

Israel's Innovation Economy

Chinese Delegation to IDC

Prof. Zvi Eckstein

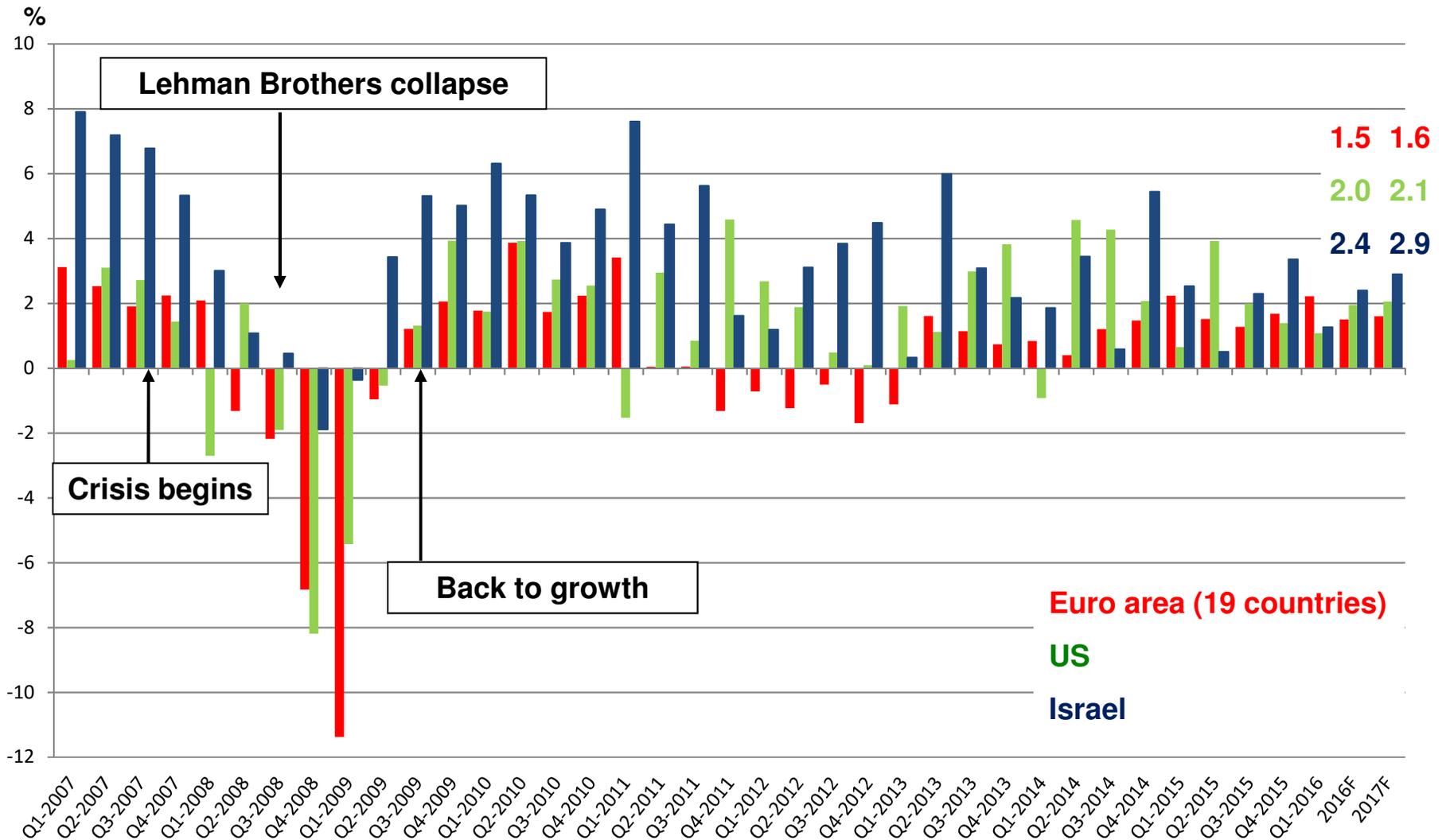
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Outline

- The Macro Picture
- Innovations and Start Ups

Growth Rates - Israel, US and Europe



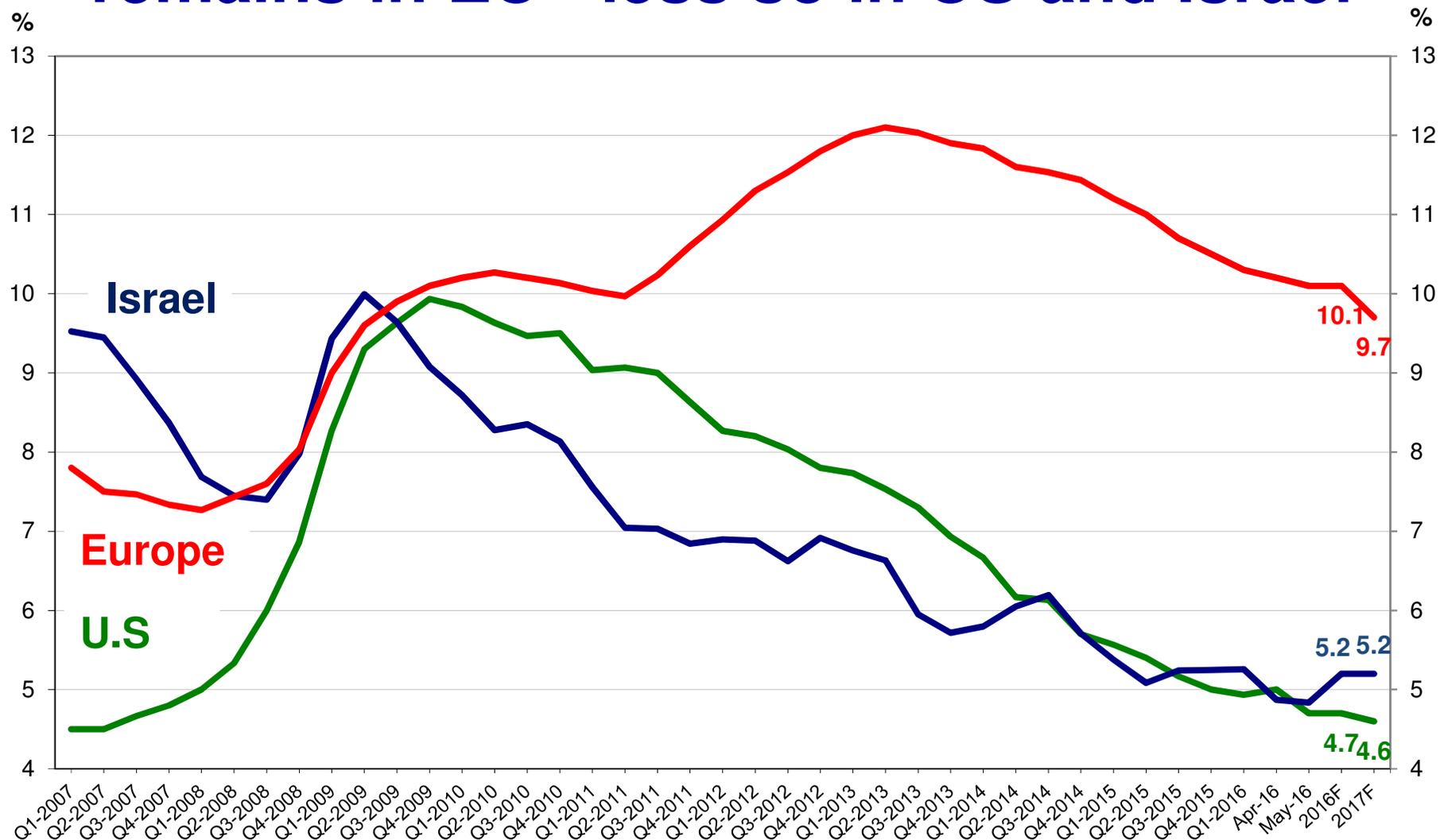
Quarterly rates in annual terms.

Source: OECD data, forecasts by BOI (September 2015), Federal Reserve (September 2015) and ECB (2015Q4).



