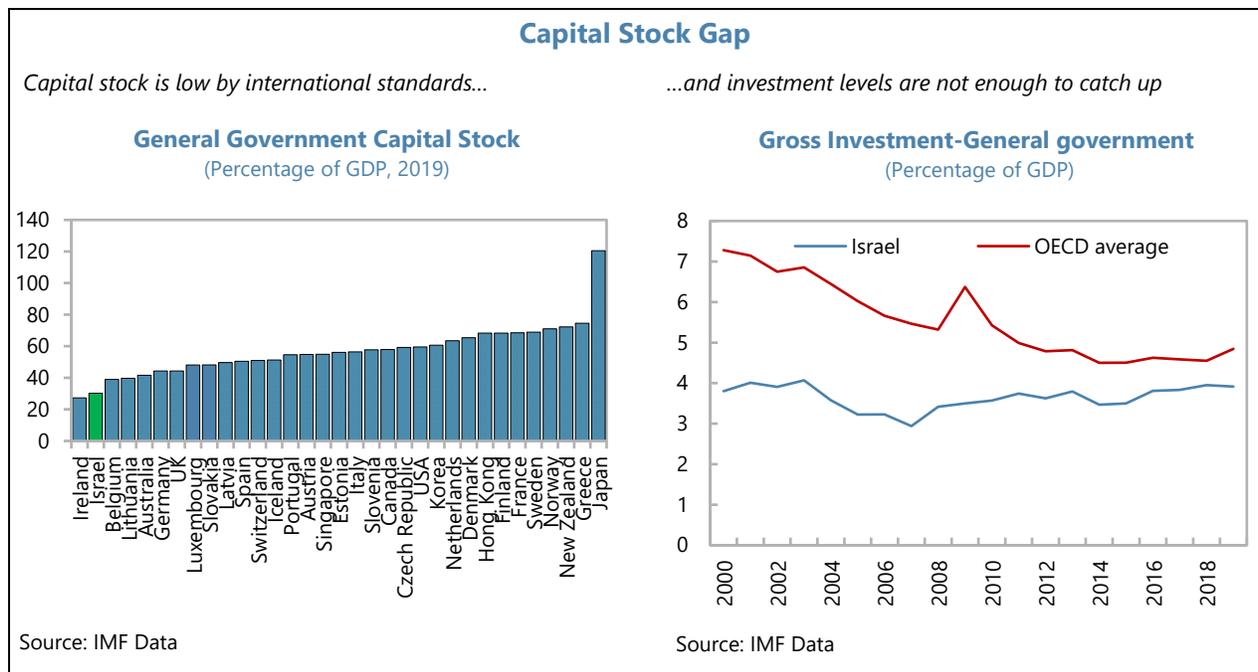
**41. Skill gaps need to be addressed to provide market relevant skills**, particularly among populations with low participation rates such as the Haredi and Arab communities, while making sure to keep gender opportunity equality in higher-education and in the workplace. The government should aim to allocate a significant portion of the added hours in the Arab schools to Hebrew language instruction, and to increase the study of subjects relevant to the labor market among the Haredi population, especially of men, literacy, mathematics, problem solving in a computerized environment, and English. A greater adaptation of the different education streams will be needed to help align student qualifications with increasingly digitalized labor market needs. Active Labor Market Policies should seek to expand vocational training and encourage employers' involvement in training programs.<sup>19</sup>



**42. Investment in infrastructure is accelerating, but the gap with advanced economies remains substantial.** The authorities have developed a multi-year strategy for increasing the development of infrastructure, "Infrastructure 2030." However, while infrastructure spending reached about 3 percent of GDP in 2021–22, it is projected to decrease in the 2023–24 budget. Given that the stock of public capital is notably below OECD averages, the budget allocations for capital investment need to increase markedly, especially considering population growth, which will increase

<sup>19</sup> See "Designing active labor market policies for the recovery," OECD (2021), available at: <https://www.oecd.org/coronavirus/policy-responses/designing-active-labour-market-policies-for-the-recovery-79c833cf/>

the demand for transportation infrastructure. Focusing on improving transportation networks in large cities is crucial to ease congestion, improve job accessibility and to reduce the pressure on housing markets. Upgrading digital infrastructure to expand access to digital networks in poor communities will support labor market participation and labor reallocation.



**43. Infrastructure spending can sustain inclusive growth, but spending efficiency is key for obtaining positive returns on public investment.** Staff analyzed the impact of sustained increases in infrastructure spending, incorporating in the analysis labor participation differences between low-skilled and high-skilled workers.<sup>20</sup> In the analysis, the high-tech sector grows at higher rates, as do the wages paid by high-tech firms, and wage inequality grows because more high-skilled workers are employed there. Staff finds that increasing public investment by 30 percent (from 2021 levels) would raise GDP growth in the long run by 10 percent, while reducing labor market inequality (Figure 9). Two risk factors potentially mitigate the positive findings. A sustained increase in global risk premia, and reduced spending efficiency (Figure 11).

**44. Further analysis suggests that dividends from education reform can have significant spillover effects,** because returns to capital spending are higher in presence of a more productive workforce. Staff analysis shows that improving education can positively impact labor supply. Hence, in an environment with a more educated workforce, infrastructure investment would have an even

<sup>20</sup> Staff calibrated a version of the Dignar model (Melina, Yang, and Zanna, 2016) to the Israeli economy including a tech sector and a non-tech sector, with different investment and productivity levels in equilibrium. The analysis included two types of workers: low-skill and high-skill, with the latter disproportionately employed in the tech sector (Annex VII).

stronger effect on dampening wage inequality. These results underscore the importance of addressing the structural determinants of skills gaps in the Israeli workforce (Figure 10).

**45. Advancing product market reforms remains important to boost competition and reduce the cost of living.** Reforms to decrease trade barriers should be maintained to reduce the cost of living. Staff welcomes improvements in product market regulation, including allowing the import of products that meet European Union standards, and the free trade agreements signed with the UAE, and South Korea as well as ongoing negotiations for a free trade agreement with the UK. Staff supports authorities' proposals to reduce regulation of parallel imports, removal of barriers to entry of service companies to Israel, the health insurance cost reduction reform and increased financial market competitiveness.

**46. The authorities should further advance measures to meet their commitments to reduce greenhouse emissions.** Staff welcomes planned measures to support the authorities' nationally determined contribution (NDC) commitments. Staff analysis indicates that the 2030 electricity sector target is feasible; however, without reductions in other sectors, the overall target appears difficult to reach (See Israel 2022 AIV SR). Staff therefore recommends enacting a climate law and defining a carbon pricing mechanism, taking into account energy security needs. These measures should be reinforced by fiscal incentives across different sectors to foster private sector investment in mitigation. It is also important to look for alternative approaches based on Israel's innovative technologies for which additional fiscal support for R&D would likely be needed. Further advancing a strategy to deal with climate adaptation is also recommended.

### ***Authorities' Views***

**47. The authorities agreed that increasing growth-enhancing spending, especially in education and infrastructure, is key to boosting growth and reducing inequality.** They emphasized that increased public spending should not happen at the expense of maintaining a solid budgetary framework. For this reason, education and infrastructure investment should be financed by a reallocation of spending or an increase in tax revenues. Authorities acknowledge the duality of the Israeli economy and underscored interventions tailored to reduce obstacles to employment in the Haredi and Arab population, while suggesting future measures to improve education outcomes and the acquisition of market-relevant skills.

## **STAFF APPRAISAL**

**48. Israel's economic performance in 2022 was remarkable, but economic activity is expected to decelerate.** Economic growth is projected to slow in 2023, as households' purchasing power is falling and firms rein in investment. Despite some easing, the labor market is expected to remain tight. Inflation is forecast to fall to the target range by end 2024. Over the medium term, growth is anticipated to converge towards its potential rate. Staff assesses the overall external position as stronger than the level implied by medium-term fundamentals and desirable policies.

**49. The fiscal stance is appropriate.** Rebuilt fiscal buffers should be protected while raising growth-enhancing spending, for which the authorities should proactively strengthen revenue

measures. To reinforce the conduct of fiscal policy, additional measures should be considered, including the possibility of establishing an independent fiscal council, a review of the fiscal framework to assess whether fiscal rules are binding, flexible, and transparent and a mechanism to ringfence allowances for infrastructure and education projects.

**50. The central bank has appropriately moved the monetary policy stance to restrictive territory.** Inflation is above target, driven by broad-based price rises. While inflation expectations are within the target range, the output gap is still positive, and the labor market remains tight. Recent shekel weakness adds further to inflationary pressures. The monetary policy stance should remain tight until there are clearer signs that aggregate demand is cooling. Market forces should be allowed to continue to set the price of the shekel.

**51. The macroprudential policy stance is adequate, and efforts to raise the supply of housing should continue.** The recent retightening of macro-prudential tools is helpful to contain unwarranted risk taking. Further calibration of macroprudential tools should be based on sector specific developments. Continued increases in the supply of housing will ease real estate prices and affordability pressures. Recent measures to boost supply should be supported by complementary infrastructure investment and the reduction of fiscal disincentives to residential construction at local authority level.

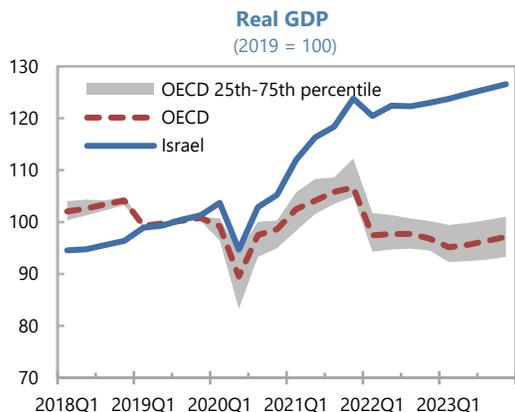
**52. Staff assesses the banking sector to be broadly robust, but pockets of vulnerability require close monitoring.** Banks are well capitalized and liquid, and overall household and corporate leverage levels are comparatively low, but concentration in the real estate sector is high. Credit bureau information should be used to strengthen the measurement of risk at individual exposure level (to ensure adequate risk absorbing capacity), as a complement to the macroprudential tool set.

**53. Structural reforms should focus on closing gaps in skills, stock of infrastructure, and market competitiveness.** Education reform should aim to expand the provision of cognitive and market-relevant skills. Active labor market policies, like the expansion of vocational training, can complement efforts in improving the job prospects of Israeli workers. Increasing infrastructure spending is crucial to promote labor reallocation and foster productivity. Reducing barriers to product market competition is key to address rising cost of living concerns.

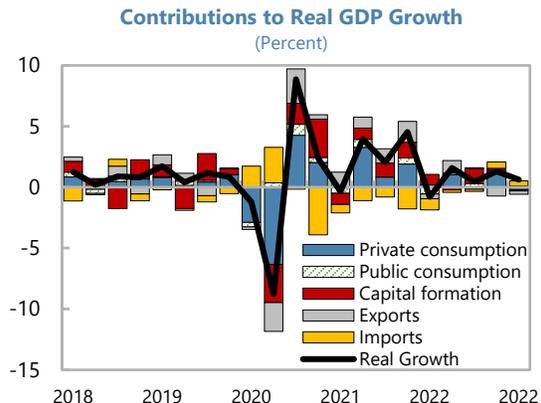
**54. It is proposed that the next Article IV consultation with Israel take place on the standard 12-month cycle.**

**Figure 1. Israel: Recent Economic Developments**

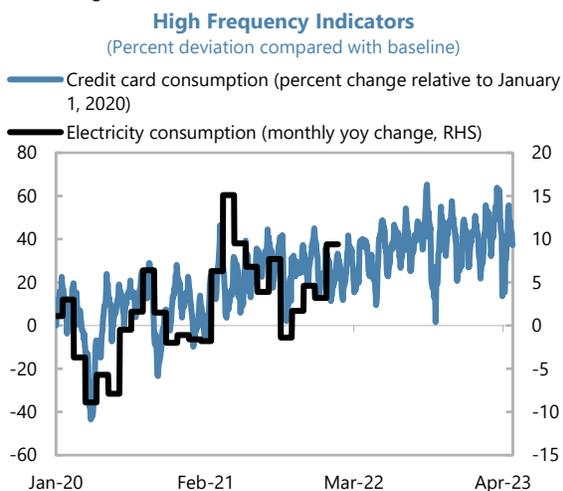
Israel fared well relative to other countries, with a more modest contraction and a stronger recovery...



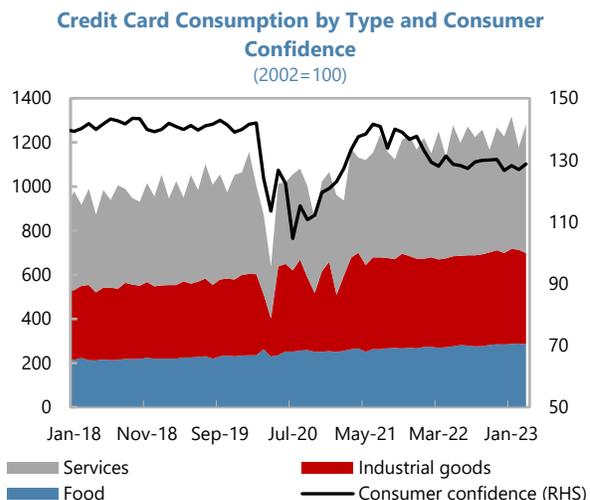
...as private consumption, investment and exports recovered.



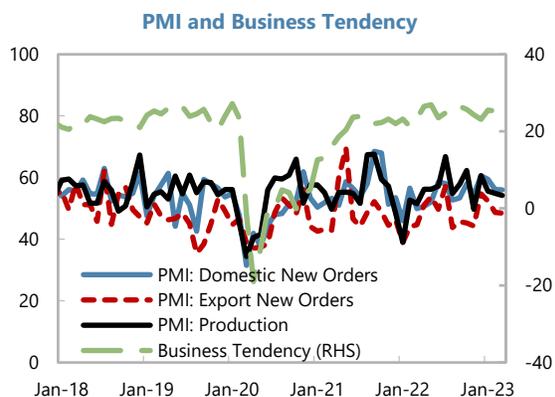
High frequency indicators are consistent with strong economic growth...



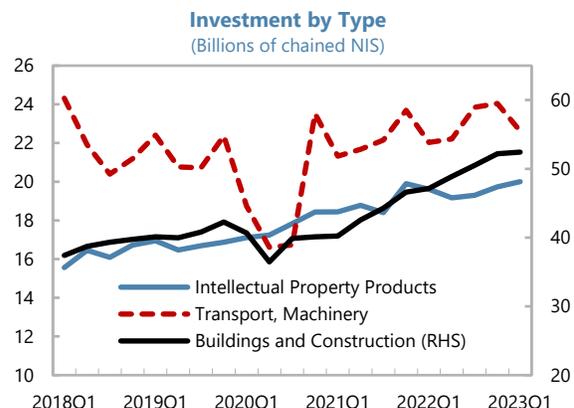
...which is also reflected in consumer confidence



Business confidence has recovered close to pre-crisis levels...



...and investment has recovered across sectors.



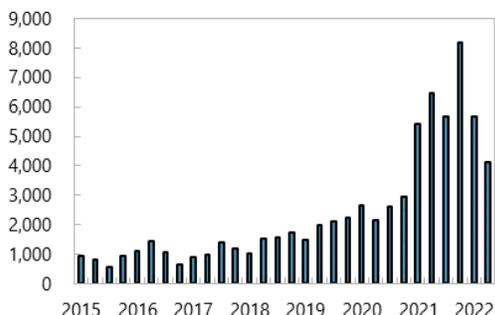
Sources: Bank of Israel; Haver Analytics; IMF, World Economic Outlook; IMF Staff calculations.

### Figure 2. Israel: High-Tech Sector Developments

Investments in the high-tech sector has declined but remains high.

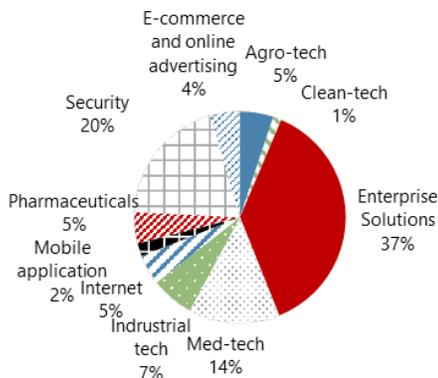
Investment is diversified within the sector.

Capital Raised by High Tech Companies in Israel



Source: IVC.

Company Distribution by Sub-Sectors



Source: Israel Central Bureau of Statistics

With higher investment, employment in the high-tech sector has been increasing.

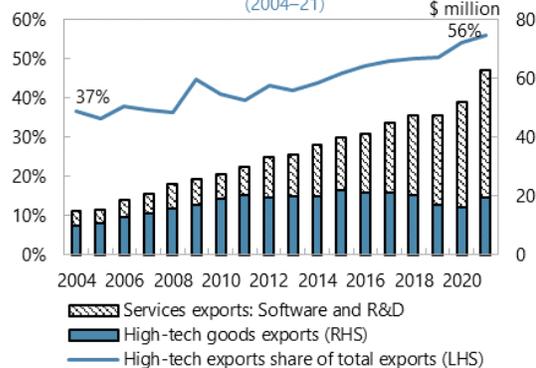
The expansion of the high-tech sector has contributed to the increase in export.

Number of Employees (In thousands)



Source: Israel Central Bureau of Statistics

High Tech Exports (2004–21)

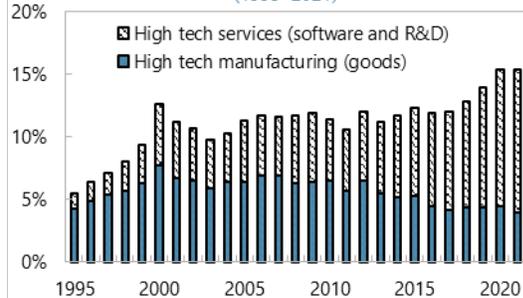


Sources: Innovation Authority and Central Bureau of Statistics.

The sector represents an important part of the economy.

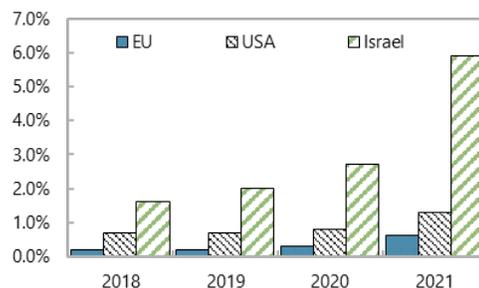
Comparing with other countries, Israel has received significant flows to finance the high-tech sector.

High Tech as Percent of GDP, by Industry (1995–2021)



Source: IVC.

Capital Raised as Percentage of GDP

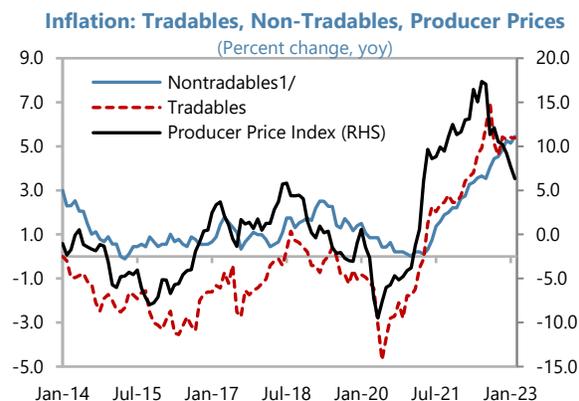
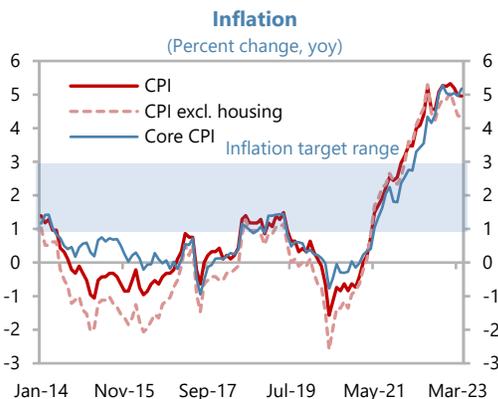


Sources: Innovation Authority, IVC Meitar, CBS, BOI, National Economic Council, TASE.

**Figure 3. Israel: Inflation and Monetary Policy Indicators**

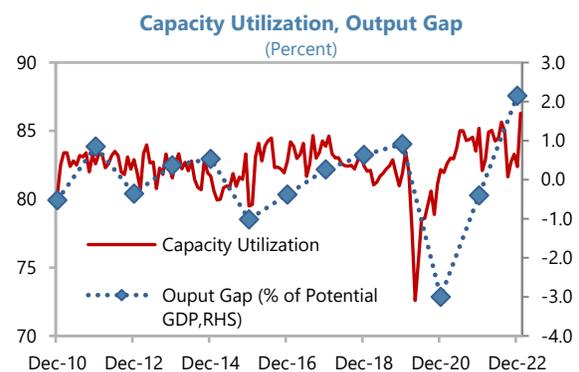
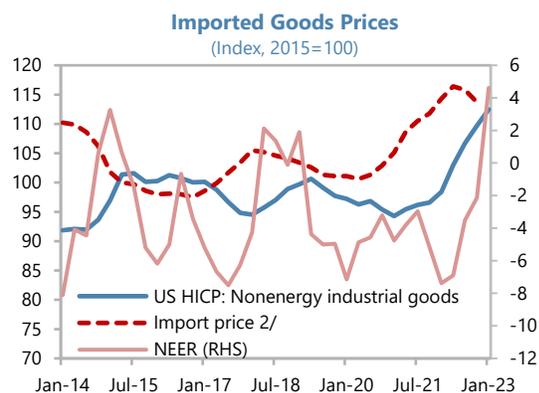
*Inflation breached the target band and remains above the upper bound...*

*...with prices of tradable and non-tradables rising (but PPI inflation falling)...*



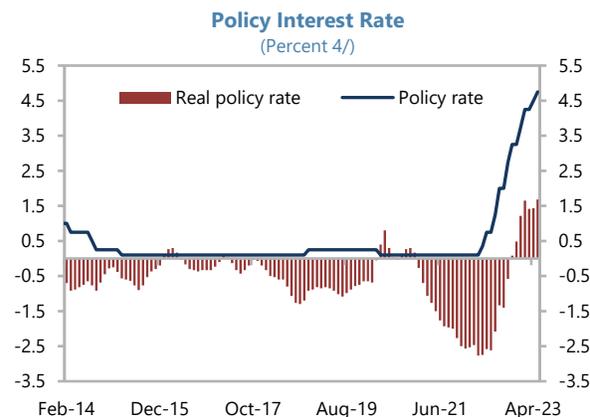
*...owing partly to external factors...*

*...but also strong domestic demand.*



*Inflation expectations (from markets) returned to the target band, after policy tightening...*

*...with eight consecutive hikes between Apr 2022 and Feb 2023, bringing the ex-ante RIR above zero and estimated neutral.*



Sources: Haver Analytics; Bank of Israel; IMF, World Economic Outlook; FRED; IMF Staff calculations.

1/ Excluding fruit and vegetables, and estimated impact of government measures.

2/ Excluding ships, aircrafts, diamonds, and fuel.

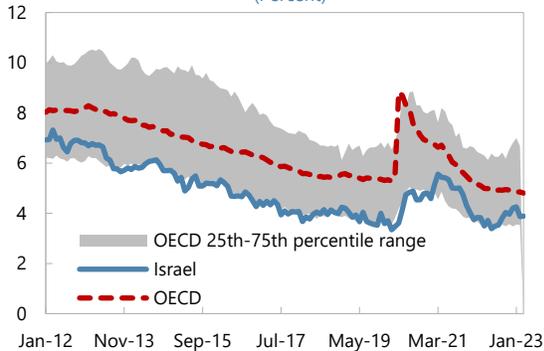
3/ Inflation expectations from capital markets.

4/ The real policy rate is calculated as the difference between the nominal policy rate and the three-month moving average of one-year ahead inflation expectations from markets.

