

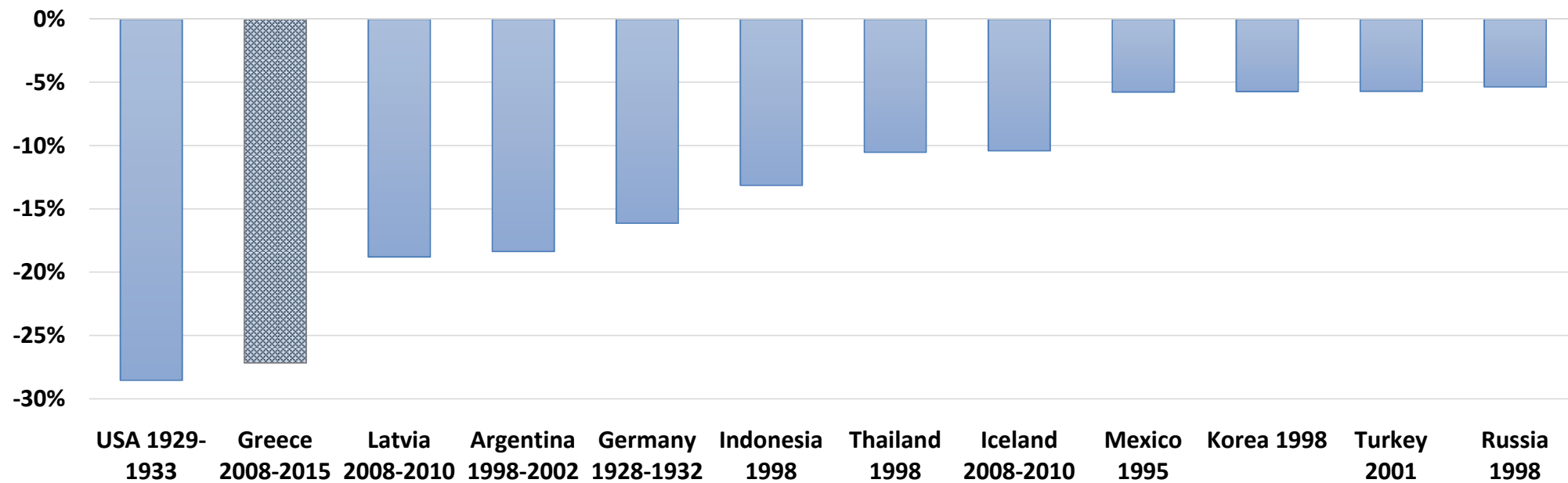
# **Restructuring, Reallocation and Economic Growth in Greece**

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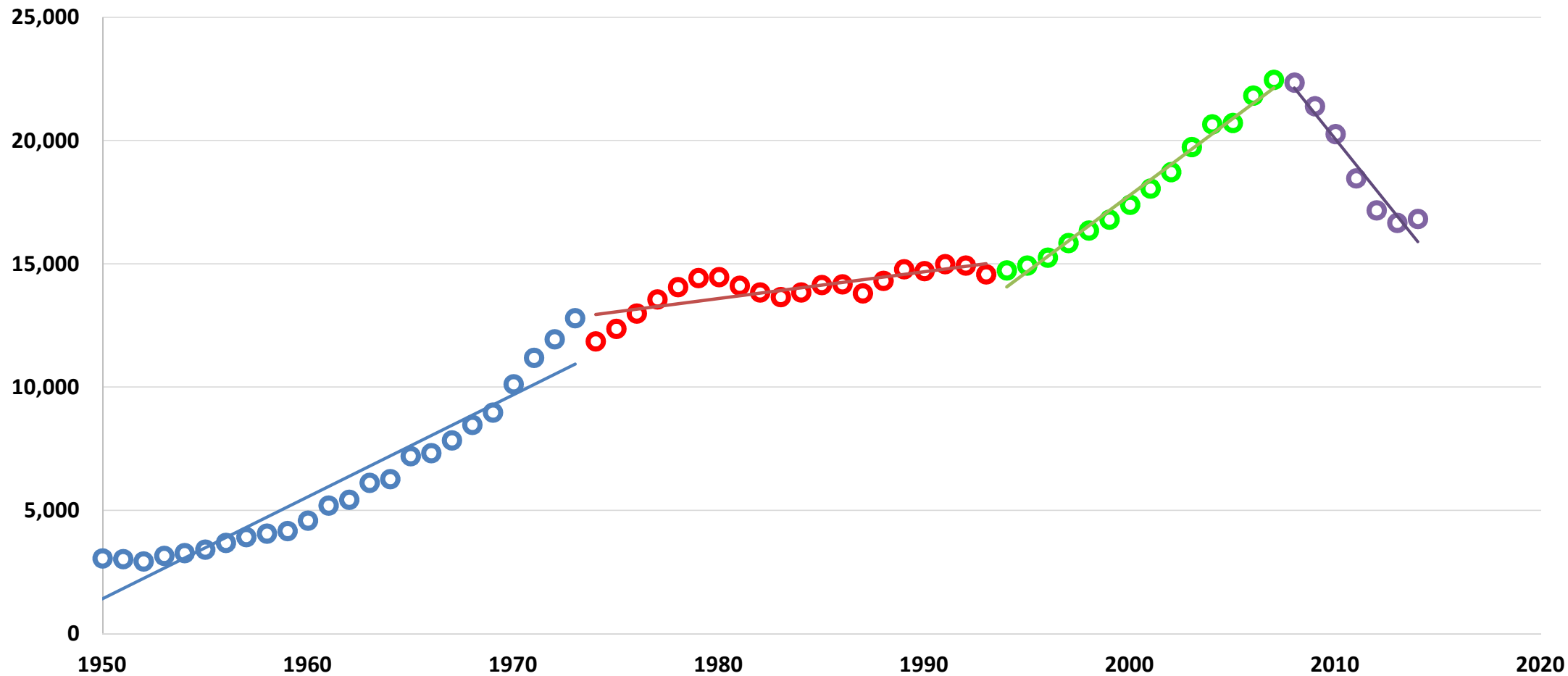
March 2016

## Real GDP growth in crisis (from peak to first recovery year)



Source: IMF, Angus Maddison Historical Statistics of the World Economy, Author's calculations