Aaron Institute
for Economic Policy
In the name of Aaron Dovrat z"l

Unemployment signals that the real crisis remains in EU - less so in US and Israel

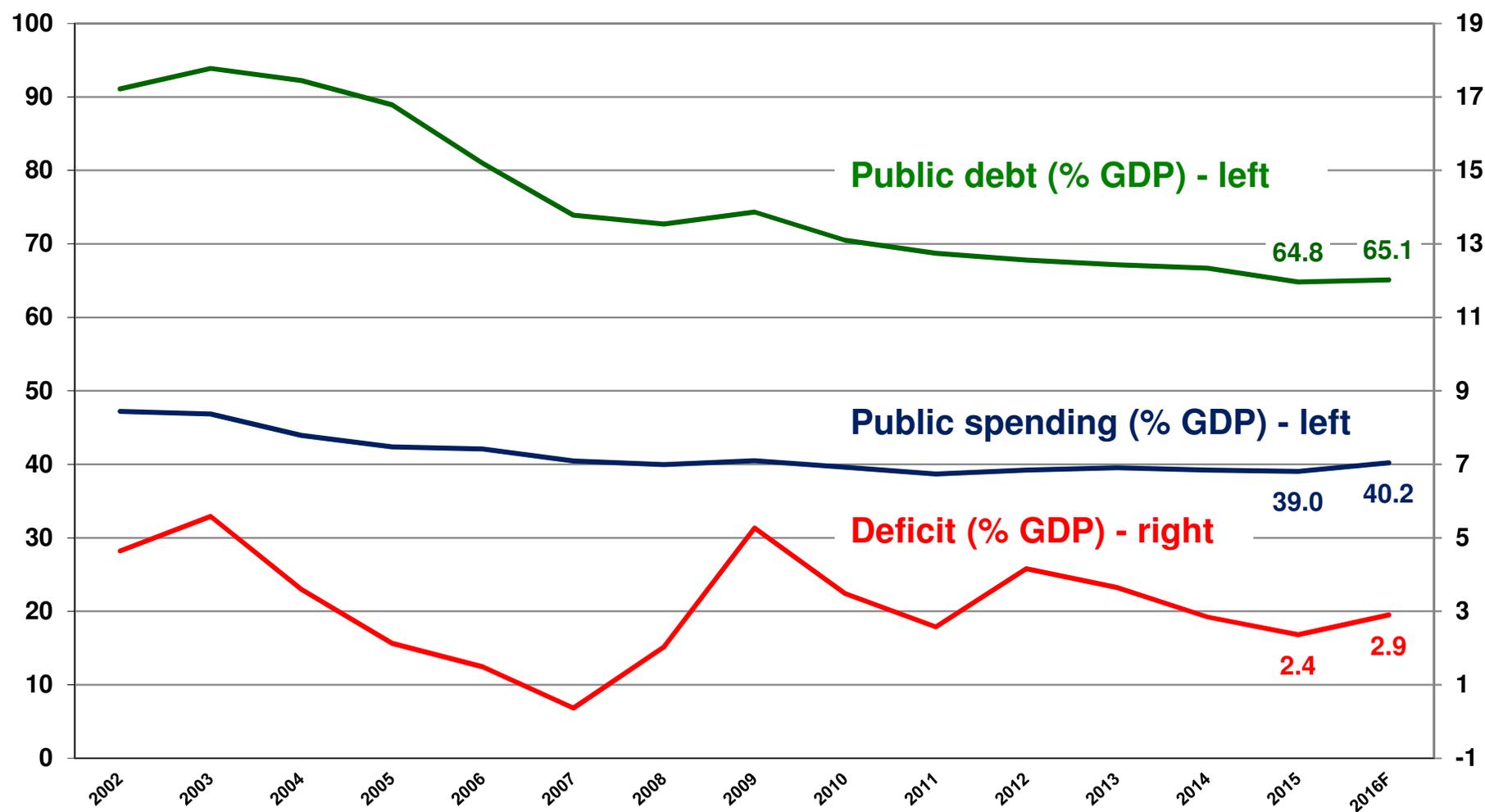


Source: OECD, BOI and CBS data,
forecasts by BOI (September 2015), Federal Reserve (September 2015) and ECB (2015Q4).

Israel's Economic Strength: Resilience to Shocks

- Financial markets: Stable
- Fiscal policy: Credible reduction in Debt/GDP
- Balance of payments: Surplus
- Monetary policy: Price stability and growth

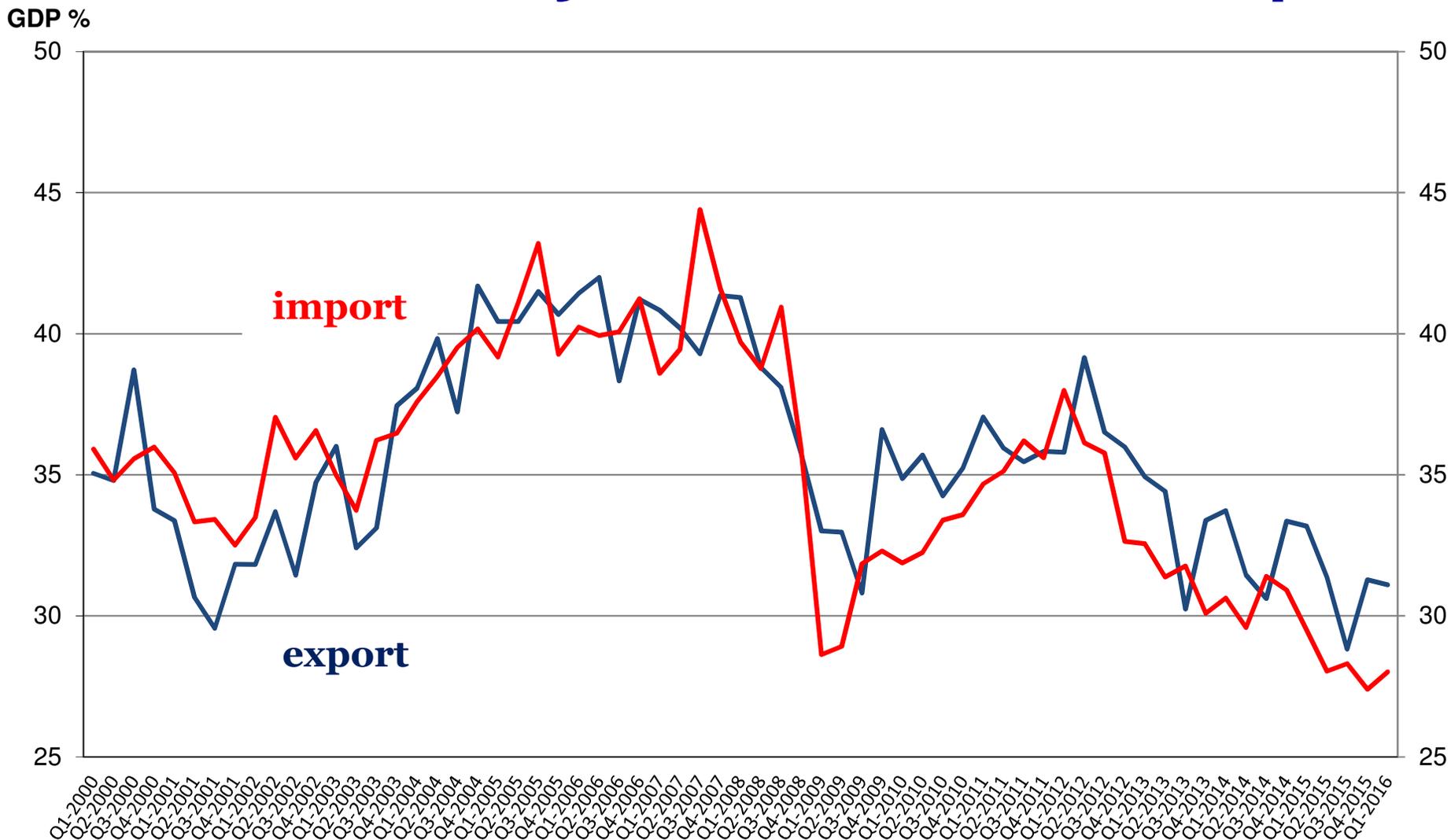
Fiscal Policy: Conservative and *Credible*



Deficit for 2015-16 is the target.

Source: BOI and CBS, estimated forecast calculated from BOI (September 2015).

