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## Consolidated accounts of non-financial groups: facing the use of ERICA database for economic research; decomposition of ratios technique for cross-country comparison<sup>1</sup>

Saskia Vennix, National Bank of Belgium

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<sup>1</sup> This presentation was prepared for the meeting. The views expressed are those of the author and do not necessarily reflect the views of the BIS, the IFC or the central banks and other institutions represented at the meeting.



# **Consolidated accounts of non-financial groups: facing the use of ERICA database for economic research; decomposition of ratios technique for cross-country comparison**

**European Committee of Central Balance Sheet Data Offices (ECCBSO)**

Özdere-Izmir, 26<sup>th</sup> September 2016

**Saskia Vennix**

Vice-chair of the ERICA WG of the ECCBSO



# Content

- ERICA WG and ERICA database
- Annual ERICA publication
- Decomposition of ratios





# ERICA WG

- **Targets of ERICA WG:**
  - Monitor IFRS new projects
  - Update IFRS standard formats (extended / reduced)
  - Creation of ERICA database (European Records of IFRS Consolidated Accounts):
    - To know better the uses and limits of consolidated accounts
    - To analyze the results of non-financial listed groups
  - XBRL and CBSO
  - Integrated reporting
  
- **Participants of ERICA WG: Austria, Belgium, France, Germany, Greece, Italy, Portugal, Spain, Turkey (observer), ECB (observer) and IASB (observer)**



# ERICA database: why we created it

- In 2002, knowing the IFRS introduction project in Europe, we created a WG to:
  - Understand better IFRS: “translating” the bound volume into an extended format
  - Check possible impacts of IFRS on CBSOs
  
- We decided to create a database for:
  - Testing process of reduced standard format
  - Assess real use of IFRS by European groups
  - Financial analysis, amongst others:
    - Fair value / IFRS alternatives used
    - Financial structure / Profitability
    - Sectoral diversification / Restated data
    - Dividends / Cash flows





# ERICA database: contents

IFRS data of non-financial listed groups (2005-2014)

Country	2009	2010	2011	2012	2013	2014
Austria	53	24	46	45	45	42
Belgium	30	30	80	76	77	77
France	471	454	447	347	348	343
Germany	231	288	315	314	305	219
Greece	30	60	60	60	49	50
Italy	189	193	190	160	163	179
Portugal	43	41	40	39	39	38
Spain	30	30	113	113	111	103





# ERICA database: contents

- General characteristics
- Options IFRS
- Employment
- Statement of financial position (78 items)
- Statement of profit or loss by function (39 items)
- Statement of profit or loss by nature (35 items)
- Other comprehensive income (23 items)
- Cash-flow statement (25 items)
- Some additional information on parent entity, breakdown of revenue by sector, market capitalization, fair value gains/losses, reasons of variation of revenue, enz. (ERICA+)



# ERICA DB: good coverage of listed groups

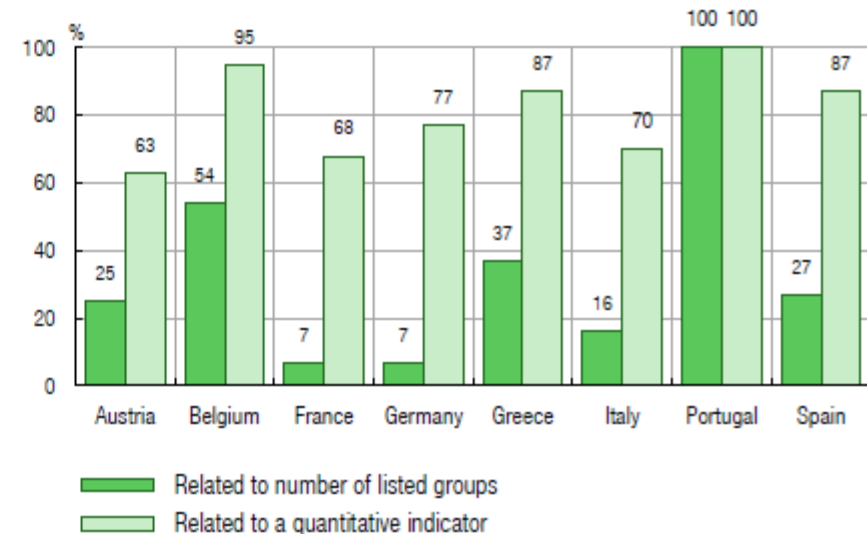
## COVERAGE OF DATABASE

CHART BOX 1.2

ERICA (RELATED TO TOTAL LISTED GROUPS)



