

Israel's Innovation Economy

Chinese Delegation to IDC

Prof. Zvi Eckstein

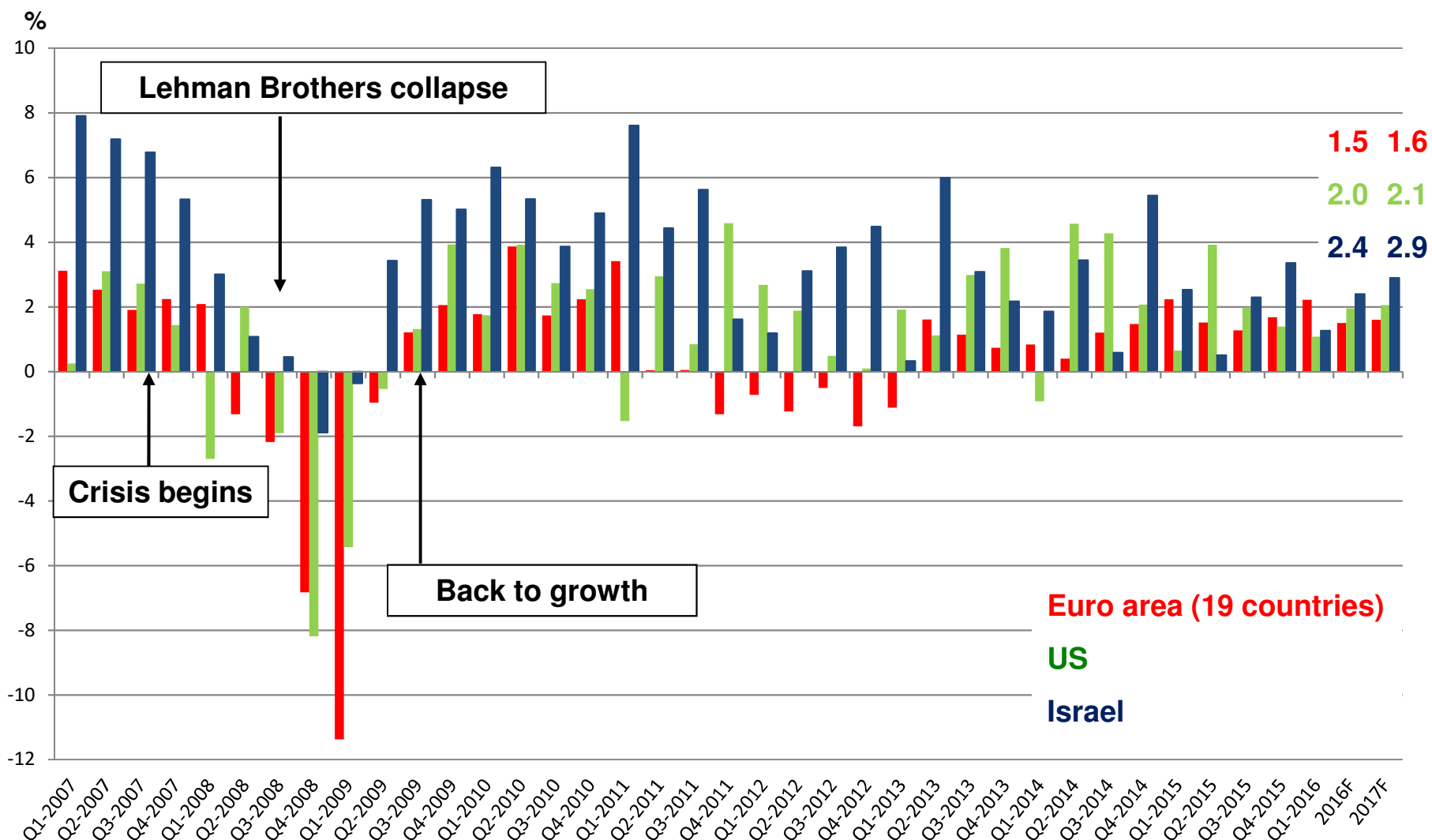
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25 July 2016

Outline

- The Macro Picture
- Innovations and Start Ups

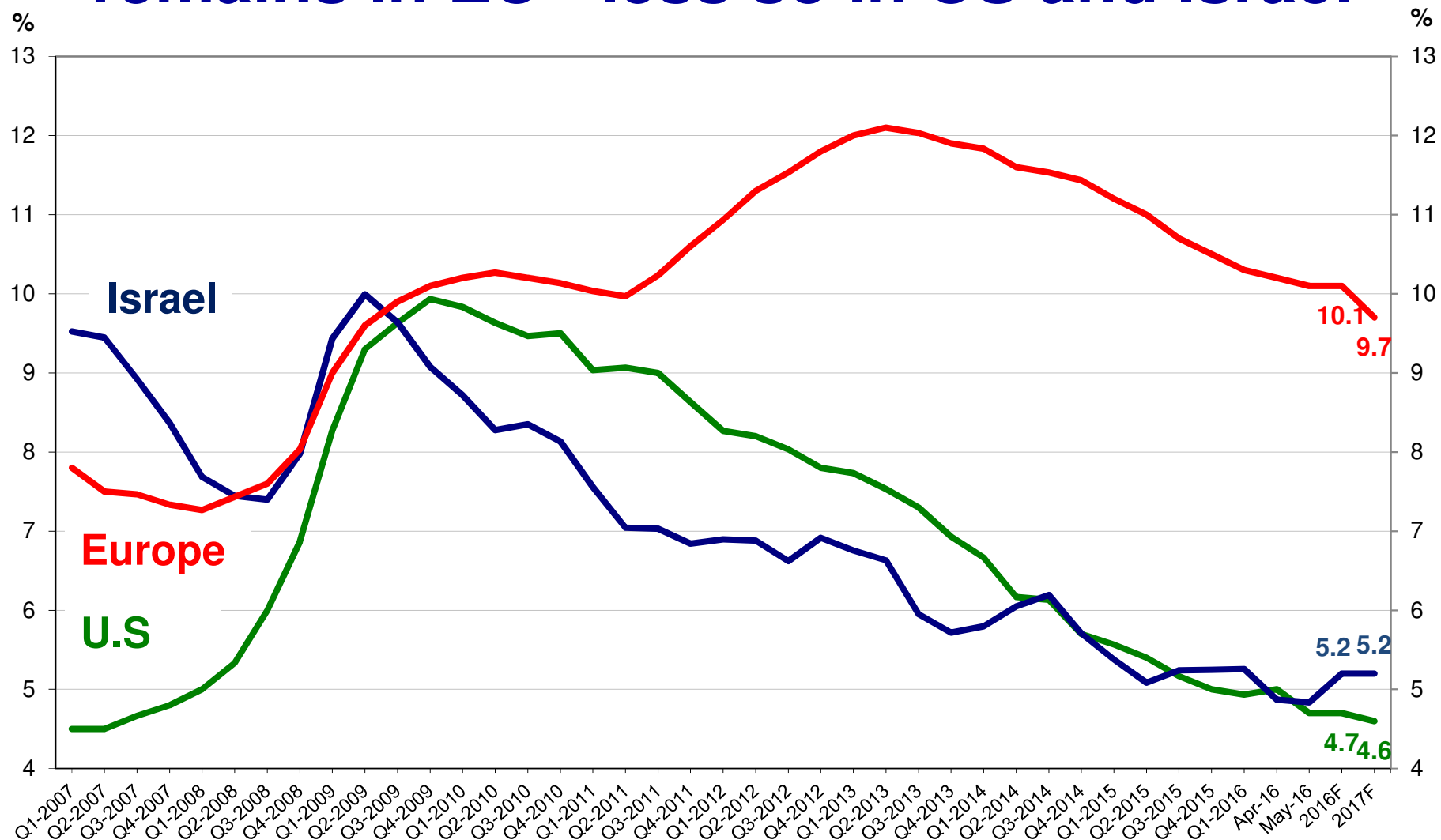
Growth Rates - Israel, US and Europe



Quarterly rates in annual terms.