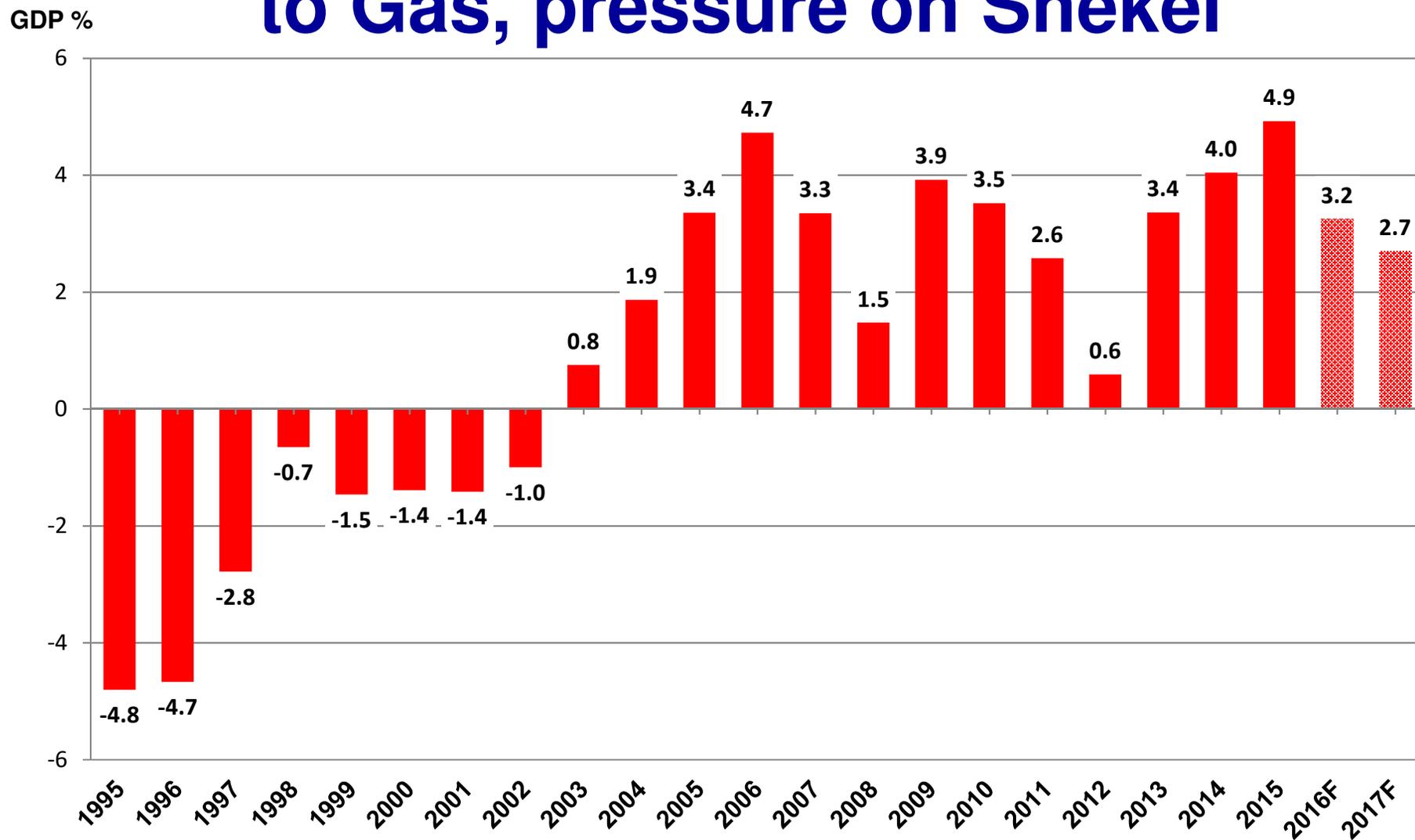
Balance of Payments: Back to surplus



Total goods and services, calculated from current prices series.

Source: CBS.

Current Account: Growing surplus due to Gas, pressure on Shekel

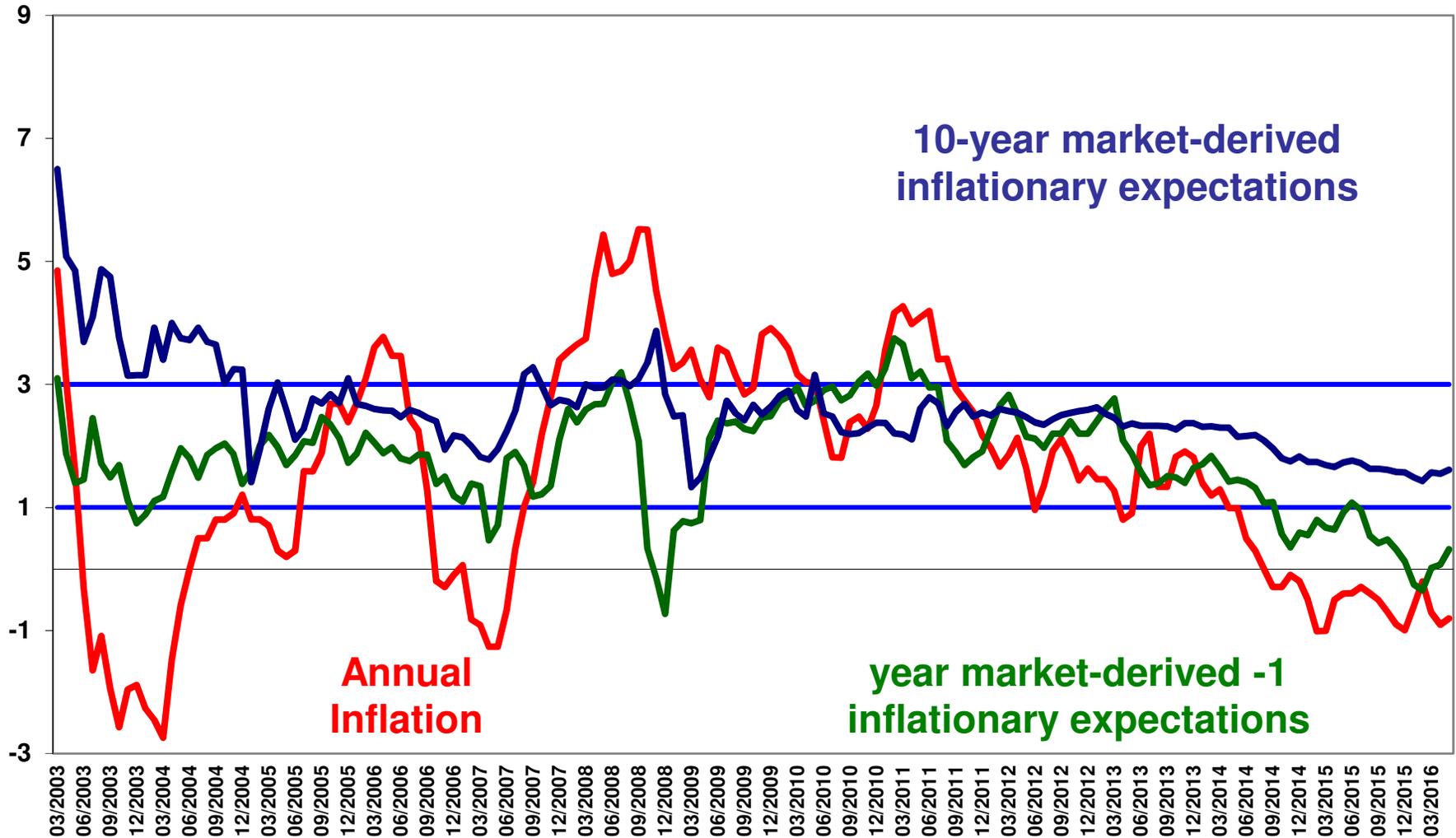


Source: CBS, estimated forecast calculated from BOI (June 2016).