ERICA+ (RELATED TO TOTAL LISTED GROUPS)







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# ERICA analysis publicly diffused (Dec 2015)

## TITLE:

“European non-financial listed groups: analysis of 2014 data”

## CONTENT

- Profitability
- Financial structure
- Fair value impact
- Box 1 - ERICA database: main characteristics & coverage
- Statistical annexes

Caution: trends with consolidated data, no distinction between

- External growth (new subsidiaries added in the scope)
- Organic growth (internal increase)

For this reason, we try to work with ratios





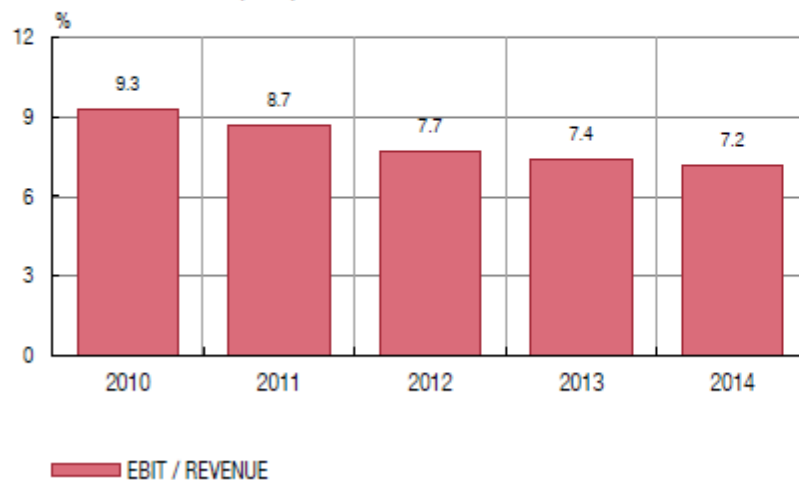
# ERICA analysis: Profitability

- After three years of poor performance, 2014 shows a picture of slight recovery in results and profitability

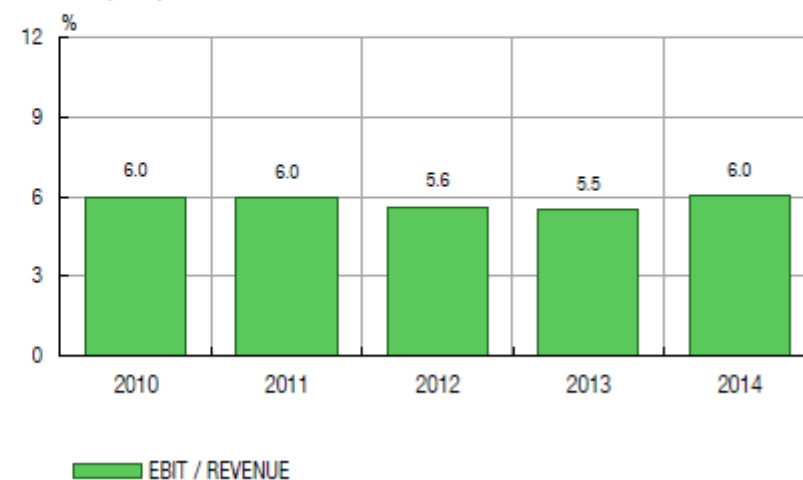
EBIT / REVENUE

CHART 2.1.3

WEIGHTED AVERAGE (IN %)



MEDIAN (IN %)