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

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

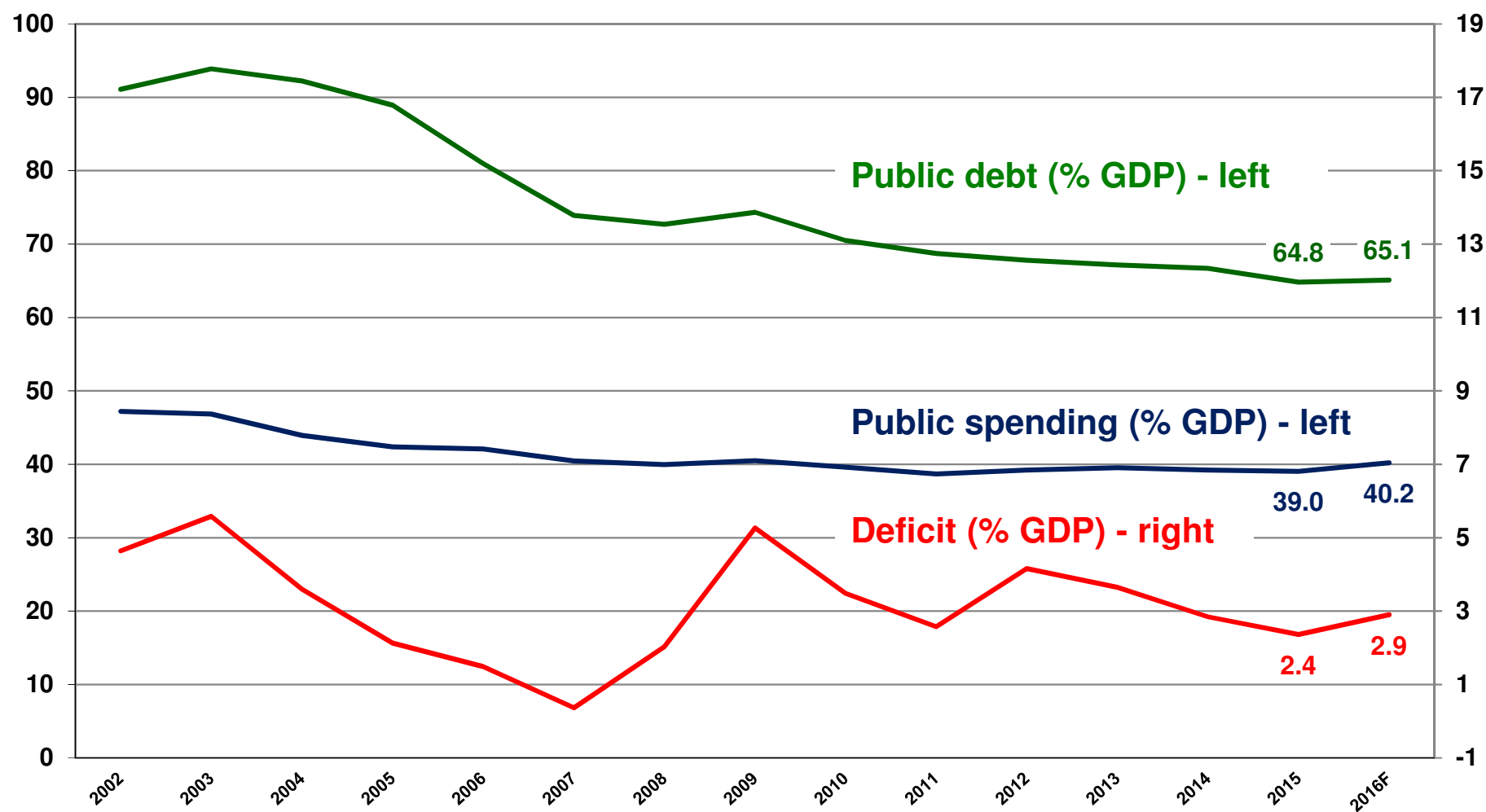


Source: OECD, BOI and CBS data,
forecasts by BOI (September 2015), Federal Reserve (September 2015) and ECB (2015Q4).

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

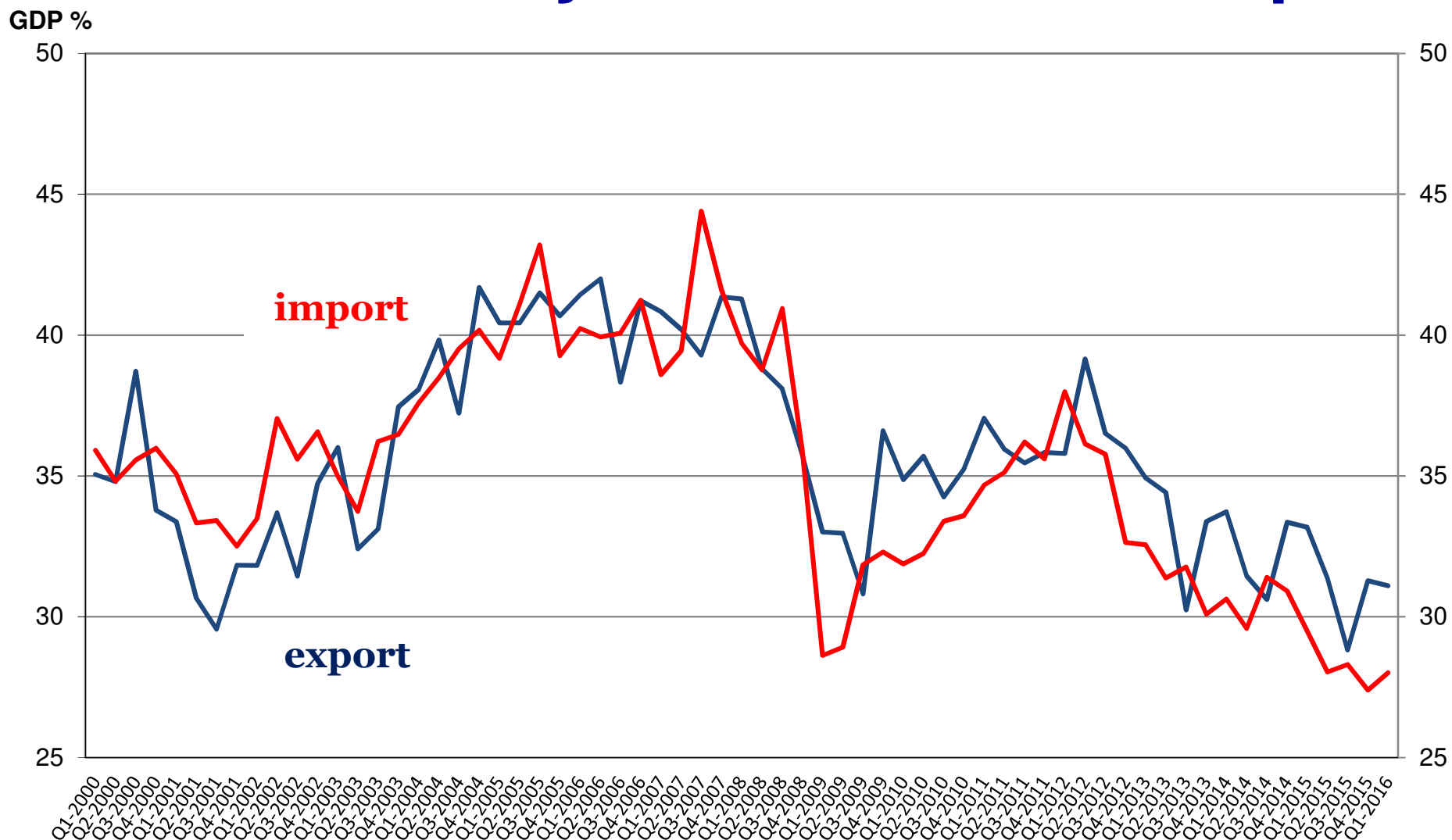
Fiscal Policy: Conservative and *Credible*



Deficit for 2015-16 is the target.