Monetary Policy Goals

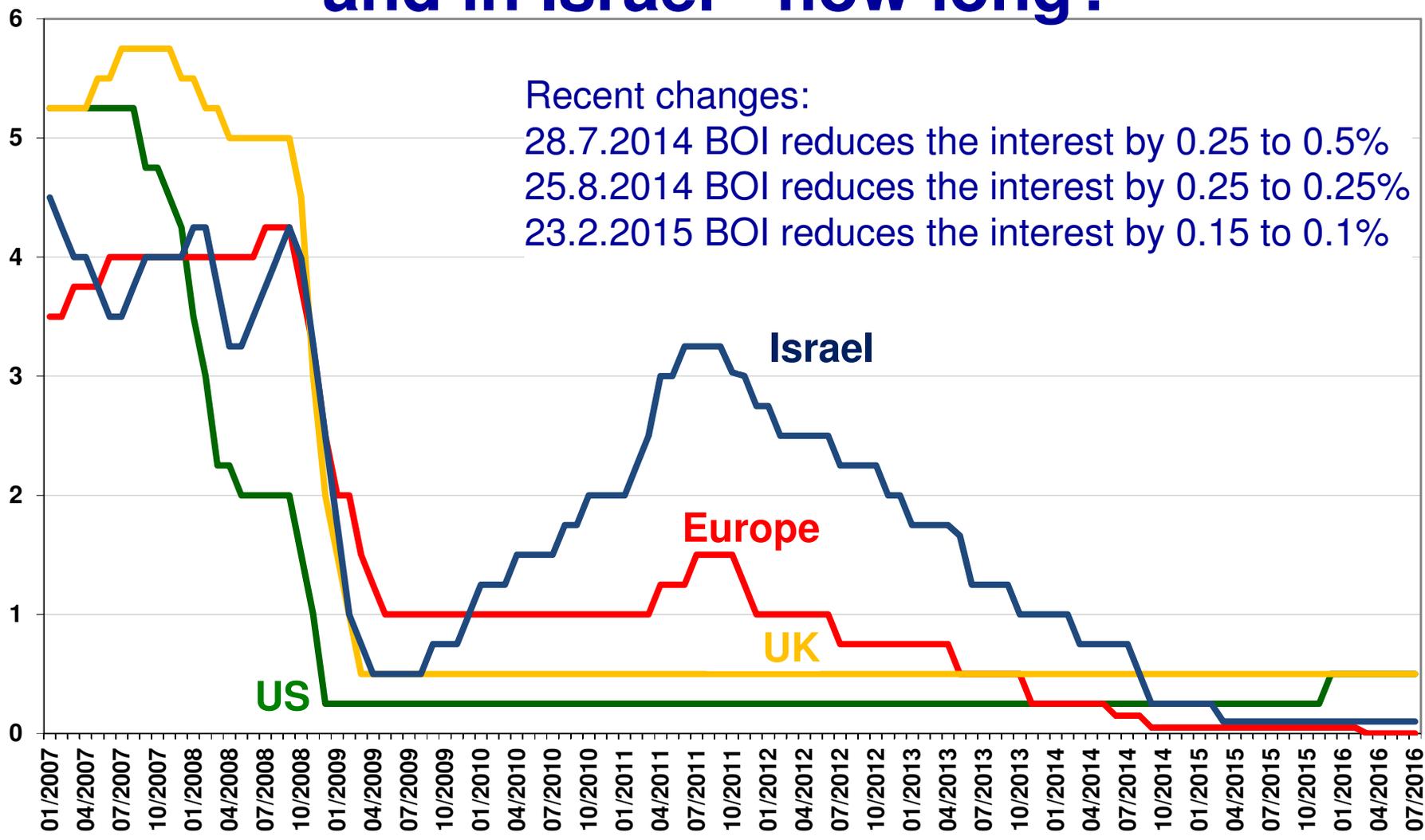
- **Main goal:** Price stability, inflation target 1-3%
- **Secondary goal:** Support employment and growth (subject to price stability)
- Tools: Interest rate and FX market interventions
- **Additional goal:** Support financial stability
- Tools: Financial markets interventions and “macro-prudential” actions (e.g. restrictions on exposure to real estate and restrictions on FX derivatives exposure)

Inflation below Target

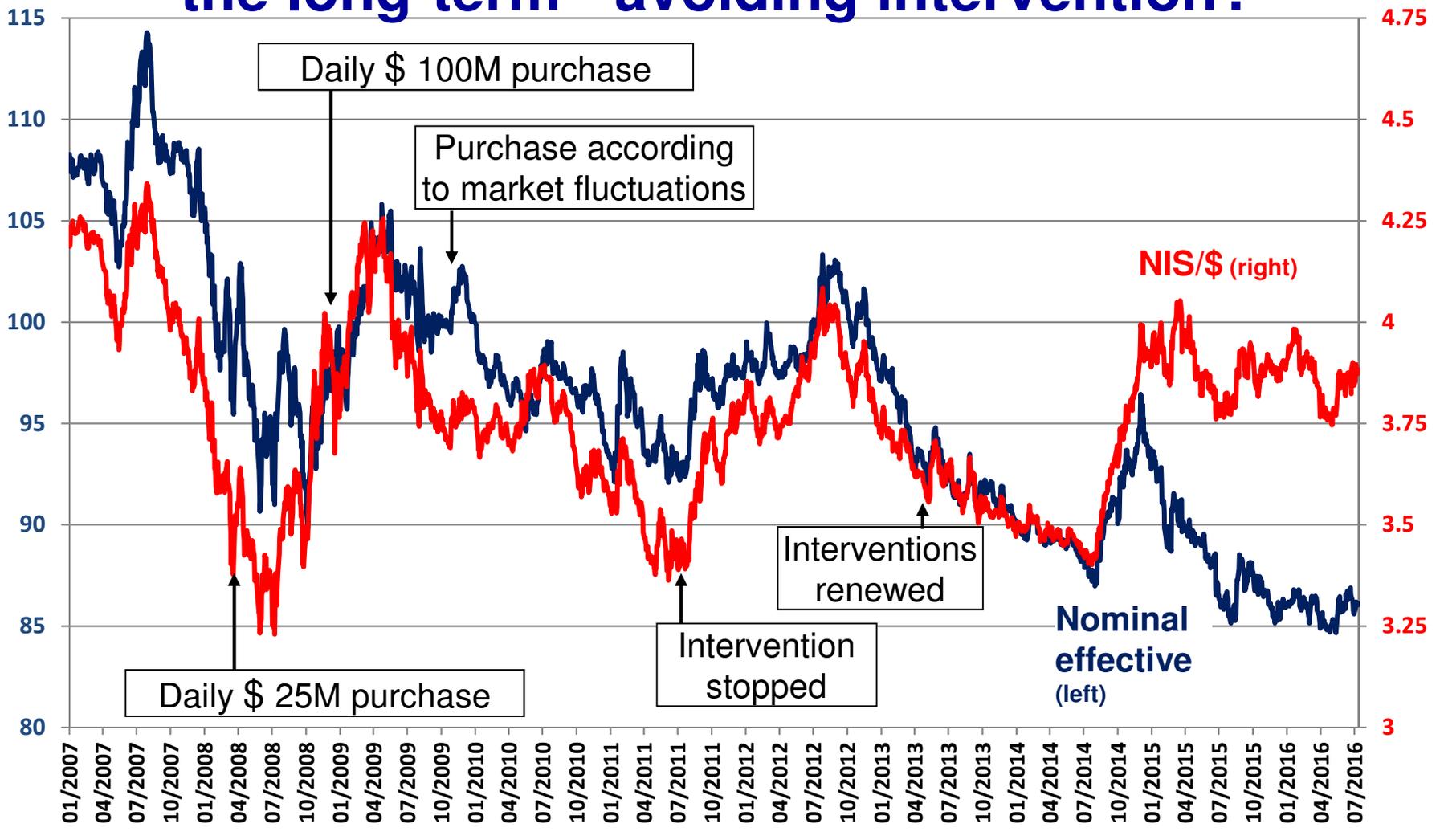


Source: CBS and BOI.

Interest rate policy: Expansionary in the west and in Israel - how long?



Shekel too strong? Intervention during unusual trends affecting market; Accumulating balances; In the long-term - avoiding intervention?

