Israel's Fiscal Prospects in the Post-Covid Era

Martin Eichenbaum and Federico Puglisi

June, 2022

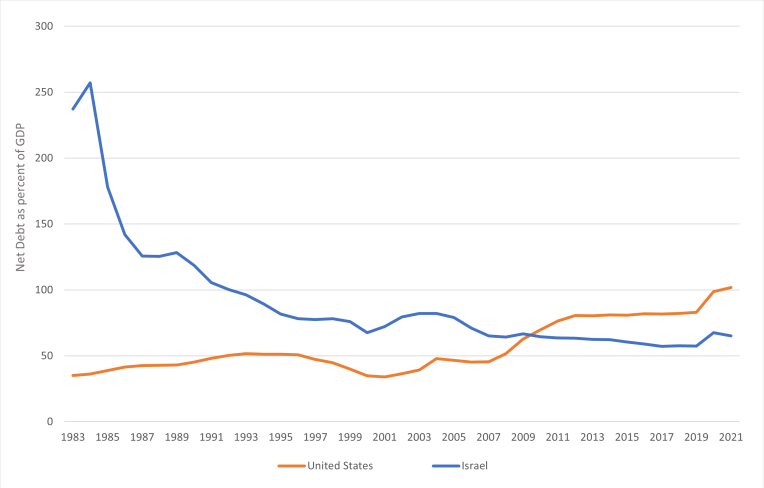
Introduction

- As in most other industrialized countries, government debt in Israel rose dramatically in the wake of the Covid crisis.
- But the real interest rate on Israeli government debt, r, remains very low by historical standards
  - r is now lower than the GDP growth rate, g.
- Other things equal, a lower interest rate drives down future debt-to-GDP ratios (debt payments are lower), and a higher GDP growth rate decreases future debt-to-GDP ratios.
- If we knew that r would remain lower than g, government could in principle
  - Borrow a large amount of money, on a one-time basis, and never have to pay it back.
  - Run a perpetual deficit while the debt-to-GDP ratio declined over time.

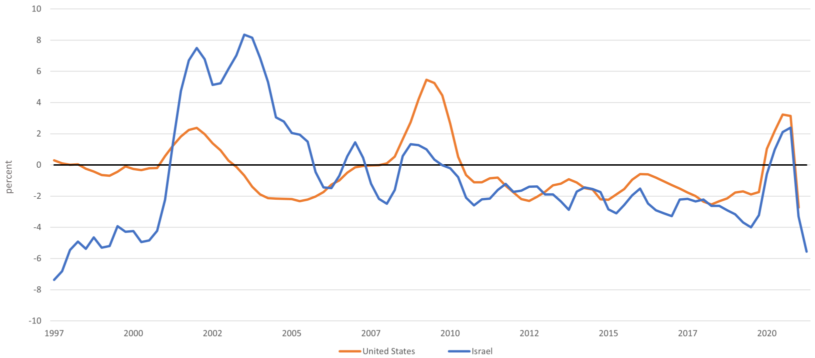
Four questions

- First, how big could a perpetual deficit be?
- Second, given reasonable forecasts for r and g, is Israel's fiscal situation sustainable given pre-Covid government deficits?
- Third, how sensitive is Israel's fiscal position to rare events that affect the interest rate on government debt and the GDP growth rate?
- What if anything can the fiscal authorities do to help with tail risk?

Government debt as a percent of GDP



The evolution of $r - g$



Note: r and g entail respectively the yield on the 10Y Government Benchmark Bond and the growth rate of nominal GDP. Data is annualized and at quarterly frequency (average over the quarter).

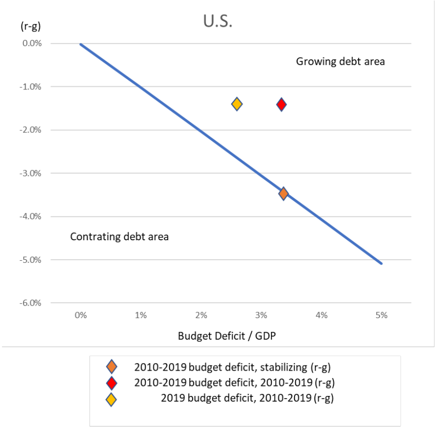
The evolution of $r-g$

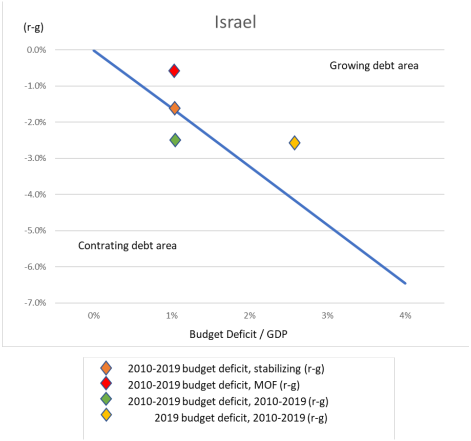
- Negative values of $(r-g)$ are no sure thing.
  - The percent of periods in which $(r-g) > 0$ in Israel and the U.S. are 34.4 and 28.1.
  - The percent of periods in which $(r-g) > 1.5\%$ in Israel and the U.S. is 21.9 and 14.6, respectively.
- The distribution of $r-g$ for Israel is significantly more right-skewed than the U.S. distribution.
  - This fact reflects that Israel is more exposed to geopolitical events like the second Intifada.
- Tail-risk is a genuine, *in-sample* phenomenon for Israel.