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

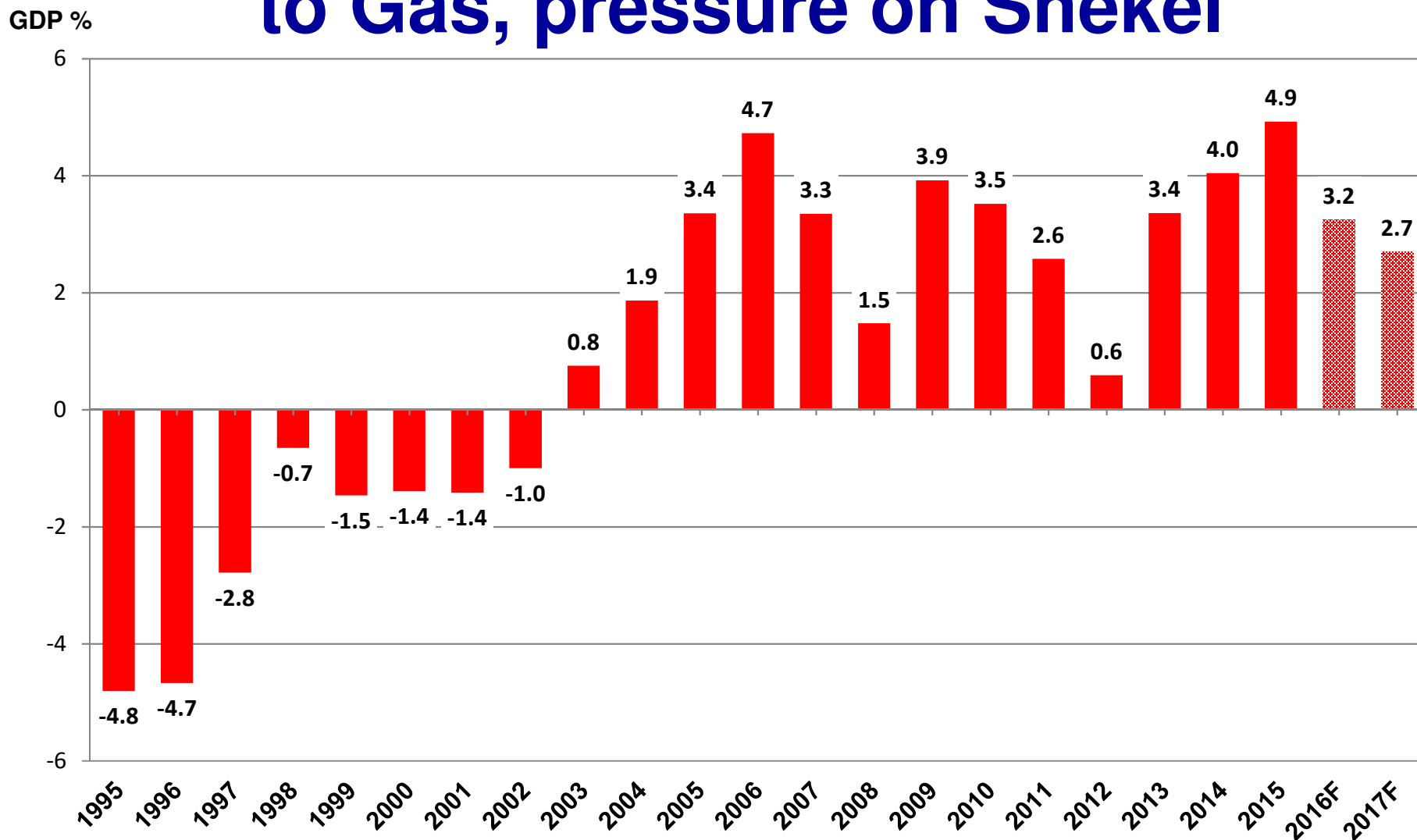
Balance of Payments: Back to surplus



Total goods and services, calculated from current prices series.

Source: CBS.

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

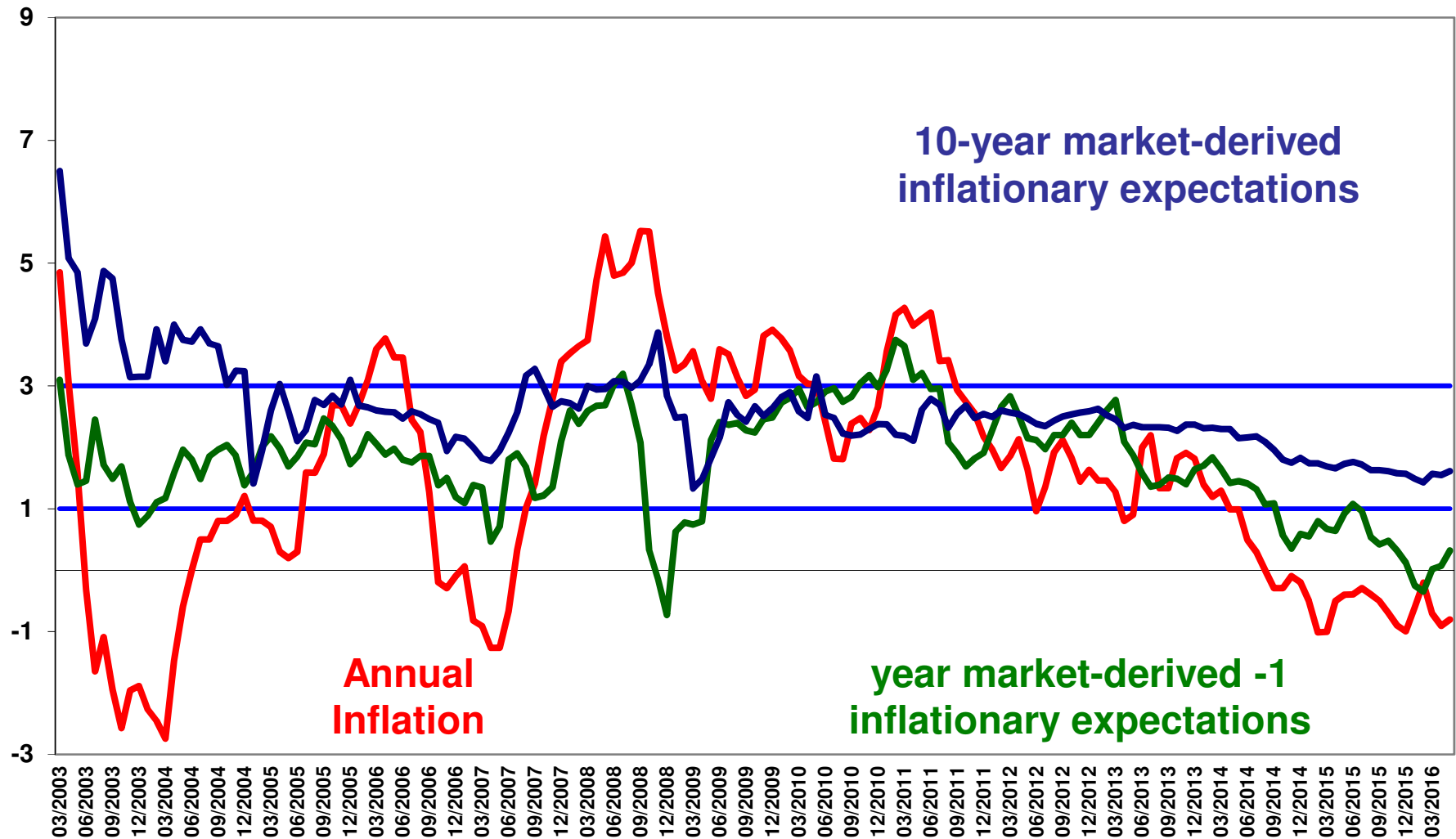


Source: CBS, estimated forecast calculated from BOI (June 2016).