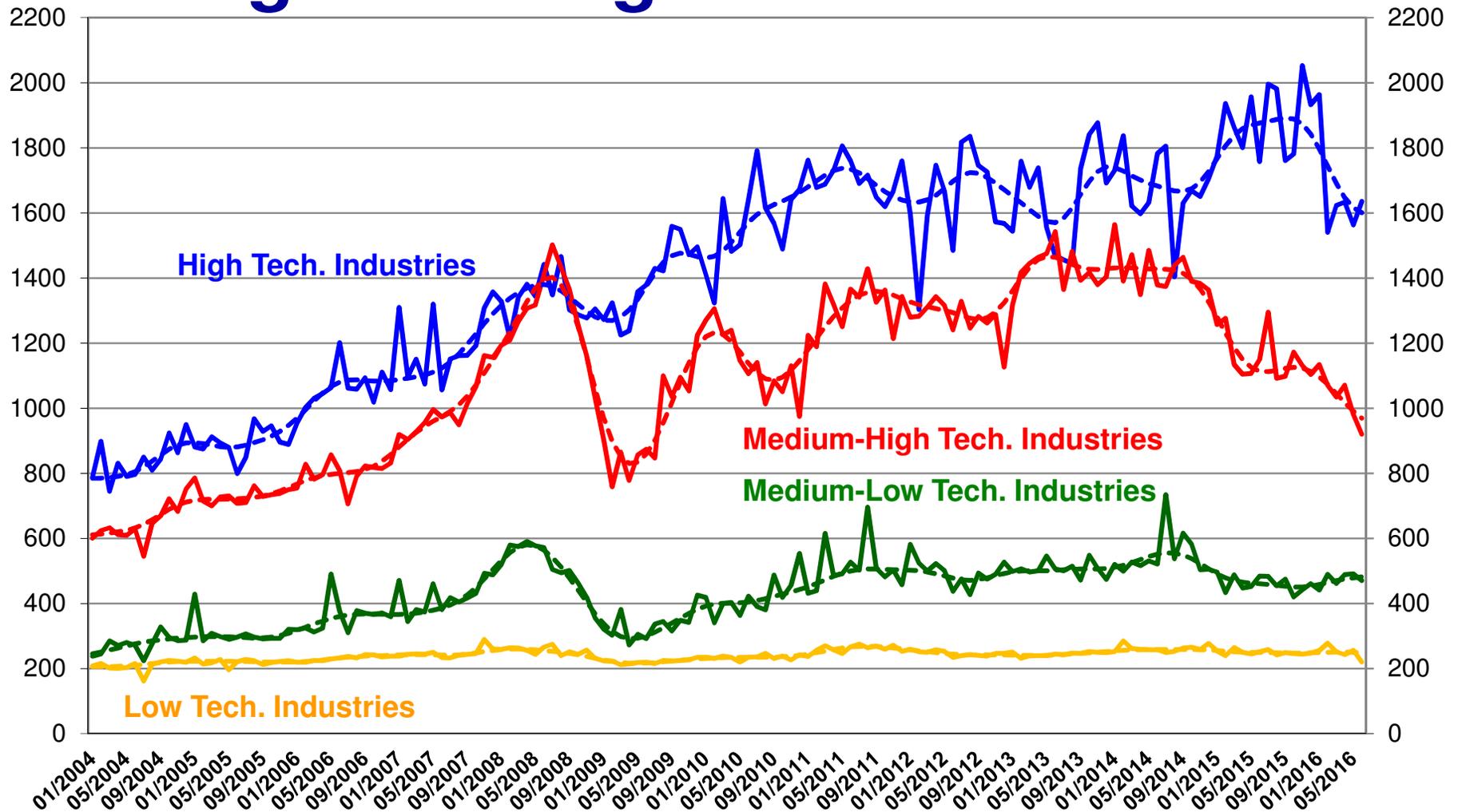


Source: B.O.I.

Innovations and Start Ups

Exports by Technology Intensity: “The growth engine is stuck?”

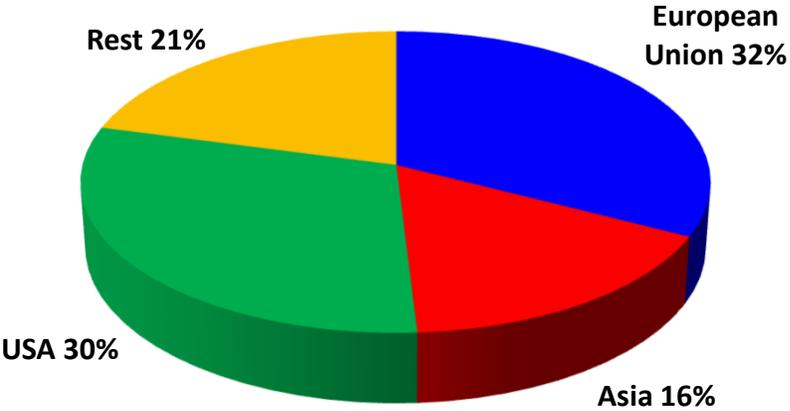
\$ monthly millions



Source: CBS.

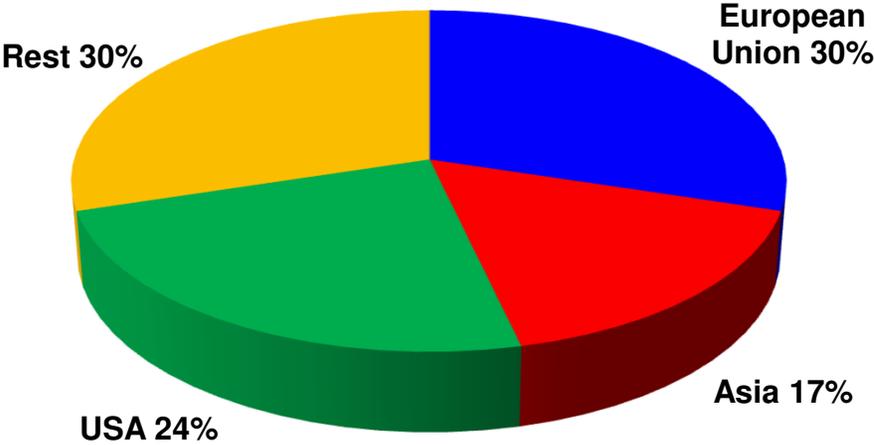
Export by Country (excluding diamonds): Transition to Asia