**Figure 4. Israel: Labor Market Developments**

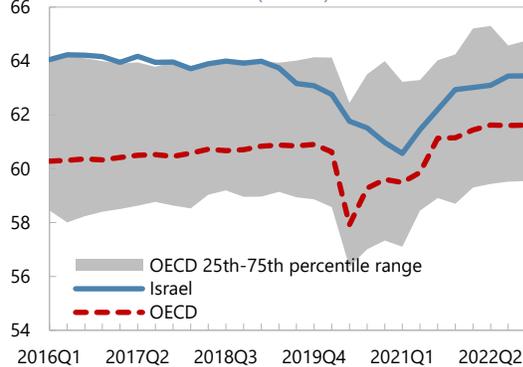
*As the recovery gained pace, unemployment decreased but started to stabilize by the end of 2022...*

**Unemployment (Percent)**



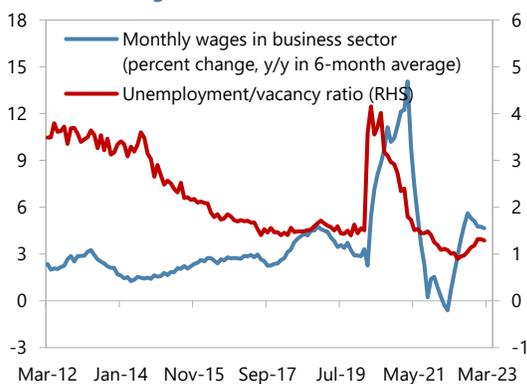
*...with labor force participation still below pre-pandemic levels.*

**Labor Force Participation (Percent)**



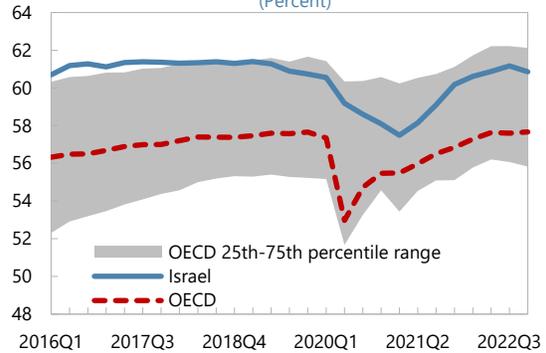
*The labor market remains tight...*

**Wages and Labor Market Slack**



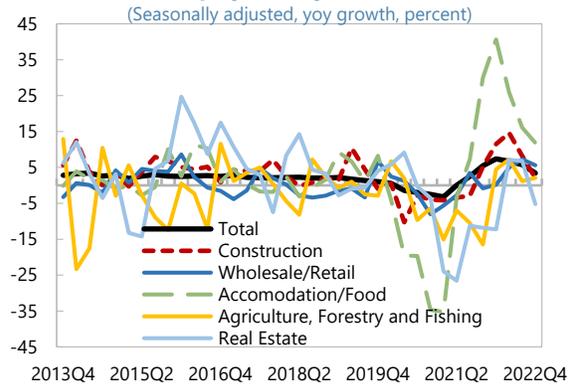
*and employment is recovering as in other advanced economies...*

**Employment (Percent)**



*Employment recovery has been uneven across sectors*

**Employment by Industries (Seasonally adjusted, yoy growth, percent)**



*...but job vacancies started easing across all sectors.*

**Job Vacancies by Industry (Index, 2019=100)**

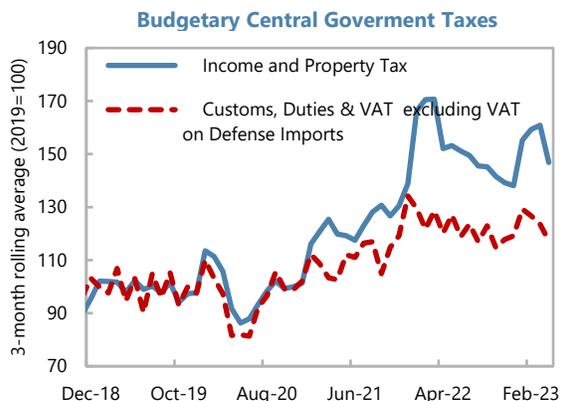
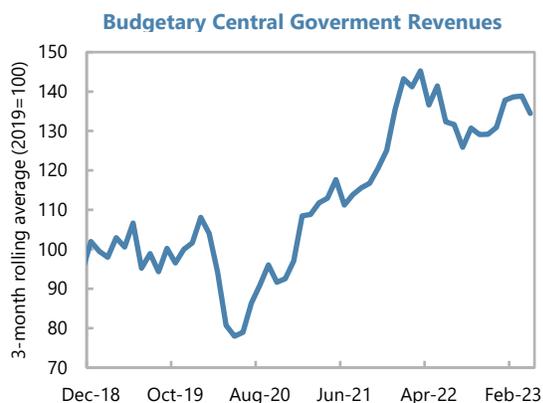


Sources: Haver Analytics; IMF Staff calculations.

**Figure 5. Israel: Fiscal Developments**

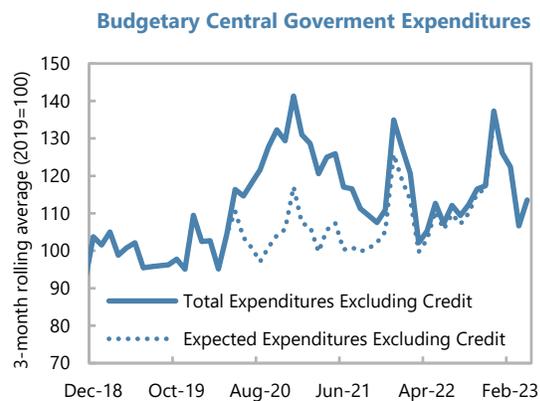
Government revenues are well above pre-crisis levels....

...with a sharp increase in direct taxes and a strong collection of indirect taxes.

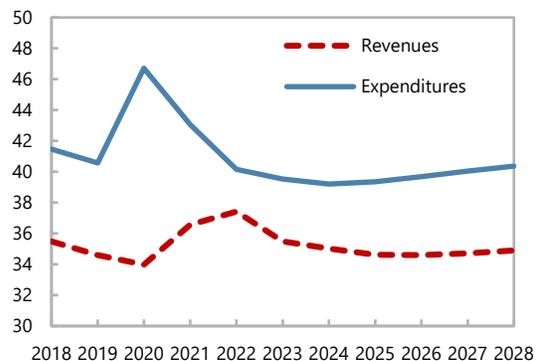


Government spending declined as pandemic-related spending was wound down.

Medium-term consolidation plans are largely based on expenditure restraint.

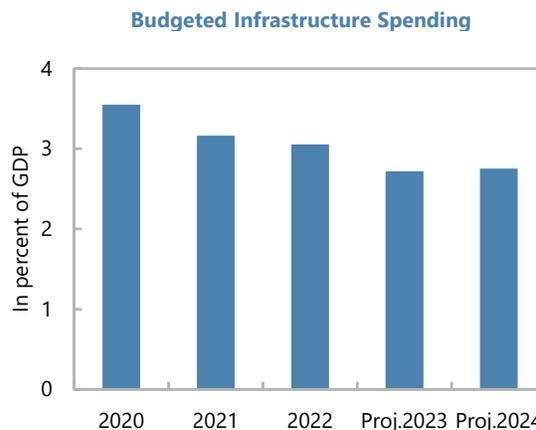
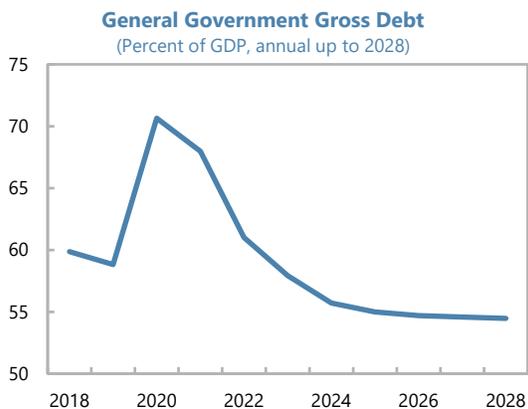


**General Government Revenues and Expenditures**



Government debt is on a downward path.

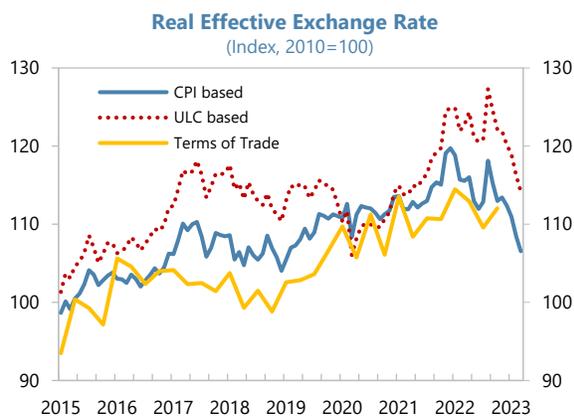
But there is little room to raise priority spending, such as infrastructure.



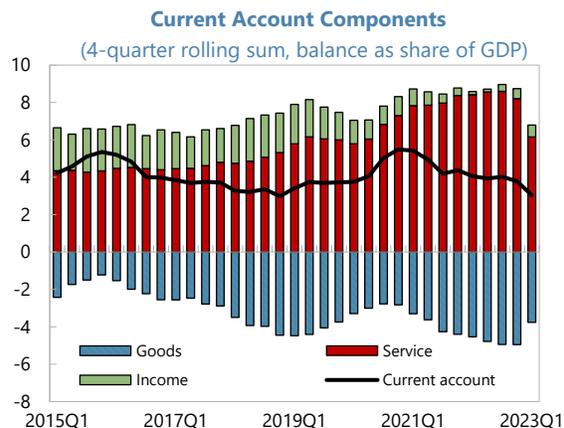
Sources: Ministry of Finance; IMF Staff calculation.

**Figure 6. Israel: External Sector Developments**

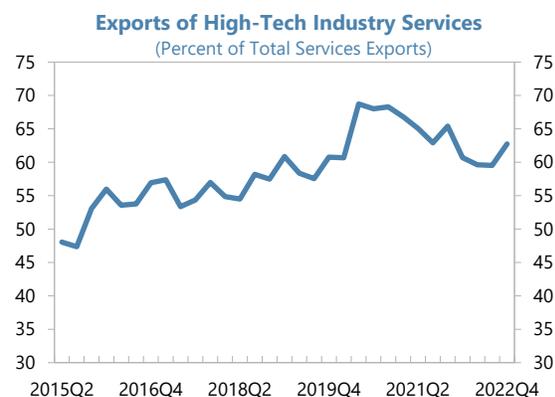
*Shekel depreciation pushed down the REER...*



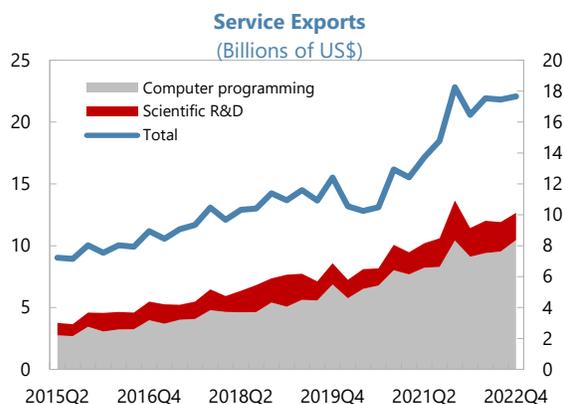
*...current account balance remains in surplus...*



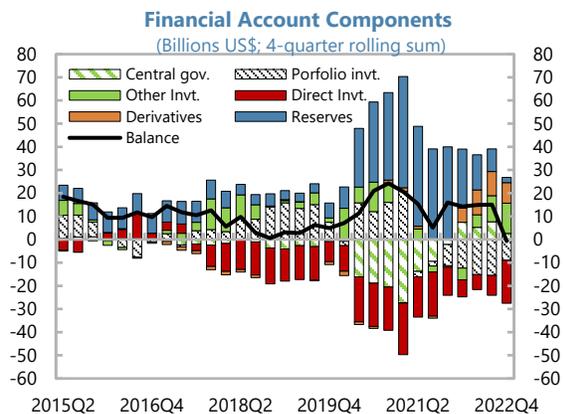
*...due to service exports, and despite a large deficit in goods trade.*



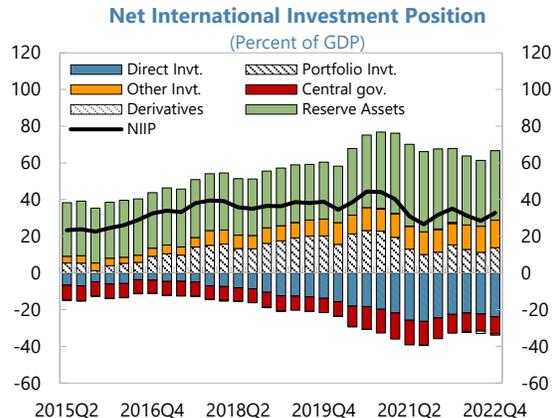
*High-tech industries drive service exports.*



*Portfolio inflows resumed, while official FX purchases ceased.*



*The net international investment position remains comfortably positive.*

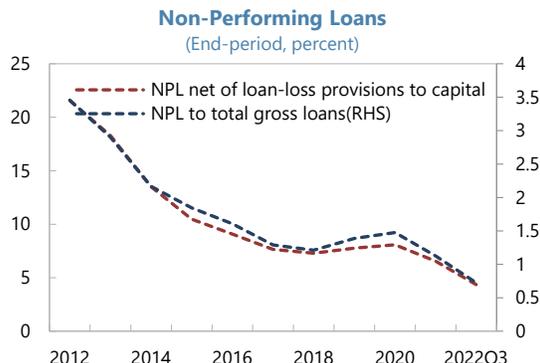
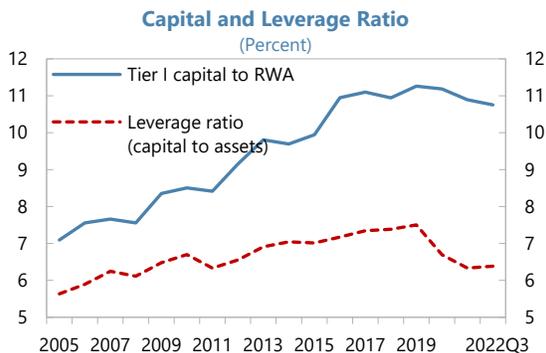


Sources: Bank of Israel; Central Bureau of Statistics; Haver Analytics; IMF Staff calculations.

**Figure 7. Israel: Performance of the Banking System**

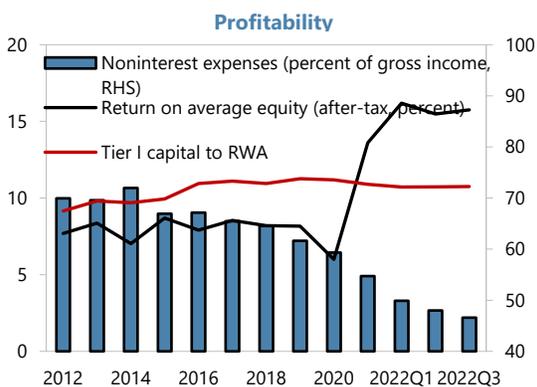
Capital and leverage ratios exceed regulatory minima ...

...with NPLs the lowest in a decade...

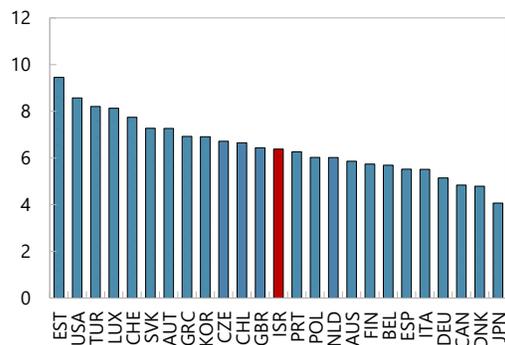


...supporting bank profitability.

Tier 1 capital to total assets close to median.

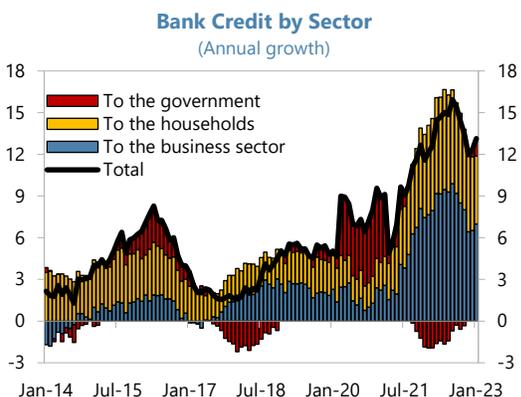


**Leverage Ratio, 2022Q3 or the Latest**  
(Percent)

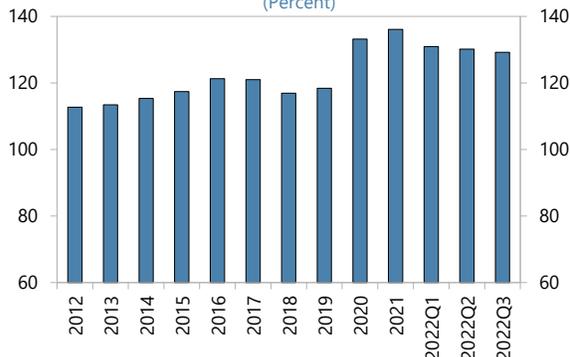


Lending to households (mortgages) and businesses account for the bulk of credit...

...and are fully covered by core funding.



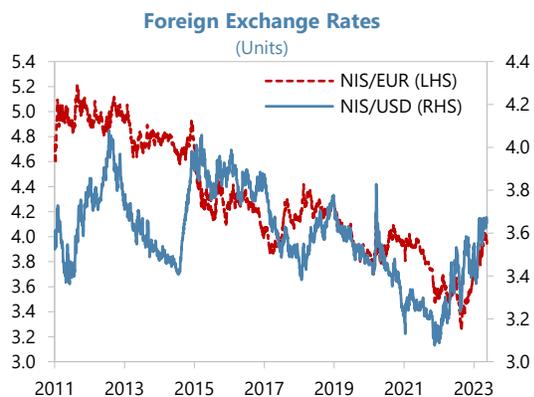
**Customer Deposits to Non-Interbank Loans**  
(Percent)



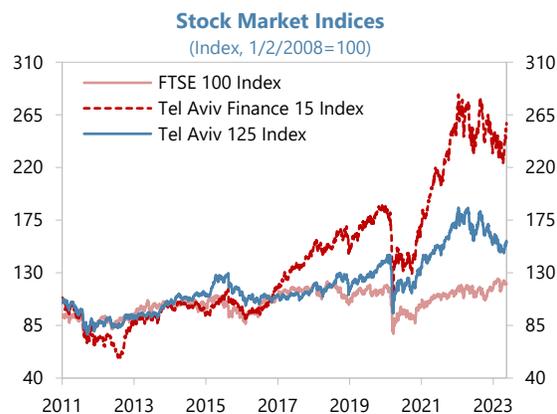
Sources: IMF, Financial Soundness Indicator Database; Haver Analytics; IMF Staff calculations.

**Figure 8. Israel: Selected Financial Indicators**

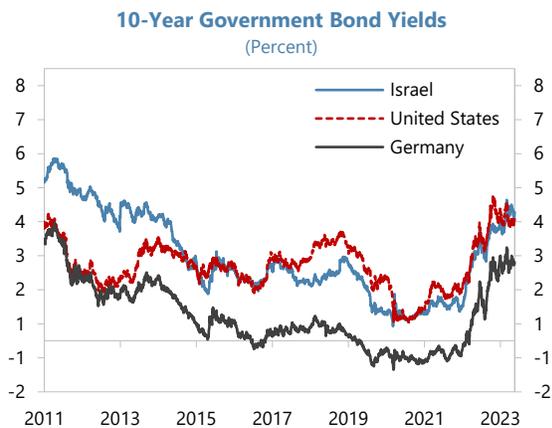
*The shekel weakened after reaching 20-year highs in 2021.*



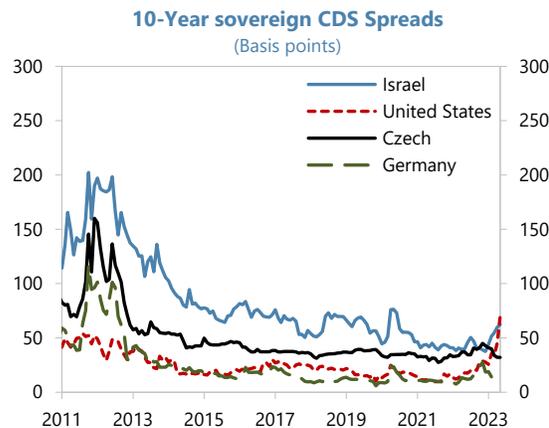
*Stock prices fell in line with global equities...*



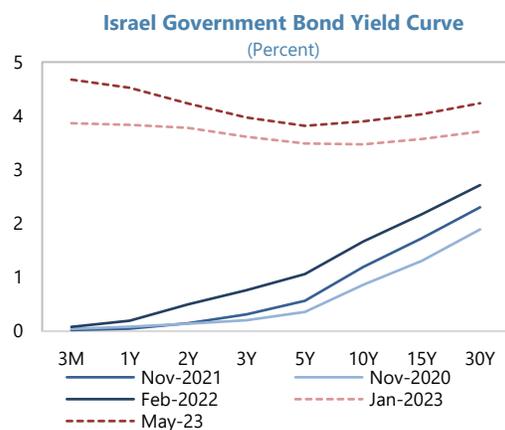
*...as did bond prices...*



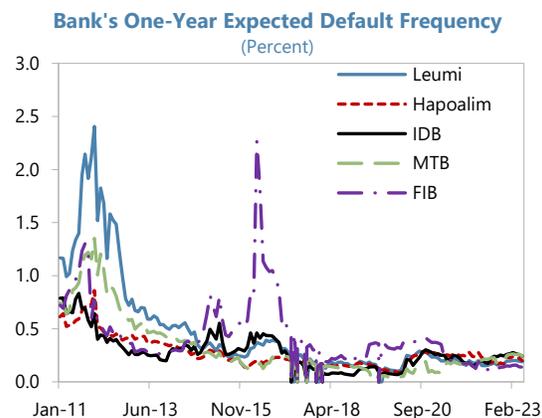
*...with stable but rising sovereign CDS spreads.*



*The term structure of interest rates flattened and inverted after steepening sharply.*

