Session 1. Central Balance Sheet Data

New developments in Central Balance Sheet Data Office at Banco de España

Financial Information Forum (FIF). CEMLA/Banco Central de Chile
FIF III meeting. Santiago de Chile, 4-5 October 2017

Manuel Ortega
Head of Central Balance Sheet Data Office Division. Banco de España
GENERAL CONTENT

1. Banco de España´s CBSO (Central Balance Sheet Data Office): databases, products and users

2. Recent remarkable developments:
   1. Increase of microdata use at Banco de España
   2. Use of CBSO in SNA 2008 implementation
   3. SMEs risk assessment analysis using CBSO data
   4. EBITDA: an harmonization effort using CBSO data
   5. Adjustments to individual data due to intragroup operations
   6. New tools to detect outliers in quarterly database
1. Databases, products and users

"Central de Balances", databases, number of companies and coverage. Year 2017/2015

<table>
<thead>
<tr>
<th>Individual accounts</th>
<th>Consolidated accounts (groups)</th>
<th>Listed groups</th>
<th>Unlisted groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual databases</strong></td>
<td><strong>Quarterly database</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated Database (CBI)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct survey (CBA)</td>
<td>Administrative source (Mercantile Registers) (CBB)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>529,546</td>
<td>8,991</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45,2</td>
<td>29,1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Direct survey (CBQ)</strong></td>
<td><strong>Stock exchange Commission (CNMV)</strong></td>
<td><strong>Administrative source (Mercantile Registers)</strong></td>
<td></td>
</tr>
<tr>
<td>520,555</td>
<td>21,4</td>
<td></td>
<td>16,5</td>
</tr>
<tr>
<td>16,1</td>
<td>865</td>
<td></td>
<td>1,128</td>
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<tr>
<td><strong>Q1 - Q1 2017</strong></td>
<td>2016</td>
<td></td>
<td>2015</td>
</tr>
<tr>
<td>13,0</td>
<td>114</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NUMBER OF COMPANIES / GROUPS (left scale)

COVERAGE: Gross value added at basic prices of the database with respect to non-financial companies total (right scale). In the case of consolidated accounts, the numerator also includes the GVA generated by non-resident subsidiaries, what affects the reliability of this indicator.

- Direct survey (CBA)
- Administrative source (Mercantile Registers) (CBB)
- Direct survey (CBQ)
- Stock exchange Commission (CNMV)
- Administrative source (Mercantile Registers)
1. Databases, products and users

Aggregated data
- Public web site, including:
  - Annual CBSO report
  - Sectoral aggregates
- Grossing up (total population) MENF
- Public enterprises aggregate and Central Government portfolio
- Quarterly report
- Statistical series (statistical bulletin)
- Summary indicators of NFCs
- Contribution to BACH database
- Aggregated sectoral studies, on demand
- Financial Soundness Indicators (FSI)

Statistical distributions
- Contribution to BACH (RSE) database
- Ratios of Spanish sectors of activity

Individual data:
- Corporations reports
- “CB on line”
- Groups database (map of subsidiaries relations)

Users
- General public (GP)
  - GP
  - GP, but especially Universities
- NSI; Financial Accounts of Spanish Economy (FASE)
- Internal use and FASE
- Governing Council (Banco de España). Weeks later, GP and reporting companies
- GP
- Governing Council (Banco de España)
- European Committee of Central Balance Sheet Data Offices
- Banking Supervision and Regulation Departments; other departments of Directorate General Economics, Statistics and Research
- IMF and GP (Statistical bulletin)
- GP / Credit institutions (risk assessment)
- GP
- Reporting companies. Banking Regulation and Supervision Departments; Financial Risk Department (risk assessment in collateral list); other divisions of Directorate General Economics, Statistics and Research (Balance of Payments)
- Internal use at Banco de España
1. Databases, products and users