2000



China:	1%
Inc. Hong Kong:	2.1%

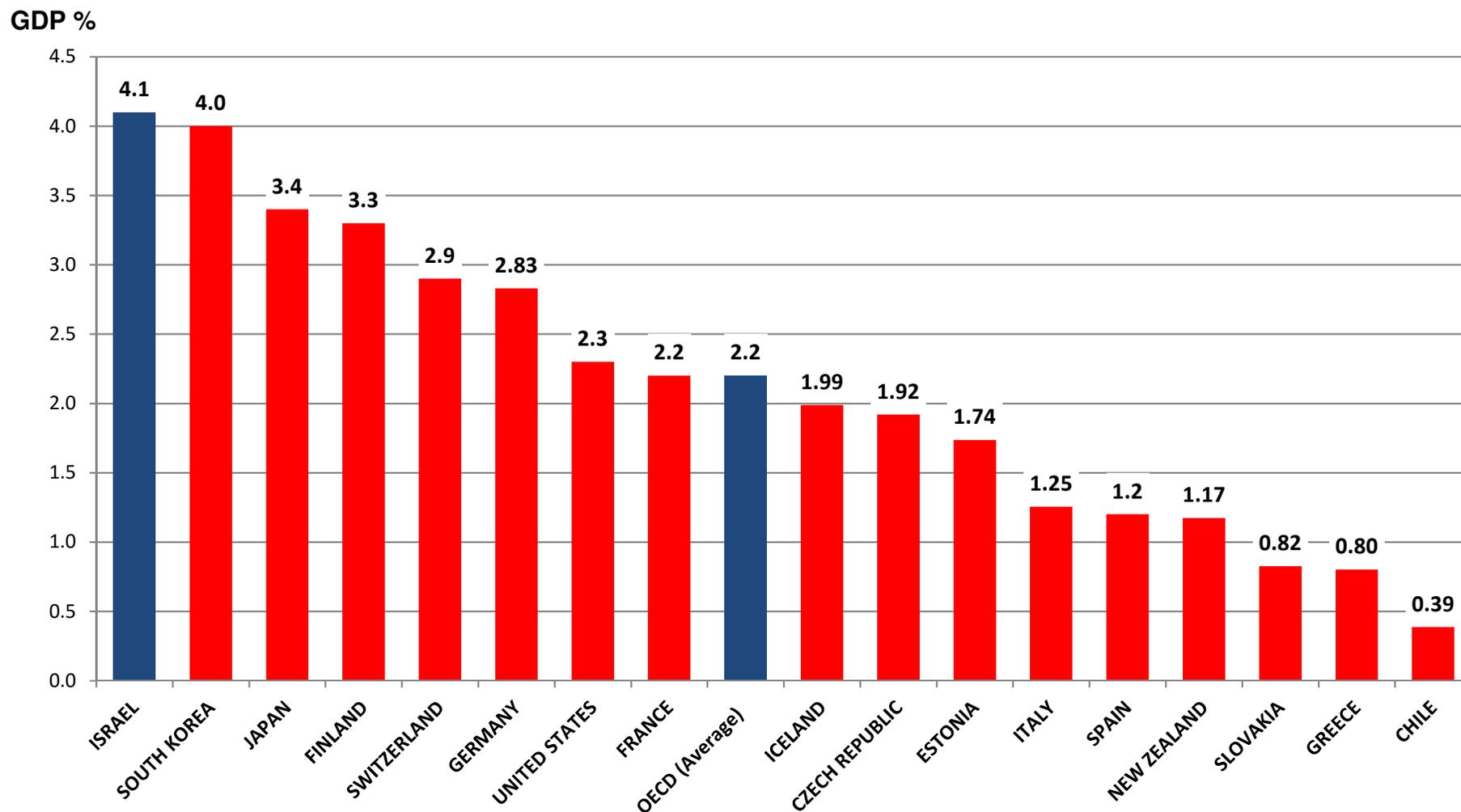
2015



China:	6.7%
Inc. Hong Kong:	7.9%

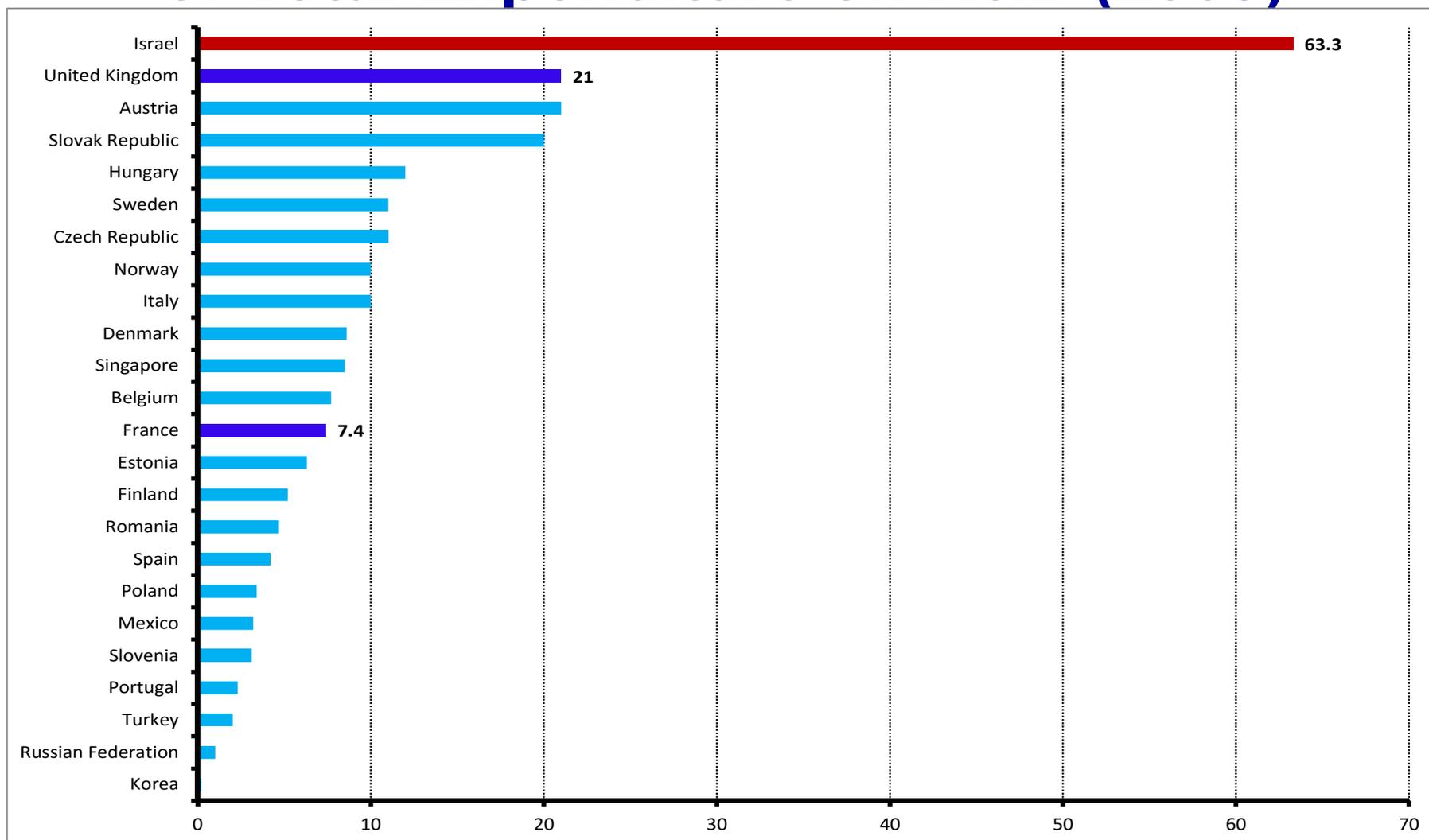
Source: CBS.

National Expenditure on Civilian R&D (2013)



Source: CBS and OECD.

Expenditure on R&D of Foreign Affiliates out of Total Expenditure on R&D (2009)



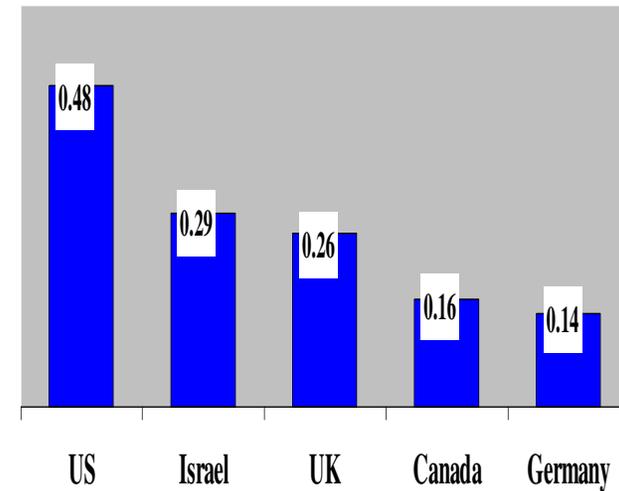
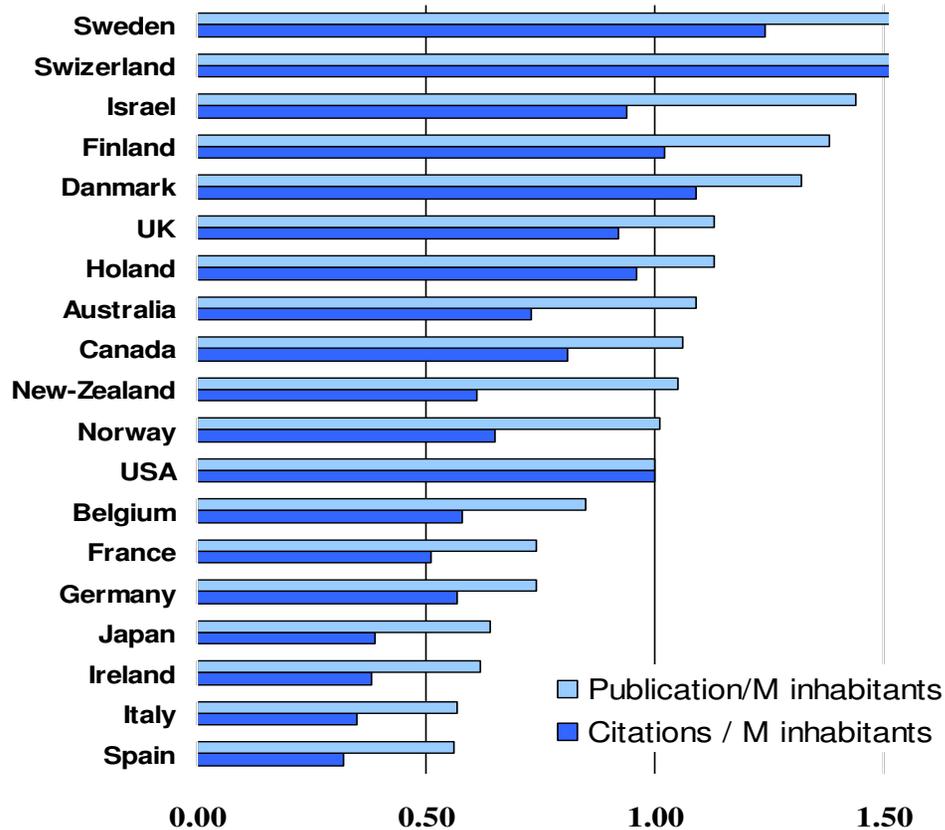
Source: Applied Economics.