Monetary Policy Goals

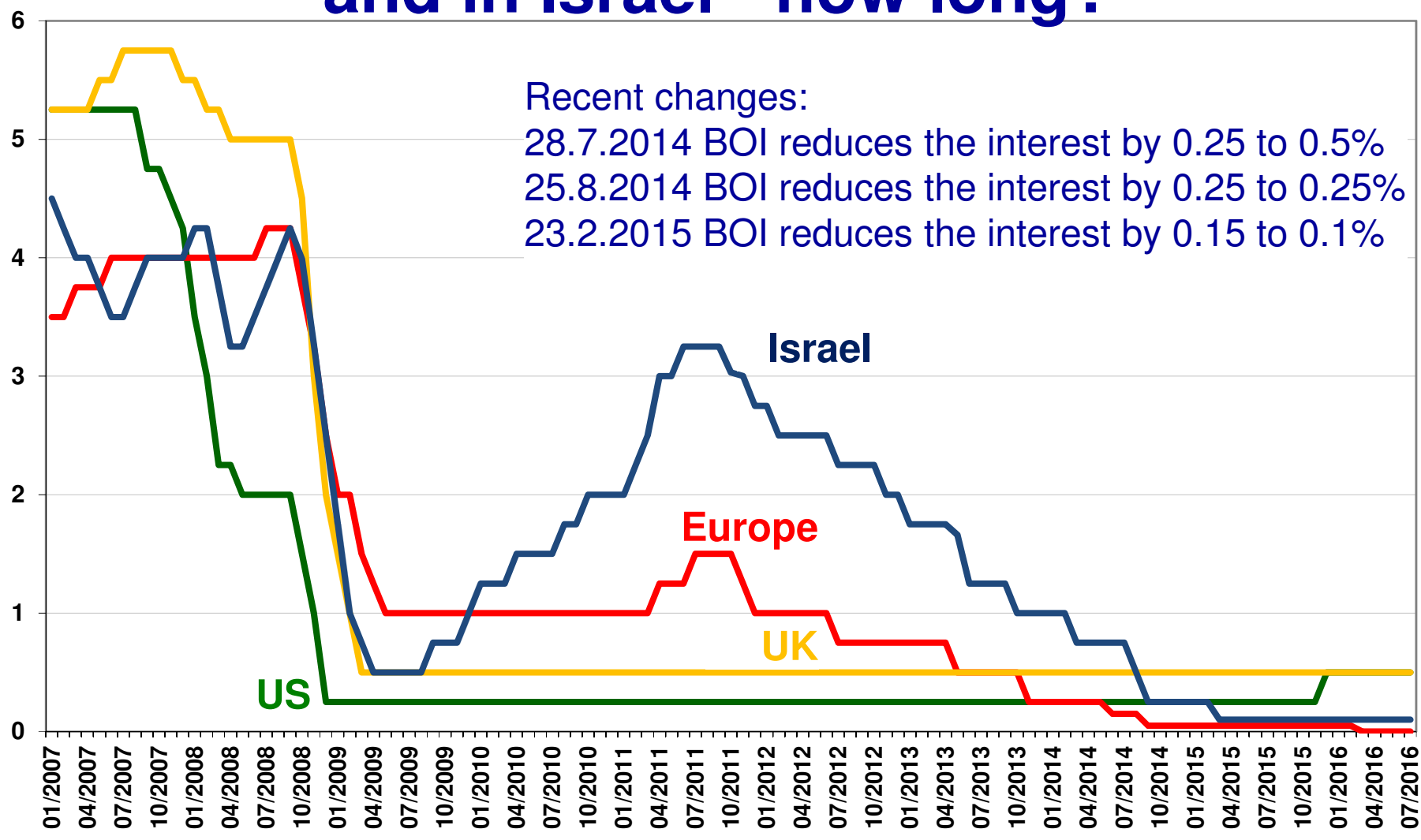
- **Main goal:** Price stability, inflation target 1-3%
- **Secondary goal:** Support employment and growth (subject to price stability)
- Tools: Interest rate and FX market interventions
- **Additional goal:** Support financial stability
- Tools: Financial markets interventions and “macro-prudential”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

Inflation below Target

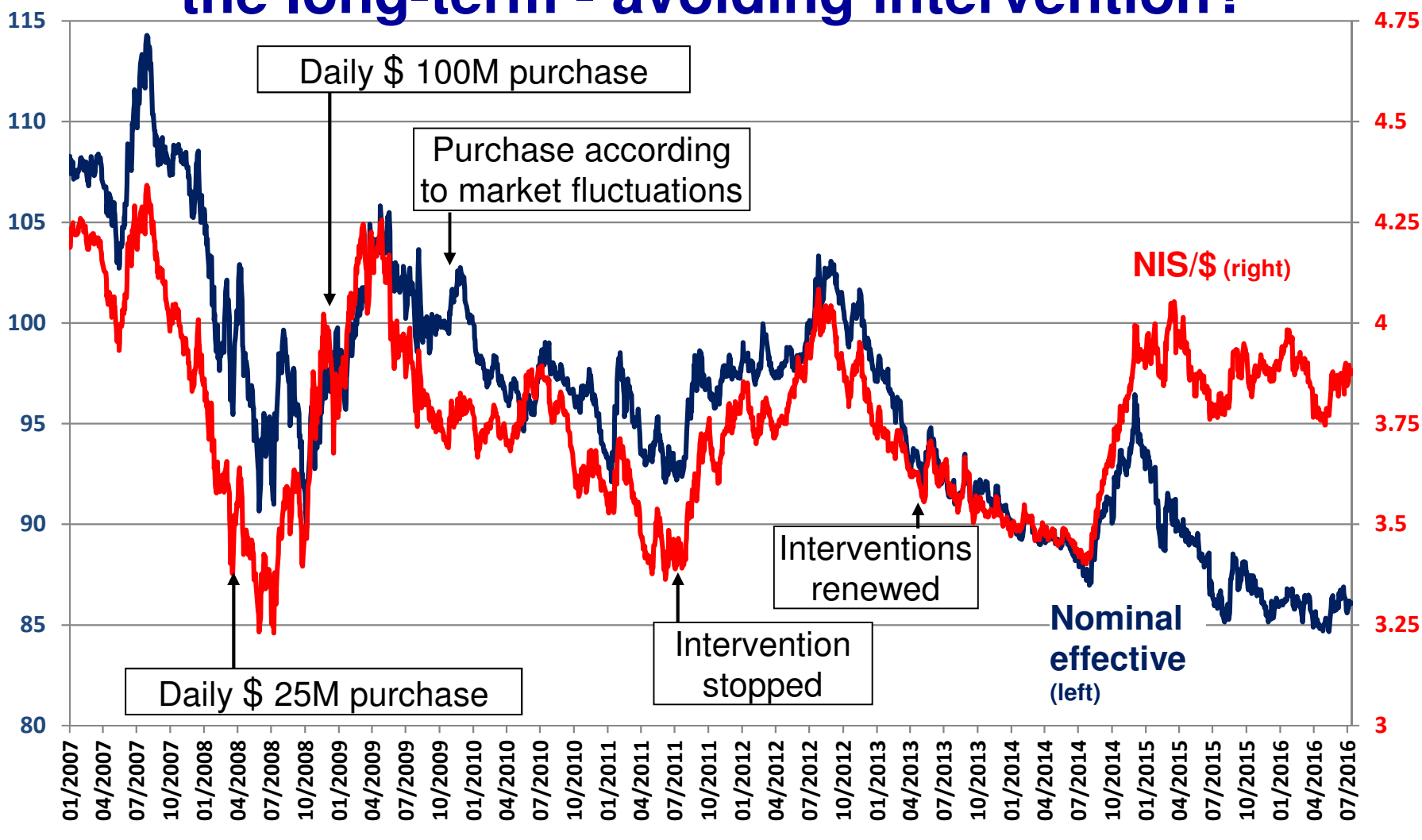


Source: CBS and BOI.