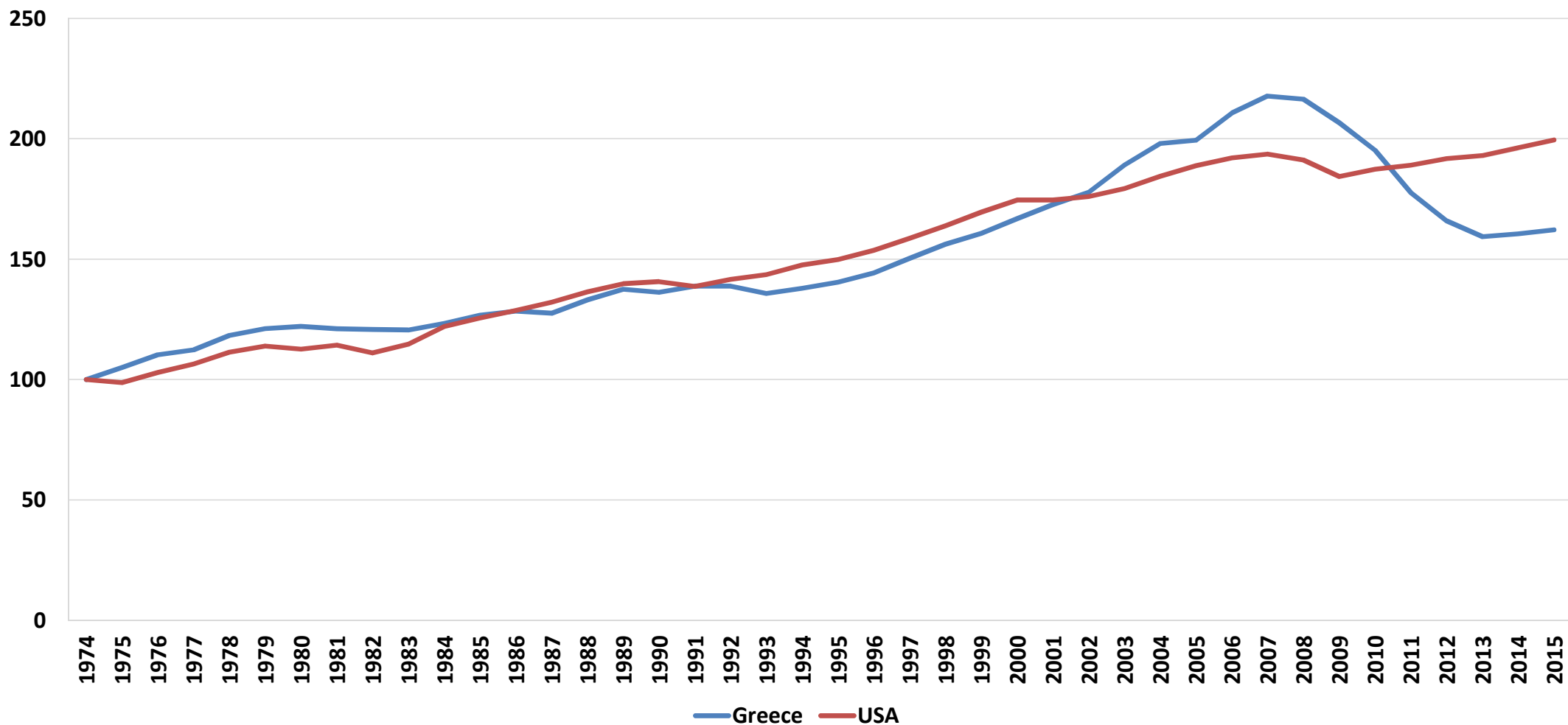
## GDP per Capita <sup>a</sup>



Source: Leounakis, N. and Sakellaris, P. "Greek Economic Growth since 1960", Athens University of Economics and Business, Working Paper Series 16-2014

a. Great Expansion (1960 – 1973), Long Stagnation (1974 – 1993), Recovery (1994 – 2007) and Great Depression (2008-2013)

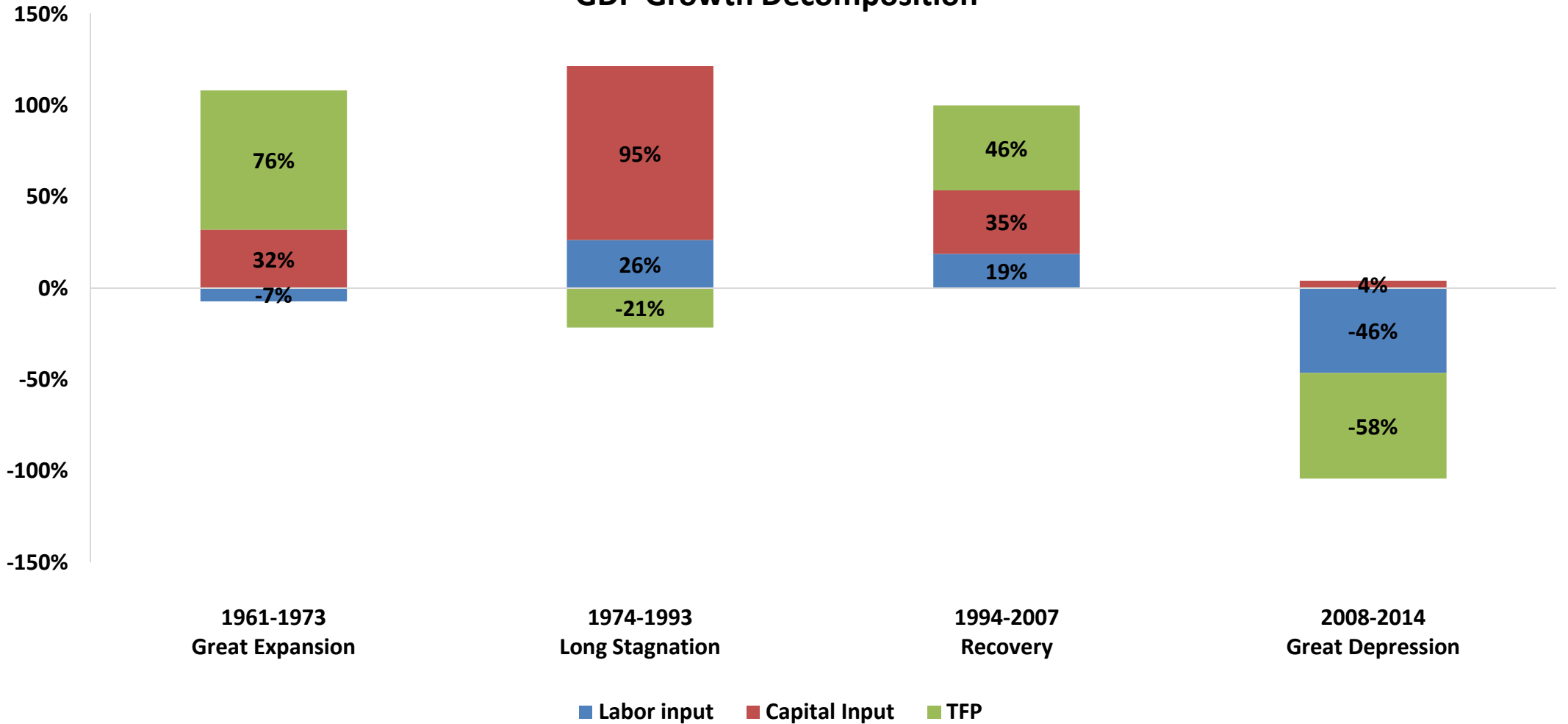
### GDP per Capita (1974=100)<sup>a</sup>



Source: The Conference Board: Total Economy Database

a. In 2014 US\$ (converted to 2014 price level with updated 2011 PPPs). 1974- US: \$27,658, Greece: \$16,487. 2015- US: \$55,204, Greece: \$26,741

## GDP Growth Decomposition



Source: Leounakis, N. and Sakellaris, P. "Greek Economic Growth since 1960", Athens University of Economics and Business, Working Paper Series 16-2014

**What determines productivity growth?**

# What determines productivity growth?

- Technical improvement
  - new technology, methods and equipment, new products and services
- Resource reallocation
  - entry and exit of firms, contraction of less productive firms and expansion of more productive firms

## Firm-level evidence

- Scant evidence
- Better institutions => Greater contribution of resource reallocation
- US manufacturing (1977 – 1996): 90% !