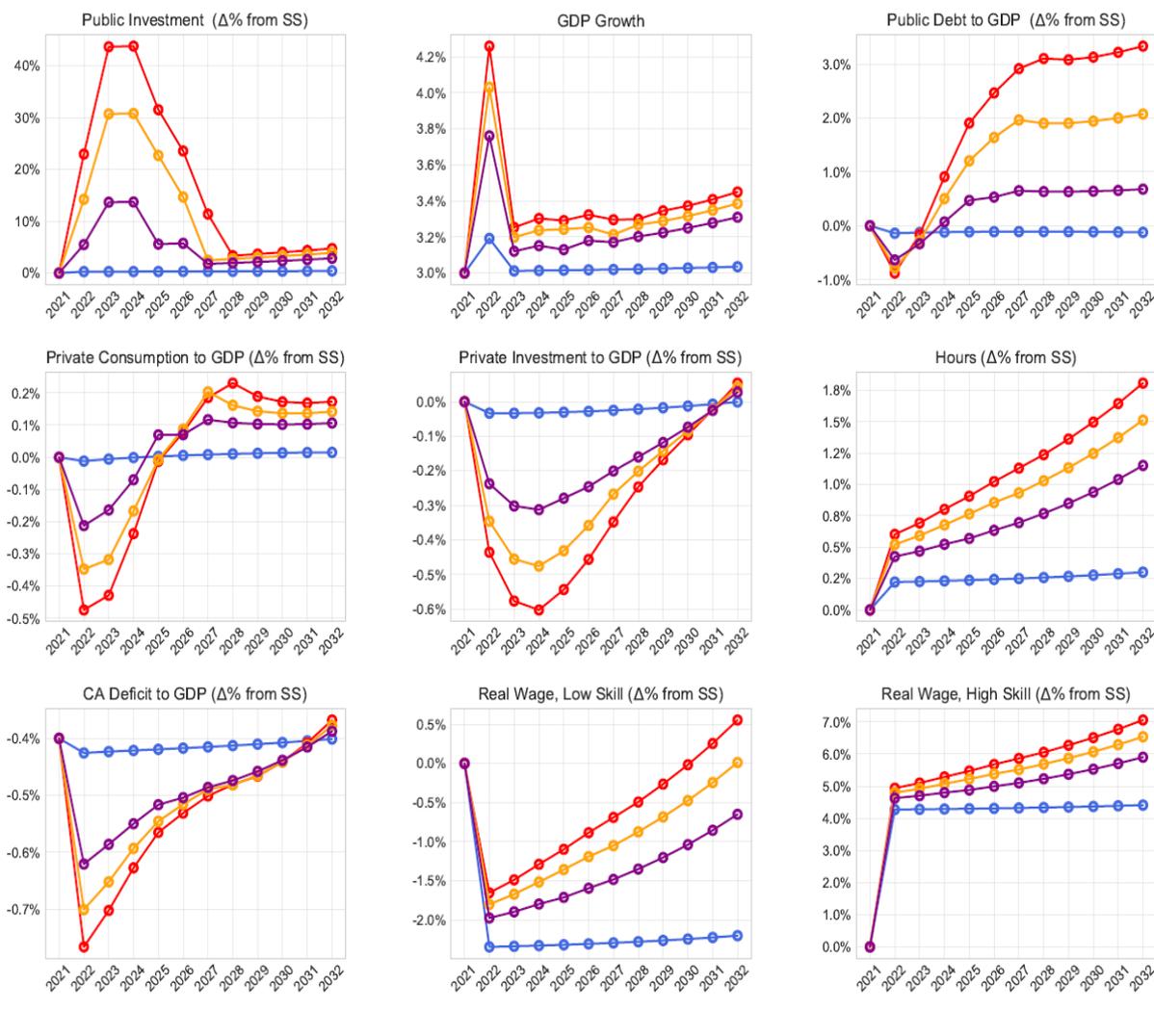


*Banks expected default frequencies remain low.*



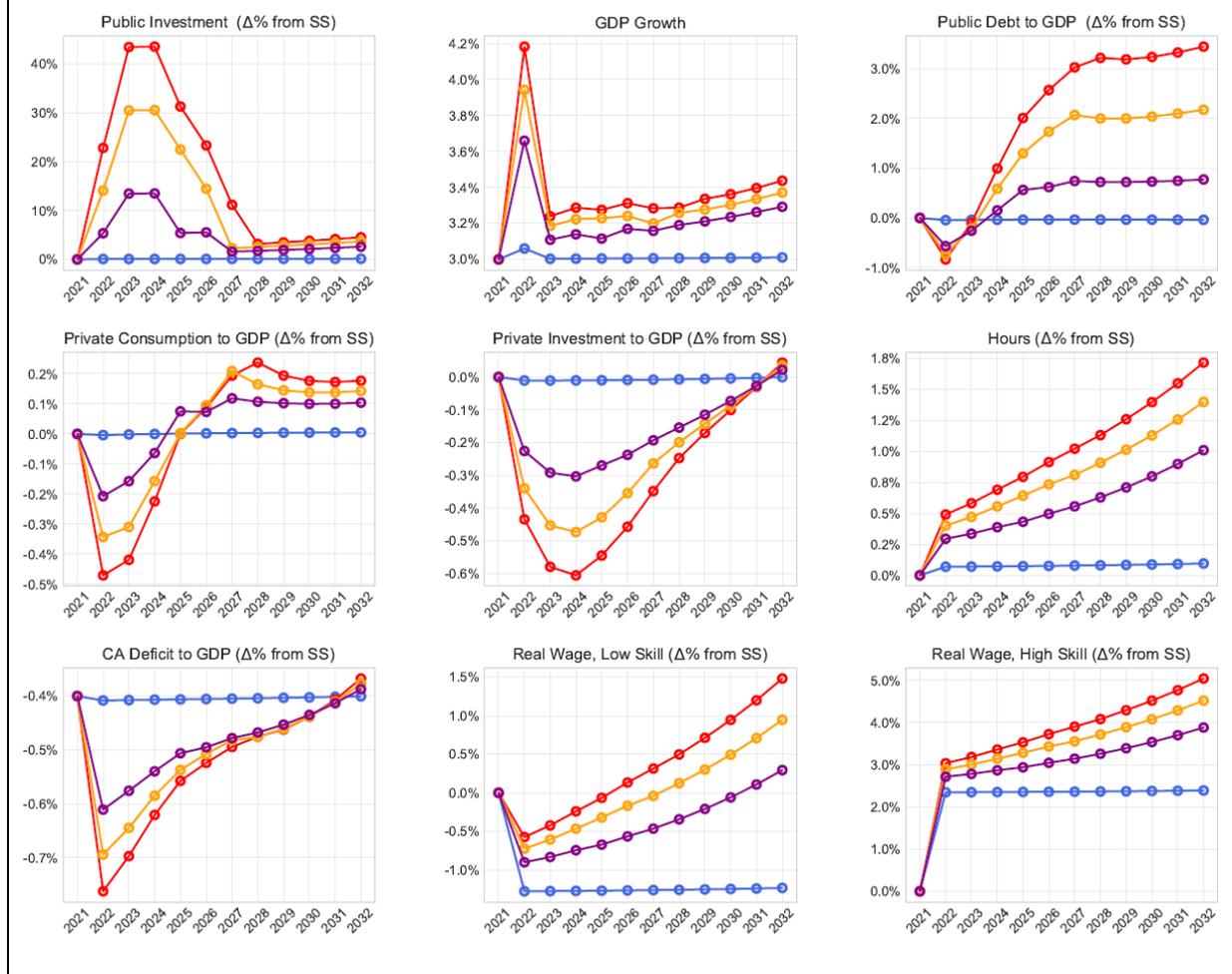
Sources: Bloomberg; DataStream; Haver; and Moody's Analytics, Credit Edge.

Figure 9. Israel: Effects of Increased Investment



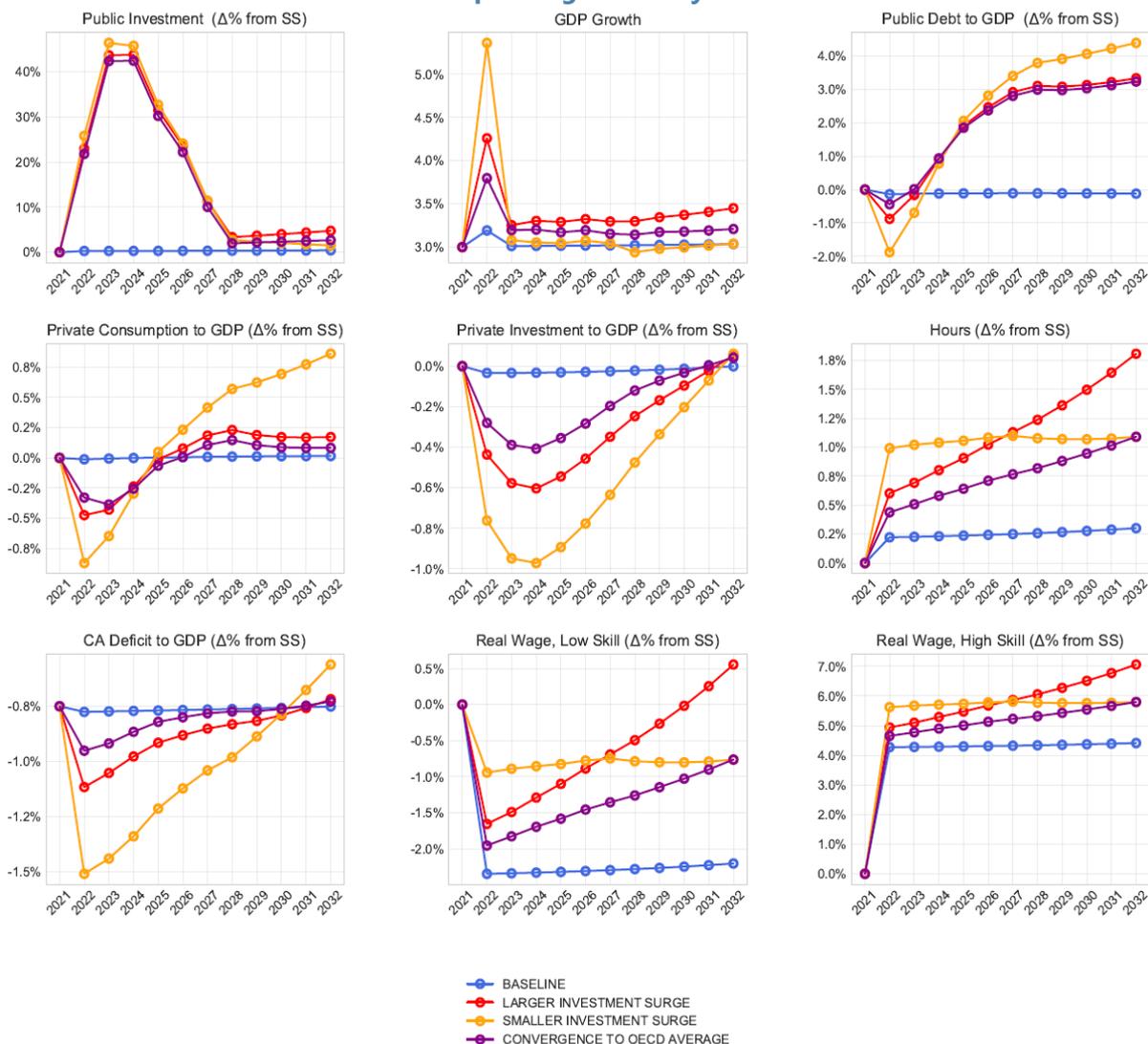
Note: We simulate different increases in public investment, ranging from zero, fifteen, thirty and forty-five percent from the current level (respectively marked with the blue, purple, yellow and red lines). Spending peaks in 2024 and is financed with a combination of public debt and tax revenues. The yellow line would allow to close the capital stock gap as discussed in paragraph 43. Hence, it represents our recommended investment increase (up to 30 percent extra). New infrastructure spending initially decreases private consumption and investment, mainly through a wealth channel (as agents expect higher taxation to finance the increased spending) which improves the current account. Worked hours increase because the government uses the local non-tech sector to execute the investments. This exerts upward pressure on wages, and because the non-tech sector employs predominantly low-skilled workers, it decreases wage inequality.

Figure 10. Israel: Effects of Increased Investment with More Participation



Note: We repeat the investment simulation of Figure 10, with increases in public investment, ranging from zero, fifteen, thirty and forty-five percent from the current level (respectively marked with the blue, purple, yellow and red lines). We simulate the plan assuming the economy has already absorbed an education reform which has already increased GDP, as more workers are employed than in the previous scenario. Multiplier effect of public investment is the same, and growth still increases by 10 percent. In addition, the labor market responds differently. Because more workers are already employed in this scenario, the boost to labor demand that is generated by the investment plan has a stronger effect on the wages of low-skilled workers. As a result, wage inequality decreases further than in the no-reform scenario of Figure 9.

**Figure 11. Israel: Effects of Increased Investment with Higher Risk Premia and Reduced Spending Efficiency**



Note: We compare the central result of Figure 10 (the red line corresponds to the yellow line in Figure 10) to two adverse scenarios. The yellow line represents a scenario in which the sovereign spread increases suddenly. The increase leads to a stronger decrease of private consumption and investment, and for the need to finance spending by relying more heavily on taxation. As a result, depressed internal demand drags down GDP growth, and the investment plan has no multiplier effect, while increasing public debt. The purple line represents a scenario in which execution bottlenecks or capacity constraints limit the efficiency of public spending from the calibrated 80 percent (above the OECD average as estimated by Dabla-Norris et al., 2012) to 60 percent. Labor demand is still strong, and inequality decreases compared to baseline. However, aggregate supply receives less stimulus as the public spending does not result in the same level additional capital that would boost the productivity of the economy. As a result, the growth dividends are modest, while public debt grows.

Table 1. Israel: Selected Economic Indicators, 2018–2028

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
							Projections				
<b>Real Economy (percent change)</b>											
Real GDP	4.1	4.2	-1.9	8.6	6.5	2.5	3.4	3.4	3.6	3.7	3.8
Domestic demand	4.5	4.0	-3.4	9.9	7.4	2.5	3.7	3.8	3.9	4.1	4.1
Private consumption	3.6	4.0	-7.9	11.1	7.7	2.8	3.8	4.0	4.0	4.0	4.1
Public consumption	4.0	3.0	2.8	4.2	0.7	2.3	3.2	3.6	3.6	3.6	3.6
Gross capital formation	6.9	4.9	1.2	12.6	12.4	1.9	3.7	3.6	4.1	4.5	4.5
Gross fixed investment	7.8	3.3	-3.9	11.7	9.0	0.9	2.7	3.7	4.1	4.5	4.5
Foreign demand (contribution to growth)	-0.4	0.2	1.6	-1.3	-1.0	0.3	-0.3	-0.4	-0.4	-0.3	-0.3
Potential GDP	3.7	3.9	2.0	5.9	3.7	3.7	3.8	3.8	3.8	3.8	3.8
Output gap (percent of potential)	0.6	0.9	-3.0	-0.4	2.2	1.1	0.7	0.3	0.1	0.0	0.0
Unemployment rate (percent)	4.0	3.8	4.3	5.0	3.8	4.0	4.0	4.0	4.0	4.0	4.0
Overall CPI (percent change, average)	0.8	0.8	-0.6	1.5	4.4	4.5	3.5	2.5	2.1	2.1	2.0
Overall CPI (percent change, end of period)	0.8	0.6	-0.7	2.8	5.3	4.1	2.9	2.1	2.0	2.0	2.0
Core CPI (percent change, average)	0.9	0.6	-0.3	1.2	3.6	4.7	3.8	2.8	2.3	2.2	2.2
<b>Saving and investment balance</b>											
Gross national saving (percent of GDP)	26.8	26.8	29.3	29.1	29.9	29.9	29.7	29.6	29.5	29.5	29.5
Foreign saving (percent of GDP)	-3.0	-3.5	-5.5	-4.3	-3.7	-4.1	-3.9	-3.8	-3.6	-3.5	-3.4
Gross capital formation (percent of GDP)	23.8	23.3	23.8	24.8	26.3	25.8	25.8	25.8	25.9	26.0	26.1
<b>Public Finance (percent of GDP)</b>											
Central government											
Revenues and grants	25.0	24.2	22.4	26.2	26.7	24.6	24.2	23.8	23.8	23.8	23.8
Total expenditure	27.9	27.9	33.6	30.5	26.2	25.6	25.3	25.7	26.0	26.2	26.2
Overall balance	-2.9	-3.6	-11.3	-4.4	0.6	-0.9	-1.0	-1.9	-2.2	-2.3	-2.4
Structural balance 1/	-3.1	-3.9	-10.3	-4.2	0.0	-1.2	-1.2	-2.0	-2.2	-2.3	-2.4
Interest payments	2.2	2.1	2.1	2.1	1.9	1.9	1.8	1.7	1.7	1.8	1.8
General Government											
Overall balance	-3.6	-3.9	-10.8	-3.7	0.6	-1.1	-1.6	-2.4	-2.7	-3.0	-3.1
Structural balance 1/	-3.8	-4.2	-9.5	-3.5	-0.2	-1.5	-1.9	-2.5	-2.7	-3.0	-3.1
Debt	59.9	58.8	70.6	68.0	61.0	57.9	55.7	55.0	54.7	54.6	54.5
<i>Of which: Foreign currency external debt</i>	8.4	7.7	11.3	9.4	8.8	7.7	6.1	5.7	5.2	4.6	4.2
<b>Balance of Payments (percent of GDP)</b>											
Current account balance	3.0	3.5	5.5	4.3	3.7	4.1	3.9	3.8	3.6	3.5	3.4
Goods and services balance	0.9	2.0	4.4	3.9	3.1	3.1	2.9	2.8	2.6	2.5	2.3
Exports of goods and services 2/	29.9	29.3	27.7	29.5	31.9	29.7	28.9	28.7	28.5	28.2	28.1
Real growth rate (percent)	5.7	3.7	-2.7	14.6	8.3	-1.9	1.6	3.3	3.4	3.5	3.5
Export prices growth (percent)	1.4	0.9	-0.2	10.4	6.5	-2.4	-0.6	0.2	0.2	0.4	1.0
Imports of goods and services 2/	29.0	27.0	23.2	25.5	28.6	25.6	24.8	24.6	24.6	24.5	24.5
o/w Oil imports (billions of U.S. dollars)	9.7	9.2	5.5	9.0	13.3	10.4	10.1	10.2	10.3	10.4	10.6
Real growth rate (percent)	7.2	3.2	-8.1	20.6	11.7	-2.9	2.4	4.6	4.6	4.5	4.5
Import prices growth (percent)	3.7	-2.7	-4.7	8.4	7.1	-1.8	-1.1	-0.6	-0.5	-0.1	0.6
Foreign reserves (eop, US\$ billions)	115.3	126.0	173.3	213.0	194.2	198.7	207.6	216.8	226.3	237.1	248.9
<b>Exchange Rate</b>											
NIS per U.S. dollar (period average)	3.59	3.56	3.44	3.23	3.36	...	...	...	...	...	...
Nominal effective exchange rate (2010=100)	118.6	123.5	129.1	135.0	140.1	...	...	...	...	...	...
Real effective exchange rate (2010=100)	106.3	109.1	111.5	114.3	114.6	...	...	...	...	...	...
Terms of trade (2010 = 100)	95.3	98.7	99.5	93.2	87.5	...	...	...	...	...	...

Sources: Bank of Israel; Central Bureau of Statistics; Haver Analytics; and IMF Staff estimates and projections.

1/ Percent of potential GDP.

2/ National Accounts data.

**Table 2. Israel: Balance of Payments, 2018–28**  
(Billions of U.S. Dollars; unless Otherwise Indicated)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Projections										
<b>Current account balance</b>	11.3	14.1	22.6	21.0	19.1	21.5	21.5	21.7	21.7	21.9	22.0
Merchandise	-16.8	-15.4	-11.4	-21.9	-26.4	-30.3	-31.8	-33.3	-35.3	-37.6	-40.4
Exports, f.o.b.	60.1	60.4	58.9	70.1	80.1	75.4	76.6	79.0	81.3	83.8	87.2
Imports, f.o.b.	76.9	75.8	70.2	92.1	106.5	105.7	108.4	112.3	116.6	121.5	127.6
Services	20.2	23.5	29.6	40.9	42.7	46.3	47.6	49.0	50.8	53.0	55.6
Exports	52.1	57.1	55.2	74.1	86.1	83.6	84.0	87.3	90.9	95.2	99.9
Imports	32.0	33.6	25.5	33.1	43.4	37.3	36.4	38.2	40.2	42.2	44.3
Primary income	-0.2	-2.3	-3.6	-7.4	-6.9	-4.2	-4.4	-4.6	-4.8	-5.0	-5.2
Receipts	15.0	14.6	12.2	18.2	19.5	16.7	17.5	18.3	19.1	20.0	21.0
Payments	15.3	16.9	15.7	25.5	26.4	20.9	21.9	22.8	23.8	25.0	26.2
Secondary income	8.2	8.3	7.9	9.4	9.6	9.6	10.1	10.5	11.0	11.5	12.1
Receipts	12.0	12.6	12.8	14.8	15.1	15.1	15.8	16.5	17.2	18.0	18.9
Payments	3.8	4.3	5.0	5.5	5.4	5.4	5.7	5.9	6.2	6.5	6.8
<b>Capital account</b>	1.6	1.6	1.8	2.1	2.7	2.7	2.7	2.7	2.7	2.7	2.7
<b>Financial account 1/</b>	-4.7	-1.5	-13.6	-23.8	-3.0	19.7	15.3	15.2	14.9	13.8	12.9
Direct investment, net	-15.4	-8.7	-18.7	-12.0	-18.5	-9.7	-11.2	-9.6	-8.1	-6.5	-5.0
Foreign direct investment abroad	6.1	8.7	4.4	9.5	9.2	9.7	10.2	10.7	11.2	11.8	12.4
Foreign direct investment in Israel	21.5	17.4	23.1	21.5	27.8	19.4	21.4	20.3	19.3	18.3	17.4
Portfolio investment, net	10.3	6.5	-4.1	-15.5	-6.8	10.7	9.6	10.2	10.8	10.8	10.9
Financial derivatives, net	0.1	-1.2	1.3	0.3	8.8	4.4	2.2	1.1	0.6	0.3	0.1
Other investment, net	0.4	1.9	8.0	3.5	13.5	14.3	14.6	13.5	11.7	9.3	7.0
<b>Change in reserves</b>	5.3	6.4	37.8	39.7	2.3	4.5	8.9	9.2	9.5	10.8	11.8
<b>Errors and omissions</b>	-12.3	-10.8	-0.1	-7.2	-22.5	0.0	0.0	0.0	0.0	0.0	0.0
Memorandum items:											
Current account balance (percent of GDP)	3.0	3.5	5.5	4.3	3.7	4.1	3.9	3.8	3.6	3.5	3.4
Terms of trade (percent change)	-9.0	3.6	0.8	-6.4	-6.1	2.4	1.4	1.0	0.6	0.4	0.6
Gross external debt (percent of GDP)	25.0	25.6	31.6	33.2	29.3	28.8	27.7	26.6	25.5	24.7	24.1
Foreign reserves											
US\$ billion	115.3	126.0	173.3	213.0	194.2	198.7	207.6	216.8	226.3	237.1	248.9
Percent of GDP	30.6	31.3	41.9	43.6	37.2	38.0	38.0	38.0	38.0	38.0	38.0
Months of G&S imports	12.7	15.8	16.6	17.1	16.3	16.5	16.5	16.6	16.6	16.5	15.2
GDP (billions of U.S. dollars)	376.7	402.5	413.3	488.5	522.0	522.9	546.4	570.6	595.6	624.0	655.1

Sources: Central Bureau of Statistics; Haver Analytics; IMF Staff estimates and projections.  
1/ Excludes reserve assets.

**Table 3. Israel: International Investment Position, 2018–28**  
(Percent of GDP)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Projections										
<b>Net Investment</b>	36.1	39.1	44.4	31.7	32.1	36.7	39.5	42.1	44.5	46.4	48.0
Direct investment	-10.4	-14.0	-20.0	-24.5	-23.3	-25.1	-26.1	-26.7	-26.9	-26.7	-26.2
Portfolio investment	8.7	13.2	10.8	-0.3	3.9	5.9	7.4	8.9	10.3	11.6	12.7
Financial derivatives	-0.4	0.0	0.3	0.4	-0.6	0.2	0.6	0.8	0.8	0.8	0.8
Reserve assets	30.6	31.3	41.9	43.6	37.2	38.0	38.0	38.0	38.0	38.0	38.0
Other investment	7.6	8.6	11.4	12.6	15.0	17.7	19.6	21.1	22.2	22.7	22.7
<b>Total Assets</b>	116.4	121.9	144.3	143.7	123.1	130.9	133.9	136.2	138.0	139.1	139.7
Direct investment	27.8	26.1	24.6	21.8	21.7	23.5	24.4	25.2	26.1	26.8	27.4
Portfolio investment	37.6	42.5	52.8	52.0	38.8	41.7	42.6	43.4	44.2	44.7	45.0
Reserve assets	30.6	31.3	41.9	43.6	37.2	38.0	38.0	38.0	38.0	38.0	38.0
Other assets	20.7	21.9	24.7	25.8	26.0	27.5	28.3	28.8	28.9	28.8	28.4
<b>Total Liabilities</b>	80.3	82.8	99.9	112.0	91.0	94.3	94.4	94.1	93.6	92.7	91.7
Direct investment	38.2	40.1	44.6	46.4	45.0	48.7	50.5	51.9	53.0	53.5	53.6
Equity and Reinvested Earnings	35.8	37.5	42.3	44.1	42.8	...	...	...	...	...	...
Other Capital	2.4	2.6	2.3	2.2	2.2	...	...	...	...	...	...
Portfolio investment	28.9	29.4	42.0	52.3	34.9	35.8	35.1	34.5	33.9	33.1	32.3
Equity Securities	19.4	19.6	26.0	34.7	18.9	...	...	...	...	...	...
Bonds and Notes	9.5	9.7	15.9	17.7	16.0	...	...	...	...	...	...
Other liabilities	13.1	13.3	13.3	13.3	11.1	9.8	8.7	7.7	6.7	6.1	5.8

Sources: Central Bureau of Statistics; Haver Analytics; IMF Staff estimates and projections.