Global Presence: Companies with R&D Activities and Investments in Israel



Source: Office of the Chief Scientist and Investment Promotion Center.

Academic Environment: Scientific Publications & Citations



Publications in leading LS Journals* per capita

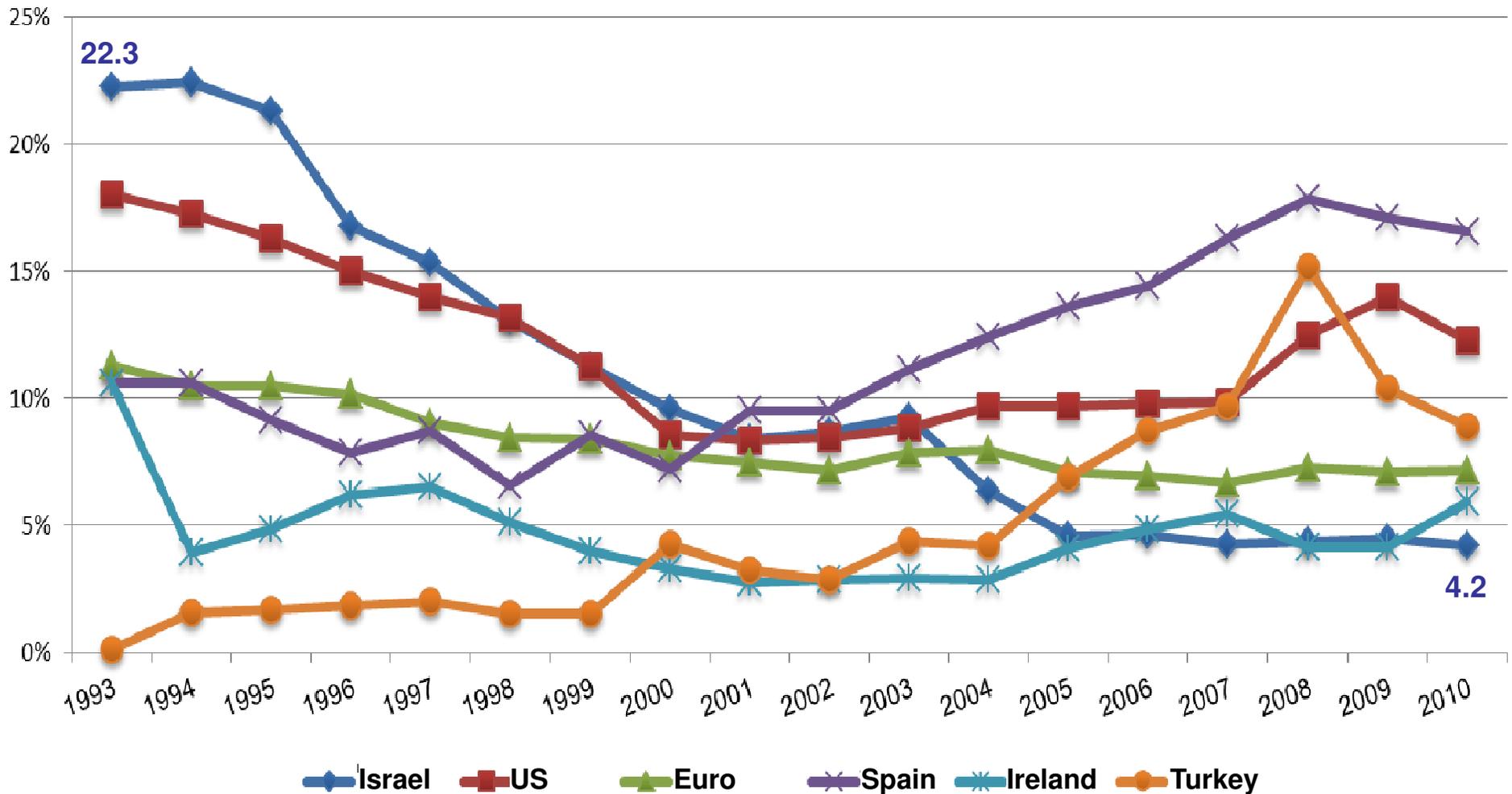
* Nature, Science, The Cell

Patents (2013)



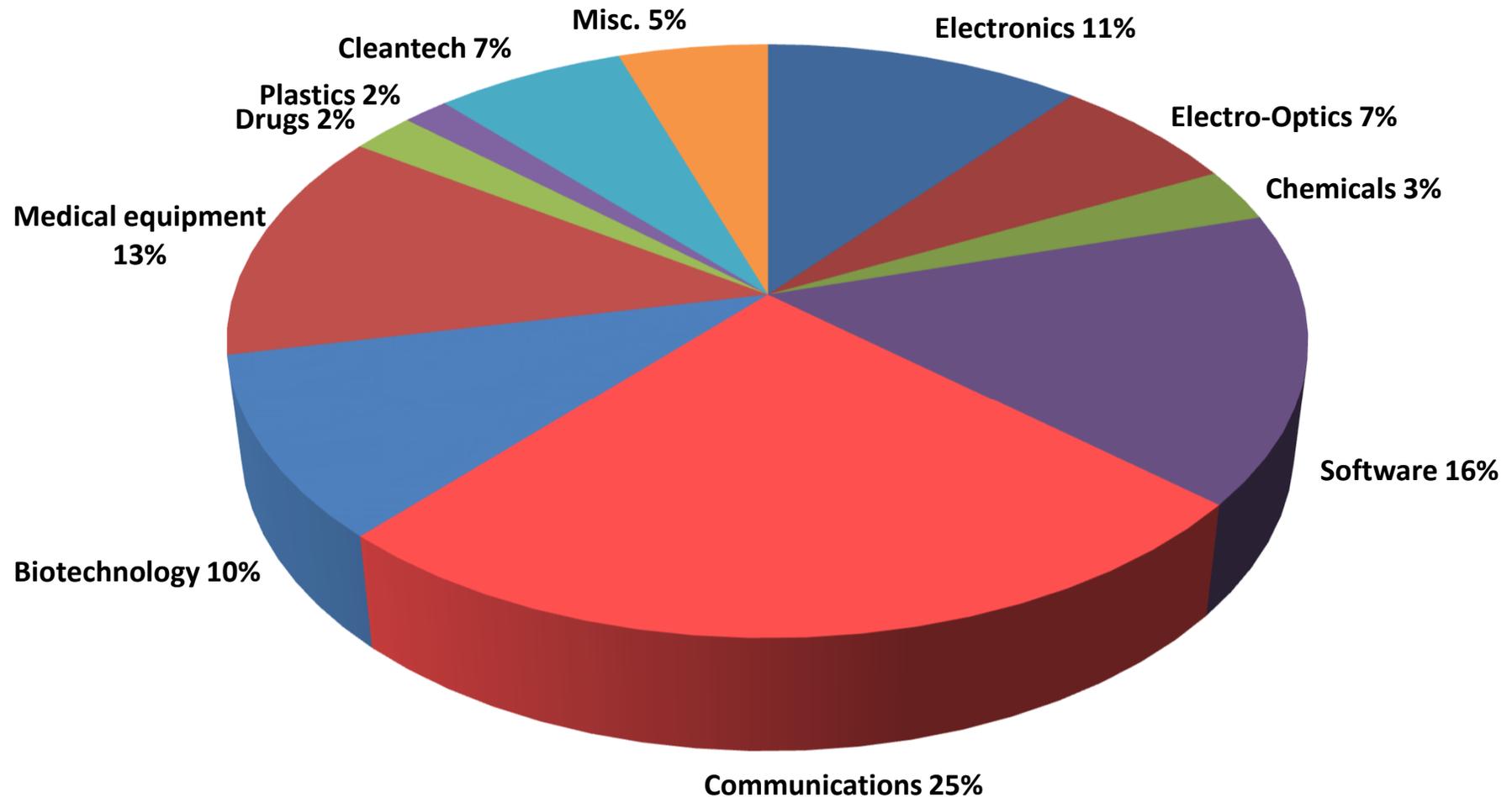
- Israel ranked #5 in number of patents per capita
- Israel ranked #1 in number of medical devices patents and #2 in number of Biopharma patents approved in the US

Government Funding out of Total Expenditure on Business R&D



Source: Office of the Chief Scientist.