Petrin et al., 2011

- Greek manufacturing (1999 – 2010) : Very Low !  
Fakos – Sakellaris (2016 – preliminary)

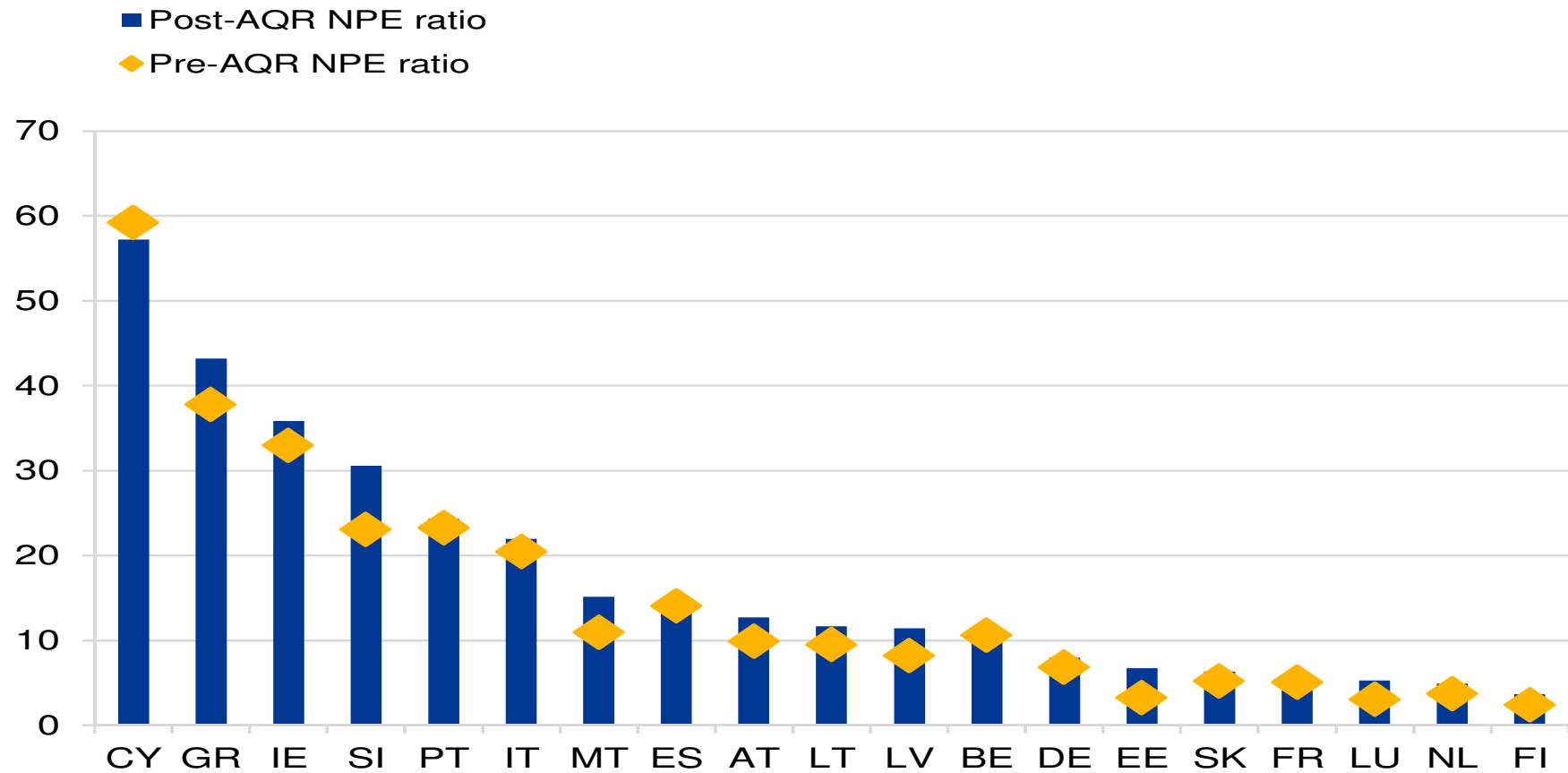


# **Banks play a role in productivity growth**

**Credit is essential for production, investment, technology adoption, innovation**

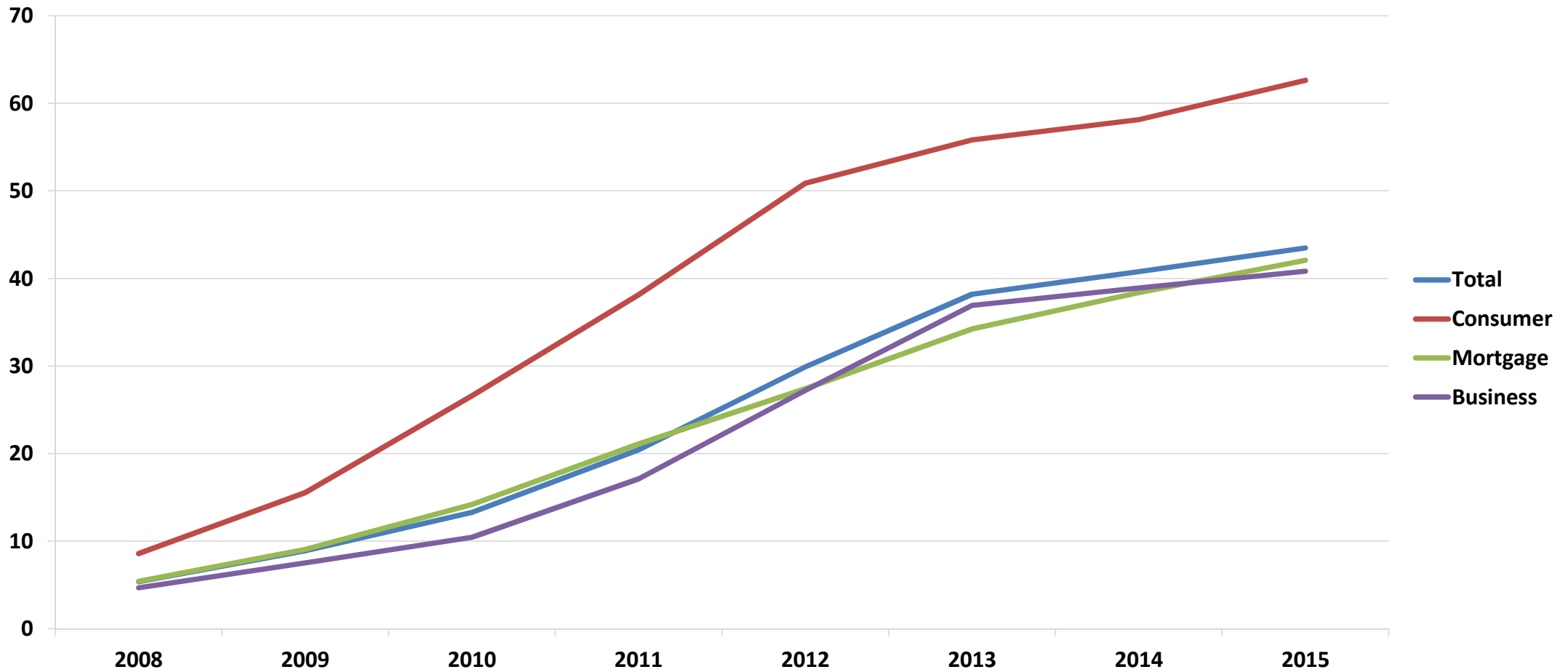
**Back to the present**

# NPEs in the Eurozone



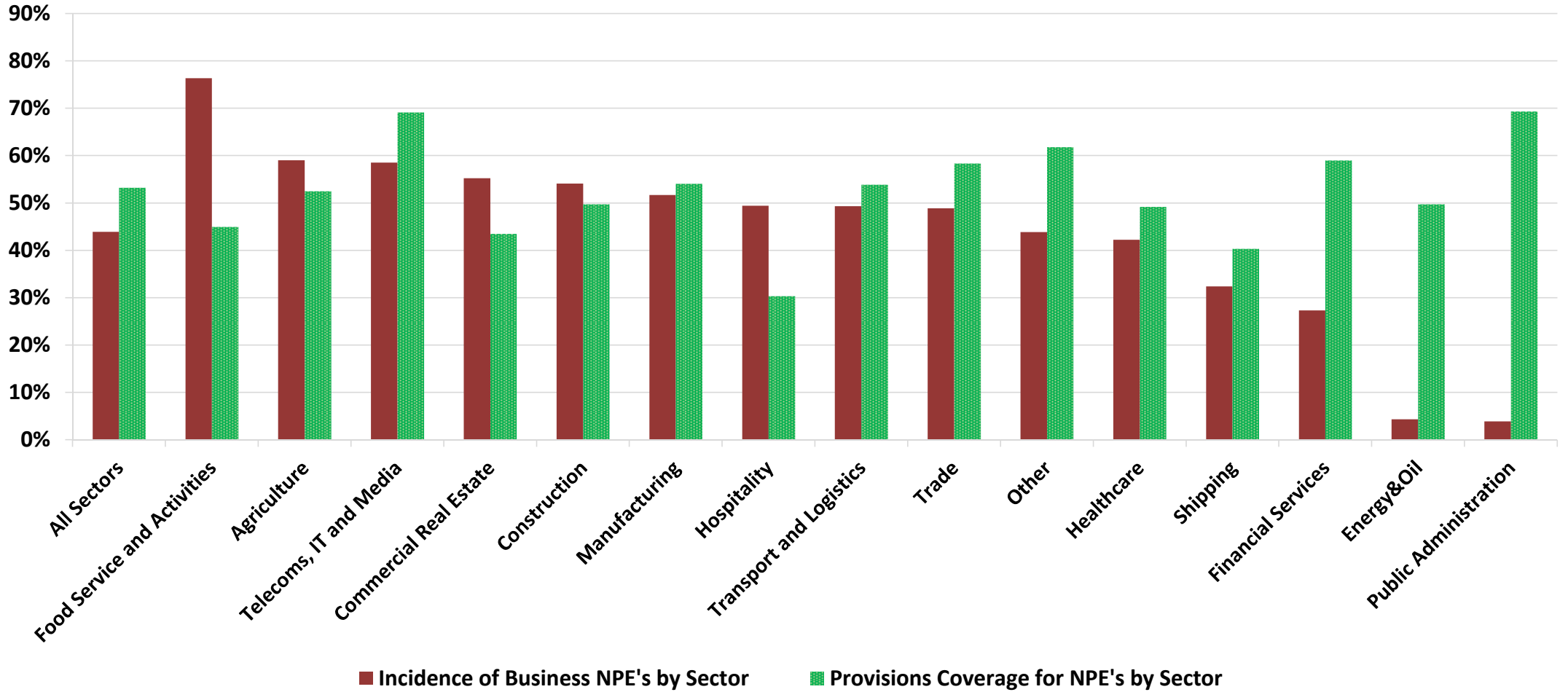
Source: ECB Financial Stability Review May 2015, based on end-2013 AQR data.