The Fiscal Alarm Frontier

- Each of us has views about how large government deficits and what $(r - g)$ will be in the post-pandemic era.
  - Will r stay low, will g rise, say because of wise social investments?
- Given an assumed value for future deficits in the next decade, what's the max value of $(r - g)$ such that the debt-to-GDP ratio doesn't grow?
- The *fiscal-alarm frontier* displays the answers to this question for different values of the future deficit.

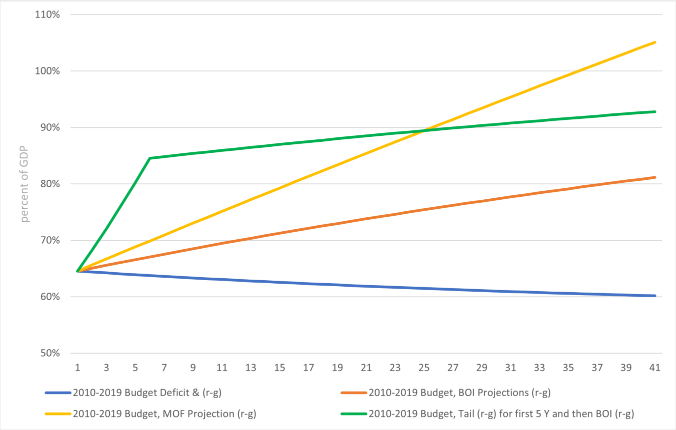
The Fiscal Alarm Frontier: Israel and the U.S.





- Orange diamond: average value of deficit-to-GDP from 2010-2019 in Israel, Y axis: what r-g would have to be for Israeli debt-to-GDP to be constant
- Y axis of green line: avg. value of Israeli debt-to-GDP from 2010-2019, Y-axis of red axis, MOF estimate of g, BOI estimate of long-run r.
- X axis of yellow diamond: 2019 deficit to GDP ratio.

Tail Risks: Evolution of Israeli Debt to GDP

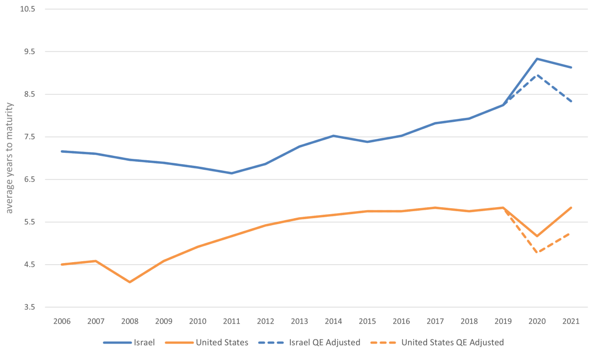


- blue line: $r - g$ is equal to its average value in the period 2010-2019
- orange line: BoI long- term forecasts of $r - g = -1.2\%$
- yellow line corresponds to the pessimistic scenario where $r - g = -0.3\%$: MoF long-term forecast of g (3.2%) minus BoI long-term r forecast
- green line: $r - g = 4.0\%$ for 5 years (Second Intifada), after 5 years, $r - g = -1.2\%$

Quantitative Easing

- The FRB and the BoI responded to the Covid crisis via vigorous QE programs.
- Central bank bought government bonds and other government-guaranteed securities at the long end of the yield curve.
- The central bank pays for the longer-term assets with overnight reserves.
  - Zero-maturity liabilities.
- Net effect: lower the average maturity and effective duration of the *consolidated* government debt held by the public.

Average Maturity of Government Debt



Orange Line: average years to maturity of total U.S. government debt. Blue line: average years to maturity of total Israeli government debt.

- Solid orange, blue lines: average maturity of bonds issued by U.S. Treasury and Israeli gov.
- Data underlying these lines don't net out purchases by the FRB or the BoI.
- So they don't represent the average maturity of consolidated gov debt.

Conclusion: challenges.

- To keep the debt-to-GDP ratio stable, the government will need to make fiscal adjustments if r rises modestly, g below its pre-Covid levels, or the deficit-to-GDO ration returns to its 2019 level.
- Tail events could impact substantially interest rates and growth rates.
  - The fiscal authorities can buy some insurance against tail events by substantially increasing average maturity of government debt back to pre-Covid levels and beyond.

Caveats

- I am not saying the government should forgo socially beneficial investments that lead to increases in g.
- Work at the Aaron Institute has highlighted specific areas with high potential.
  - See Bental, Eckstein and Sumkin (2021).
  - These investments are potenial win-win (increase g *and* lower debt-to-GDP).
- But the government should explicitly account for deficits incurred to finance growth-enhancing investments and adjust taxes / spending if the expected higher growth rates don't materialize.