**Table 4. Israel: Summary of Central Government Operations, 2018–28 1/**

(Percent of GDP; unless Otherwise Indicated)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Projections										
<b>Revenue and grants</b>	25.0	24.2	22.4	26.2	26.7	24.6	24.2	23.8	23.8	23.8	23.8
On income and profits	12.0	11.7	11.8	13.7	14.5	12.5	12.0	11.6	11.6	11.6	11.6
VAT and customs	10.2	9.9	9.6	10.2	9.9	9.9	9.9	9.9	9.9	9.9	9.9
Fees	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
VAT on defense imports	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Interest	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Loans from NII	1.7	1.6	0.1	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.4	0.4	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
<b>Expenditure</b>	27.9	27.9	33.6	30.5	26.2	25.6	25.3	25.7	26.0	26.2	26.2
Administrative Departments	4.2	4.2	4.3	3.9	3.8	3.7	3.6	3.7	3.8	3.9	4.0
Social Departments	12.5	12.6	15.6	14.3	12.1	11.6	11.6	11.8	11.9	11.9	11.9
Economic Departments	2.4	2.5	3.2	2.8	2.5	2.5	2.4	2.4	2.5	2.5	2.5
Defense Expenditure	5.0	4.9	5.0	4.8	4.3	4.3	4.1	4.3	4.4	4.5	4.5
Other Expenditures	0.2	0.2	1.9	1.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Reserve	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Interest	2.2	2.1	2.1	2.1	1.9	1.9	1.8	1.7	1.7	1.8	1.8
Repayment of Principal to NII	1.5	1.5	1.5	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3
<b>Budget deficit</b>	-2.9	-3.6	-11.3	-4.4	0.6	-0.9	-1.0	-1.9	-2.2	-2.3	-2.4
<b>Financing</b>	2.9	3.6	11.3	4.4	-0.6	0.9	1.0	1.9	2.2	2.3	2.4
Foreign (net)	0.8	0.3	4.3	-0.2	-0.3	-0.8	-1.1	-0.1	-0.2	-0.2	-0.1
Domestic (net)	1.9	3.2	6.9	3.7	-1.2	1.3	1.8	1.6	1.9	2.2	2.1
Loans	6.4	8.6	11.8	9.8	4.2	4.9	5.1	5.5	6.3	6.1	6.1
Repayment	-4.5	-5.4	-4.8	-6.1	-5.4	-3.6	-3.3	-3.9	-4.4	-3.9	-4.0
Sale of assets (net)	0.2	0.1	0.0	0.9	0.9	0.4	0.4	0.4	0.4	0.4	0.4
<b>Memorandum items:</b>											
Structural balance (percent of potential GDP)	-3.1	-3.9	-10.3	-4.2	0.0	-1.2	-1.2	-2.0	-2.2	-2.3	-2.4
Primary balance (PB)	-0.8	-1.6	-9.2	-2.3	2.5	1.0	0.7	-0.2	-0.4	-0.6	-0.6
Cyclically adjusted PB (percent of potential GDP)	-0.9	-1.8	-8.3	-2.2	1.9	0.7	0.5	-0.3	-0.5	-0.6	-0.6
Real expenditure growth (in percent)	3.8	5.0	20.4	-0.8	-8.8	0.9	2.4	5.5	4.9	4.6	4.2
Public debt to GDP	59.9	58.8	70.6	68.0	61.0	57.9	55.7	55.0	54.7	54.6	54.5
Nominal GDP (in billions of NIS)	1,353	1,435	1,423	1,578	1,754	1,894	2,030	2,157	2,286	2,424	2,571

Sources: Ministry of Finance; IMF Staff estimates and projections.

1/ Data as per the MoF definition, on a cash basis.

**Table 5. Israel: General Government Operations, 2018–28**  
(Percent of GDP; unless Otherwise Indicated)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Projections										
<b>Revenue</b>	480.0	496.4	483.4	577.1	656.3	672.3	710.9	746.8	790.9	841.4	897.0
Taxes	341.7	353.0	345.0	428.4	488.4	491.3	517.1	541.0	572.6	607.3	644.0
Taxes on income, profits, and capital gains	139.8	144.7	143.5	191.1	227.3	209.3	216.4	221.9	235.1	249.3	264.4
Taxes on goods and services	157.3	161.8	157.3	188.5	210.1	226.9	241.7	256.4	271.1	287.5	304.9
Taxes on international trade and transactions	2.8	3.0	2.9	3.7	3.0	3.2	3.4	3.7	3.9	4.1	4.4
Taxes n.e.c.	41.8	43.5	41.3	45.2	48.0	51.9	55.6	59.1	62.6	66.3	70.4
Social contributions	79.8	83.5	81.9	88.4	97.4	105.0	112.5	119.6	126.9	137.3	148.0
Grants	12.1	11.4	11.1	11.1	14.6	15.8	16.9	18.0	19.1	20.2	21.5
Other revenue	46.3	48.5	45.5	49.2	55.8	60.1	64.3	68.3	72.2	76.6	83.6
<i>Of which:</i> Interest income	3.1	3.4	2.6	2.5	3.0	3.2	3.5	3.7	3.9	4.1	4.4
<b>Expenditure</b>	528.5	552.0	636.4	635.1	645.4	693.0	743.3	798.9	853.1	914.5	976.3
Expense	513.3	535.5	617.4	636.1	653.4	695.0	743.3	793.9	847.8	908.9	970.4
Compensation of employees	135.9	141.5	142.9	148.9	157.3	170.7	186.6	202.8	217.2	235.1	254.5
Purchases/use of goods and services	88.8	92.4	98.3	101.8	105.8	113.2	122.7	133.4	144.7	157.1	167.9
Interest expense	32.4	30.0	28.1	44.3	58.8	55.6	52.7	50.3	53.1	56.4	59.9
Social benefits	166.6	177.1	201.0	200.8	210.0	227.9	245.9	263.5	280.3	298.5	316.5
Expense n.e.c.	89.7	94.5	147.1	140.3	121.4	127.6	135.4	143.9	152.5	161.7	171.5
Net acquisition of nonfinancial assets	15.1	16.5	19.0	-1.0	-8.0	-2.0	0.0	5.0	5.3	5.6	6.0
Net lending/borrowing	-48.5	-55.6	-153.0	-58.0	10.9	-20.8	-32.4	-52.1	-62.2	-73.1	-79.3
<b>Revenue</b>	35.5	34.6	34.0	36.6	37.4	35.5	35.0	34.6	34.6	34.7	34.9
Taxes	25.3	24.6	24.2	27.1	27.8	25.9	25.5	25.1	25.1	25.1	25.1
Taxes on income, profits, and capital gains	10.3	10.1	10.1	12.1	13.0	11.0	10.7	10.3	10.3	10.3	10.3
Taxes on goods and services	11.6	11.3	11.1	11.9	12.0	12.0	11.9	11.9	11.9	11.9	11.9
Taxes on international trade and transactions	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Taxes n.e.c.	3.1	3.0	2.9	2.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Social contributions	5.9	5.8	5.8	5.6	5.6	5.5	5.5	5.5	5.6	5.7	5.8
Grants	0.9	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Other revenue	3.4	3.4	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.3
<i>Of which:</i> Interest income	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Expenditure</b>	39.1	38.5	44.7	40.2	36.8	36.6	36.6	37.0	37.3	37.7	38.0
Expense	38.0	37.3	43.4	40.3	37.3	36.7	36.6	36.8	37.1	37.5	37.7
Compensation of employees	10.0	9.9	10.0	9.4	9.0	9.0	9.2	9.4	9.5	9.7	9.9
Purchases/use of goods and services	6.6	6.4	6.9	6.5	6.0	6.0	6.0	6.2	6.3	6.5	6.5
Interest expense	2.4	2.1	2.0	2.8	3.4	2.9	2.6	2.3	2.3	2.3	2.3
Social benefits	12.3	12.3	14.1	12.7	12.0	12.0	12.1	12.2	12.3	12.3	12.3
Expense n.e.c.	6.6	6.6	10.3	8.9	6.9	6.7	6.7	6.7	6.7	6.7	6.7
Net acquisition of nonfinancial assets	1.1	1.2	1.3	-0.1	-0.5	-0.1	0.0	0.2	0.2	0.2	0.2
Net lending/borrowing	-3.6	-3.9	-10.8	-3.7	0.6	-1.1	-1.6	-2.4	-2.7	-3.0	-3.1
<b>Memorandum items:</b>											
Structural Balance in percent of potential GDP	-3.9	-4.3	-9.2	-3.5	-0.2	-1.5	-1.9	-2.6	-2.8	-3.0	-3.1

Sources: Central Bureau of Statistics; IMF, Government Financial Statistics; IMF Staff estimates and projections.

**Table 6. Israel: Financial Soundness Indicators, Banks, 2015–22: Q3**

(End-period, in Percentage Points)

	2015	2016	2017	2018	2019	2020	2021	2022Q3
<b>Capital Adequacy</b>								
Regulatory capital to risk-weighted assets 1/	14.0	14.7	14.5	14.2	14.6	14.4	14.0	13.8
Regulatory Tier I capital to risk-weighted assets 1/	9.9	10.9	11.1	10.9	11.3	11.2	10.9	10.8
Capital as percent of assets (leverage ratio)	7.0	7.2	7.3	7.4	7.5	6.7	6.3	6.4
<b>Asset quality and exposure</b>								
Nonperforming loans to total gross loans	1.8	1.6	1.3	1.2	1.4	1.5	1.1	0.7
Nonperforming loans net of loan-loss provisions to capital	10.5	9.1	7.6	7.3	7.8	8.1	6.5	4.4
Large exposures as percent of regulatory capital	0.0	0.0	0.0	0.0	0.0	133.2	136.1	129.2
<b>Earnings and profitability</b>								
Return on average assets (before tax)	1.0	1.0	1.0	1.0	1.0	0.7	1.4	1.5
Return on average equity (before tax)	8.7	7.9	8.5	8.2	8.2	6.0	13.6	15.7
Interest margins to gross income	56.4	58.6	61.6	64.4	66.2	66.6	66.8	71.8
Trading and fee income to gross income	0.4	0.2	-0.7	1.3	1.9	3.1	1.9	2.2
Noninterest expenses to gross income	66.9	67.2	65.5	64.5	61.6	59.3	54.7	46.6
Personnel expenses to noninterest expenses	59.0	58.0	57.8	52.5	53.4	53.2	56.5	56.8
<b>Liquidity</b>								
Liquid assets as percent of total assets	20.8	24.4	23.9	22.2	23.2	28.8	29.4	24.6
Liquid assets as percent of short-term liabilities	31.1	36.5	35.0	32.4	33.6	39.3	39.5	33.8
Customer deposits as a percent of total (non-interbank) loans	117.4	121.3	121.0	116.9	118.4	133.2	136.1	129.2
<b>Foreign exchange risk</b>								
Net foreign exchange open position to capital	-0.4	0.1	0.0	-0.8	0.2	0.0	-0.5	-4.4
Foreign currency-denominated loans as percent of total loans	13.7	12.3	11.1	11.9	10.7	10.7	10.1	9.6
Foreign currency-denominated liabilities as percent of total liabilities	27.5	26.5	23.7	25.2	23.6	22.8	23.8	25.2

Sources: Bank of Israel; IMF, Financial Soundness Indicators Database.

1/ The calculation of capital base follows rules under Basel II.

Table 7. Israel: Depository Corporations Survey, 2017-22

	2017	2018	2019	2020	2021	2022
	(In percentage of GDP, end of period)					
<b>Net foreign assets</b>	5.68	5.85	5.99	5.10	5.73	6.75
Claims on nonresidents	9.60	9.78	9.60	9.17	9.97	10.86
Liabilities to nonresidents	3.91	3.93	3.61	4.06	4.24	4.11
<b>Claims to central bank</b>	22.66	20.55	19.94	30.68	36.02	30.31
Currency	0.75	0.63	0.58	0.61	0.53	0.52
Reserve deposits	18.27	17.09	16.76	29.57	35.22	27.36
Other claims central bank	3.64	2.83	2.60	0.49	0.27	2.44
<b>Net claim to Central government</b>	5.06	4.99	5.01	8.75	6.37	6.16
Claim on central government	5.93	5.89	5.91	9.68	7.24	7.04
Liabilities to the central government	0.86	0.90	0.90	0.93	0.88	0.88
<b>Claims to other sectors</b>	74.63	75.40	74.27	79.20	80.96	84.14
Claims to other financial institutions	8.18	8.16	8.29	9.66	9.71	11.06
Claims to local governments	1.77	1.83	1.83	2.00	1.88	1.86
Claims to public corporations	0.00	0.00	0.00	0.00	0.00	0.00
<b>Claims to private sector</b>	64.67	65.41	64.15	67.55	69.37	71.23
<b>Total Assets</b>	108.03	106.79	105.21	123.74	129.07	127.37
Liabilities to the central bank	0.11	0.03	0.02	1.43	2.58	2.33
Transf Dep included in Broad Money	37.21	37.93	38.41	51.86	56.97	44.21
Other deposits in Broad Money	38.03	35.43	35.65	40.28	41.09	47.90
Other shares included in Broad money	0.00	0.00	0.00	0.00	0.00	0.00
Deposit excluded from Broad Money	17.63	17.42	16.14	13.83	13.12	16.36
Securities other than shares excl from broad money	3.43	3.56	3.17	2.75	2.76	3.11
Loans	0.08	0.05	0.04	0.03	0.39	1.25
Derivatives	1.53	1.63	1.63	2.74	2.05	2.98
Insurance	0.00	0.00	0.00	0.00	0.00	0.00
Equity	7.88	8.36	7.61	8.44	8.47	8.21
Other items	2.13	2.38	2.54	2.39	1.65	1.03
<b>Total Liabilities</b>	108.03	106.79	105.21	123.74	129.07	127.37

Sources: Haver, IMF Staff calculations.

## Annex I. External Sector Assessment

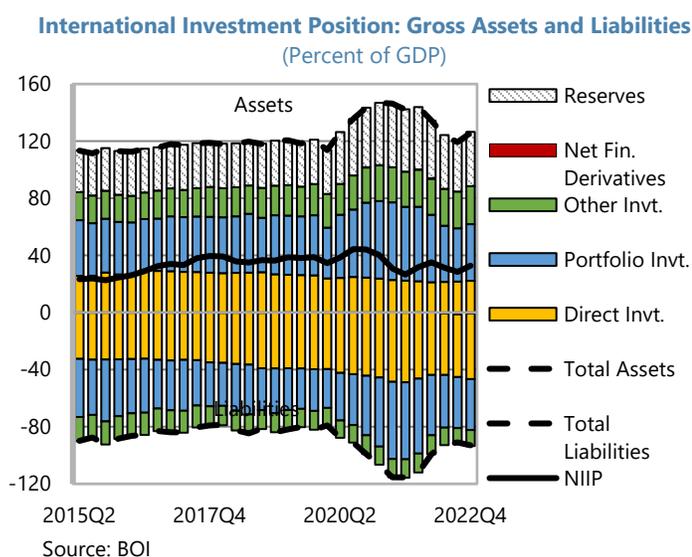
**Overall Assessment:** *The external position in 2022 is preliminarily assessed as stronger than the level implied by medium-term fundamentals and desirable policies: the current account balance exceeds its estimated norm, the net international investment position is positive, and international reserves are comfortable. However, due to country specificities only imperfectly captured by the model, the estimated gap (between the actual current account balance and its norm) is likely to overstate the extent to which Israel's current account represents an excess surplus relative to fundamentals and desired policy settings over the medium term.*

**Potential Policy Responses:** Structural reforms to improve productivity and strengthen the resilience of the economy, including much needed public investment spending, would help prevent potential accumulation of imbalances.

### Foreign Assets and Liabilities: Position and Trajectory

**1. Background.** The net international investment position (NIIP) has been broadly stable around 32 percent (321 percent in 2022, from 31.7 at end-2021) despite the current account surplus, due to valuation effects.

**2. Assessment.** The NIIP does not represent a major risk. Foreign assets, including international reserves of 37 percent of GDP (end-2022), exceed liabilities and provide a large buffer. FDI is the largest component of external liabilities, and the only (significant) negative net position: NIIPs for portfolio securities and other investment are positive (Table 3). Moreover, the bulk of FDI liabilities consist of equity claims. Debt assets held abroad exceed debt liabilities to non-residents (and so do sovereign reserves).



2022 (percent GDP)	NIIP:	Gross Assets:	Reserve Assets:	Gross Liabilities:	Debt Liabilities:
	32.1	123.1	37.2	91	29.3

### Current Account

**3. Background.** The current account surplus dropped half of a percentage point of GDP, from 4.3 percent of GDP in 2021, to 3.7 in 2022. This was mainly due to an increase in the merchandise trade deficit (reflecting high absorption) which exceeded the increase in the services trade surplus.

The high-tech sector remains the engine of Israel's export growth, with receipts from cargo between ports rising (see Recent Developments in main text, paragraph 15). Over the medium term, the CA surplus is projected to decline toward about 3.5 percent of GDP.

**4. Assessment.** The EBA CA model suggests that the cyclically adjusted 2022 CA balance is above the level warranted by fundamentals and appropriate policies by 4 percent of GDP. The cyclically adjusted CA balance includes a multilaterally consistent adjustment for the output gap and terms of trade. Staff assess the CA gap to be 3.3 percent of GDP, after an adjustment to the current account norm for Israel's high exposure to geopolitical uncertainty.<sup>1</sup> Other country -specific factors not reflected in the CA norm potentially also play a role in Israel's high savings rate, including its high level of transfer and grant inflows, and mandatory pension contributions (see [2017](#) and [2018 Article IV Staff Reports](#)).<sup>2</sup>

<b>Text Table. Israel: Model Estimates for 2022 (Percent of GDP)</b>			
	<b>CA model</b>	<b>REER level</b>	<b>REER index</b>
<b>CA-Actual</b>	<b>3.7</b>		
Cyclical Contributions	1.3		
<b>Adjusted CA 1/</b>	<b>5.0</b>		
<b>CA Norm</b> (from model)	<b>0.9</b>		
Adjustments to the norm	0.8		
<b>Adjusted CA Norm</b>	<b>1.7</b>		
<b>EBA CA Gap</b>	<b>3.3</b>	<b>-3.98</b>	<b>-2.58</b>
o/w Policy gap	1.1		
<b>REER Gap 2/</b>	<b>-14.3</b>	<b>17.3</b>	<b>11.2</b>

<sup>1/</sup> Cyclically adjusted, including multilateral consistency adjustments.

<sup>2/</sup> Semi-elasticity of CA/GDP to REER assumption is 0.23.

## Real Exchange Rate

**5. Background.** The real exchange rate depreciated in 2022 by about 7 percent, using the CPI-based REER, and by about 4 percent using the ULC-based REER—partly correcting the substantial appreciation during the preceding decade (by about 20 percent, using the CPI-based REER, and

<sup>1</sup> This adjustment is derived from the EBA-lite model—estimated without Israel in the sample—which suggests that the impact of uncertainty related to potential armed conflict would increase Israel's current account balance by about 0.8 percent of GDP.

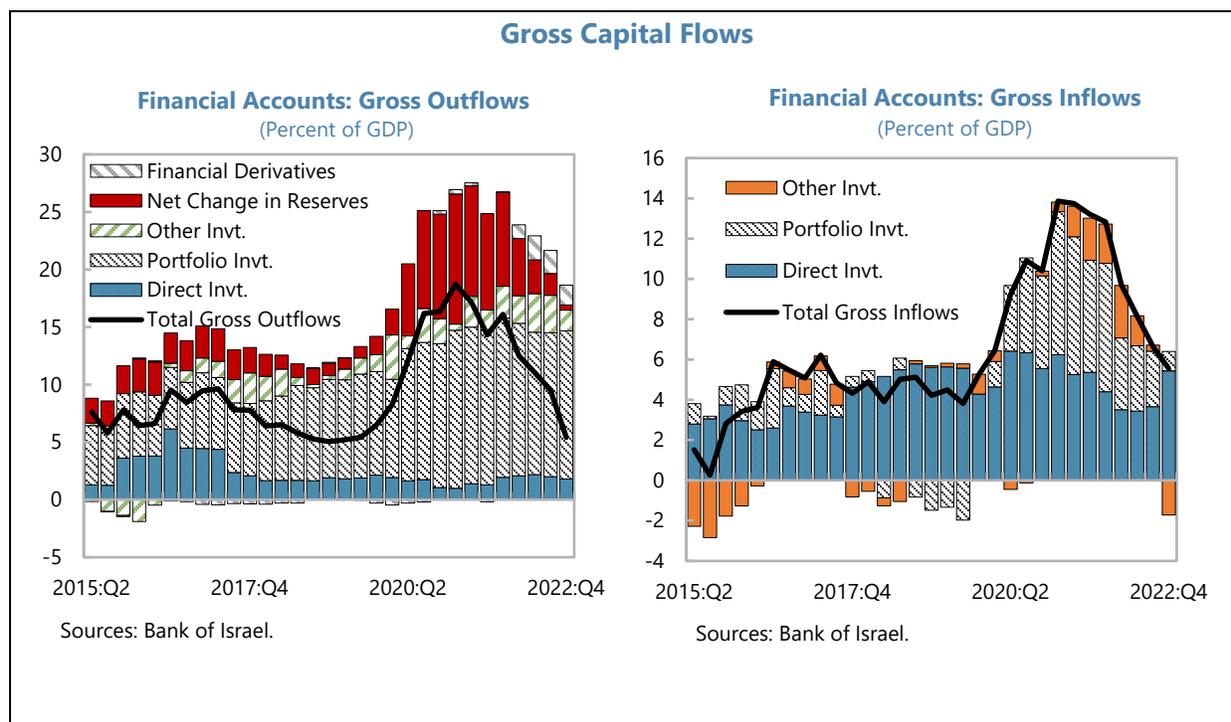
<sup>2</sup> A pension law enacted in 2008, which requires mandatory pension contributions to fully fund Israel's defined contribution (DC) pension system, has increased private savings from 15.3 percent of disposable income prior to 2008 to 20.3 percent in 2019 after full transition to the new contribution rates. While the cross-country evidence of a permanent impact of DC pension reforms on the savings rate remains inconclusive, previous staff assessments ([2017 Article IV Staff Report](#)) suggested a significant adjustment to the CA norm estimated on the basis of the 2015 EBA CA model.

about 25 percent using the ULC-based REER, between end-2011 and end-2021). The falling REER was mainly due to the approximately 9 percent depreciation of the nominal exchange (to the US dollar).

**6. Assessment.** There is a large divergence in the exchange rate valuation estimates from EBA models. The REER-index and REER-level models point to substantial overvaluation, of 11.2 and 17.3 percent, respectively, consistent with the prolonged appreciating trend of the REER in the decade to 2021. However, the REER gap implied by the CA model suggests an undervaluation of 14.3 percent. Overall, IMF staff assess the REER gap to be centered around 1.5 percent (the midpoint of a rather wide range from –14 to 17 percent).

## Capital Flows

**7. Background.** Non-residents were net buyers of Israeli assets through each quarter of 2022, while residents continued to accumulate assets abroad, particularly (non-official) portfolio investment.



**8. Assessment.** Capital outflow risks are low due to low external indebtedness of the private sector, a banking system with very limited reliance on non-core funding from abroad, and long maturity of external government debt.

## FX Intervention and International Reserves

**9. Background.** Gross official reserve assets fell to USD 194 in December 2022 (from 213 billion at end-2021), due to valuation effects (FX accumulation ceased). This corresponds to

37 percent of GDP and 14 months of imports. Predetermined net short-term drains on reserves are low as a share of gross reserves (about USD 9 billion).

**10. Assessment.** Israel's level of international reserves is large and comfortably exceeds standard benchmarks for reserve adequacy. Large international reserves, and other buffers, are justified in Israel in view of the geopolitical risks the country faces. At the onset of the pandemic, the BOI's intervention—FX purchases of USD 35 billion, 30 billion of which were pre-announced—helped prevent substantial undershooting of the inflation target band from de-anchoring inflation expectations and supported the package of monetary easing measures (the policy rate was at what the authorities regard as the effective lower bound). Foreign exchange intervention should now be limited to preventing disorderly market conditions.