# The Evolution of NPLs in Greece <sup>a</sup>



Source: Bank of Greece  
a. % of amounts outstanding

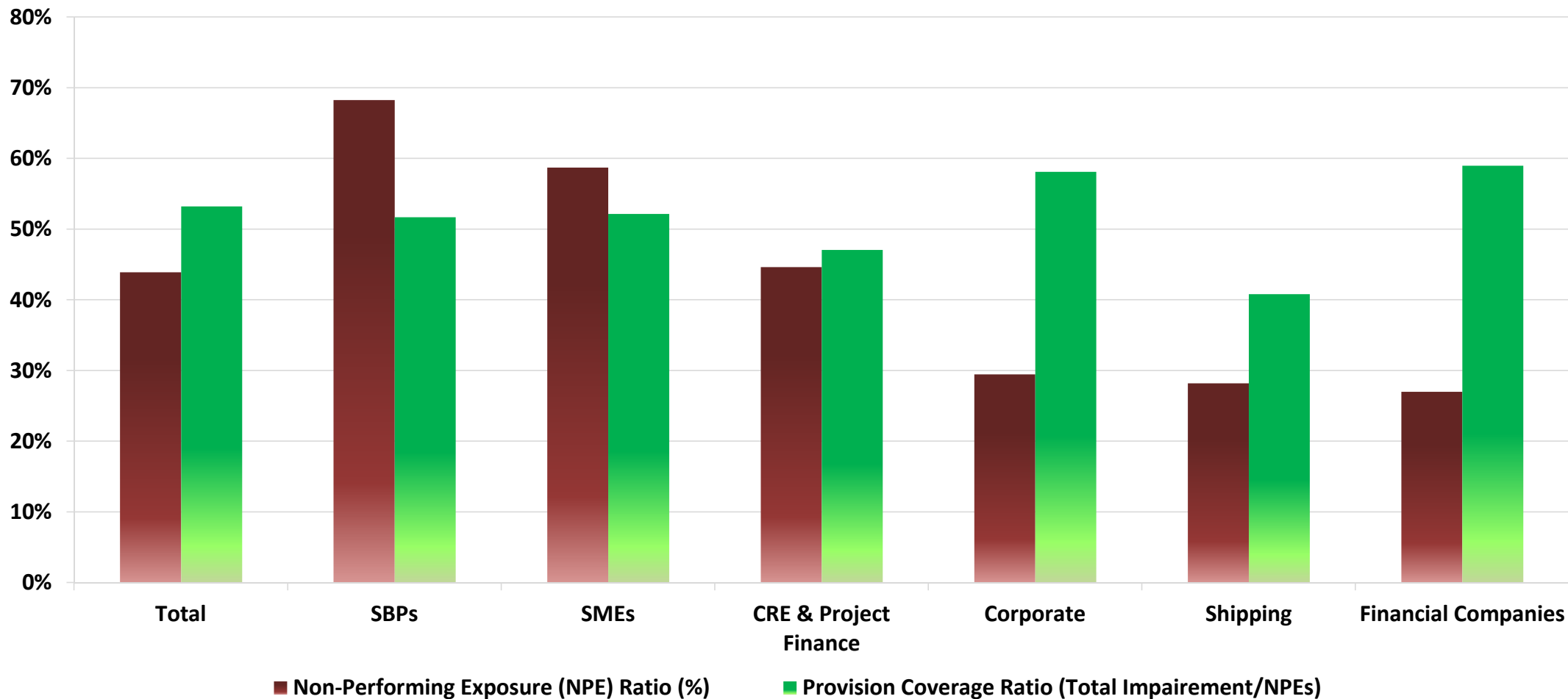
## Business NPEs (2015) <sup>a</sup>



Source: Bank of Greece

a. Sectors sorted by Incidence of Business NPE's

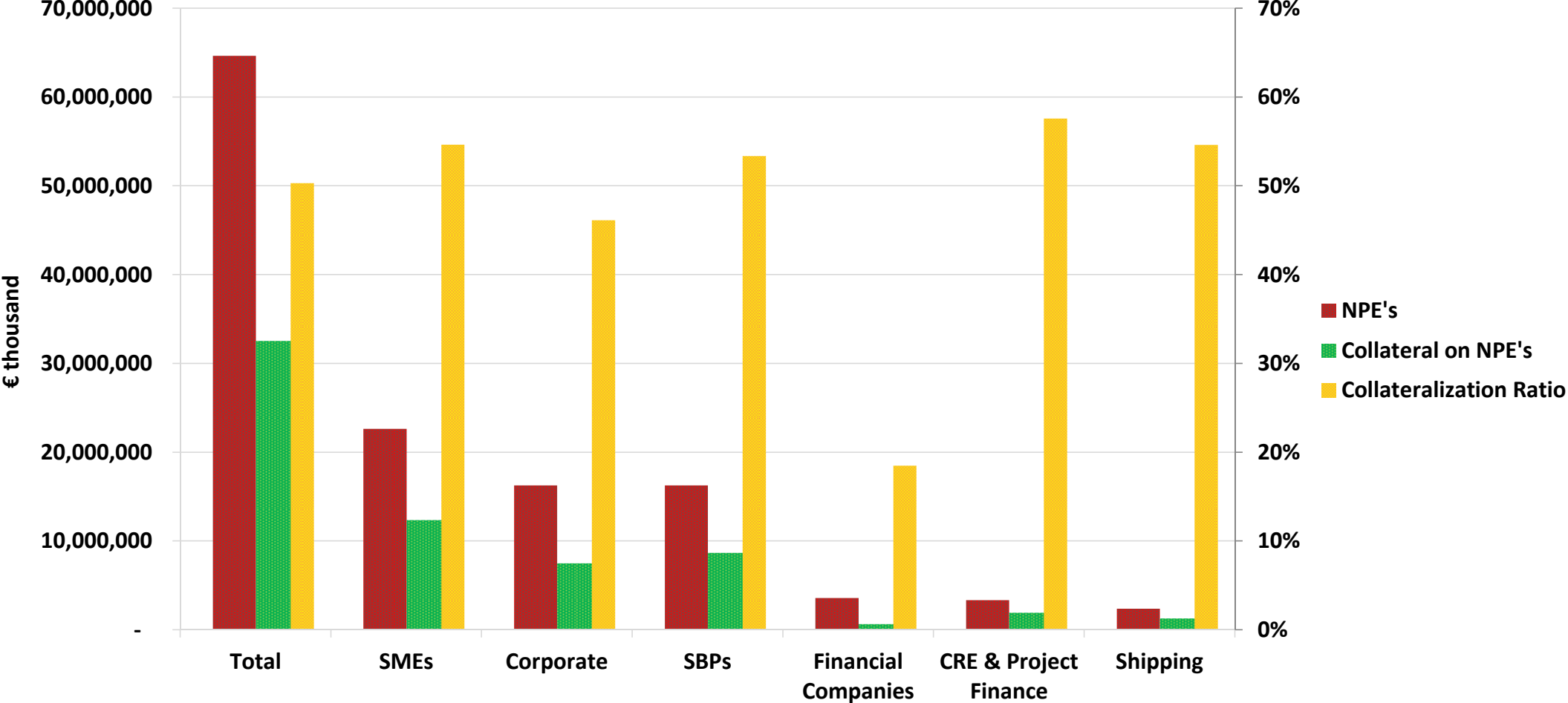
## NPE and Coverage Ratios for Business Loans (2015) <sup>a</sup>



Source: Bank of Greece

a. Sectors sorted by NPE Ratio