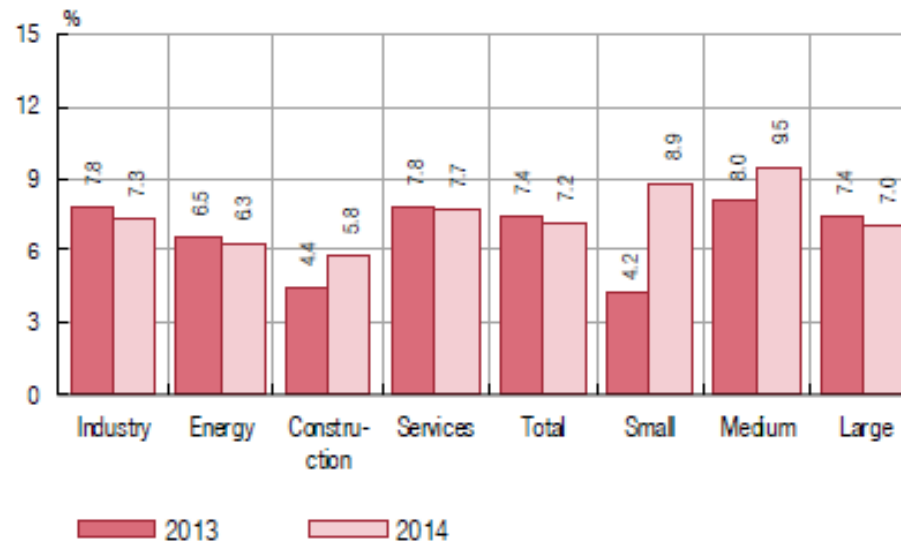


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EBIT / REVENUE

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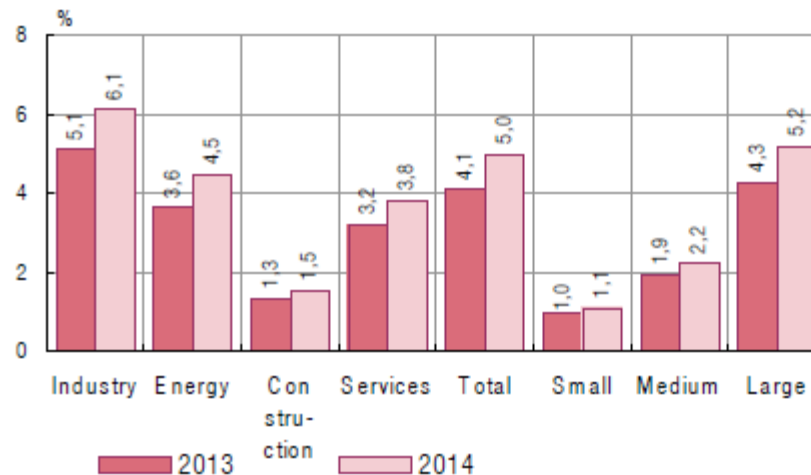


# ERICA analysis: Financial structure

- Equity ratio remains largely stable in 2014 due to financial debt expansion and increase in provisions for employee benefits

## PROVISIONS FOR EMPLOYEE BENEFIT / TOTAL ASSETS

WEIGHTED AVERAGE (IN %)