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



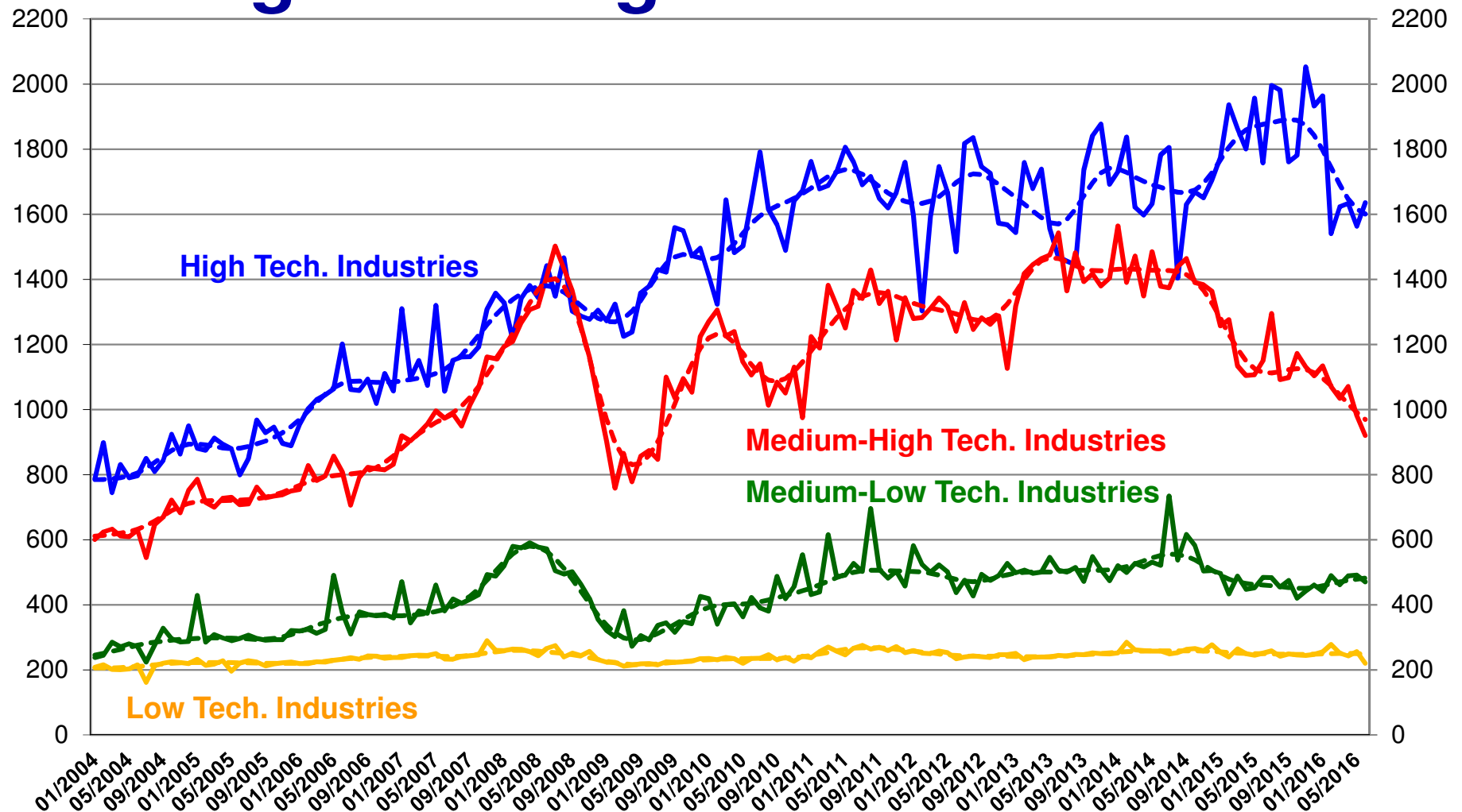
Shekel too strong? Intervention during unusual trends affecting market; Accumulating balances; In the long-term - avoiding intervention?



Innovations and Start Ups

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

\$ monthly
millions

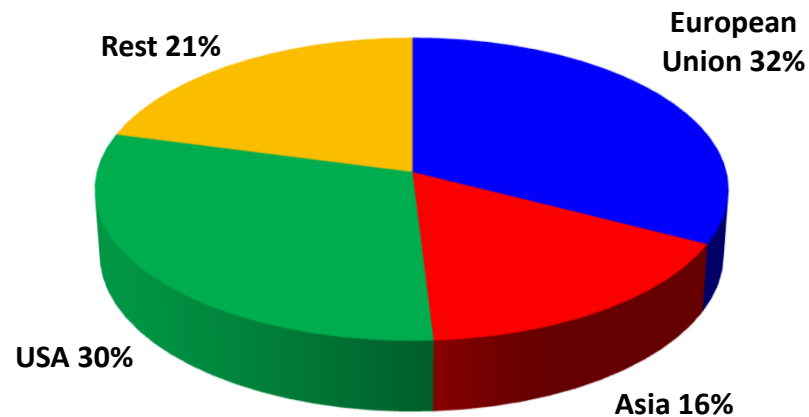


Source: CBS.

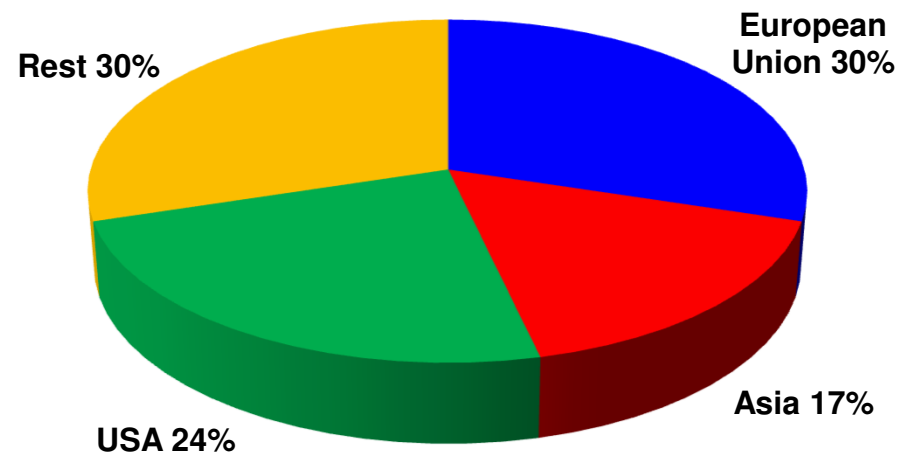
Export by Country (excluding diamonds): Transition to Asia