### Collateralization Ratio (2015) <sup>a</sup>



Source: Bank of Greece  
Sectors sorted by NPE

# How do NPLs hurt growth?

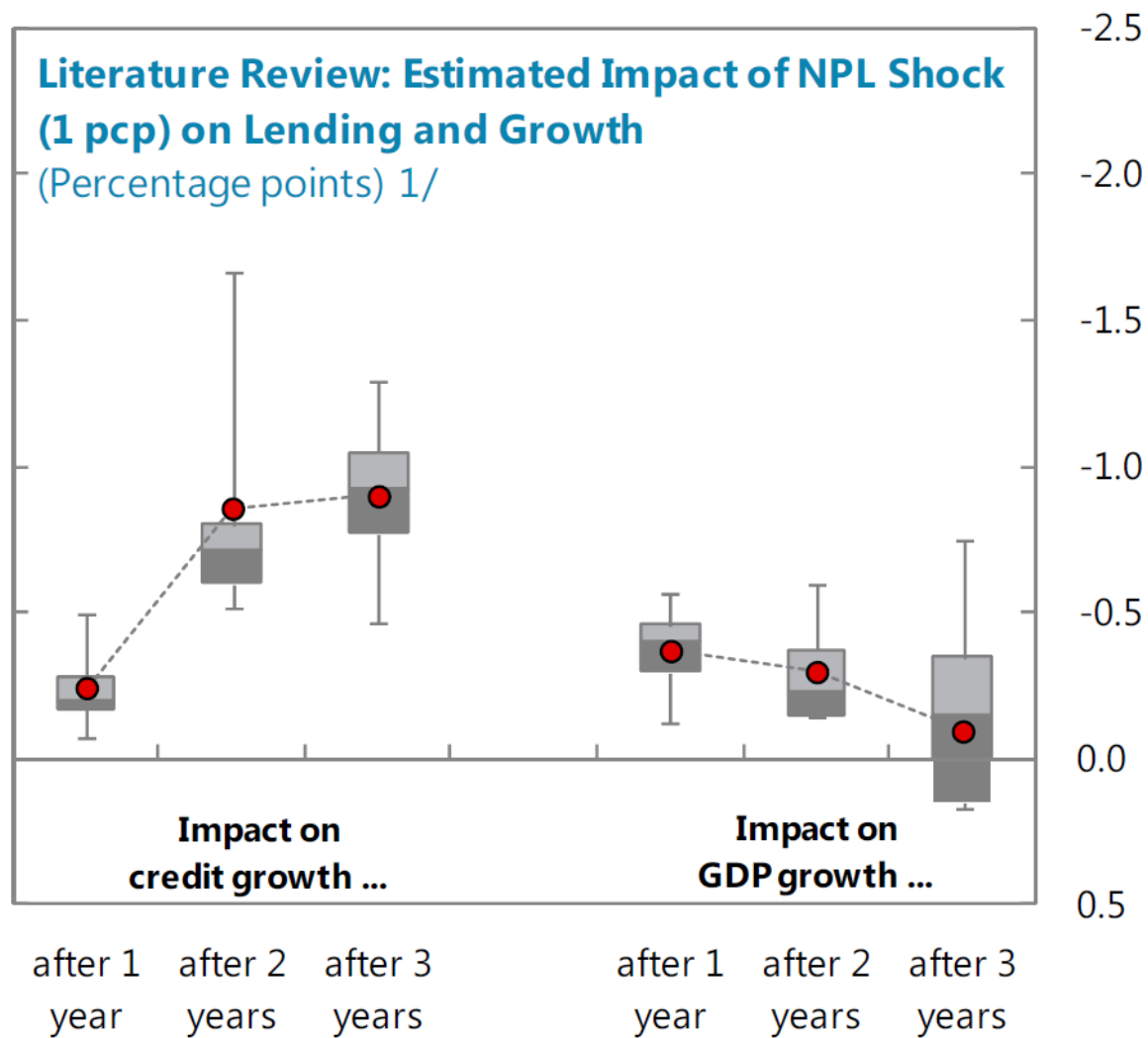
## **Supply of credit:**

- Banks more risk-averse
- Trapped liquidity in unproductive uses

## **Demand for credit:**

- Debt overhang: Businesses that are over-indebted but with good prospects for revenue growth do not have incentive to expand capital and employment.