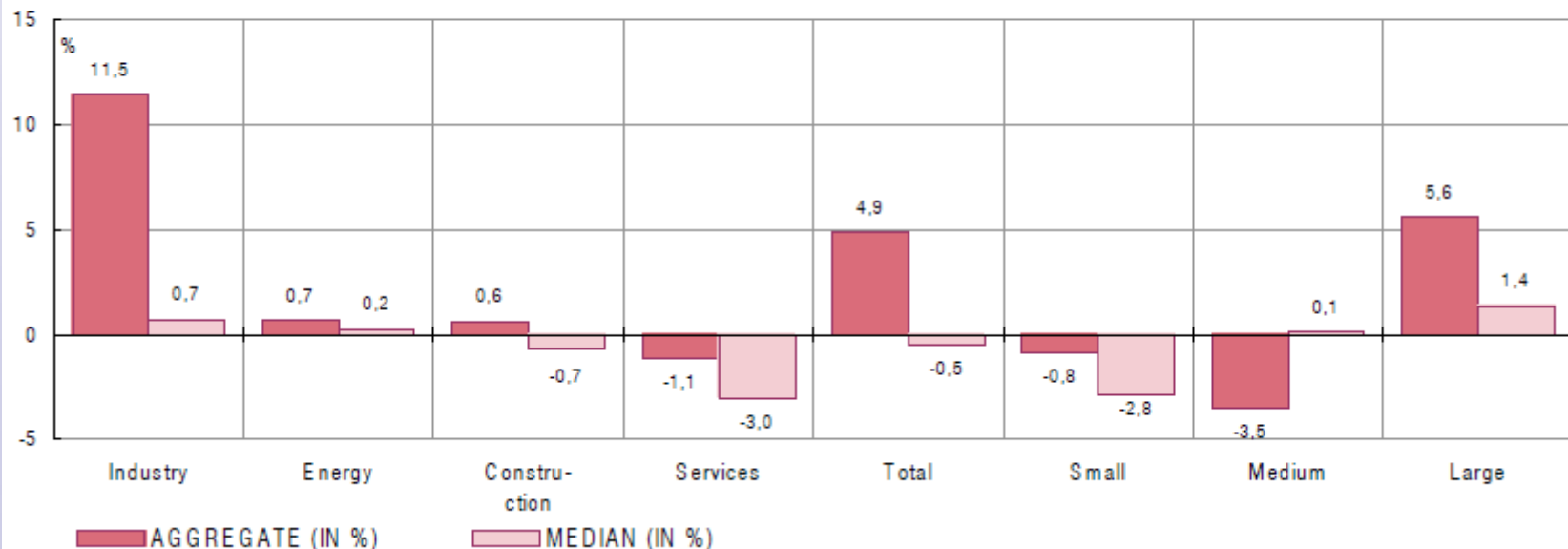
# ERICA analysis: Financial structure

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CHANGE IN FINANCIAL DEBT

GRAPH 3.3.1

Sliding Sample 2013/2014



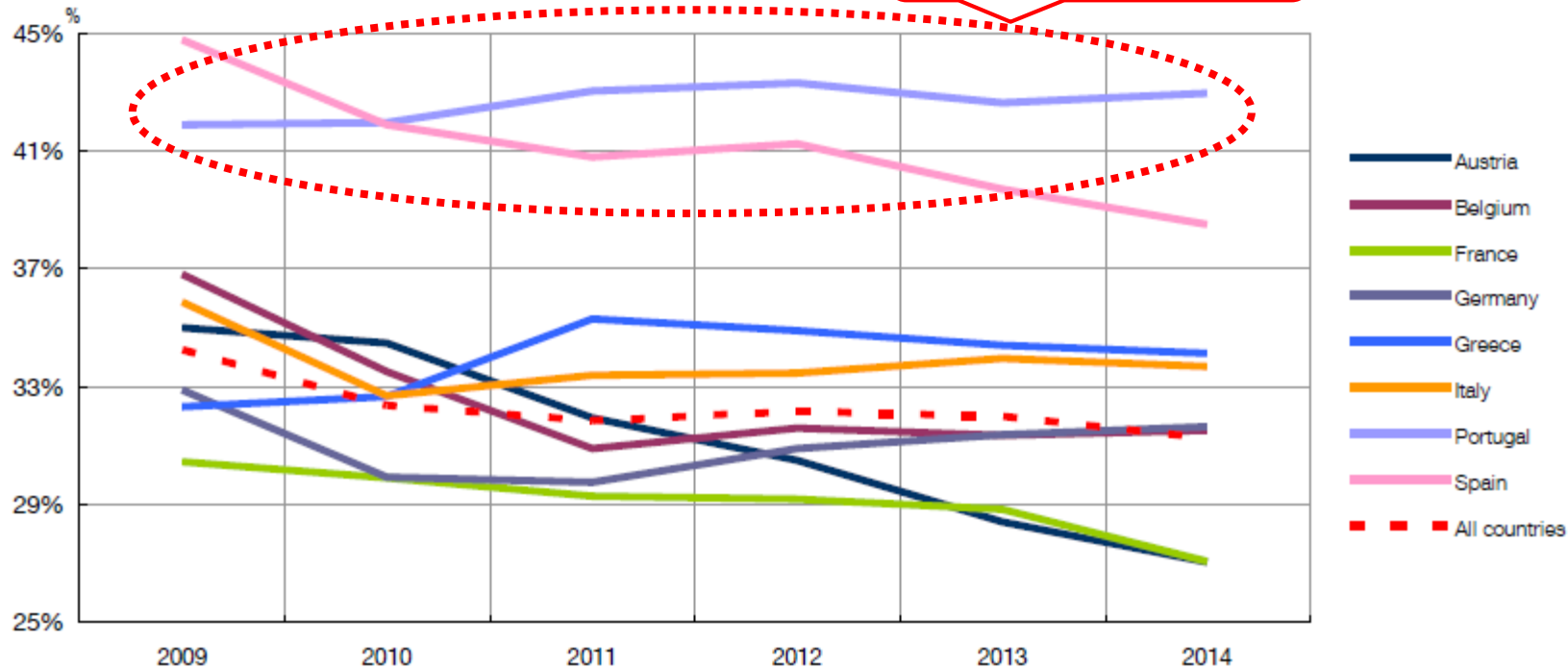
# ERICA analysis: Financial debt ratio

- Downward trend in financial debt ratio during 2009-2014