- **Corporation demography**
- **OCDE ScoreBoard on SMEs:**
  - Bankruptcies, total and SMEs
  - Payment delays, B2B
- **FSI of the IMF:**
  - Total debt to equity
  - Return on equity
  - Earnings to interest and principal expenses
- **FSAP of the IMF:** “analysis of vulnerabilities of private sector balance sheets and risks to the financial sector” with Spanish microdata (info by size and sector of activity)
- **Key performance indicators** in several statistical publications (Economic Indicators / Indicators for the Council / Statistical Bulletin):
  - Return of equity / Return on investment / Debt ratio / Financial cost / EBITDA
  - Quarterly performance of large companies
- **ESA 2010 (SNA 2008) needs:**
  - Holdings (full set of accounts: current, capital and financial accounts, and balance)
  - Stock options
  - Pension fund schemes
1. **Banco de España´s CBSO (Central Balance Sheet Data Office): databases, products and users**

2. **Recent remarkable developments:**
   1. Increase use of microdata at Banco de España
   2. Use of CBSO in SNA 2008 implementation
   3. SMEs risk assessment analysis using CBSO data
   4. EBITDA: an harmonization effort using CBSO data
   5. Adjustments to individual data due to intragroup operations
   6. New tools to detect outliers in quarterly database
“Internal funding has been key during the crisis and the recovery, buffering debt contraction”

“The finance of corporate investment in Spain along the current recovery phase” Banco de España. Source INE (NA)/BdE (FASE)
2.1. Recent remarkable developments: increase use of microdata (one example)

“Aggregate deleveraging has been compatible with a significant share of investing firms raising their indebtedness”

“The finance of corporate investment in Spain along the current recovery phase” Banco de España. Source CBSO

ASSETS AND LIABILITIES OF NFCs WITH POSITIVE OR ZERO NET INVESTMENT. FLOWS

ASSETS AND LIABILITIES OF NFCs WITH NEGATIVE NET INVESTMENT. FLOWS

Microdata availability eases correct analysis of Financial Accounts
1. **Banco de España´s CBSO (Central Balance Sheet Data Office): databases, products and users**

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2.2. Use of CBSO in SNA 2008 implementation

1. Data available in CBSO has been used as direct source and source of contrast in FASE. Phases of the project
   1. Building intermediate system (from business accounting to FASE)
   2. Grossing up the sample to the total population
   3. Including adjustments to obtain market value of balance items
   4. Final result: full set of accounts (Current / Accumulation / Balances)

2. Recently CBSO has been used to cover some SNA 2008 new needs:
   • Stock options
   • Pension funds schemes
   • Holding companies data

To know more, go to the end of the power point (extra slides)
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2.3. SMEs risk assessment analysis using CBSO data

- **Law 5/2015 promoting SME financing**
  - *How to promote financing to SMEs: easing access, increasing the alternative methods of financing*
  - *Easing access: reducing the information asymmetry gap*
  - *To that end, the law obliges financial institutions to provide a financial report on financial situation and payment track record to SMEs that will see their credit facilities reduced. This is the “SME financial information” report ("Información Financiera-PYME")*

- The **Banco de España** was obliged by this law to:
  - *Standardise this document*
  - *Create a standardised methodology for the assessment of the credit quality of an SME (also including sole proprietorships)*
• In June 2015 Banco de España published Circular 6/2016: harmonized content of the report and of the risk assessment methodology

• **Content of the “SME financial information” report:** mainly, records with the credit history of the company (Central Credit Register statements; Information provided to private data compilators about solvency history; movements over the last year in financial contracts; credit rating)

• The report has also to provide the relative position of the Company within its sector of activity

• **Harmonised risk assessment method.** Taking into account these variables:
  • Financial situation of the debtor
  • Qualitative variables (years of relationship, sector of activity, shareholder experience...)
  • Behavioural variables (default, payment delays, overdrafts...)
2.3. SMEs risk assessment analysis using CBSO data

Company data:

- **Annual accounts officially deposited in Mercantile Registers (XBRL)**
- **15 variables from Balance Sheet, 11 from profit and loss account**
2.3. SMEs risk assessment analysis using CBSO data

- 85% of companies submit their annual financial statements with XBRL

Mercantile Registers receive every year thousands of annual accounts (XBRL instance documents)
2.3. SMEs risk assessment analysis using CBSO data