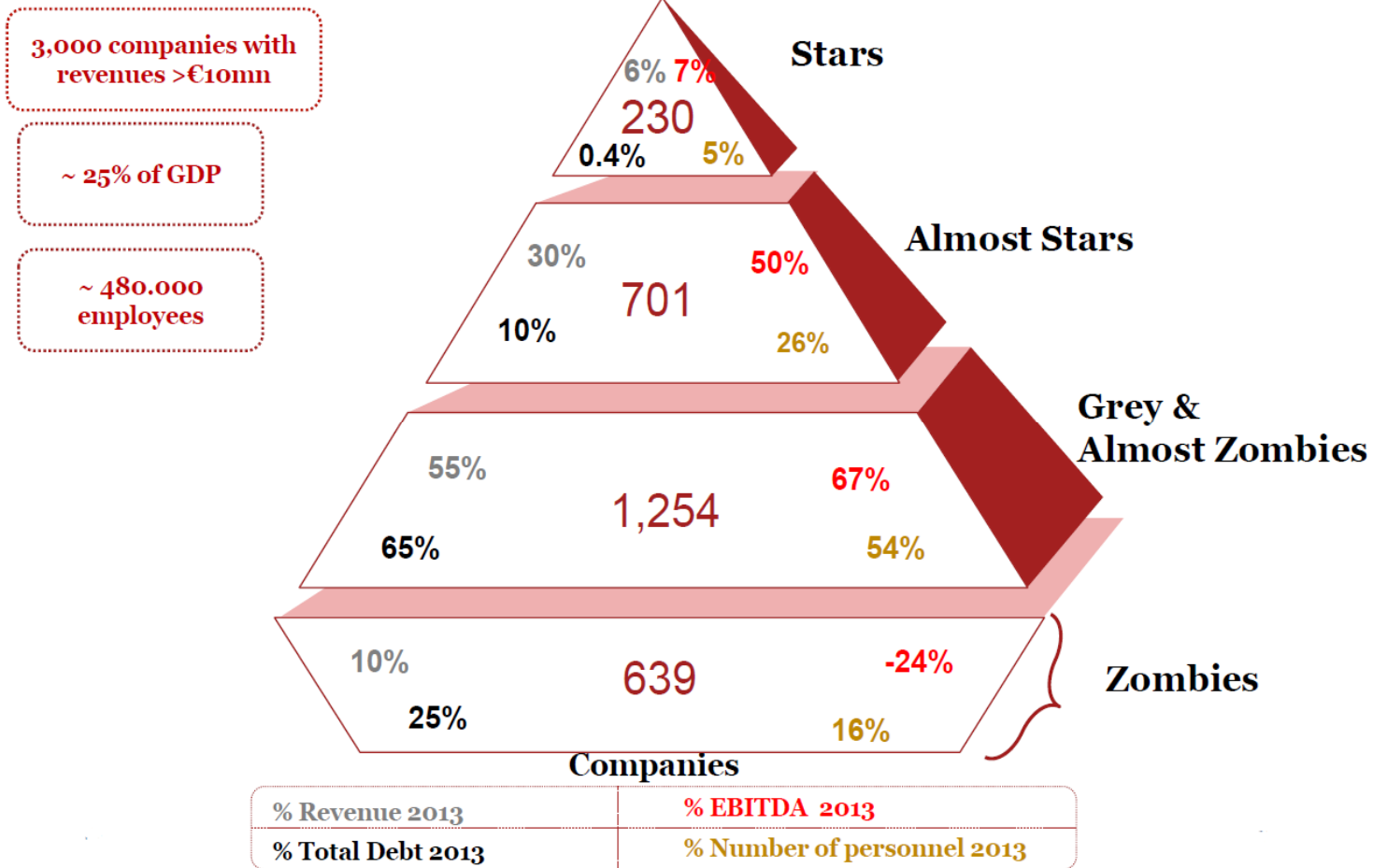




Source: "A Strategy for Resolving Europe's Problem Loans", Technical Background Notes, IMF, September 2015

**PWC “Stars and Zombies” study  
2015**

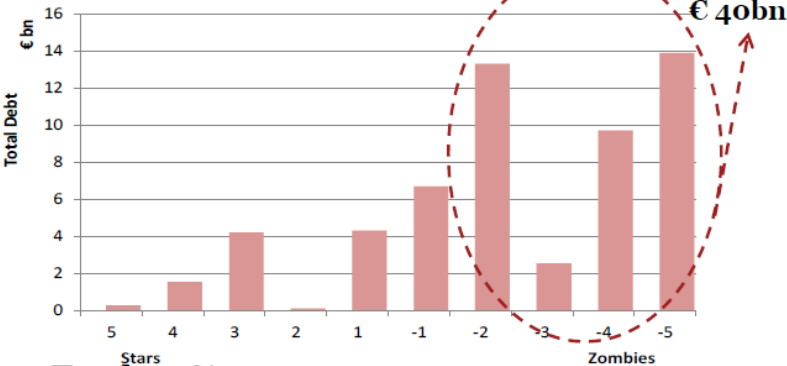
## The value pyramid of the Greek corporate economy



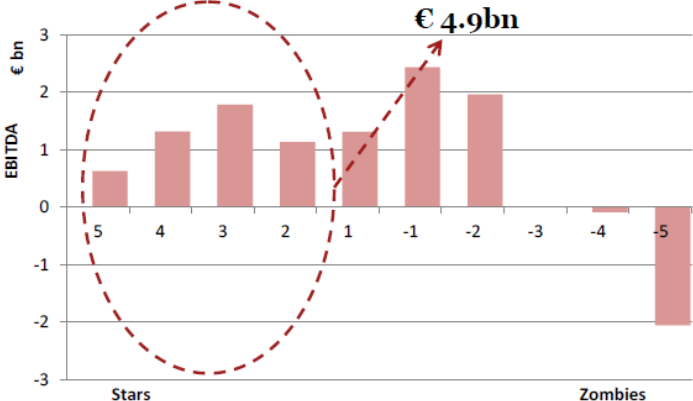
Source: "Stars and Zombies - Greek corporates coming out of the crisis", PWC Executive Summary, September 2015