2000

2015



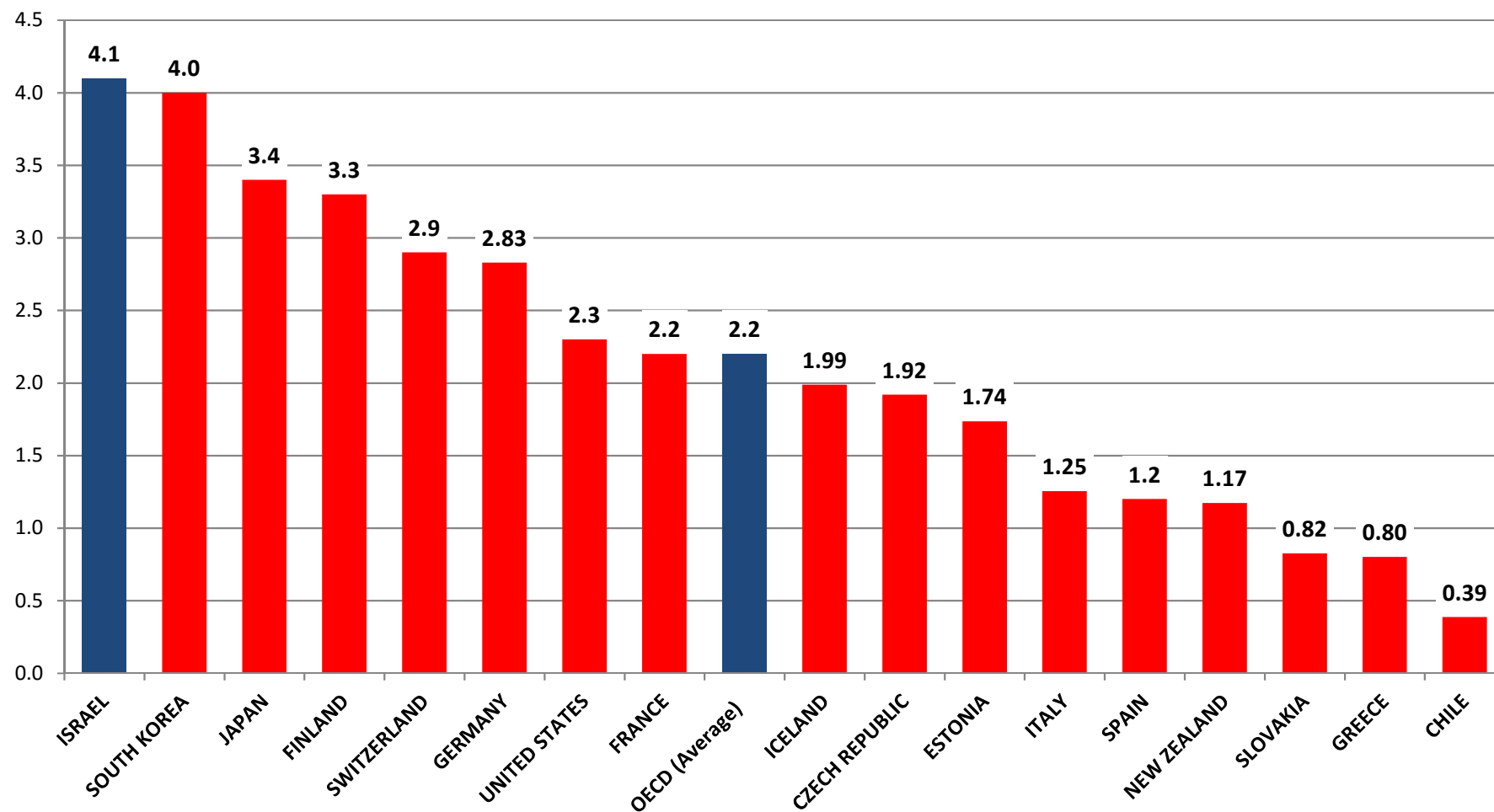
China:	1%
Inc. Hong Kong:	2.1%



China:	6.7%
Inc. Hong Kong:	7.9%

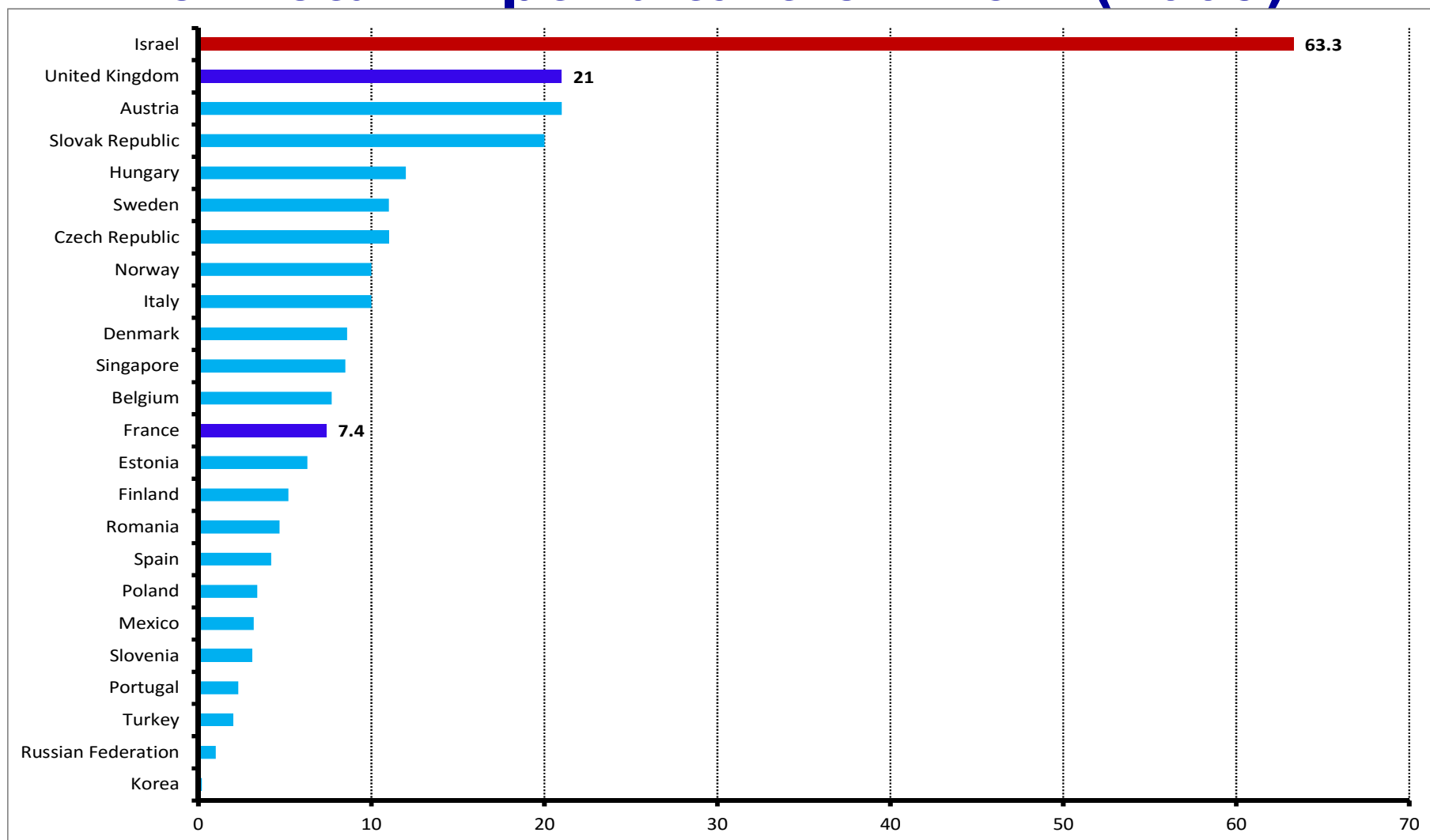
National Expenditure on Civilian R&D (2013)

GDP %



Source: CBS and OECD.