Office of the Chief Scientist Grants by Technological Sector (2014)



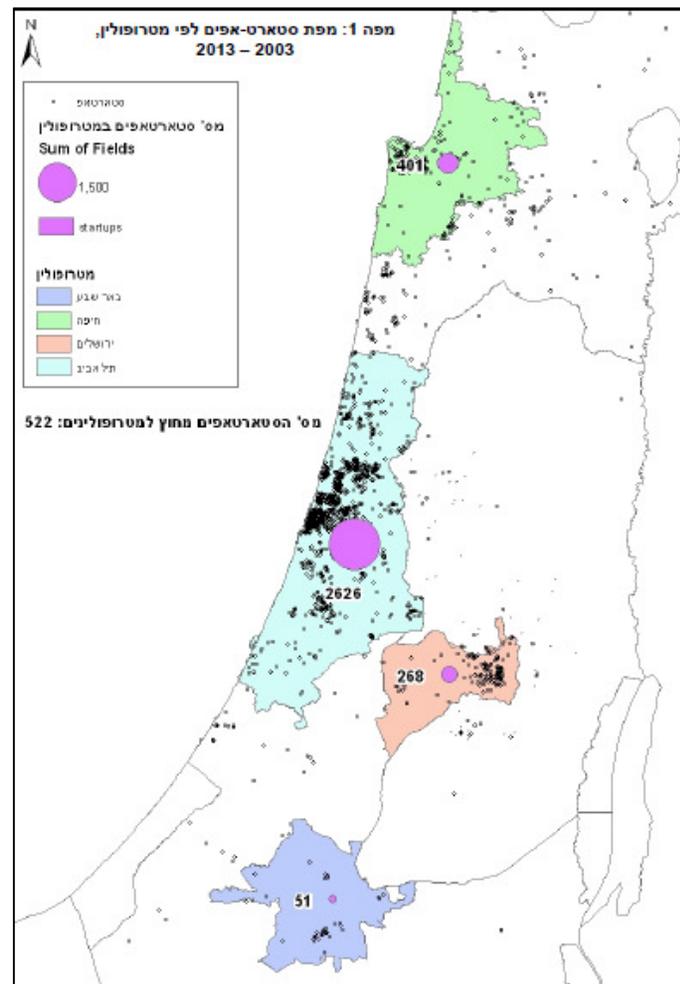
Source: Office of the Chief Scientist.

Start-Up Nation

- Israel ranks #4 in the number of companies listed on the Nasdaq (US 5,511, Canada 188, China 151, Israel 87)
- 1,523 startups, 62 accelerators, 73 R&D centers... almost all in a radius of 30 minutes from here

<http://startupnationbook.com/startup-map/>

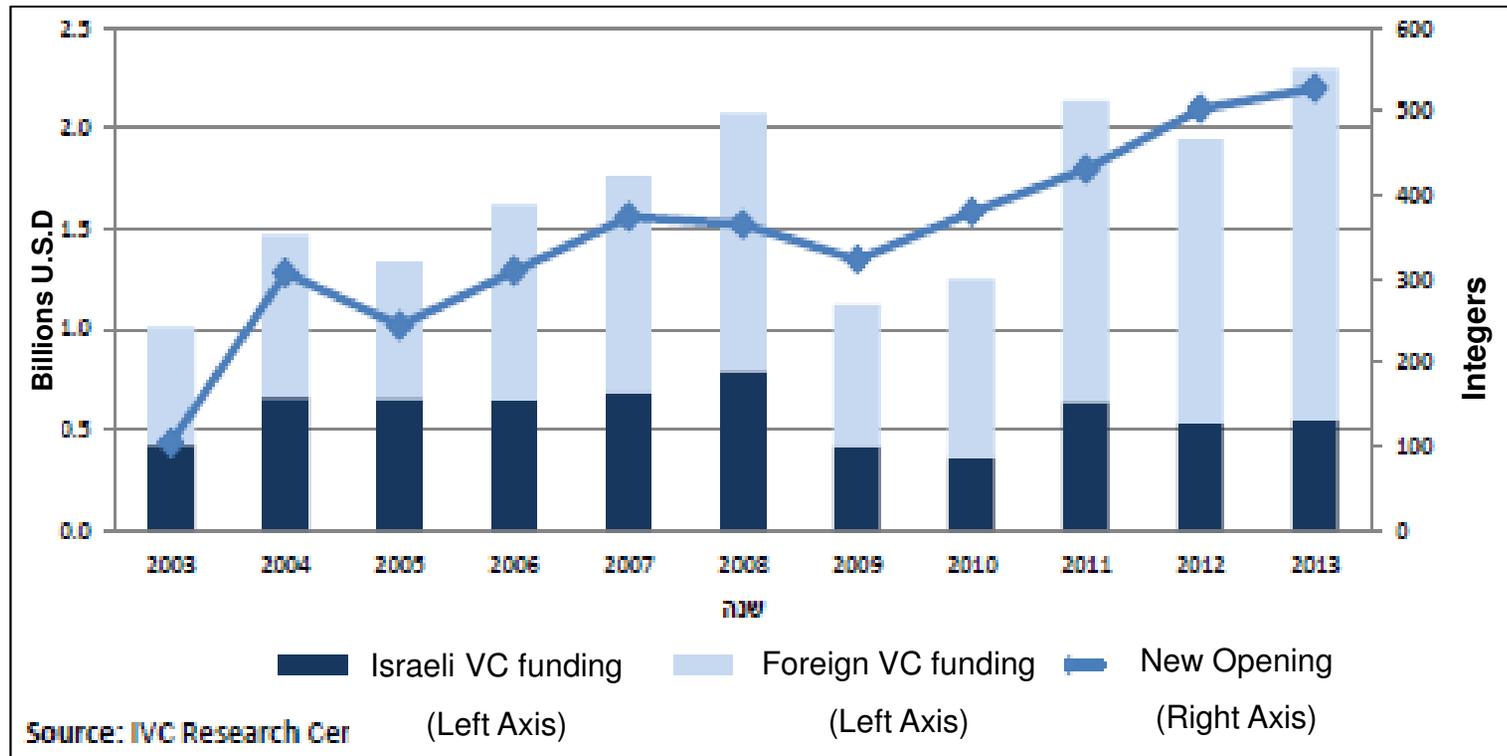
Main Areas of Startups: Tel Aviv, Beer-Sheva, Jerusalem, Haifa



Start-Up Nation Facts

- Between 2003-2013 there were 3,900 Start-ups in Israel.
- On average 430 new startups are established every year.
- Total Revenue of startups (without exit): 17.6 Billion NIS (2013)
- Startups with grants from the office of the chief scientist tend to grow by higher rates.

Sources of venture capital and num. of new opening – 2003-2013



Top Universities for VC-backed Entrepreneurs (2009-2014)

- An Israeli university ranks #9 in the number of undergraduate entrepreneurs
- 4 Israeli universities rank top-10 outside the US and Europe

University	Rank*	Rank**	# Entrepreneurs	# Companies	Capital Raised (\$M)
Stanford	1	-	378	309	3,519
UC Berkeley	2	-	336	284	2,412
MIT	3	-	300	250	2,417
Tel Aviv University	9	2	169	141	1,253
Technion	18	4	119	98	797
Hebrew University	36	7	69	61	560
The Interdisciplinary Center	-	10	46	42	355

* Overall rank. ** Outside the US and Europe.

Source: Pitchbook.

Other Challenges

- **Inequality:** The highest poverty rate among OECD countries: Arabs and Ultra Orthodox
- **Education:** Low ranking in PISA tests
- **Housing Prices:** 50% increase in 6 years: Bubble?
- **Cost of Living:** High food and other retail store items
- **Peace** and the economy

Thank You!