# Corporate debt is concentrated in Zombies; profit and growth in Stars

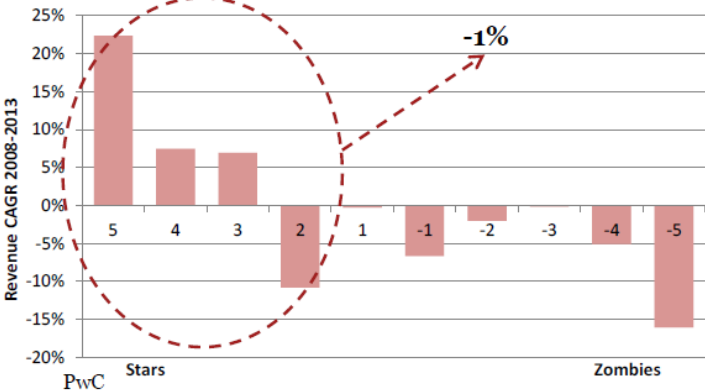
Total: € 57bn



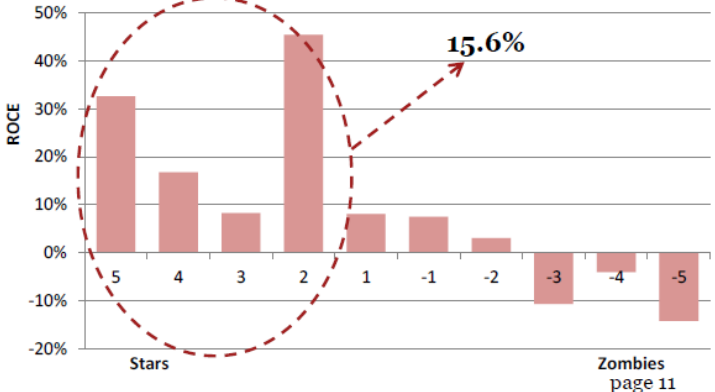
Total: € 8bn



Total: -3%



Total: 2%

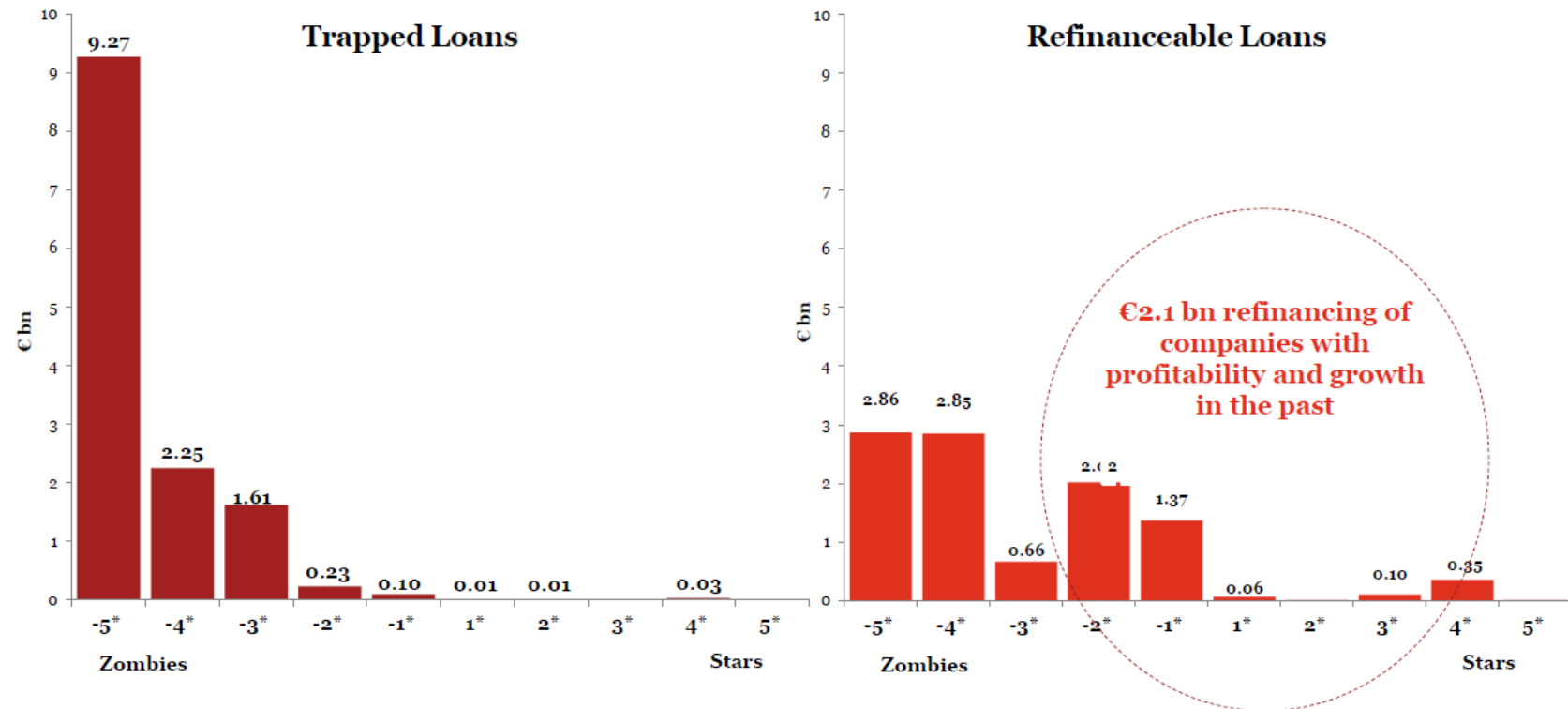


Source: "Stars and Zombies - Greek corporates coming out of the crisis", PwC Executive Summary, September 2015

## For the refinancing of the corporate economy, over a reasonable time horizon, banks must

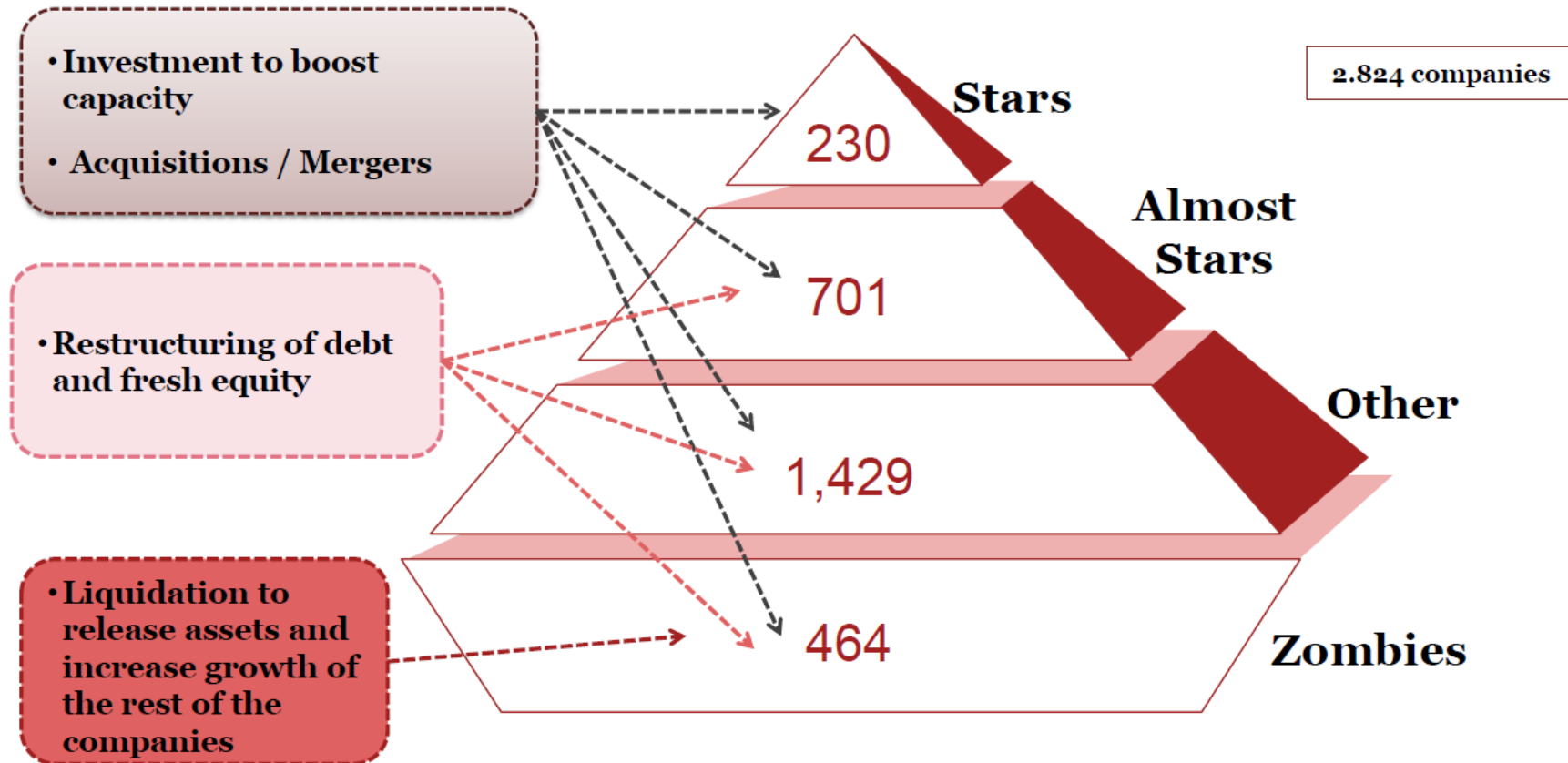
*...write off or heavily restructure about €13.5 bn (24% of loans) to release assets, mostly by Zombies*

*... restructure/refinance about €10.3 bn (18% of loans) to restore the balance with operational profitability*