WEIGHTED AVERAGE DEBT RATIO PER COUNTRY

Due to population or country-specific?

CHART 3.3.3



☞ Listed groups are not necessarily representative for national economies ☞





# Content

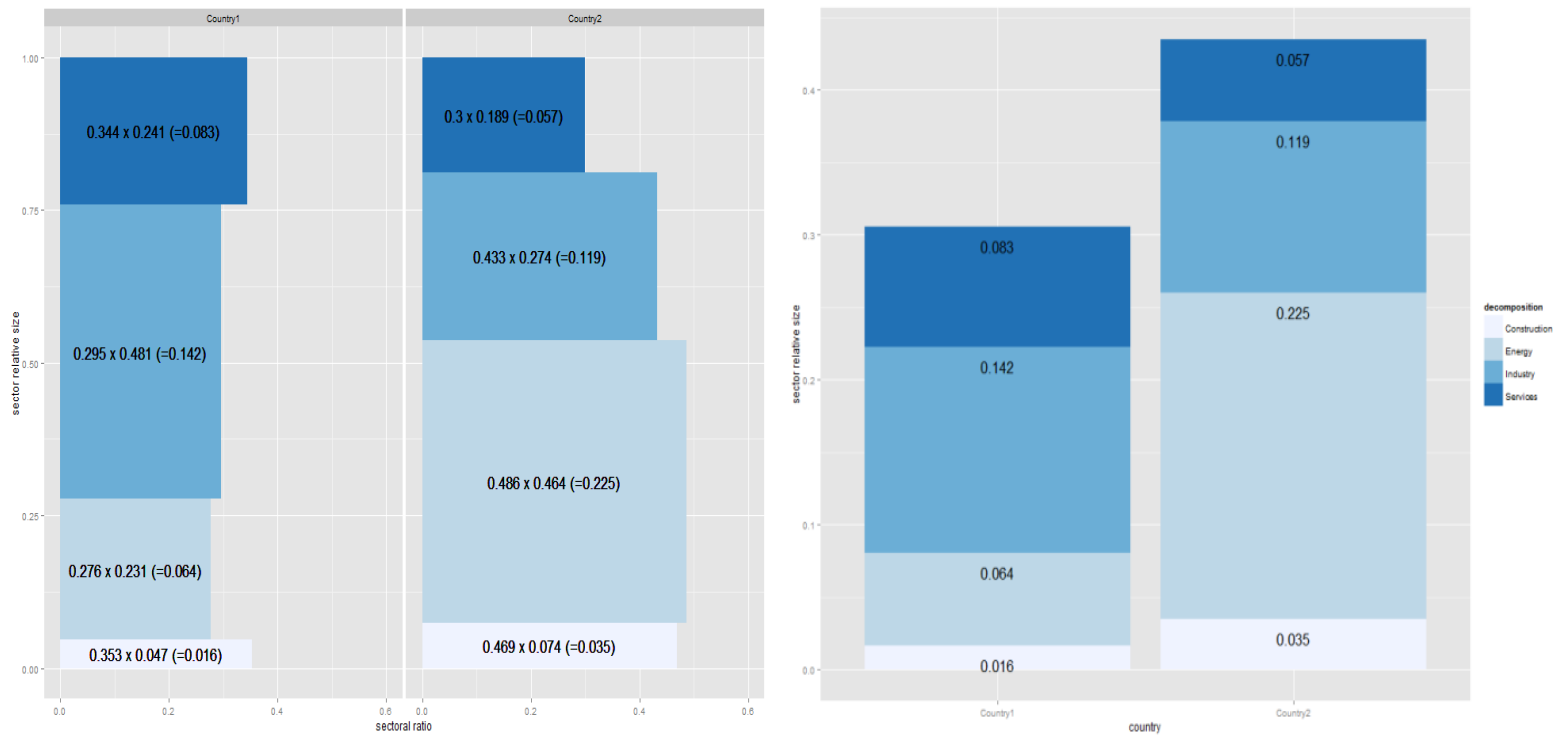
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# Decomposition of ratios: methodology