## Annex II. Israel Macprudential Policy Measures

	<b>Policy Action</b>	<b>Status</b>
Capital requirement	Commercial banks' capital requirements reduced by 1 percent, until September 30, 2021.	Extended on September 30, 2021 to December 31, 2021, and expired.
LTV	Increased to up to 70 (from 50) percent, until September 30, 2021.	Expired on September 30, 2021.
Additional T1 capital for housing loans	Temporary relaxation of requirement that banks raise T1 capital target by 1 percent with respect to housing loans issued during temporary order.	Expired on September 30, 2021.
Loan deferral framework	Adopted a framework to enable customers to defer loan repayments in three activity segments: mortgages, consumer credit, and business credit.	Expired on March 31, 2021.
Restrictions on bank's dividend distributions	Supervisor of Banks instructed the banks' boards of directors to re-examine their dividend distribution and share buy-backs.	On July 2021 the BSD announced that banks may resume dividend distribution with regard to profits earned in 2020 taking into account future impact of the Covid-19 crisis, though advising that payouts in excess of 30 percent of profits will not be considered prudent. On September 30, 2021, the supervisor announced that the same will apply to profits earned in 2021.
Leverage ratio	Reduced minimum leverage ratio for banks by 0.5 percentage points (from 6 to 5.5 for large banks, and from 5 to 4.5 for small banks).	Extended on September 30, 2021, to December 31, 2021. Expired.
Limits on exposure to construction and real estate sector	The limitation on exposure to the construction and real estate industry was increased by 2 percentage points (from 24 percent to 26 percent of the total credit portfolio when national infrastructure is included; from 20 to 22 excluding infrastructure).	Valid until 2025.

## Annex III. Public DSA

**Figure 1. Israel: Public DSA-Composition of Public Debt and Alternative Scenarios**  
(Percent of GDP unless Otherwise Indicated)

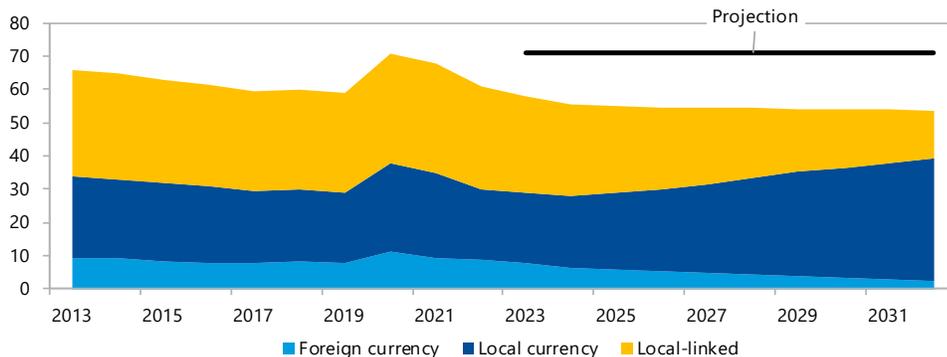
Horizon	Mechanical signal	Final assessment	Comments
<b>Overall</b>	...	<b>Low</b>	The overall risk of sovereign stress is low, reflecting conservative fiscal policies and strong economic growth
<b>Near term 1/</b>			
<b>Medium term</b>	<b>Low</b>	<b>Low</b>	Medium-term risks are assessed as low on the basis of conservative fiscal policies, strong growth, and strong access to debt markets.
Fanchart	<b>Moderate</b>	...	
GFN	<b>Low</b>	...	
Stress test	...	...	
<b>Long term</b>	...	<b>low</b>	Long term risks are supported by conservative fiscal policy and strong growth that would also contribute to reduce the debt ratio over time. Also, there are no significant increases in the old dependency ratio, no significant exposure to climate change risks and there are not long term risks associated to large debt amortizations.
<b>Sustainability assessment 2/</b>	Not required for surveillance countries	Not required for surveillance countries	
<b>Debt stabilization in the baseline</b>			Yes
<b>DSA Summary Assessment</b>			
<p>Israel is at a low overall risk of sovereign stress and debt is sustainable. Strong growth, conservative fiscal policies have reduced debt ratios at pre-pandemic levels. Based on these assumptions, debt ratios are projected to continue to decline. Medium-term liquidity risks as analyzed by the GFN Financeability Module is classified as low and by the Fanchart as moderate. Over the longer run, Israel debt is also at low risk of stress.</p>			
<p>Source: Fund staff.</p> <p>Note: The risk of sovereign stress is a broader concept than debt sustainability. Unsustainable debt can only be resolved through exceptional measures (such as debt restructuring). In contrast, a sovereign can face stress without its debt necessarily being unsustainable, and there can be various measures—that do not involve a debt restructuring—to remedy such a situation, such as fiscal adjustment and new financing.</p> <p>1/ The near-term assessment is not applicable in cases where there is a disbursing IMF arrangement. In surveillance-only cases or in cases with precautionary IMF arrangements, the near-term assessment is performed but not published.</p> <p>2/ A debt sustainability assessment is optional for surveillance-only cases and mandatory in cases where there is a Fund arrangement. The mechanical signal of the debt sustainability assessment is deleted before publication. In surveillance-only cases or cases with IMF arrangements with normal access, the qualifier indicating probability of sustainable debt ("with high probability" or "but not with high probability") is deleted before publication.</p>			

**Figure 2. Israel: Debt Coverage and Disclosures**  
(Percent of GDP unless Otherwise Indicated)

						Comments	
<b>1. Debt coverage in the DSA: 1/</b>		CG	GG	NFPS	CPS	Other	
<b>1a. If central government, are non-central government entities insignificant?</b>						n.a.	
<b>2. Subsectors included in the chosen coverage in (1) above:</b>							
Subsectors captured in the baseline						Inclusion	
CPS	NFPS	GG: expected	CG				
				1	Budgetary central government	Yes	
				2	Extra budgetary funds (EBFs)	No	
				3	Social security funds (SSFs)	Yes	
				4	State governments	Yes	
				5	Local governments	Yes	
				6	Public nonfinancial corporations	No	
				7	Central bank	No	
				8	Other public financial corporations	no	
<b>3. Instrument coverage:</b>		Currency & deposits	Loans	Debt securities	Oth acct. payable 2/	IPSGSs 3/	
<b>4. Accounting principles:</b>		Basis of recording		Valuation of debt stock			
		Non-cash basis 4/	Cash basis	Nominal value 5/	Face value 6/	Market value 7/	
<b>5. Debt consolidation across sectors:</b>		Consolidated		Non-consolidated			
<b>Color code:</b> ■ chosen coverage ■ Missing from recommended coverage ■ Not applicable							
<p>1/ CG=Central government; GG=General government; NFPS=Nonfinancial public sector; PS=Public sector.  2/ Stock of arrears could be used as a proxy in the absence of accrual data on other accounts payable.  3/ Insurance, Pension, and Standardized Guarantee Schemes, typically including government employee pension liabilities.  4/ Includes accrual recording, commitment basis, due for payment, etc.  5/ Nominal value at any moment in time is the amount the debtor owes to the creditor. It reflects the value of the instrument at creation and subsequent economic flows (such as transactions, exchange rate, and other valuation changes other than market price changes, and other volume changes).  6/ The face value of a debt instrument is the undiscounted amount of principal to be paid at (or before) maturity.  7/ Market value of debt instruments is the value as if they were acquired in market transactions on the balance sheet reporting date (reference date). Only traded debt securities have observed market values.</p>							

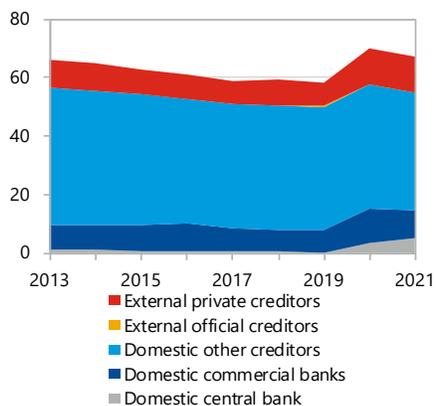
**Figure 3. Israel: Public Debt Structure Indicators**

**Debt by Currency (Percent of GDP)**



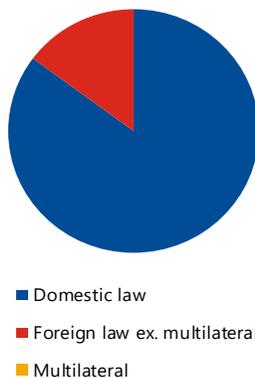
Note: The perimeter shown is general government.

**Public Debt by Holder (Percent of GDP)**



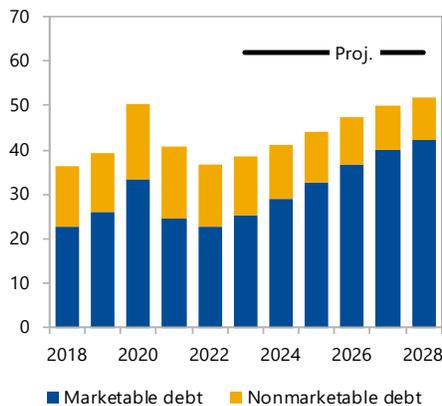
Note: The perimeter shown is general government.

**Public Debt by Governing Law, 2022 (Percent)**



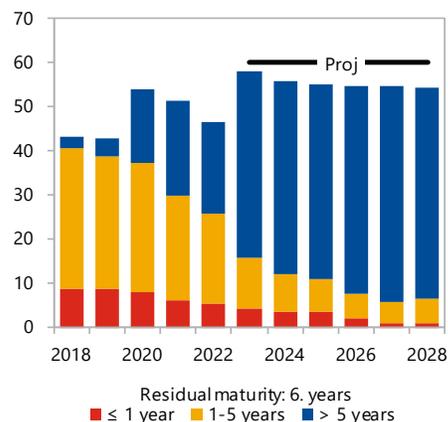
Note: The perimeter shown is general government.

**Debt by Instruments (Percent of GDP)**



Note: The perimeter shown is general government.

**Public Debt by Maturity (Percent of GDP)**



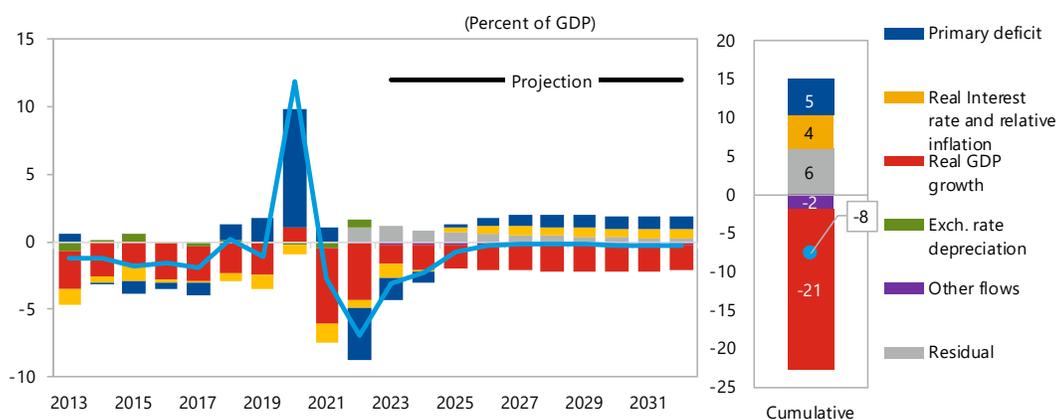
Note: The perimeter shown is general government.

Commentary: Debt is mostly held by domestic creditors, with maturity projected to increase over time.

**Figure 4. Israel: Public DSA-Baseline Scenario**  
(Percent of GDP Unless Otherwise Indicated)

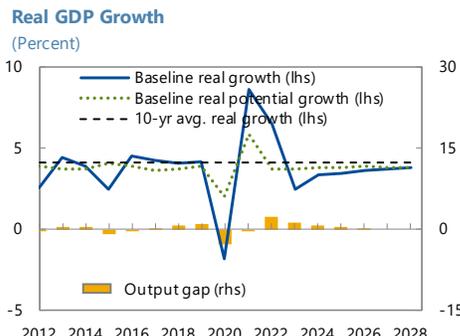
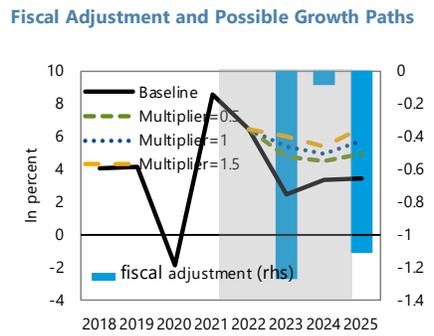
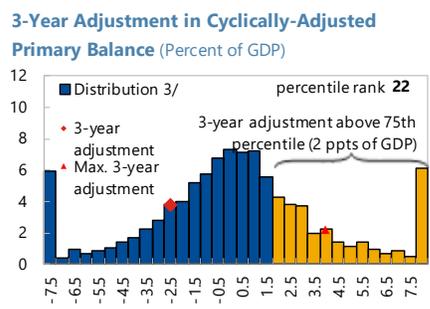
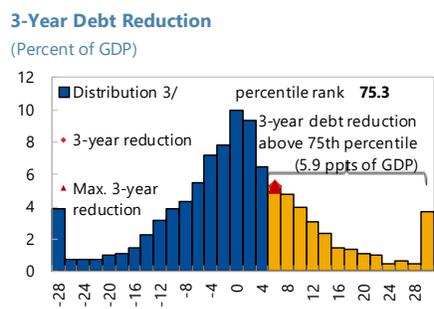
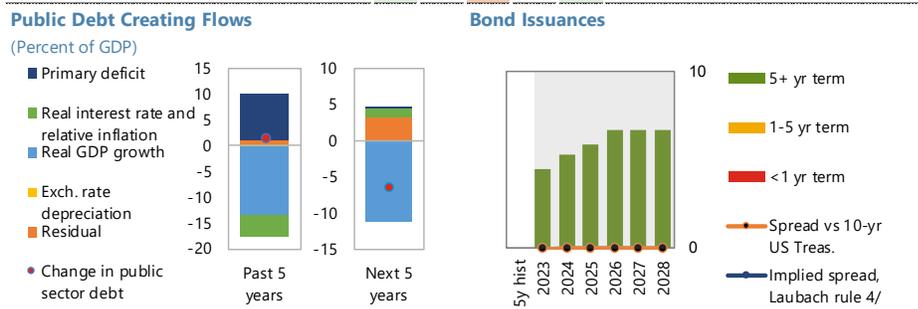
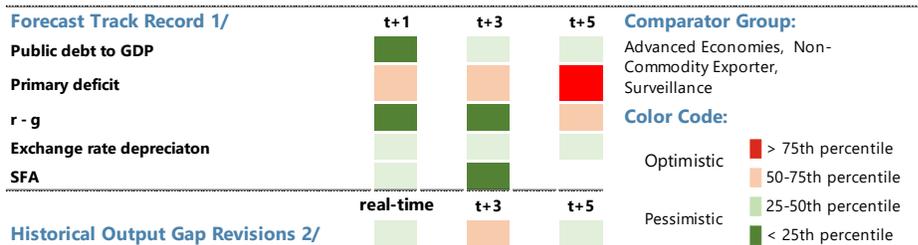
	Actual	Medium-term projection						Extended projection			
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Public debt	61.0	57.9	55.7	55.0	54.7	54.6	54.5	54.3	54.1	53.8	53.6
Change in public debt	-7.0	-3.1	-2.2	-0.7	-0.3	-0.1	-0.1	-0.2	-0.2	-0.2	-0.3
Contribution of identified flows	-8.1	-4.3	-3.0	-1.4	-0.9	-0.6	-0.6	-0.5	-0.6	-0.5	-0.5
Primary deficit	-3.8	-1.7	-0.8	0.3	0.6	0.9	0.9	0.9	0.9	0.9	0.9
Noninterest revenues	37.2	35.3	34.9	34.4	34.4	34.5	34.7	34.7	34.7	34.7	34.7
Noninterest expenditures	33.4	33.7	34.0	34.7	35.0	35.4	35.6	35.6	35.6	35.6	35.6
Automatic debt dynamics	-4.2	-2.4	-2.0	-1.5	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3
Real interest rate and relative inflat	-0.6	-1.0	-0.1	0.3	0.6	0.6	0.7	0.7	0.7	0.7	0.7
Real interest rate	-0.7	-1.2	-0.2	0.3	0.5	0.6	0.7	0.7	0.6	0.7	0.7
Relative inflation	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Real growth rate	-4.1	-1.5	-1.9	-1.8	-1.9	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Real exchange rate	0.6	...	...	...	...	...	...	...	...	...	...
Other identified flows	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other transactions	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Contribution of residual	1.1	1.2	0.8	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.3
Gross financing needs	4.5	4.5	5.3	5.9	6.7	6.7	6.7	7.4	8.4	7.6	8.2
of which: debt service	8.4	6.3	6.3	5.8	6.3	6.0	5.9	6.6	7.7	6.8	7.4
Local currency	5.7	3.8	3.5	4.2	4.8	4.2	3.9	4.6	5.9	5.5	6.0
Foreign currency	1.4	1.3	1.5	0.4	0.5	0.5	0.4	0.4	0.5	0.1	0.3
Memo:											
Real GDP growth (percent)	6.5	2.5	3.4	3.4	3.6	3.7	3.8	3.8	3.8	3.8	3.8
Inflation (GDP deflator; percent)	4.4	5.4	3.7	2.8	2.3	2.2	2.2	2.2	2.2	2.2	2.2
Nominal GDP growth (percent)	11.1	8.0	7.2	6.3	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Effective interest rate (percent)	3.2	3.2	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.5	3.5

#### Contribution to Change in Public Debt



Staff commentary: Public debt is expected to fall over time, with the primary deficit covering to about 1 percent of GDP.

Figure 5. Israel: Realism of Baseline Assumption



Commentary: Realism analysis does not point to major concerns. Past forecast errors do not reveal any systematic biases and the projected fiscal adjustment and debt reduction are well within norms.

Source : IMF Staff.

1/ Projections made in the October and April WEO vintage.

2/ Calculated as the percentile rank of the country's output gap revisions (defined as the difference between real time/period ahead estimates and final estimates in the latest October WEO) in the total distribution of revisions across the data sample.

3/ Data cover annual observations from 1990 to 2019 for MAC advanced and emerging economies. Percent of sample on vertical axis.

4/ The Laubach (2009) rule is a linear rule assuming bond spreads increase by about 4 bps in response to a 1 ppt increase in the projected debt-to-GDP ratio.

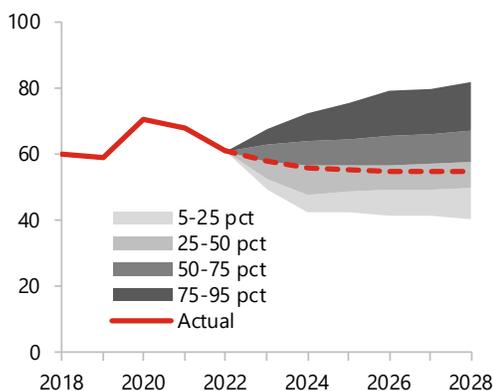
**Figure 6. Israel: Medium-Term Risk Analysis**

**Debt Fanchart and GFN Financeability Indexes**  
(Percent of GDP unless Otherwise Indicated)

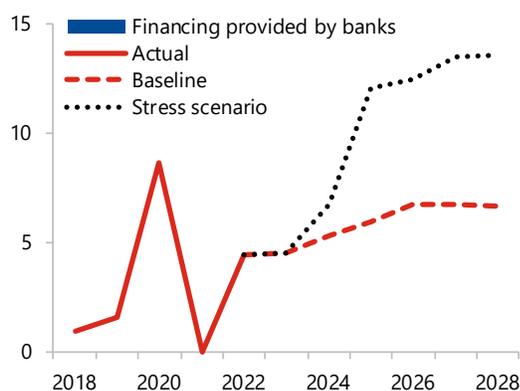
Module	Indicator	Value	Risk index	Risk signal	Adv. Econ., Non-Com. Exp, Program				
					0	25	50	75	100
Debt fanchart module	Fanchart width	41.3	0.6	...					
	Probability of debt not stabilizing (pct)	52.6	0.4	...					
	Terminal debt level x institutions index	15.2	0.3	...					
<b>Debt fanchart index</b>		...	<b>1.4</b>	<b>Moderate</b>					
GFN financeability module	Average GFN in baseline	6.0	2.0	...					
	Bank claims on government (pct bank assets)	6.5	2.1	...					
	Chg. in claims on govt. in stress (pct bank asset)	4.0	1.3	...					
<b>GFN financeability index</b>		...	<b>5.5</b>	<b>Low</b>					

Legend: Interquartile range Israel

**Final Fanchart (Percent of GDP)**



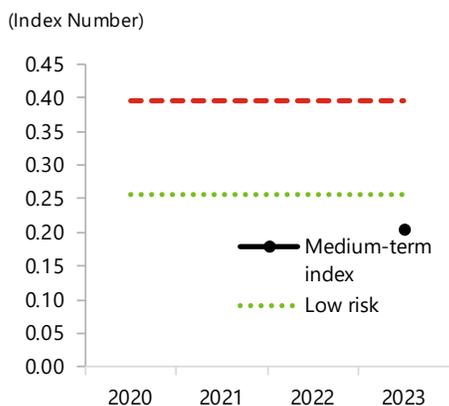
**Gross Financing Needs (Percent of GDP)**



Triggered stress tests (stress tests not activated in gray)

Banking crisis    Commodity prices    Exchange rate    Contingent liab.    Natural disaster

**Medium-Term Index**



**Medium-Term Risk Analysis**

	Low risk threshold	High risk threshold	Weight in MTI	Normalized level
Debt fanchart index	1.1	2.1	0.5	0.3
GFN financeability index	7.6	17.9	0.5	0.1
Medium-term index (MTI)	0.3	0.4	...	0.2, Low

Prob. of missed crisis, 2023-2028 (if stress not predicted): 9.1

Prob. of false alarm, 2023-2028 (if stress predicted): 52.3 pct.

Commentary: Of the two medium-term tools, the Debt Fanchart Module is pointing to moderate level of risk, while the GFN Financeability Module suggests lower level of risk.

## Annex IV. Authorities Responses to Past IMF Policy Recommendations

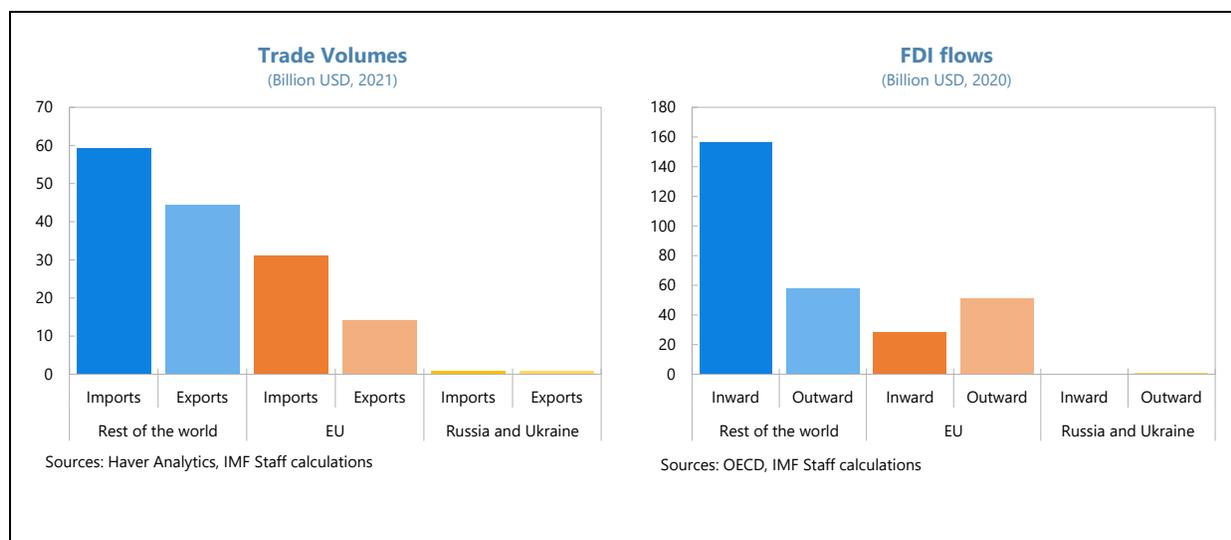
	<b>Key Recommendations</b>	<b>Actions</b>
<b>Monetary</b>	Begin data-driven monetary policy tightening. Foreign exchange purchases should taper off, allowing the shekel's value to be determined by market forces.	The central bank embarked on a steady tightening cycle, raising the policy rate gradually. Near-term inflation expectations (one year ahead) fell back to the target range in late 2022, and the rate of overall price growth eased in February and March 2023.
<b>Macroprudential</b>	Further tightening of macroprudential measures could help stem banks' exposures to housing market risks and prevent potentially unsustainable borrowing.	See Annex II.
<b>Fiscal</b>	Refocus medium-term policy on reducing public debt and rebuilding pre-pandemic buffers. Increase tax revenues by broadening the tax base and making the tax system more progressive. This would also support a needed increase in growth-enhancing spending.	Fiscal consolidation has taken place, with debt reduction happening faster than expected. Gross public debt in 2022 is 61 percent of GDP, down from 68 percent in 2021, and further reduction is expected in 2023. Increasing revenues, which was part of the recommended strategy, has played a large role in closing the fiscal deficit.
<b>Structural</b>	Active labor market policies should seek to expand vocational training and improve its quality. A greater adaptation of the different education streams will be needed to help align student qualifications with labor market needs. Continued efforts to reduce trade barriers and red tape would promote efficient resource allocation, investment, and innovation. Accelerating digital and physical Infrastructure would improve job accessibility.	<p>The new government has pledged to extend support to schools that do not include core subjects in their curriculum.</p> <p>The Knesset approved two measures in June to address the labor market child penalty of young parents. An increase by 40 percent in work grants to induce stronger labor market participation, and an extra income tax credit for parents of each child aged 6–12. In January, the new government pledged to broaden the tax credit scheme to include parents of children aged 6–18.</p> <p>The new government confirmed its intention to recognize many EU food standards, but barriers to trade and investment more broadly remain relatively high.</p>

## Annex V. Exposure to Ukraine and Russia

**1. While the Russian invasion of Ukraine had spillover effects in many countries, Israel had limited exposure and was limitedly affected.** Russia and Ukraine cover a tiny fraction of Israel's trade volumes, such that there has been no direct impact on the demand of Israeli goods and services, nor a shortage of imported intermediate goods that would create issues in Israeli supply chains. Secondary spillovers are also contained by the fact that Israel trade does not rely exclusively on the European Union, which has faced the strongest impact from the war.