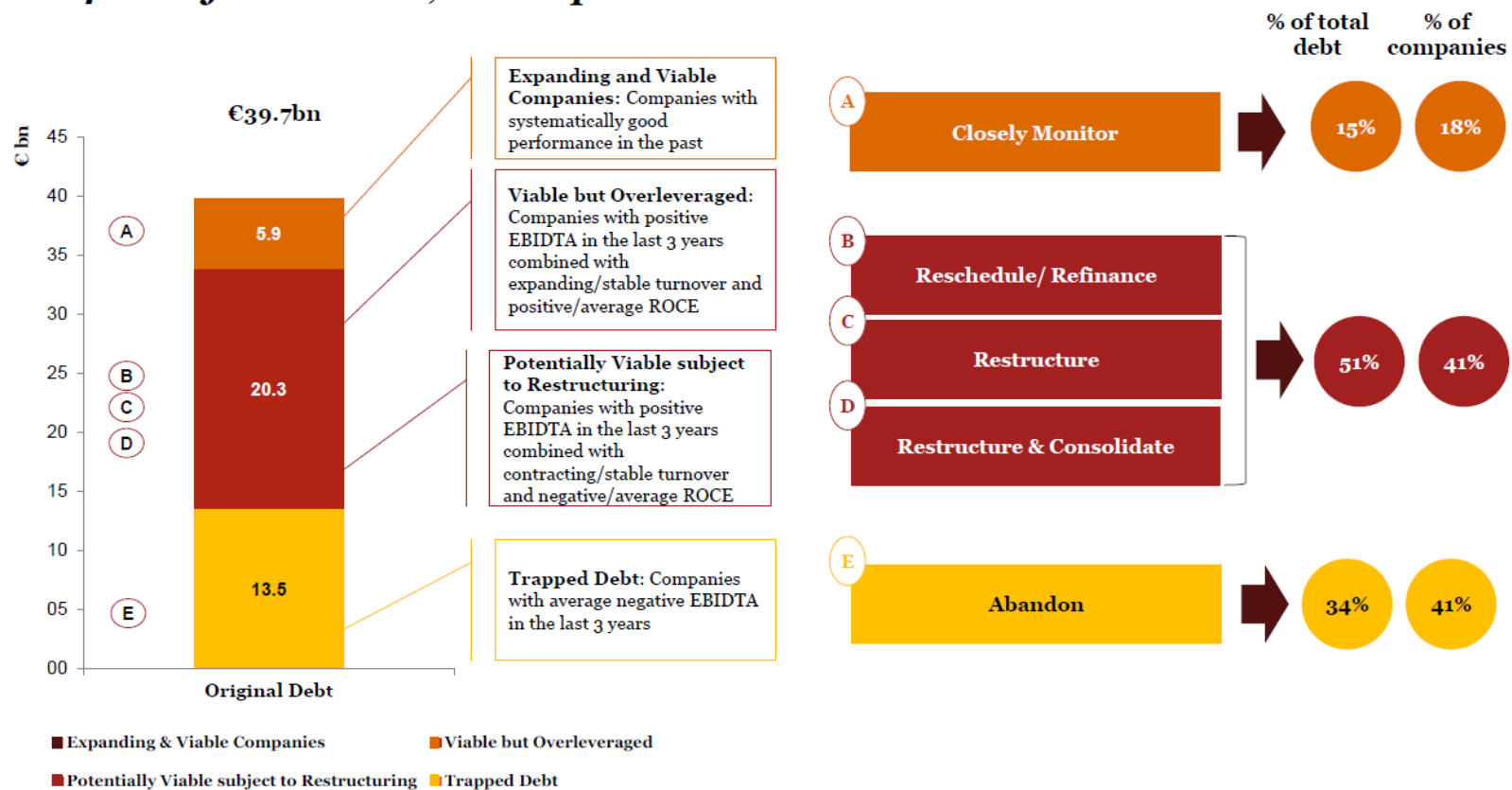
Source: “Stars and Zombies - Greek corporates coming out of the crisis”, PWC Executive Summary, September 2015

## The dynamics of future growth



Source: "Stars and Zombies - Greek corporates coming out of the crisis", PWC Executive Summary, September 2015

## Applying consistent NPL management strategies will affect about € 40bn of debt and 1,100 corporates



Source: "Stars and Zombies - Greek corporates coming out of the crisis", PWC Executive Summary, September 2015

# Institutional Requirements for NPL Resolution

- Active and efficient servicing
- Insolvency Procedures: Determining viability of borrowers
- Efficiency of judicial systems / Faster foreclosure of collateral
- Market for loans / Attracting investors
- Appropriate tax incentives to banks for quick resolution (DTC)



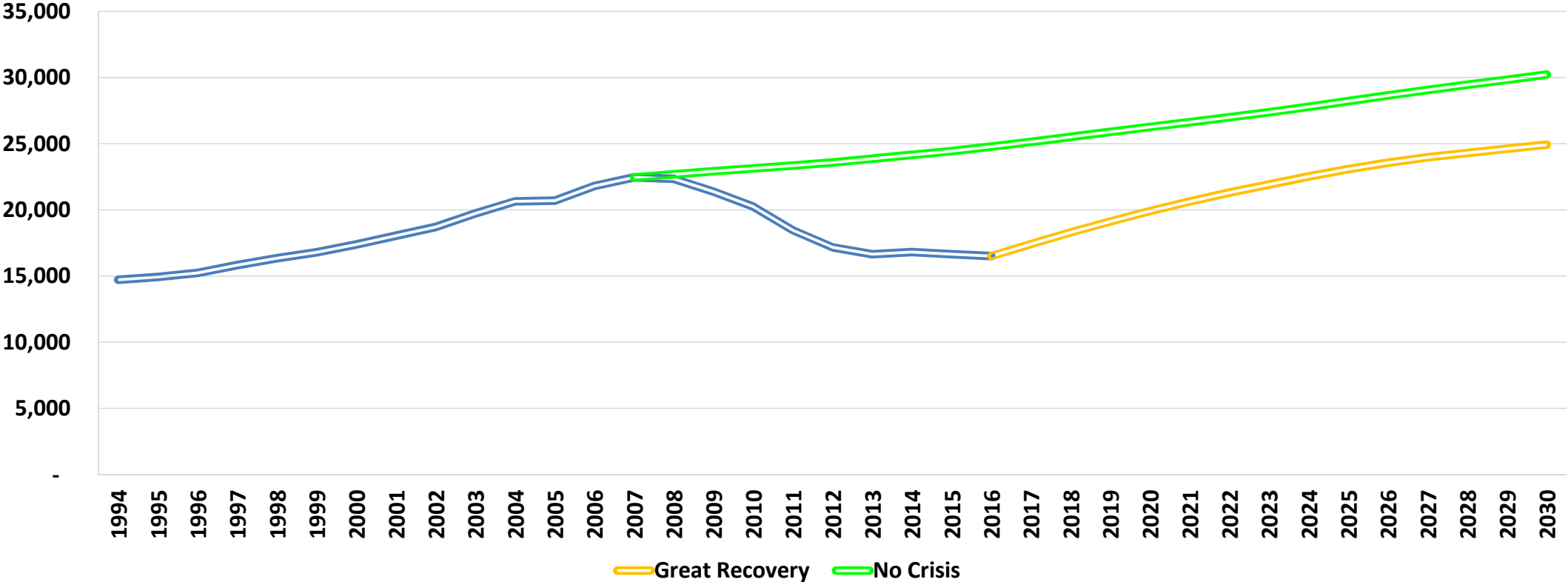
Financial restructuring will need to be accompanied by new management practices

# Back to the future

- Macroeconomic stabilization
- Structural reform: product and labor markets, institutions
- Business Debt restructuring and new management practices
- Restart of lending by banks – Focus on productive businesses

NPL management

# GDP per Capita Projection



Source: Own calculations

ALP growth assumed at 1.43% (its 1974 to 2007 average). Population and Working Age Population projections are taken from Eurostat. Great Recovery: European Commission (Aut. 2015) forecasts GDP Growth Rate at -1.4% and -1.3% for 2015 and 2016; Unemployment Rate= 25.7% and 25.8% respectively. We assume reduction of the Unemployment Rate to 8% from 2016 level by 2027. No Crisis: Employment Rate is assumed constant at 2007 level.