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



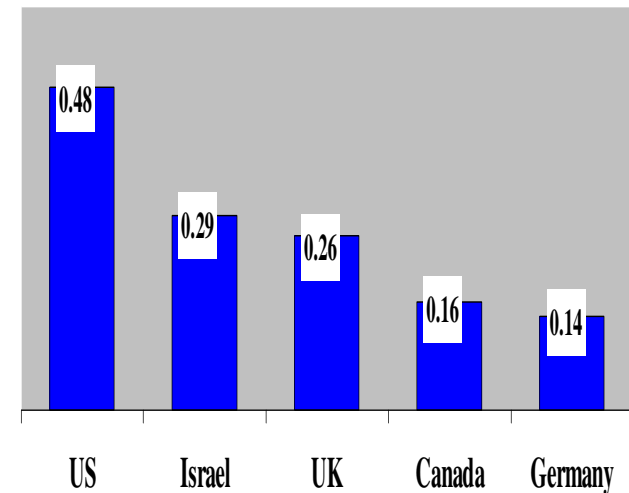
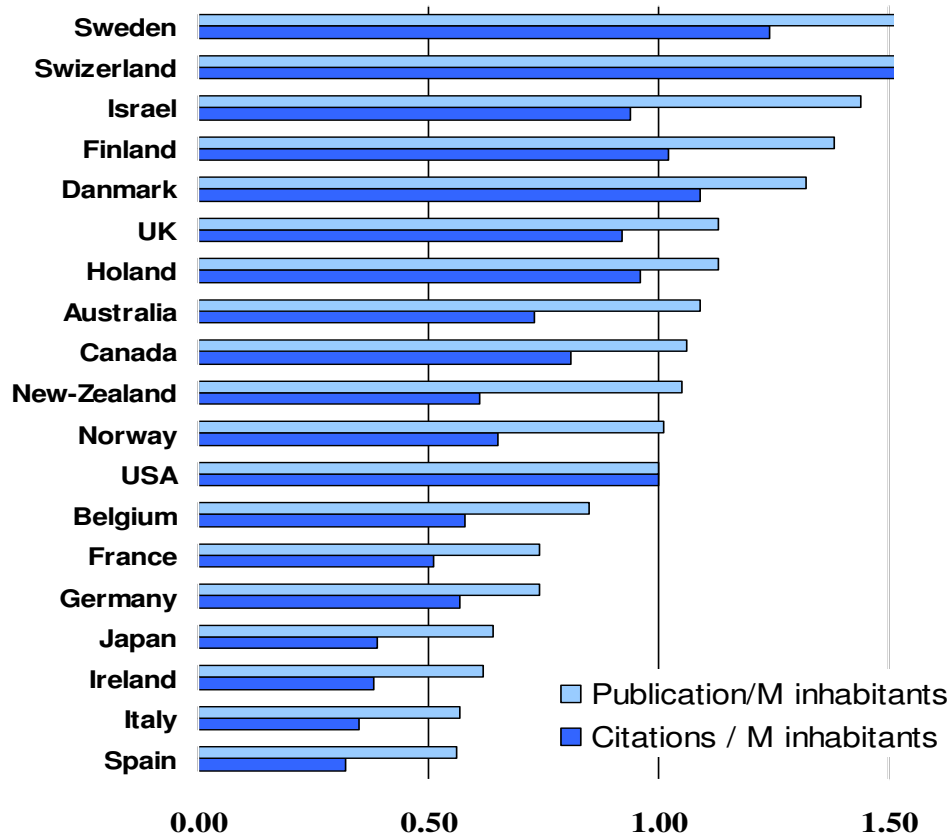
Source: Applied Economics.

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**

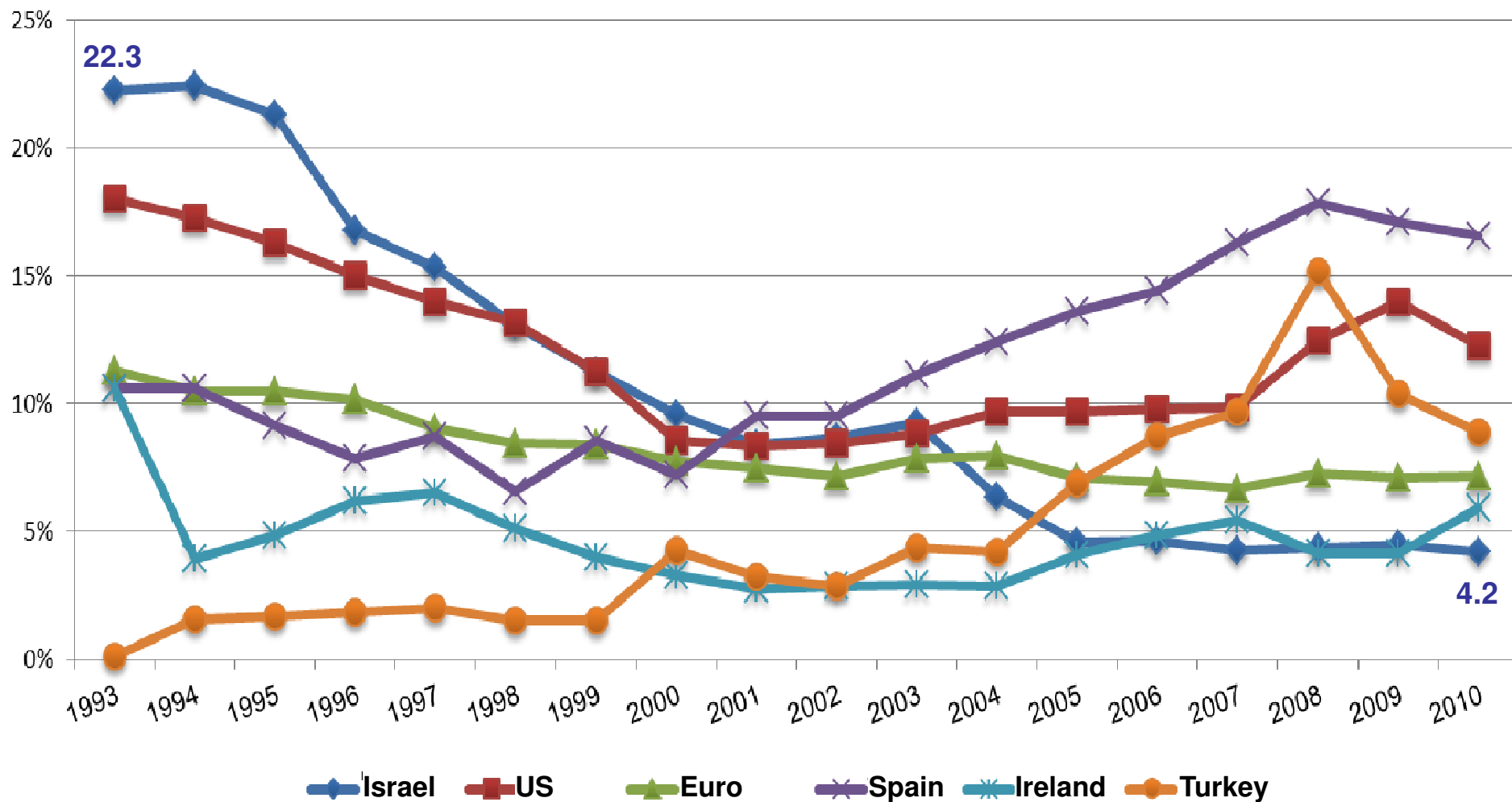
*** Nature, Science, The Cell**

Patents (2013)



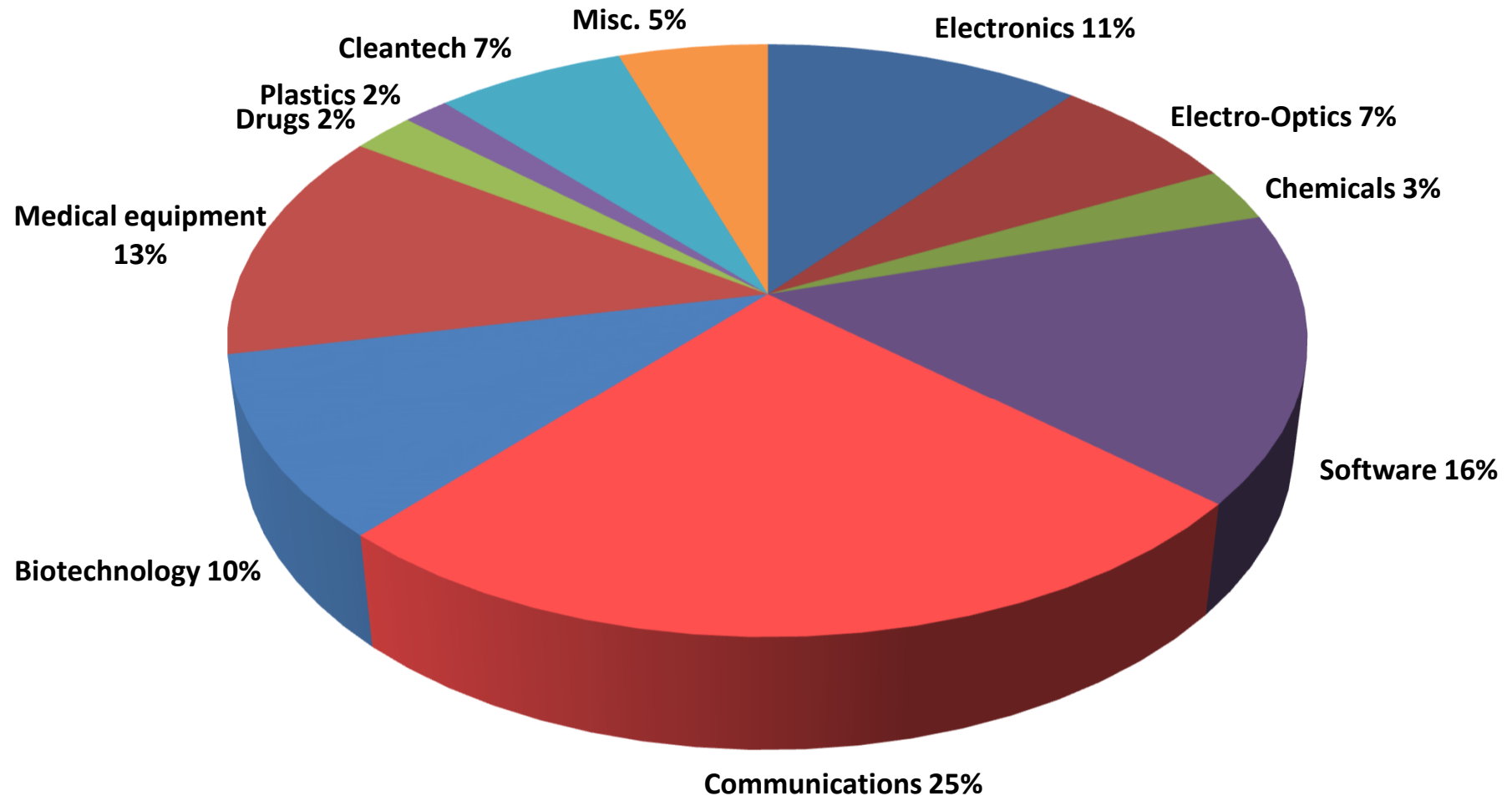
- Israel ranked #5 in number of patents per capita
- Israel ranked #1 in number of medical devices patents and #2 in number of Biopharma patents approved in the US