**2. Israel is integrated in global capital markets, and direct investments come predominantly from other OECD countries.** As with trade, international investment in Israel is strongly diversified, coming from North America and Western Europe. Slowdowns in global investment due to changes in the macroeconomic outlook can have consequences for accumulation of physical capital domestically, but the share of Russia and Ukraine in Israeli FDI combined is negligible.

**3. Exposure to Russia and Ukraine is small,** due to energy self-sufficiency and large diversification of exports, most of which are in the high value-added segment which is less cyclical. In addition, the war created additional demand for sub-sectors of the tech industry, as cyber-security and military technology.



## Annex VI. Adverse Scenarios

**This annex includes two downside scenarios.** The first one embeds the possible impact on the Israeli economy from a combination of global spillovers. The second scenario illustrates the potential effect to economic activity related to uncertainty around the judicial reform.

### Risk Scenario: Impact of Global Spillover

**1. Israel is vulnerable to global spillovers.** As a small open economy, Israel could be impacted by spillovers from a weaker global outlook. The escalation of Russia's war in Ukraine could indirectly impact Israel through possible significant increases in global energy and commodity prices—and fragmentation—including from increased geopolitical tensions between the West and China, which risks lower cross-border flows of labor, goods and capital—as well as the impact of lower global credit supply derived from turmoil in global financial markets.<sup>1</sup> We employ the IMF's G20 Model to illustrate the potential effects of this scenario.<sup>2</sup> Global spillovers would impact activity and inflation in Israel via these channels.

- *Commodities and trade:* although Israel has been able to partially isolate the shock from an escalation of energy prices, overall, higher global commodities prices have impacted Israel inflation. An increase in inflation, in turn, would reduce real incomes, thus weighing on private consumption. A lower external demand—as the war hits major trading partners and fragmentation deepens, would reduce Israeli exports, which could significantly impact Israel's economy as exports contribute pointedly to GDP. Combined higher commodity prices, war-related uncertainty, and weakening economic prospects globally could dent consumer and business confidence, further dampening activity.
- *Lower global credit supply:* with a subsequent tightening in global financial conditions and widening corporate spreads and cost of financing could adversely impact activity, particularly investment and consumption.

**2. Altogether, these shocks could reduce Israel's growth and increase further its inflation rates.** Relative to the baseline scenario, the adverse scenario assumes growth downgrades in the range of 1.4 and 1.5 percentage points and headline inflation to be higher by 1.7 and 1.0 percent during 2023 and 2024. While these estimates are subject to unusually large uncertainty, these results imply an overall economic growth reduction of about half of what it is expected under the baseline. However, given its strong economic fundamentals, sizable buffers, and proven record of sound macroeconomic management, Israel is perceived to be well positioned to face these headwinds.

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<sup>1</sup> Key assumptions for this scenario are presented in the April 2022 and April 2023 WEO.

<sup>2</sup> Andrieu and others (2015).

Baseline and Adverse Scenarios						
(in percent)						
	Baseline		Adverse		Difference	
	2023	2024	2023	2024	2023	2024
GDP growth	2.9	3.1	1.5	1.6	-1.4	-1.5
Inflation	3.3	2.9	5.0	3.9	1.7	1.0
Sources: IMF estimates.						

### Risk Scenario: Impact of Uncertainty around the Judicial Reform

#### 3. Continued uncertainty around the judicial reform presents a notable downside risk.

Protests and social confrontation have accompanied economic uncertainty which, if continuing, could come at a large cost to the economy, negatively impacting consumption and investment. Among the specific channels through which investment could be affected is the relocation of high-tech firms. If a large enough number of firms in the sector relocated, Israel's strong economic growth potential could be jeopardized.

#### 4. The BOI has analyzed the potential economic ramifications of uncertainty around the judicial reform.

The BOI assesses that the economy could be impacted through shocks characterized by increases in Israel's risk premium, adverse impact to exports, and declines in domestic investment and private consumption.<sup>3</sup>

- *Increase in the country's risk premium* characterized by increased yield spreads of Israeli government dollar bonds relative to US bonds, a weakening of the shekel, and underperformance of the domestic stock market relative to the US and Europe. As noted by the BOI, many of these developments are already happening and if they continue, these events would make investors demand a higher premium to hold Israeli assets. An increase in the risk premium would increase the economy's financing costs. This would be reflected in a reduction in the volume of capital in the economy, a further depreciation of the shekel, and an acceleration of inflation. Overtime, a decline in the growth of real investment would decrease the stock of capital in the economy and therefore the level of GDP.
- *Negative impact to domestic investment and consumption.* A negative impact on the way the Israeli economy is perceived makes the economy vulnerable to a reduction in (quantity) demand for investments from foreign and local investors. Capital mobility also subjects the Israeli economy to reallocation risks, especially from the high-tech sector, given its funding base and key markets. Unlike the decline in investments that originates from an increase in the premium

<sup>3</sup> The BOI used the DSGE model from its Research Department to make the analysis.

demanded by investors (the first shock), here the BOI assumes a reduction on the willingness to invest in the economy, for a given interest rate.

- *Impact to Israel exports' demand*, as the uncertainty around the judicial reform could make Israel's trade partners reduce their exposure to Israel as they reassess their return-risks trade off on doing business with Israel. Lower exports will further reduce economic activity.

**5. The BOI's projections are based on several assumptions.** Since there is significant uncertainty about the duration and intensity of the uncertainty around the judicial reform, the BOI made the following assumptions on the shocks that were used for the scenario:

- *Timing.* The BOI presents results over the next three years, as it is difficult to assess the exact timing of the impact of shocks on economic variables, and because it is possible that some of the effects will be realized over time.
- *Magnitude.* The BOI choose shocks whose magnitude was similar to those that hit the economy in the early 2000s crisis, which experienced a combination of significant domestic events in an unstable global environment. In 2001–02, the increase in the risk premium was reflected in a cumulative increase in interest rate spreads of about 4.5 percentage points and a depreciation (in the effective exchange rate) of about 18 percent during those two years. The average negative impact on GDP growth each year during the first two years of the crisis was about 3 percent.<sup>4</sup>
- *Persistence of the shock.* Given the uncertainty about the reform, the BOI includes two scenarios depending on the degree of persistence of the shocks (low persistence and high persistence). As the persistence of shock last longer, the expected economic impact is expected to be larger.

**6. The BOI presents results of the economic impact based on a low and high persistence of shocks.** The table below indicates that in the event that the effect of the changes weakens relatively quickly (the gray rows in the table), the cumulative effect of the three channels will be a negative impact of an average of 0.8 percent of GDP each year over the next three years.

- In a scenario characterized by a higher persistence of the shocks (white lines in the table), an average of about 2.8 percent of GDP is negatively impacted per year over the next three years. In this case, the bulk of the decline in GDP derives from a marked negative impact on investment in the economy, due to the increase in uncertainty and the risk premium. The depreciation moderates the negative impact on exports slightly in the three years examined, but the marked reduction in investment, and as a result the negative impact on the economy's capital inventory and production capacity, is expected to deepen the negative impact on exports and on GDP in the more distant future. Private consumption is also significantly negatively

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<sup>4</sup> The BOI characterized the magnitude of shocks in the time series employed in its model as of one standard deviation for the estimation period.

impacted, due to the increase in uncertainty and the increase in the interest rate in the economy due to the increase in the risk premium. For the negative shock on domestic demand (consumption and investment), the BOI estimates the same impacts for both scenarios.

- The framework used by the BOI is based on a linear model. Therefore, a twice as large shock will double the negative impact on GDP. In contrast, if shocks are smaller, the negative impact on GDP will also be more limited. It is possible that in a situation where the shocks are relatively large and are also perceived as persistent, the reaction of the economic variables will be above and beyond the assessment consistent with the existing estimation.

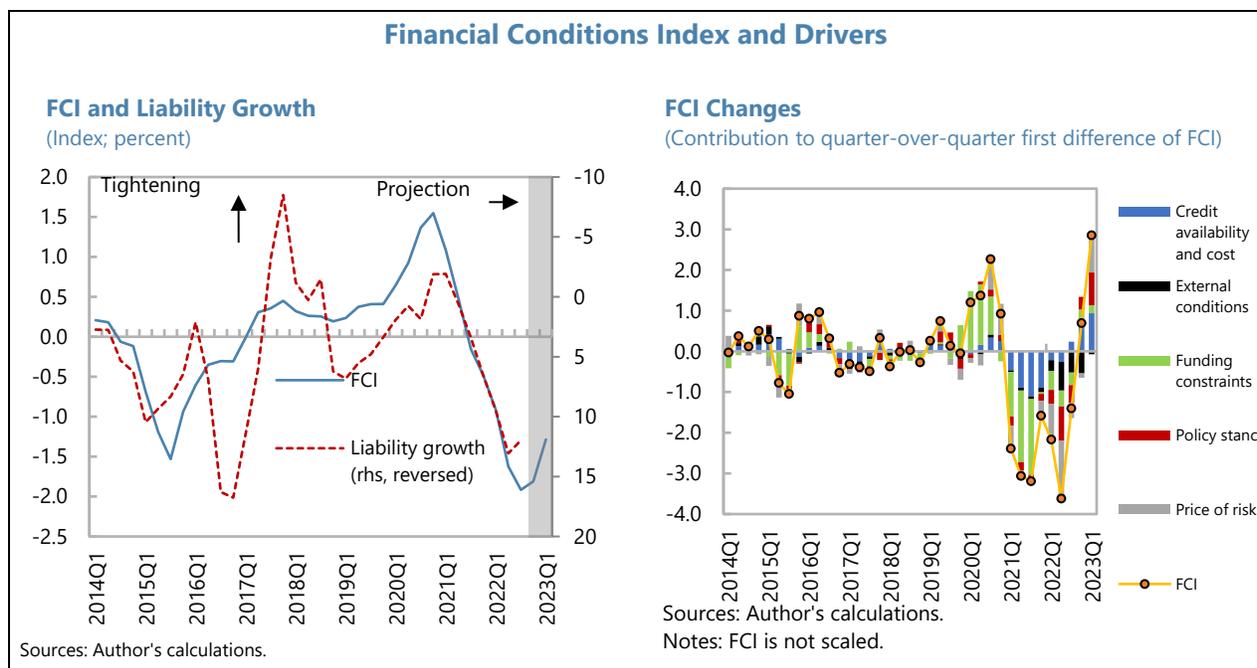
<b>Impact of Shocks in the Economy</b>				
<b>Type of Shock</b>	<b>Interest Rate Deviation</b>	<b>Inflation Deviation</b>	<b>Depreciation</b>	<b>Change in GDP</b>
	(first year impact)	(first year impact)	(first year impact)	(per year, over three years)
Increase in risk premium	0.5	0.6	1.6	-0.04
	1.9	3.3	13	-1.9
Decline in domestic demand (investment and consumption)	-0.25	-0.2	1.8	-0.7
Decline in exports	0	0	0.1	-0.03
	-0.1	0.0	0.7	-0.2
<b>Total impact for low persistence</b>				-0.8
<b>Total impact for high persistence</b>				-2.8

Sources: The Bank of Israel, Research Department Staff Forecast, April 2023.  
<https://www.BOI.org.il/en/communication-and-publications/press-releases/research-department-staff-forecast-april-2023/>  
 Note: The first line (with a gray background) in each shock reflects the developments for a shock whose degree of persistence is what characterizes the history of the Israeli economy over the past three decades (the estimated inertia of the relevant shock within the framework of the Research Department's DSGE model). The second line of each shock (white background) describes the development in a scenario characterized by a shock of a more prolonged nature. For the decline in domestic demand, it is assumed the same (low) persistence for both scenarios; therefore, only one line appears on the table.

**7. Based on alternative estimations that assess the impact of tightening of financial conditions on aggregate demand, IMF staff views the results presented by the BOI as plausible.** While it is very difficult to project the impact of uncertainty on economic activity, continued uncertainty could significantly increase the price of risk in the economy, which could tighten financial conditions and ultimately slow consumption and investment. To assess the impact of tightening of financial conditions, staff performed a two-step quantification:<sup>5</sup>

<sup>5</sup> See Borraccia et al, "Financial Conditions in Europe: Dynamics, Drivers and Macroeconomic Implications," IMF forthcoming Departmental Paper 2023.

- *First, the estimation of financial conditions in Israel and its drivers.* When quantifying the drivers of financial conditions, it is important to note that increases in “the price of risk” have had an important impact in the tightening of financial conditions observed in the last quarter. See Annex IX.



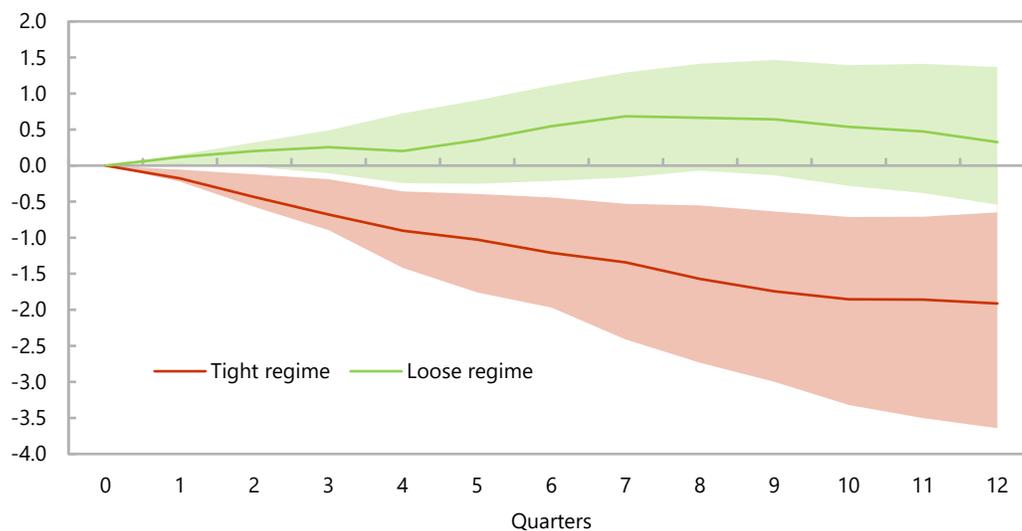
- *Second, the quantification of the impact of tightening financial conditions on aggregate demand.* Based on a reduced form approach—using a multinomial logit model that includes a large set of European countries and Israel—staff estimated the impact of tightening financial conditions on aggregate demand.<sup>6</sup> In this analysis, IMF staff assumed that if uncertainty related to the reform continues, financial conditions could be driven by significant increases of the “price of risk” and tighten to similar levels similar to the ones observed in the early 2000s, which were among the tightest historically observed values, ranked within a 98 percent confidence interval.

**8. Tighter Financial Conditions are expected to lower output.** Under the assumption that financial conditions tighten to reach similar levels than the ones observed in the early 2000s, IMF staff estimates that a tightening cycle of financial conditions could lower output by approximately 2.6 percent—on average over the next three years—when considering a confidence interval of 98 percent.

<sup>6</sup> The countries covered in the analysis include: i) Euro-area: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain; ii) Southern Euro-area: Italy, Spain, Portugal, and Greece; iii) rest of the Euro-area: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Slovakia, and Slovenia; and iv) non-Euro-area: Croatia (through end 2021), Czech Republic, Hungary and Poland and Israel.

### Impact of Tightening Financial Conditions on Aggregate Demand

(12 Quarters ahead)



Note: The redline represents the mean impact of tight financial conditions on output. The red shade represents the impact of tight financial conditions on output under a 98 percent confidence interval. Hence, if tight financial conditions were to persist, the impact on output would be up to about 1.4, 2.7 and 3.9 percent of GDP during the first, second and third years respectively; averaging up to about 2.6 percent in a 3 year period.

Annex VII. Risk Assessment Matrix<sup>1</sup>

Risks	Likelihood	Impact	Policy Response
<b>Internal political tensions.</b> Political polarization is heightened due to the judicial reform amidst protests.	<b>High:</b> The underlying trend in political polarization of Israeli society is reflected in social confrontation.	<b>High:</b> continued uncertainty associated with ongoing discussions of judicial reform could impact the economy, as investors reassess risk-return trade off to invest in Israel.	Find a durable and politically sustainable solution to lower uncertainty and protect the rule of law.
<b>Intensification of regional conflict(s).</b> Escalation of Russia's war in Ukraine or other regional conflicts and resulting economic sanctions disrupt trade (e.g., energy, food, tourism, and/or critical supply chain components), remittances, refugee flows, FDI and financial flows, and payment systems.	<b>High.</b> The system of alliances that Israel built in the Arab world in the recent years has been challenged by other actors, and spillovers from Russia-Ukraine war could affect the region.	<b>Medium.</b> Israeli institutions are built around persistent existential threats, but the intensification of geopolitical tensions might distract resources from important medium-run structural issues.	Allow temporary deviations of defense spending. Rebuild structural and contingent buffers for geopolitical risks.
<b>Social discontent.</b> Supply shocks, high inflation, real wage drops, and spillovers from crises in other countries worsen inequality, trigger social unrest, and give rise to financing pressures and damaging populist policies with possible spillovers to other EMDEs. This exacerbates imbalances, slows growth, and triggers market repricing.	<b>High:</b> The underlying trend in political polarization of Israeli society is reinforced by the current configuration of party alliances.	<b>High:</b> Short term impact on institutions and investment could be smaller, but long run changes in the solidity of Israeli institutions could affect investor sentiment and pressure location decisions that firms, especially in the tech sector, already face.	Safeguard the principles of rule of law and reinforce the checks and balances, while achieving the objective of the reform, could be achieved with higher participation in the design of a new proposal.
<b>Abrupt global slowdown or recession.</b> Global and idiosyncratic risk factors combine to cause a synchronized sharp growth downturn, with recessions in some countries, adverse spillovers through trade and financial channels, and markets fragmentation.	<b>Medium.</b> Higher interest rates in the U.S. results in capital outflows from Israel, a stock market fall and tighter financial conditions.	<b>Medium:</b> Israel proved to be resilient to global downturns thanks to its positioning in the high value-added segment of value chains but remains a small open economy.	Keep monitoring financial conditions. Market forces should be allowed to continue to set the price of the shekel, with interventions limited to addressing disorderly market conditions.

<sup>1</sup> The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path. The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent).

Risks	Likelihood	Impact	Policy Response
<p><b>Commodity price volatility.</b> A succession of supply disruptions (e.g., due to conflicts and export restrictions) and demand fluctuations (e.g., reflecting China reopening) causes recurrent commodity price volatility, external and fiscal pressures, and social and economic instability.</p>	<p><b>Medium.</b> While the Israeli economy has achieved substantial energy autonomy, and has oriented its production towards services, supply chain disruptions could still happen.</p>	<p><b>Low.</b> High diversification, energy autonomy and a placement of the Israeli economy in the high value-added segment of value chains represent useful shields against these risks.</p>	<p>Intensify investments on energy sources that can guarantee lower volatility, maintain a highly diversified economy.</p>
<p><b>Monetary policy miscalibration.</b> Amid high economic uncertainty and volatility, major central banks slow monetary policy tightening or pivot to loosen monetary policy stance prematurely, de-anchoring inflation expectations and triggering a wage-price spiral in tight labor markets.</p>	<p><b>Medium.</b> Labor markets in Israel remain tight, with inflationary pressures unabated among advanced economies, while financial stability concern put pressures on central bank to slow tightening.</p>	<p><b>Medium.</b> Being a small open economy linked to all major advanced economies, Israel is exposed to changes in policies of other countries that could trigger capital outflows as well as instability domestically.</p>	<p>Maintaining a credible commitment to monetary policy tightening with coordinated moves with major central banks.</p>
<p><b>Systemic financial instability.</b> Sharp swings in real interest rates, risk premia, and assets repricing amid economic slowdowns and policy shifts trigger insolvencies in countries with weak banks or non-bank financial institutions, causing markets dislocations and adverse cross-border spillovers.</p>	<p><b>Medium.</b> Monetary policy tightening is still ongoing, while it might slow down. It happens in a financial environment that has experienced ultra-low nominal rates for over a decade.</p>	<p><b>Medium.</b> The Israeli economy, being characterized by highly productive firms which need financing to expand, that are on average younger than in other advanced economies, and a rapid growth fueled by investments, depends heavily on financial stability.</p>	<p>Monitoring signals of financial distress in local financial markets to avoid threats to financial stability.</p>
<p><b>Deepening geo-economic fragmentation.</b> Broader and deeper conflict(s) and weakened international cooperation lead to a more rapid reconfiguration of trade and FDI, supply disruptions, technological and payments systems fragmentation, rising input costs, financial instability, a fracturing of international monetary and financial systems, and lower potential growth.</p>	<p><b>High.</b> Following the Russia-Ukraine war, the emergence of alliances across geopolitical blocs pose a higher risk of a process of de-globalization of global trade and investment.</p>	<p><b>Medium.</b> While reduced global growth would impact Israel, its main trading partners are in the Western block, and have increased their importance in Israeli economy over time.</p>	<p>Diversify economy to mitigate the potential detrimental impact of global trade shocks to the economy.</p>

Risks	Likelihood	Impact	Policy Response
<p><b>Cyberthreats.</b> Cyberattacks on critical domestic and/or international physical or digital infrastructure (including digital currency and crypto ecosystems) trigger financial and economic instability.</p>	<p><b>Medium.</b> With global tensions rising and asymmetric warfare capabilities, cyberattacks are likely to expose significant fault lines in infrastructures, with Israel being a likely target from regional competitors.</p>	<p><b>Medium.</b> While Israel has been at the forefront of promoting digital security in both the public and private sector, the high digitalization of its economy could expose potentially relevant fault lines.</p>	<p>Invest in cybersecurity, especially by focusing on the threats posed by lack of awareness of more senior individuals in critical roles.</p>
<p><b>Extreme climate events.</b> Extreme climate events cause more severe than expected damage to infrastructure (especially in smaller vulnerable economies) and loss of human lives and livelihoods, amplifying supply chain disruptions and inflationary pressures, causing water and food shortages, and reducing growth.</p>	<p><b>Medium.</b> Israel is naturally exposed to extreme climate events and has a particular concern regarding water supplies.</p>	<p><b>High.</b> High population density, together with limited natural water resources, make climate events, especially linked to water shortages, potentially disruptive.</p>	<p>Invest in adaptation technologies.</p>

## Annex VIII. Assessing the Impact of Increased Public Investment

**1. The Israeli economy is characterized by a large gap in the stock of public capital compared to its peers, and by large wage inequality.** The diverging path of the tech sector with respect to the rest of the economy is amplifying wage inequality, as most productive workers are employed in research-intensive industries whose wage growth surpasses that of the rest of the economy. To study how these dynamics interact with an increase in public investment, we adapt a New-Keynesian DSGE model with a rich sectoral microstructure to the Israeli economy.