## Example of sectoral decomposition of a ratio





# Decomposition of ratios: methodology

## Marshall-Edgeworth cross-country

$$r_i - r_0 = \sum_{j=1}^n \left[ \underbrace{\frac{r_{ij} + r_{0j}}{2} (\sigma_{ij/i} - \sigma_{0j/0})}_{\text{structural sector } j} + \underbrace{\frac{\sigma_{ij/i} + \sigma_{0j/0}}{2} (r_{ij} - r_{0j})}_{\text{intrinsic sector } j} \right]$$





# Decomposition of ratios: methodology

## Marshall-Edgeworth over time

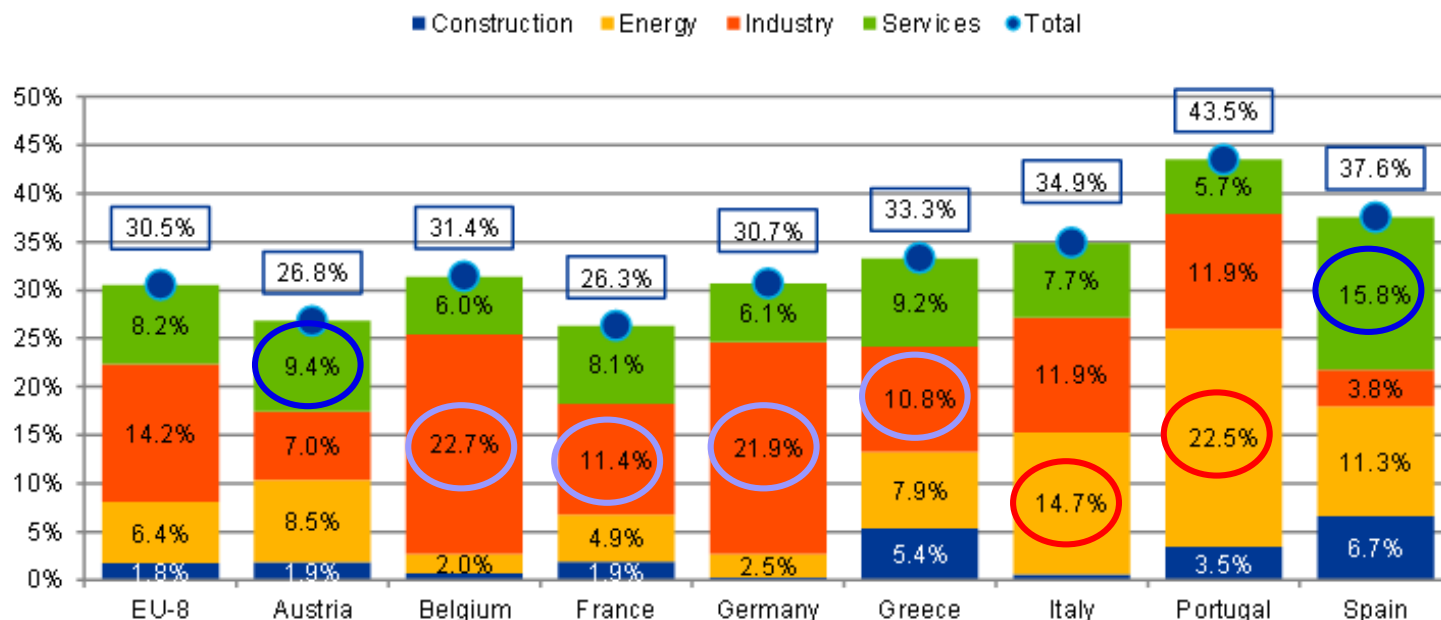
$$r_i(t_1) - r_i(t_0) = \sum_{j=1}^n \underbrace{\left[ \frac{r_{ij}(t_1) + r_{ij}(t_0)}{2} \left( \sigma_{ij/i}(t_1) - \sigma_{ij/i}(t_0) \right) \right]}_{\text{structural for sector } j}$$