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)



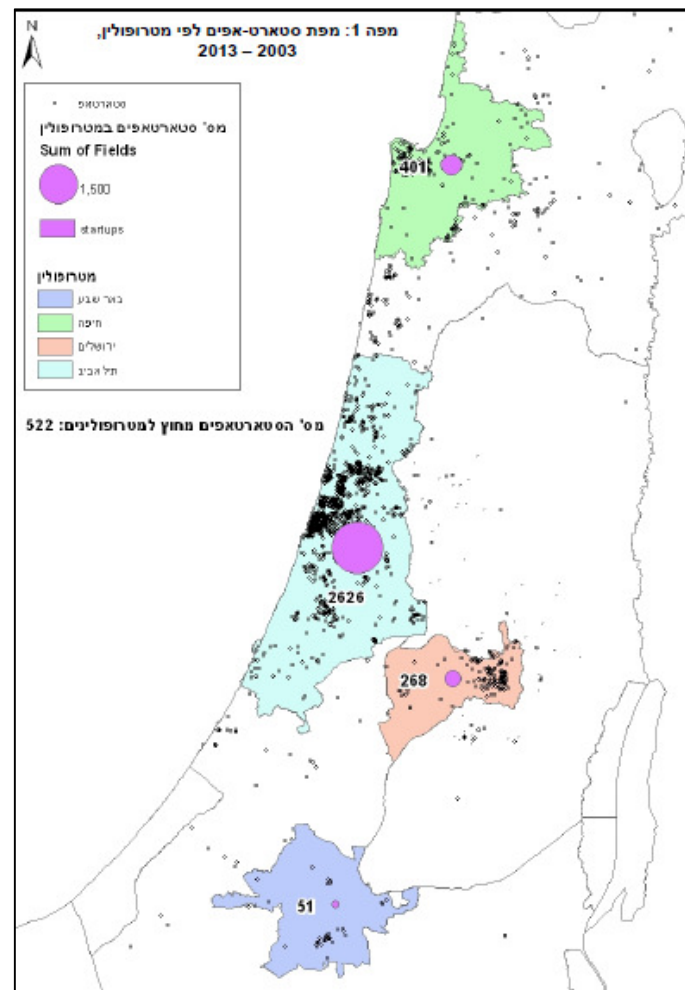
Source: Office of the Chief Scientist.

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/>

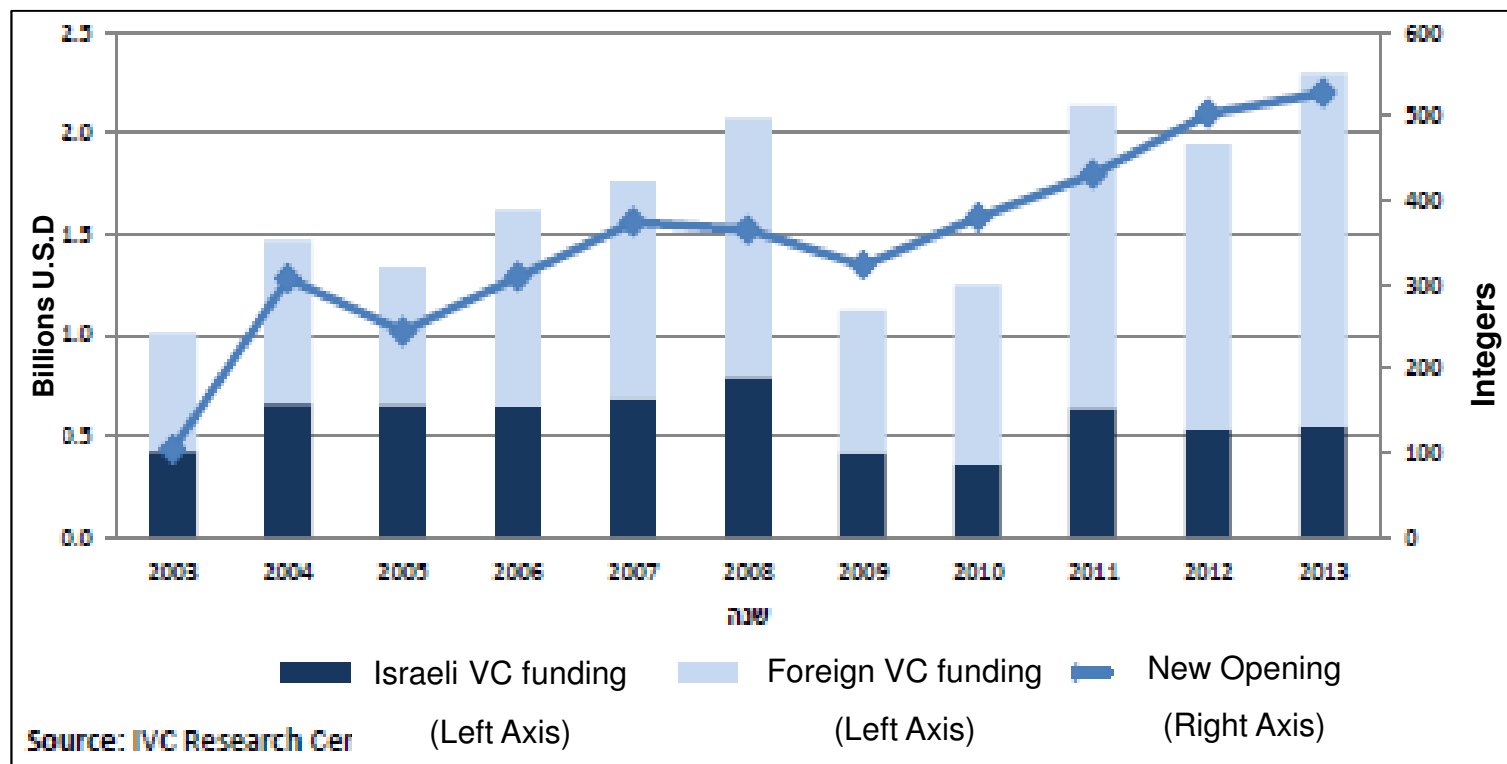
Main Areas of Startups: Tel Aviv, Beer-Sheva, Jerusalem, Haifa



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 Piza 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!