**2. Our exercise is based on the DIGNAR: a real, multiple sector model of a small open economy proposed by Melina et al. (2015).** We assume there are two types of workers (low-skilled and high-skilled, indexed with  $j$ ), who supply labor in two productive sectors (tech and traditional, indexed with  $s$ ). Workers maximize the following utility function:

$$\mathbf{E}_0 \left[ \sum_{t=0}^{\infty} \beta^t \left( \frac{1}{1-\sigma} (c_t^j)^{1-\sigma} - \frac{\kappa^j}{1+\psi^j} (L^j)^{1+\psi^j} \right) \right], \text{ with } j = L, H \quad (1)$$

subject to a standard intertemporal budget constraint. The parameter  $\kappa^j$  governs the effective labor supply of workers of type  $j$ , while  $\psi^j$  is a standard Fritsch elasticity. Because  $\kappa^H < \kappa^L$  and  $\psi^H < \psi^L$ , and steady state labor equals:

$$L^j = \left( \frac{1}{\kappa_j} \cdot \frac{1-\tau^l}{1-\tau^c} \cdot w_j \right)^{1/\psi_j} \quad (2)$$

we have  $L^H > L^L$ . The two sectors produce output according to:

$$y_{s,t} = z_s (k_{s,t-1})^{1-\alpha_s} (L_{s,t})^{\alpha_s} (k_{G,t-1})^{\alpha_G}, \text{ with } s = T, NT \quad (3)$$

where  $k_G$  is public capital. Elasticity of output with respect to public capital,  $\alpha^G$ , is calibrated to a conservative low level of 0.1.<sup>1</sup> We assume lower depreciation of tech capital, and hence in steady state tech firms are more capitalized, that is:  $K_T > K_{NT}$ , invest more, and pay higher wages. High-skilled workers are by assumption employed more heavily in the tech sector.

**3. The model allows for a realistic characterization of fiscal policy:** the government can change its consumption, investment and transfer policy, and finance each of those policies with any combination of debt, consumption taxes, labor taxes, capital taxes, and other transfers. The dynamic budget constraint of the government is thus:

<sup>1</sup> Zidong et al. (2019) estimate a long-run elasticity of production to public capital of 0.13.

$$\begin{aligned} & \tau_t^c c_t + \tau_t^l w_t L_t + (1 - \theta^k) \tau^k (\sum_s r_t^s k_{s,t-1}) + \mu k_{G,t-1} + \\ & + s_t d_{c,t} + b_t = p_t^G (g_t^c + g_t^l) + t_t + R_{t-1} b_{t-1} + s_t R_{dc,t} d_{c,t-1} \end{aligned} \quad (4)$$

where  $\mu k_{g,t-1}$  are user fees on government capital,  $s$  is the real exchange rate,  $b$  is domestic debt, and  $d_c$  is external (commercial) debt. To finance fiscal gaps, we need to include a rule that determines the mix of domestic and commercial debt to be used. That is given by:

$$\chi \Delta b_t = (1 - \chi) s_t \Delta d_{c,t} \quad (5)$$

**4. Because of public inefficiencies and absorptive capacity constraints, public investment in general does not equal the amount mobilized for each desired project.** In the model, this is captured by effective investment being proportional to a deviation of public investment from its steady-state value,  $\bar{\gamma}_t^{GI} = \frac{g_t^l}{g^l} - 1$ . Hence, effective investment can be written as:

$$\tilde{g}_t^l = \begin{cases} \bar{\epsilon}_t^l, & \text{if } \bar{\gamma}_t^{GI} < \bar{\gamma}^{GI} \\ \bar{\epsilon}(1 + \bar{\gamma}^{GI})g_t^l + \epsilon(\bar{\gamma}_t^{GI} - \bar{\gamma}^{GI})g_t^l, & \text{otherwise} \end{cases} \quad (6)$$

where  $\bar{\epsilon} \in (0,1)$  represents steady-state efficiency, and  $\epsilon \in (0,1)$  is the efficiency of the portion of public investment exceeding an exogenously fixed threshold  $\bar{\gamma}^{GI}$ .

**5. In the baseline scenario, wage inequality grows, absent external shocks or government policies to address it.** The growth of total factor productivity drives a long-run yearly GDP growth of 3 percent. Despite the assumption that the productivity process is identical for the two sectors, that is  $z_{T,t} = z_{NT,t}$  for all  $t$ , the model yields predictions on the distribution of incomes even in absence of additional shocks. Since the tech sector is characterized by higher investment levels, its share grows over time. In a growing economy, the stronger increase in labor demand for tech workers widens the labor earnings gap between them and workers in the traditional sector.

## Modelling an Investment Surge

**6. Closing the capital stock gap with respect to other OECD countries requires a sustained increase in investment levels.** We assume the public investment to GDP ratio in steady state to equal 1.8 percent of GDP, so that an investment surge that closes the gap is equal to a 33 percent increase in capital spending with respect to the steady state. The increase lasts three years, after which the share of investment slowly converges back to steady state in the eighth year of the simulation. We assume all tax rates adjust proportionally to finance the increase in investment and that the remaining fiscal gap is closed with a combination of domestic and commercial borrowing, with  $\chi = 50$  percent. Commercial borrowing brings in additional financial resources but commands higher interest rates and is subject to jumps in international risk premia. Domestic borrowing, while cheaper from a government balance sheet point of view, shifts domestic resources away from the private sector into the public sector.

**7. Increasing public investment temporarily crowds out private investment and consumption.** Figure 10 presents three scenarios, with the central one being a surge in public spending that allows Israel to bridge the investment gap with other advanced economies. Total public debt increases to accommodate the surge but does not go on an unsustainable path even in the very aggressive investment scenario (in red). Being financed in part with a contemporary increase in consumption and labor taxes, the plan reduces household disposable income in the short run and thus the share of consumption to output. A lower share of consumption to output improves the trade balance, thus reducing the current account deficit temporarily. Similarly, the combination of higher taxes and heated up factor prices crowds out private investment. Both catch up with steady state levels in the long run.

**8. Higher public capital increases growth potential in the long run, in turn reducing wage inequality.** Strong labor demand increases hours worked for all household types. However, because of “home bias” in government spending (see Garcia-Santana and Santamaria, 2023), the investment surge relies disproportionately on the domestic traditional production sector. The relative increase in wages (compared to the tech sector, whose labor demand only increases because of indirect demand effects) produces a substantial narrowing of wage inequality. Most importantly, to the extent that new public capital is maintained, it permanently adds to the productive capacity of the economy, moving its trend growth to a new level. In the long run, the central scenario sees output growth being about 10 percent higher than in the baseline, that is going from slightly above 3 percent a year to about 3.4 percent.

### Can Education Reform Increase the Returns to Public Investment?

**9. Education reform in Israel should focus on improving the marketable skills of the least advantaged segments of the population.** While there is no direct way to capture the skills gap in the class of models used for the present chapter, it is useful to think of the parameters  $\kappa^j$  as a “labor productivity” level, translating the effort of providing worked hours into productive output for firms. In this context, education reform would lower the subjective costs of supplying hours for low-skilled workers, thus increasing their labor supply and earnings.

**10. Increasing public investment after education reform generates additional growth and reduces inequality even more.** Figure 11 shows the impact of the increased investment scenarios discussed above, in an economy with higher labor supply following education reform. While percentage increase of output is identical to the scenarios in Figure 10, it helps to point out that this is an already richer economy, with a higher level of worked hours and thus higher output levels. There is, however, a striking difference in the distributional consequences of an investment surge in such a scenario. With tighter labor markets, additional demand has an amplified effect on wages. This effect is magnified for the low-skilled, which are the main beneficiaries of the education reform: while in the previous experiment an investment surge was able to contain wage inequality trending up, in this scenario it effectively reduces long-run inequality between low-skilled and high-skilled workers.

## Risk Factors: Capacity Constraints and Global Shocks

**11. When capacity constraints limit public spending efficiency returns to increased investment can be severely affected.** The scenarios in Figures 10–11 assume small frictions to government capital stock formation, with an 80 percent public investment efficiency, in line with Dabla-Norris et al. (2012). We then run the same experiment by assuming the efficiency level of public investment to drop to 60 percent. Figure 12 compares the two scenarios, with growth returns being almost completely wiped out by a small decrease in spending efficiency (purple line), while the debt to output ratio is increased as in the previous scenario. This exercise acts as a warning against assuming that any increase in public investment would produce comparable benefits: assumptions regarding the quality of investment projects, or the smoothness of their execution, drive all welfare considerations.

**12. Turbulent global financial market conditions can adversely affect domestic growth-enhancing plans.** The yellow line illustrates a scenario in which, following an increased investment sovereign risk spreads jump by 30 percent, impacting the ability of the government to borrow internationally. Despite unchanged investment levels and with unchanged government efficiency, long-run output growth can even go below trend, while public debt starts to follow an explosive path. As a result, the current account deficit also grows in the long run. Increasing borrowing costs also affect the severity of the investment crowding out, with private capital formation staying lower than trend for a considerable number of years. The scenario illustrates the importance of maintaining sound public finances in advance of ambitious investment plans. All analysis in the present Staff Report indicate the likelihood of such a scenario for Israel to being quite low. As a result, this risk scenario should be interpreted as highlighting the unseen dividends of Israel's solid macroeconomic outlook.

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## Annex IX. Financial Conditions

1. **Financial conditions started to tighten in Israel in 2022, after loosening significantly during the pandemic.** This annex shows an index of financial conditions (FCI)—defined as the availability and affordability of financing to the main sectors of the economy—characterizing credit availability and financing ease, in terms of both prices and quantities. The FCI shows significant tightening starting in mid-2022. While the decline in lending growth is milder than during the GFC or European debt crises, the pace of FC tightening is comparable—as in much of Europe.<sup>1</sup>
2. **Higher risk—its price, and quantity—and the policy stance are the dominant contributing factors to the ongoing tightening of conditions, with the former reflecting the impact of both increased market volatility and higher required returns by investors.** To aid interpretation, indicators are grouped into five key macroeconomic and financial drivers, reflecting the transmission channels through which indicators may work:
  - **Credit availability and cost** reflects the terms on which households and non-financial corporates have access to credit, including mortgage and consumer lending rates, corporate lending rates, and determinants of real and financial asset valuations (stock prices, bond yields, house prices).
  - **The price of risk** reflects risk premia and market volatility, across asset classes, including government and corporate bond spreads, interest rate swap spreads, and CDS spreads, plus measures of stock and bond market volatility.
  - **Funding constraints** captures banks' willingness to lend, or restrictions to financial intermediation, as proxied by various financial soundness indicators (including NPL and capital ratios, interest margins, return on assets and on equity, among others).
  - **The policy stance** reflects central bank rates and other indicators which may be affected more directly by monetary and financial policy decisions (e.g., interbank and deposit rates, short-term government bond yields).
  - **External conditions** include select variables which fall outside the scope of domestic financial systems, including exchanges rates, policy rates and yields in global financial centers.
3. **Financing conditions are tightening across sectors, albeit at different speeds.** FCs for government, households, and non-financial corporates are all tightening, albeit at different levels: conditions remain looser—and started to tighten later—for non-financial corporations, partly reflecting healthy profitability.

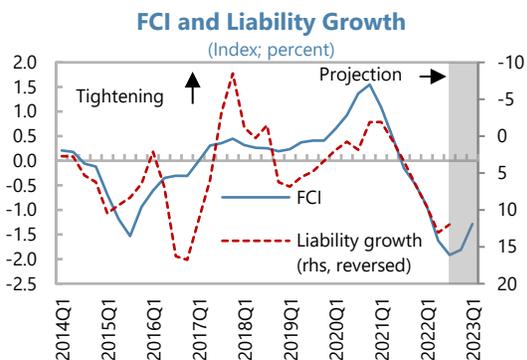
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<sup>1</sup> Prepared by G. Borraica, S. Hassan, and M. Segoviano using the methodology in "Financial Conditions in Europe: Dynamics, Drivers and Macroeconomic Implications", by G. Borraica, R. Espinoza, V. Guzzo, F. Jiang, R. Lafarguette, V. Nguyen, M. Segoviano and P. Wingender, forthcoming IMF Departmental Paper.

**Figure 1. Financial Conditions Index**

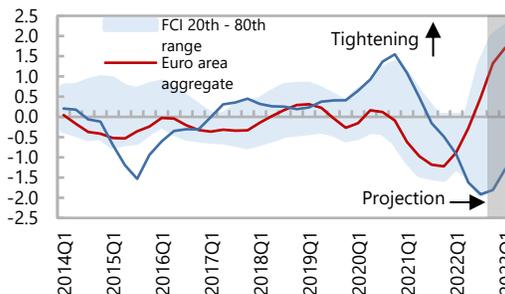
Financial conditions (FC) in Israel loosened significantly after the pandemic.

While FC have been looser than in Europe, they started tightening in the last quarter...



Sources: Author's calculations.

**Financial Condition across Israel and EA19 Member States**  
(Index, 2015Q1-2023Q1)

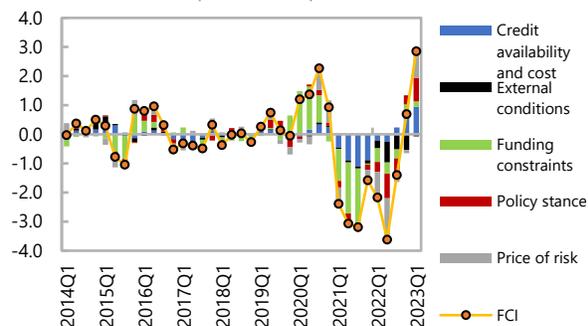


Sources: Author's calculations.

The price or risk seems to be the factor with the largest weight in the tightening of the overall private sector FC...

the government FC contrast with the household and non-bank financial corporations (NBFC) FC ...

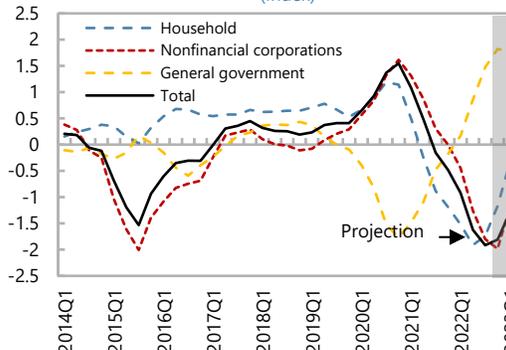
**FCI Changes**  
(Contribution to quarter-over-quarter first difference of FCI)



Sources: Author's calculations.

Notes: FCI is not scaled.

**FCI by Sectors**  
(Index)



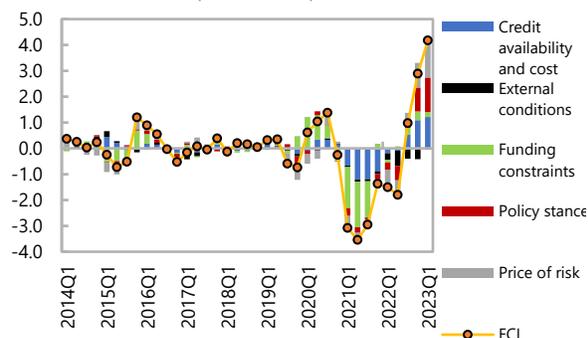
Sources: Author's calculations.

While the policy stance, in addition to the price of risk, seems, to be driving household FC...

credit availability seems to be also influencing FC in the NBFC sector.

**FCI Changes - Household**

(Contribution to quarter-over-quarter first difference of FCI)

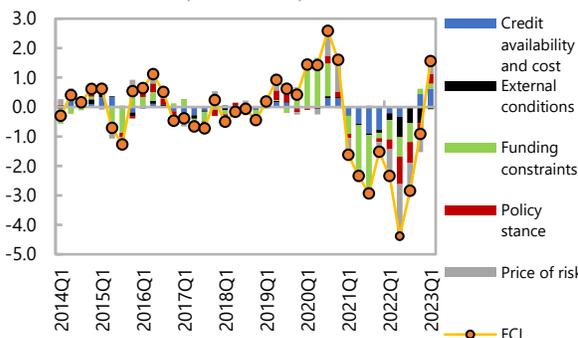


Sources: Author's calculations.

Notes: FCI is not scaled.

**FCI Changes - Nonfinancial Corporations**

(Contribution to quarter-over-quarter first difference of FCI)



Sources: Author's calculations.

Notes: FCI is not scaled.

## Annex X. Adaptive Learning and Inflation Expectations Formation in Israel<sup>1</sup>

**1. Introduction.** Expectations formation can become more backward looking when inflation is high and rising, consistent with a growing literature on deviations from the standard rational expectations (RE) assumption (Mankiw, Reis and Wolfers (2004), Milani (2007), Slobodyan and Wouters (2012b), Coibion, Gorodnichenko and Kamdar (2018), among others). Our analysis draws on a strand of this literature in which expectations can transition from a regime close to rational expectations to completely backward-looking expectation formation. Specifically, we assume that economic agents form their expectations through adaptive learning (AL), updating their beliefs about the underlying economic relations when new data become available, through a learning mechanism which we summarize through a simple statistical model.

**2. The model.** We use a small open economy semi-structural variation of the model by Galí, Smets, and Wouters (2012)—a standard New Keynesian model that includes wage and price Phillips curves (PC). The same model is used in Dizioli and Wang (2022) and Alvarez and Dizioli (2022). The equilibrium equations in the linearized system are given by:

$$\begin{aligned}
 y_t &= \alpha_{yL}y_{t-1} + \alpha_{yF}y_{t+1} + \gamma(\pi_{t+1} - r_t) + \varphi_z z_t + s_{yt} && \text{(IS Curve)} \\
 s_{yt} &= \rho_\varepsilon s_{yt-1} + \varepsilon_{yt} && \text{(Demand Shock process)} \\
 \pi_t &= \alpha_{\pi L}\pi_{t-1} + \alpha_{\pi F}\pi_{t+1} + k_\pi w_t + \lambda z_t + \varepsilon_{\pi t} && \text{(Price PC)} \\
 \pi_{wt} &= w_t - w_{t-1} + \pi_t && \text{(Nominal wage definition)} \\
 \pi_{wt} &= -\alpha_{wL}w_{t-1} + \alpha_{wF}\pi_{wt+1} + K_w y_t + \varepsilon_{wt} && \text{(Wage PC)} \\
 r_t &= \rho r_{t-1} + (1 - \rho)(\rho_\pi \pi_{t+1} + \rho_y y_t) + \varepsilon_{rt} && \text{(Policy reaction function)} \\
 z_t &= E_t[z_{t+1}] - (r_t - \pi_t - (r_t^F - \pi_t^F)) + \varepsilon_{zt} && \text{(UIP condition)}
 \end{aligned}$$

where  $y$  is the output gap (measure of slack),  $\pi$  is quarter-on-quarter annualized core inflation,  $r$  is the nominal monetary policy interest rate,  $w$  is the constant-composition real wage gap (real wage deviations from labor productivity growth),  $\pi_w$  is real wage inflation, and  $z$  is the shekel bilateral real exchange rate with respect to the US dollar.

**3. Expectations process.** In the standard full credibility RE model, the expectation is model-consistent and reflects all available information:  $E_t[x_{t+1}] = x_{t+1}$  if  $\varepsilon_{t+1} = 0$ . For the AL model, the best out-of-sample forecast performance is achieved when expectations follow an AR(2) process,

$$E_t[x_{t+1}] = \alpha_t + \beta_t^1 x_t + \beta_t^2 x_{t-1}, \quad \text{(forecasting equation)}$$

where the coefficients vary over time, as a function of how accurate the forecast is at each period. The learning algorithm follows the updating model developed in Slobodyan and Wouters (2012a; 2012b), with a Kalman filter mechanism as the statistical description of how

<sup>1</sup> Prepared by Allan Dizioli and Shakill Hassan, drawing on Alvarez and Dizioli (2023).

agents update the coefficients of the forecasting equation. The learning vector evolves according to:

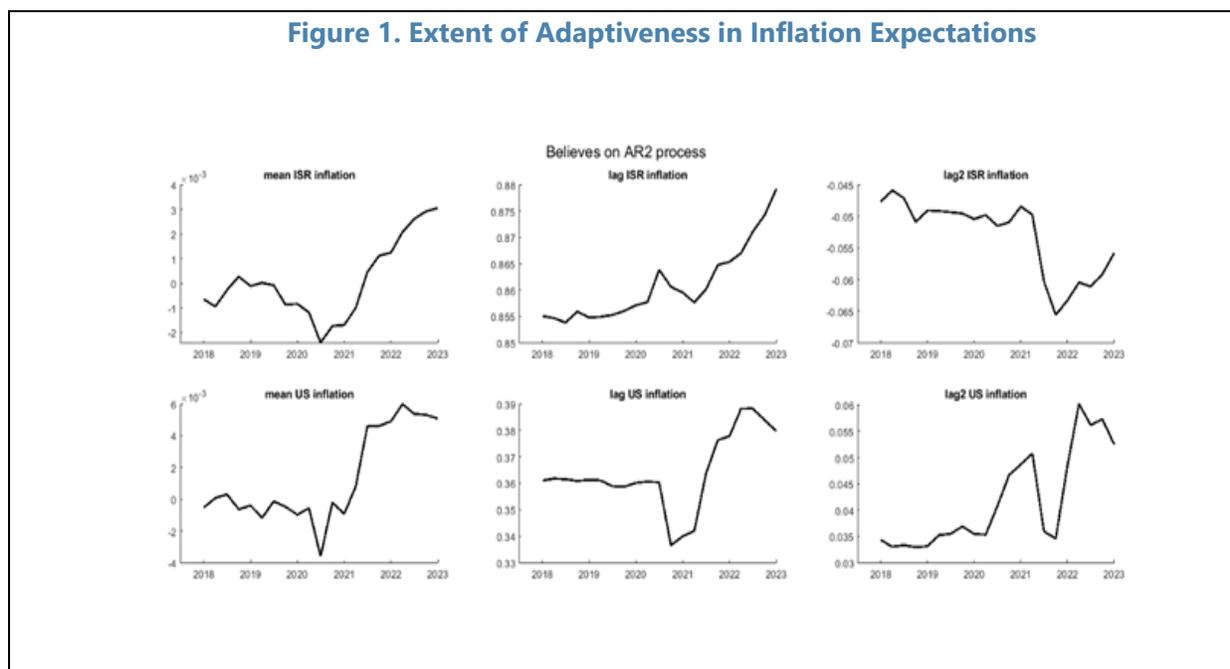
$$B_{t|t} = B_{t|t-1} + P_{t|t-1} X_{t-1} [\Sigma_t + X'_{t-1} P_{t|t-1} X_{t-1}]^{-1} * (\text{forecast errors}),$$

where the  $B_{t|t}$  is a vector that stacks all the coefficients of the AR(2) processes,  $P_{t|t-1}$  is the covariance matrix and  $\Sigma_t$  is the variance-covariance matrix of the AR(2) equation residuals.

**4. Estimation.** The model is estimated with Bayesian methods and quarterly macroeconomic data from 2000:Q1 to 2022:Q2 for Israel and the USA. The set of variables are the output gap (as estimated by IMF staff), the real wage gap, annualized quarterly price inflation deviation from target, and the policy rate of interest. Since our model does not have enough structure to explain workforce composition change, we use the composition-constant real wage calculated by Howard, Rich, and Tracy (2022) for the USA.

### Comparison of Results for Israel and the USA

**5. Degree of adaptiveness.** If inflation expectations are well anchored, we would expect the lag inflation coefficients in the household's forecasting equation to be small, and the mean deviation of inflation from target to be zero. The first result in Figure X.1 is that expectations in Israel depend a lot more on past outcomes than in the US (the sum of the two coefficients in the AR process is over 0.8 in Israel compared to less than 0.3 in the USA). The second result to highlight is the coefficient stability over the last ten years before the pandemic. (The coefficient reflecting the mean expected inflation gap was close to zero as households expected inflation to be at the central bank target.) The pandemic disrupted this stability in both economies, which started to see inflation above target.