# Cross-country analysis: debt ratio

## Absolute contribution of the different sectors to the globalised debt ratios in 2014



☞ Listed groups are not necessarily representative for national economies ☞

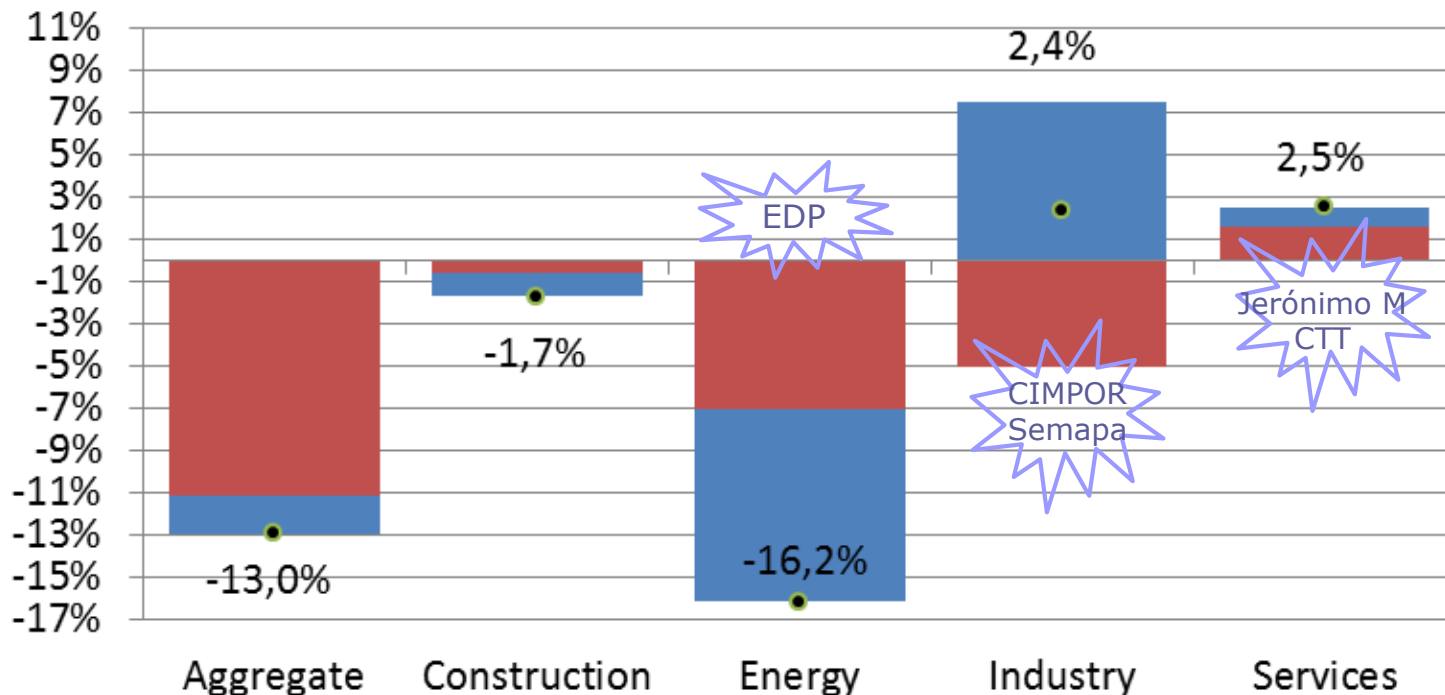




# Cross-country analysis: debt ratio

## Portugal

■ intrinsic ■ structural ● total



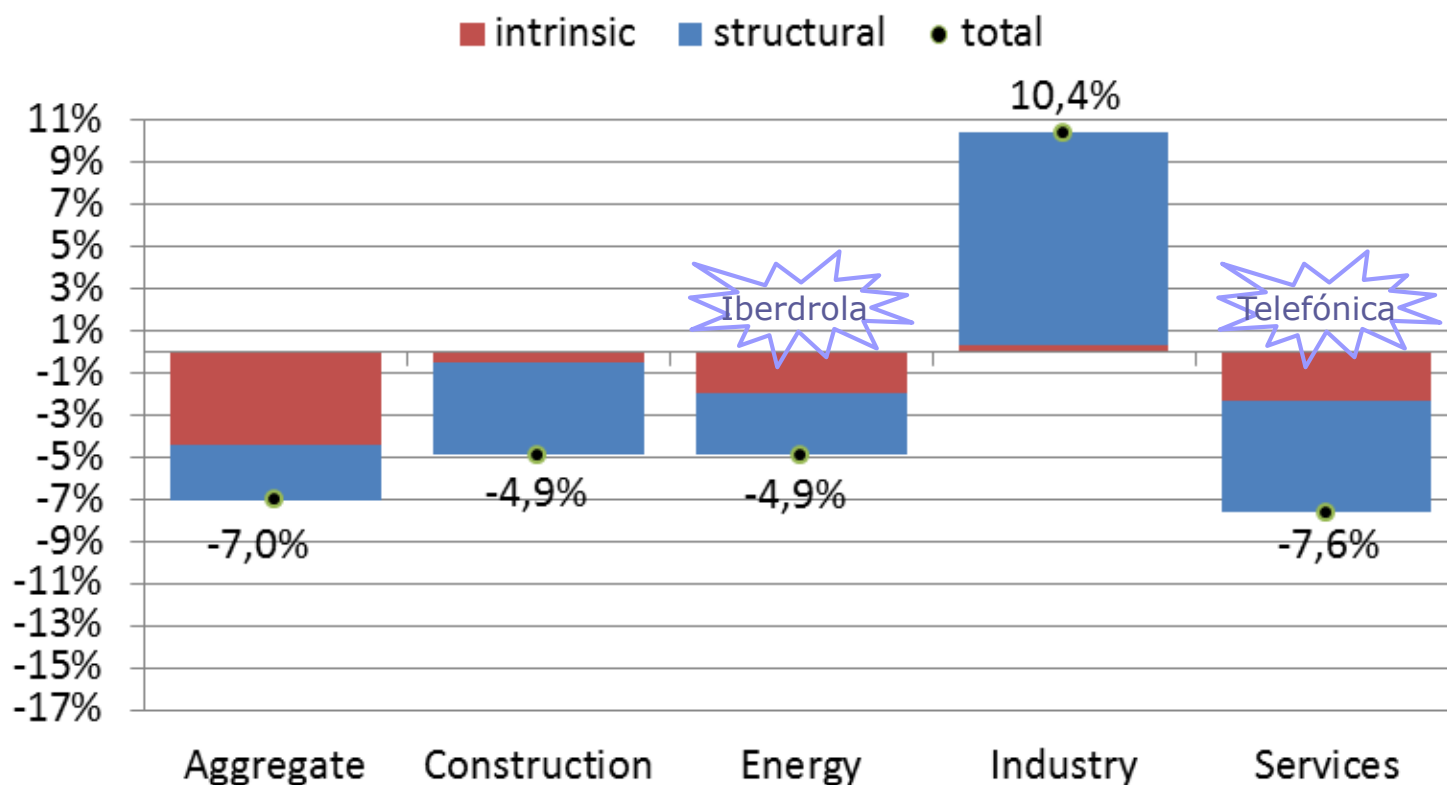
☞ Listed groups are not necessarily representative for national economies ☞





# Cross-country analysis: debt ratio

## Spain



☞ Listed groups are not necessarily representative for national economies ☞



# Decomposition of ratios: conclusions

1. Importance of decomposition techniques to distinguish, within the evolution of a country compared to others, the intrinsic impact (ratio behaviour) from the structural component (population sectoral weight).
2. Having this information, analysis should focus on intrinsic effects.
3. Offsetting effects among sectors of activity: the technique has to be applied by sector of activity and by country (not only the total).
4. Impact has to be assessed ratio by ratio: structural effects vary according to the ratio (relative weight of a sector of activity for a precise denominator)



# ERICA database, a tool of the ECCBSO

- Know more in:

<http://www.eccbso.org/>

## Thank you!