### Optimal Monetary Policy

**6. Welfare function.** In addition to the estimated monetary policy reaction function, define the optimal monetary policy path as the interest rate path,  $\{i_t\}$  for  $t=1$  to  $\infty$ , that minimizes the following welfare function,

$$\sum_{t=j}^{\infty} \beta^t (0.9(i_t - i_{t-1}) + (y_t - 0)^2 + (\hat{\pi}_t - 0)^2),$$

where we assume equal weights for the output gap ( $y_t$ ) and inflation deviations from target ( $\hat{\pi}_t$ ), and interest rate smoothing. Other implicit assumptions are that the central bank has full knowledge of the current shocks hitting the economy, know all the future shocks that will hit the economy and have full knowledge of how their actions impact expectations.

**7. Remark on expectations channels.** In the estimated AL model, the central bank has three channels to influence inflation. One is the standard direct channel, in which a tighter policy cools-off demand, lowering the output gap and hence inflation. The other two channels operate through inflation expectations. Following a tighter monetary policy stance, inflation falls, which lowers expected inflation in the next period. Finally, the central bank can also affect agents' learning (the coefficients in the forecasting equation). By seeing less inflation than they expected, households update their beliefs about how past inflation matters for future inflation.

### Adaptive Expectations Prolong the Inflationary Episode

**8. Simulations.** We use conditional forecasting scenarios to measure a possible model-derived path for inflation going forward in the current inflationary environment. The simulation period is 2023Q2. The scenarios share a common set of shocks: in both scenarios, Israel faces an unexpected cost-push shock that takes actual inflation to what was observed in 2023:Q1, with a half-life of 6.5 quarters. No new shocks hit the economy from 2023:Q1 onwards. Moreover, it is assumed that the output shock filtered by the models just unwind according to the estimated AR process. Table 1 shows the results for two scenarios: 1) the IMF's estimated output gap without any judgement on policy; 2) using a proxy for the authorities' estimate of the output gap, given by the central bank staff's [published](#) measure of output deviation from trend growth, with theoretically optimal policy.

**9. Learning induces persistence.** Both scenarios point to slow convergence of inflation towards target: as inflation expectations respond significantly to past inflation outcomes in Israel (see also IMF (2022)), there is feedback from inflation to expected inflation, keeping inflation higher for longer.

**Table 1. Israel: Inflation Under Different Interest Rate Paths**

	23:I	23:II	23:III	23:IV	24:I	24:II	24:III	24:IV	
CPI YOY (estimated taylor rule, IMF output gap)		5.2	5.2	4.9	4.5	4.1	3.7	3.3	2.9
CPI YOY (with proxy for authorities' output gap)		5.2	5.2	4.9	4.5	4.1	3.7	3.2	2.8
	23:I	23:II	23:III	23:IV	24:I	24:II	24:III	24:IV	
interest rates (estimated taylor rule, IMF output gap)		3.7	4.1	4.4	4.6	4.7	4.7	4.6	4.4
interest rates (with proxy for authorities' output gap)		3.7	4.0	4.3	4.5	4.5	4.5	4.4	4.3

Source: Staff calculations.

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- , 2012b. "Learning in an estimated medium-scale DSGE model," *Journal of Economic Dynamics and Control*, 36, 22–46.

## Annex XI. Authorities' Responses to Past FSAP Recommendations

Recommendation	Authority	Priority	Para.	Time-frame/1	Status
<b>Overall Financial Sector Oversight</b>					
Strengthen the institutional framework for macroprudential oversight and policy setting by more formally establishing a Financial Stability Committee (FSC) and initiating its operations	All	High	46	Near-term	Implemented
Further improve stress testing techniques, including the capacity to analyze systemic risks, credit risk, and liquidity risk	BOI, CMISD	High	20, 23, 24, 47	Near-term	Implemented
Eliminate gaps and overlaps in supervisory responsibilities, ensuring that like activities are subject to equally stringent regulation and supervisions	BOI, ISA, CMISD	High	28-30	Near-term	Partially implemented
Undertake more systematically cost-benefit analysis of regulatory changes, and streamline regulations where possible	BOI, ISA, CMISD	Medium	26	Near-term	Partially implemented
Strengthen the AML/CFT legal and regulatory framework, in particular with regard to the designated non-financial businesses and professions, and the transparency of beneficial ownership. <sup>2/</sup>	Government	High	43	Near-term	Implemented
<b>Banking Oversight</b>					
Further strengthen regulation and supervision of interest rate risk and market risk	BOI	High	33	Immediate	Implemented
Develop regulation of liquidity risk as international practice in this area evolves, and intensify monitoring	BOI	High	32	Near-term	Implemented
Introduce greater flexibility in personnel management and budgets to attract and retain financial sector experts with the required skill mix	BOI	Medium	27	Near-term	Implemented
<b>Insurance Sector Oversight</b>					
Intensify cross-border supervisory coordination and information-sharing	CMISD	High	35	Immediate	Implemented
Widen powers to supervise groups connected to insurance companies, and in particular related holding companies	CMISD	High	36	Near-term	Implemented
<b>Securities Markets Oversight and Securities Markets Development</b>					
Enforce uniformly high standards of due diligence in the underwriting of securities issues	ISA	High	38	Immediate	Implemented
Establish an appropriate licensing and supervisory framework for currently unregulated broker-dealers	ISA	Medium	38	Near-term	Partially implemented
Ensure consistency of relevant supervisory practice by TASE, the ISA, and the BOI	TASE, ISA, BOI	Medium	39	Near-term	Implemented
Remove impediments (including tax treatment) to repo market development	MOF	Medium	49	Near-term	Partially implemented
<b>Payments and Securities Systems Oversight</b>					
Develop and test more comprehensive business continuity plans	BOI	High	42	Immediate	Partially implemented
Protect finality of settlements in payments systems linked to Zahav	BOI	Medium	41	Immediate	Partially implemented
Complete development of payment system oversight	BOI	Medium	40	Near-term	Partially implemented

Recommendation	Authority	Priority	Para.	Time- frame/1	Status
<b><i>Crisis Management</i></b>					
Establish a policy framework for ELA	BOI	High	50	Immediate	Implemented
Establish by law and make operational <ul style="list-style-type: none"> <li>a full set of early intervention tools; and</li> <li>a special framework for going-and-gone concern resolution</li> </ul>	BOI, MOF	High	51-55	Near-term	Not Implemented
Establish mechanism for providing solvency support and for funding bank resolution, protecting the BOI from quasi-fiscal activities	BOI, MOF	High	56-58	Near-term	Not Implemented
Agree on a protocol for the coordination of, and assignment of responsibilities for system-wide crisis management	All	High	59-60	Immediate	Implemented
1/ ST: Short term (1-3 years); MT: Medium Term (3-5 years).					



# ISRAEL

May 26, 2023

## STAFF REPORT FOR THE 2023 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

Prepared By

European Department

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STATISTICAL ISSUES	4

## FUND RELATIONS

(As of April 30, 2023)

**Membership Status:** Israel became a member of the Fund on July 12, 1954.<sup>1</sup>

### General Resources Account:

	SDR Million	Percent Quota
Quota	1,920.90	100.00
Fund Holdings of Currency (Holdings Rate)	1,360.22	70.81
Reserve Tranche Position	560.69	29.19
Lending to the Fund		
New Arrangements to Borrow	1.96	...

### SDR Department:

	SDR Million	Percent Allocation
Net cumulative allocations	2,724.48	100.00
Holdings	2,782.28	102.12

**Outstanding Purchases and Loans:** None

### Latest Financial Arrangements:

Type	Date of Arrangement	Expiration Date	Amount Approved (SDR Million)	Amount Drawn (SDR Million)
Stand-By	Oct 20, 1976	Oct 19, 1977	29.25	12.00
Stand-By	Feb 14, 1975	Feb 13, 1976	32.50	32.50
Stand-By	Nov 08, 1974	Feb 14, 1975	32.50	32.50

### Overdue Obligations and Projected Payments to Fund<sup>2</sup>

(SDR Million; based on existing use of resources and present holdings of SDRs):

	Forthcoming				
	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>
Principal					
Charges/Interest	0.04	0.04	0.04	0.04	0.04
<b>Total</b>	0.04	0.04	0.04	0.04	0.04

<sup>1</sup> For purposes of Fund relations, the West Bank and Gaza (WBG) fall under Israeli jurisdiction in accordance with Article XXXI, Section 2(g) of the Articles of Agreement.

<sup>2</sup> When a member has overdue financial obligations outstanding for more than three months, the amount of such arrears will be shown in this section.

**Exchange Rate Arrangement:**

The *de jure* exchange rate arrangement is classified as “free floating” and the *de facto* exchange rate arrangement is classified as “floating.”

Israel accepted the obligations of Article VIII, Sections 2, 3, and 4 on September 21, 1993. Israel maintains an exchange system free of multiple currency practices and restrictions on the making of payments and transfers for current international transactions, with the exception of measures introduced for security reasons pursuant to Decision No. 144–(52/51).

**Article IV Consultation:**

The last Article IV consultation was concluded on February 7, 2022. Israel is on the standard 12-month consultation cycle.

**ROSCs:**

- Financial System Stability Assessment was conducted in 2000 issued in August 2001.
- Fiscal Transparency ROSC was conducted in 2003, issued in April 2004.
- Monetary and Financial Policy Transparency was conducted in 2003, issued as IMF Country Report No. 03/76 in March 2003.
- AML/CFT ROSC was conducted in 2003, issued in June 2005.
- Data Module ROSC was conducted in 2005, and issued as IMF Country Report No. 06/125 in March 2006.
- Financial System Stability Assessment Update was conducted in 2011, issued in April 2012.

**Technical Assistance:**

Conforming the commitments under the Oslo Accords, the Fund has been providing policy advice and technical assistance (TA) to the Palestinian Authority (PA) since 1994, and presently has a resident representative based in Jerusalem. Staff missions to the West Bank and Gaza (WBG) have been assisting the PA in designing and implementing its macroeconomic and fiscal framework, and reforms aimed to strengthen economic institutions. The most recent progress report was presented at the Ad-Hoc Liaison Committee (AHLC) meeting of donors held in New York on September 27, 2018. The Fund has also provided TA for capacity development, particularly in the areas of Anti-Money Laundering and Combating the Financing of Terrorism (AML/CFT), banking supervision and regulation, public financial management, revenue administration, and macroeconomic statistics.

Recent technical assistance to Israel covered issues on income tax reform, macroeconomic forecasting, systemic risk assessment and stress testing, fiscal regime for mining, a medium-term budget framework, strengthening banking supervision processes and tools, and the implementation of IFRS.

**Resident Representative:**

The office of the IMF Resident Representative for the WBG was established in July 1995.

## STATISTICAL ISSUES

<b>I. Assessment of Data Adequacy for Surveillance</b>	
<p><b>General:</b> Macroeconomic statistics are of generally high quality and broadly adequate for surveillance, although there are few shortcomings particularly in monetary and government finance statistics. A Report on the Observance of Standards and Codes—Data Module, a Detailed Assessments Using the Data Quality Assessment Framework (DQAF), and a Response by the Authorities were published on the IMF website on March 24, 2006 (<i>IMF Country Report No. 06/125</i>).</p>	
<p><b>National Accounts:</b> No issues to report.</p>	
<p><b>Price Statistics:</b> No issues to report.</p>	
<p><b>Government Finance Statistics:</b> The annual data on the overall annual fiscal balance submitted by the Central Bureau of Statistics (CBS covers all the General Government units) are compiled according to the <i>GFSM2014</i> methodology. This follows the implementation of the accrual basis of recording for the interest expense series. Quarterly data for the consolidated budgetary central government and social security fund submitted by the CBS are accrual-based and broadly follow the <i>GFSM2014</i> format. However, for financial assets and liabilities, only transaction data are currently submitted, although a financial balance sheet (stocks of financial assets and liabilities) is under preparation. In-year monthly reports on central government operations—compiled by the MOF on a cash basis—cover only the main aggregates of budgetary government accounts and net accounts of the social security fund, not broken down by components.</p>	
<p><b>Monetary Statistics:</b> Monthly monetary and financial statistics in IMF’s Standardized Reporting Format (SRF) for the central bank, other deposit takers, and other financial corporations are reported to the IMF. Israel reports data on some key series and indicators of the Financial Access Survey (FAS), including the two indicators (commercial bank branches per 100,000 adults and ATMs per 100,000 adults) adopted by the UN to monitor Target 8.10 of the Sustainable Development Goals (SDGs).</p>	
<p><b>Financial sector surveillance:</b> Data on financial soundness indicators (FSIs) are compiled and reported to IMF on a quarterly basis and cover deposit takers, other financial corporations, nonfinancial corporations and households.</p>	
<p><b>Balance of Payments:</b> Balance of payments and international investment position data are compiled on a quarterly basis and follow the sixth edition of the <i>Balance of Payments Manual</i>. External sector data were not examined in the Report on the Observance of Standards and Codes. Country participates in Coordinated Direct Investment Survey and in Coordinated Portfolio Investment Survey.</p>	
<b>II. Data Standards and Quality</b>	
Participant in the Special Data Dissemination System (SDDS) since April 1996, and in full observance of the SDDS’s prescriptions for data coverage, periodicity and timeliness, and for the dissemination of advance release calendars.	Data ROSC published on March 24, 2006.
<b>III. Reporting to STA</b>	
Data are regularly reported for publication in the <i>Government Finance Statistics Yearbook</i> and in the <i>IFS</i> .	

**Table 1. Israel: Common Indicators Required for Surveillance**  
(As January 31, 2023)

	Date of latest observation	Date received	Frequency of Data <sup>7</sup>	Frequency of Reporting <sup>7</sup>	Frequency of Publication <sup>7</sup>
Exchange Rates	Same day	Same day	D and M	D and M	D and M
International Reserve Assets and Reserve Liabilities of the Monetary Authorities <sup>1</sup>	April-23	April-23	M	M	M
Reserve/Base Money	April-23	April-23	M	M	M
Broad Money	April-23	April-23	M	M	M
Central Bank Balance Sheet	April-23	April-23	M	M	M
Consolidated Balance Sheet of the Banking System	April-23	April-23	M	M	M
Interest Rates <sup>2</sup>	Same day	Same day	D	D	D
Consumer Price Index	April -23	May-23	M	M	M
Revenue, Expenditure, Balance and Composition of Financing <sup>3</sup> – General Government <sup>4</sup>	2022	May 2023	A	A	A
Revenue, Expenditure, Balance and Composition of Financing <sup>3</sup> – Central Government	April 23	May-23	M	M	M
Stocks of Central Government and Central Government-Guaranteed Debt <sup>5</sup>	Q4-22	May-23	Q	Q	Q
External Current Account Balance	Q4-2022	Q4-2022	Q	Q	Q
Exports and Imports of Goods and Services	Q4-2022	Q4-2022	Q	Q	Q
GDP/GNP	Q1-23	May-23	Q	Q	Q
Gross External Debt	Q4-22	May-23	Q	Q	Q
International Investment Position <sup>6</sup>	Q4-2022	Q4-2022	Q	Q	Q

<sup>1</sup> Any reserve assets that are pledged or otherwise encumbered should be specified separately. Also, data should comprise short-term liabilities linked to a foreign currency but settled by other means as well as the notional values of financial derivatives to pay and to receive foreign currency, including those linked to a foreign currency but settled by other means.

<sup>2</sup> Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.

<sup>3</sup> Foreign, domestic bank, and domestic nonbank financing.

<sup>4</sup> The general government consists of the central government (budgetary, extra budgetary, and social security funds) and state and local governments.

<sup>5</sup> Including currency and maturity composition.

<sup>6</sup> Includes external gross financial asset and liability positions vis-à-vis nonresidents.

<sup>7</sup> Daily (D); weekly (W); monthly (M); quarterly (Q); annually (A); irregular (I); and not available (NA).

**Statement by Paul Hilbers, Executive Director for Israel and  
Shay Tsur, Senior Advisor to Executive Director  
June 12, 2023**

*On behalf of the Israeli authorities, we thank the Mission Team for the constructive and friendly dialogue and welcome the insights and policy advice in the staff report. The Israeli economy has demonstrated resilience and adaptability, experiencing notable growth following the COVID-19 crisis. Fiscal discipline and contractionary monetary policy have contributed to rebuilding buffers and the positive trajectory toward returning inflation to its target range. The government is committed to fostering sustainable growth through addressing infrastructure gaps, increasing employment, and promoting a competition-friendly regulatory environment, as well as through implementing climate policies that build on the innovative capacity of Israel.*

*Israel is navigating the debate surrounding the power of the judiciary branch. This debate, alongside predominantly peaceful protests, exemplifies the vibrancy of Israeli democracy. A national dialogue, led by the President of Israel, aims to reach a broad agreement that will maintain strong and independent institutions, which are vital for the continued success of the Israeli economy.*

**The resilience and adaptability of the Israeli economy**

**The Israeli economy experienced a notable 6.5 percent growth in 2022, primarily fueled by a strong rebound in domestic demand and impressive export performance.** The government's effective management of the COVID-19 pandemic, characterized by widespread vaccination campaigns and successful containment measures, played a vital role in rebuilding consumer trust and stimulating private consumption and investment, particularly in the residential construction sector. Additionally, the high-tech sector thrived, drawing in foreign investments, and driving innovation-driven economic expansion. As the economy regained its momentum, unemployment rates declined to historically low levels, reflecting the positive trajectory of Israel's economic recovery.

**Inflation in Israel, currently at 5 percent, is decelerating and expected to moderate further.** The acceleration of inflation began in 2021, influenced by global supply constraints as countries recovered from the COVID-19 crisis. These supply constraints further intensified in 2022 due to Russia's war in Ukraine, which impacted energy and food prices. The lower inflation in Israel compared to most advanced economies (AEs) and other countries, especially in earlier stages of the global acceleration

of inflation, is attributed to the country's ability to rely on its natural gas reserves, which have fixed prices through long-term contracts. More recently, robust domestic demand and the depreciation of the Shekel have become dominant factors in explaining inflation in Israel. Nonetheless, during the past 6 months, inflation continued to decelerate to 4.8 percent (compared to the previous 6 months), reaching 3.9 percent over the last 3 months (compared to the previous quarter).

### **Macroeconomic policies for economic stability and quick rebuild of buffers**

**The policy mix is consistent with the primary objective of returning inflation to target.** The government exercises fiscal discipline in line with the contractionary monetary policy led by the Bank of Israel (BOI), as reflected in the approved budget for 2023 and 2024, and the responsible wage agreements signed a few months ago. Importantly, the Prime Minister and the Minister of Finance reiterated their strong commitment to maintaining the independence of the Bank of Israel (BOI).

**The BOI has responded to inflation with a tightening of monetary policy and is prepared to implement further tightening measures if inflation remains persistent.** Measures were taken early on in 2021, with the gradual reduction of bond purchases, which had been initiated during the COVID-19 crisis, and the termination of FX purchases in January 2022. The BOI started raising interest rates in April 2022, when inflation stood at 3.5 percent, with a policy rate of 0.1 percent. In its May 2023 decision, the Monetary Policy Committee increased the key rate for the 9th consecutive time, and now it stands at 4.75 percent, a level that is expected to moderate inflation in the coming year. One-year breakeven inflation, a proxy for inflation expectations, is hovering at around 3 percent, the upper limit of the inflation target band. Unless there are significant changes in economic activity, in exchange rates or the inflation landscape, the BOI also anticipates inflation to return to its target range of 1-3 percent by the second quarter of 2024.

**The 2023-2024 budget framework strengthens Israel's fiscal credibility amid elevated uncertainty.** The economy's recovery from COVID-19 surpassed expectations, reducing the deficit from 11.2 percent in 2020 to 4.3 percent in 2021. Strong growth in 2022 boosted revenues, resulting in a surplus of 0.6 percent of GDP. As a result, the debt-to-GDP ratio declined significantly, reaching 60.9 percent in 2022, close to the pre-COVID level of 59 percent. At the same time, caution was exercised when planning the 2023-2024 budget, taking into account the possibility that a significant portion of the tax revenue growth observed in 2021 and 2022 could be cyclical and temporary. This prudent approach also considers the downward tilt of global and domestic risks.

**The BOI considers the risks in the financial sector to be well-controlled and asset quality to be robust.** The BOI has taken several measures to strengthen financial stability and risk management during the recovery from the COVID-19 crisis. These included liquidity alerts to closely monitor liquidity risks and knowing the importance of rebuilding buffers in the post-pandemic recovery period. Additionally, the BOI has retightened capital requirements and minimum leverage ratios to ensure the resilience of the banking system during this rebound phase. Furthermore, the BOI introduced in March 2022 measures to further enhance credit risk management, including the allocation of additional capital against highly leveraged land financing. Stress tests demonstrate that banks, which are subject to conservative supervision, can withstand all stress scenarios while maintaining capital above the minimum requirement. The BOI will carefully evaluate staff's recommendations to further improve supervisory measures to address risks.

### **Cultivating conditions for sustainable, inclusive, and innovative economic growth**

**Amidst internal divisions surrounding the judiciary in Israel, there is a growing understanding that judicial reform should be decided through broad consensus while preserving the strength and independence of institutions.** The predominantly peaceful protests against the initial reform proposals exemplify the vibrancy of Israeli democracy, rooted in a longstanding democratic culture. These protests played a role in fostering an ongoing dialogue between the opposition and the coalition, led by the President of Israel. This dialogue aims to achieve a reform that ensures a robust system of checks and balances, essential for maintaining the success of the Israeli economy.

**The authorities introduced various measures to reduce the cost of living in Israel.** These include ensuring the alignment of product regulations with European standards to remove import barriers, optimizing tax payment mechanisms for small businesses, and easing the licensing mechanism in manufacturing. In December 2022, the BOI granted a license to establish a new bank, following a previous license in 2019. Further initiatives are planned by the BOI and the Ministry of Finance to enhance competition in the financial sector by improving regulations and enhancing accessibility for additional participants. Relatedly, as part of the UK and Israel negotiations over a new Free Trade Agreement (FTA), the authorities seek to ensure efficient trade in financial services between the two countries.

**The government addresses the infrastructure gaps in Israel by striving for efficient execution and persistent budgeting.** To prioritize vital infrastructure projects in the coming decades, the Ministry of Finance introduced the "National Infrastructure Acceleration Bill" to remove barriers in planning, utility coordination, bureaucracy, and regulations. In the upcoming years, significant transportation projects, including the electrification of buses and heavy railways, as well as the development of the Jerusalem and Tel-Aviv light rail networks, will reach their peak. The government remains committed to preserving the scope of investments through multi-year budgeting, alongside ensuring a steady flow of future projects. While ongoing discussions explore effective methods for securing long-term budgets for planned infrastructure projects, there is a consensus that these methods should protect the fiscal envelope and buffers.

**The government acknowledges the need to address employment obstacles among the Haredi and Arab populations.** The employment of Arab women in Israel has made significant progress in the past decade, rising by 13 percentage points. This growth underscores the positive impact of initiatives aimed at promoting inclusivity and reducing employment barriers. Nonetheless, with an employment rate of 43 percent, the government understands the need to further enhance the employment of Arab women and ensure continued progress. The labor force participation of Haredi men in Israel is a multifaceted issue encompassing political, social, and economic dimensions, shaped by religious practices and traditions. Achieving a delicate balance between political constraints, cultural sensitivity, and economic growth poses a long-term challenge, especially given the increasing share of the Haredi population in Israel. We strongly agree with staff's emphasis that addressing those employment obstacles must take place while making sure to keep gender opportunity equality in higher education and the workplace.

**The government is committed to reducing greenhouse gas emissions and adapting to climate change impacts.** The government has set targets for a 27 percent reduction in emissions by 2030 (compared to 2015 levels) and a 30 percent reduction in the electricity sector. To achieve this, the

government works in various ways to integrate renewables into the electricity sector, including through collaboration with private projects for production and storage. In addition, the government strives to remove barriers to the development of renewable energy, including exploring the possibility of importing renewable energy from neighboring countries, creating regulations for the establishment of Pumped Storage Hydropower on a wide scale, and examining the possibility of establishing offshore renewable energy. Acknowledging the difficulties highlighted in the staff report, which suggests that achieving the overall target without reductions in other sectors is challenging, the government also encourages private sector innovative capacity, with support from the Israel Innovation Authority, to mitigate emissions in transportation, manufacturing, and agriculture sectors.