Sector of activity and size of the Company: data available in RSE database

Only using 9 ratios
2.3. SMEs risk assessment analysis using CBSO data

RSE (statistical distributions) database, created by Banco de España and Mercantile Registers

This database provides information for the comparative analysis of individual corporations with aggregates of non-financial corporations, using 29 ratios, with details by size (turnover), economic activity and country.
2.3. SMEs risk assessment analysis using CBSO data

Excel/XBRL tool, free of charge
(www.bde.es)
Using 26 accounting concepts and 9 sectorial ratios, we see in a nutshell the financial situation of a company within its sector of activity.
2.3. SMEs risk assessment analysis using CBSO data / Need of additional quality control processes

New fears: statistics directly applied to risk assessment decision / Need for stability

1) Exclusion of anomalous microdata (“outliers”)  
2) Confidentiality criteria (confidentiality)

3) Revision of Banque de France Requirements (Banque de France Requirements)

4) Additional controls to censore nodes with anomalous values (Box plot controls)

5) Representativeness of the provisional sample (december of t+1) compared to the definitive one (june of t+2) (homogeneity of provisional sample)

6) Concentration of the observations near the quartiles (density of the sample)

7) The coverage of the sample: Saving nodes with a high coverage despite of its data (Coverage)
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2.4 EBITDA: an harmonization effort using CBSO data

There was once a life where human beings tried to show their deepest and inner value, providing all kinds of details, to show why should somebody trust on them (i.e. love letters genre)

Liquid modernity (Baumans´ theories): everything fast, short, “in a nutshell”
This applies also to financial reports, annual accounts and studies of a company: “less is more”
2.4 EBITDA: an harmonization effort using CBSO data / KPI vs detailed data

• **Financial statements: the benefit of the details**
  - *Annual reports (including Annex and Management commentary): rich, flexible and detailed information useful for all kind of advanced analysts*
  - *The Company can describe and tell “his history and story” to show users and investors “how they are” to convince to fund the Company*

• **KPI / APM: the benefit of summarized figures. Useful for all kind of users** (specialized investors and other, like customers, employees). But only if:
  - *Homogeneous definition (among companies and countries)*
  - *Therefore, comparable (with other companies of the sector of activity)*

• Does it make any sense to let companies to “fine tune” an APM definition?
2.4 EBITDA: an harmonization effort using CBSO data

Excel/XBRL tool to compare a company with its peers (see in www.aeca.es)
## 2.4 EBITDA: an harmonization effort using CBSO data

**EBITDA:** calculation with company data

### AECA DEFINITION OF EBITDA:

**Indirect approach:** Adjustments to Total Losses and profits

<table>
<thead>
<tr>
<th>Code</th>
<th>Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>49500</td>
<td>Net profit or loss for the period</td>
</tr>
<tr>
<td></td>
<td><strong>2. Adjustments to profit/loss:</strong></td>
</tr>
<tr>
<td>42000</td>
<td>Profit/loss from discontinued operations</td>
</tr>
<tr>
<td>41900</td>
<td>Tax on profit</td>
</tr>
<tr>
<td>41400</td>
<td>Financial income</td>
</tr>
<tr>
<td>41500</td>
<td>Financial expenses</td>
</tr>
<tr>
<td>41600</td>
<td>Gain/loss in changes in fair value of financial instruments</td>
</tr>
<tr>
<td>41700</td>
<td>Exchange differences</td>
</tr>
<tr>
<td>41100</td>
<td>Impairment and gain/loss on intangible and tangible fixed assets</td>
</tr>
<tr>
<td>41800</td>
<td>Impairment and gain/loss on financial instruments</td>
</tr>
<tr>
<td>42100</td>
<td>Other financial income/expenses</td>
</tr>
<tr>
<td>40800</td>
<td>Depreciation and amortisation of intangible and tangible fixed assets</td>
</tr>
<tr>
<td>40900</td>
<td>Government grants of non-financial assets recognised as income during the year</td>
</tr>
<tr>
<td>41300</td>
<td>Other gains/losses</td>
</tr>
<tr>
<td>41200</td>
<td>Negative goodwill resulting from business combinations (¹)</td>
</tr>
</tbody>
</table>

### Other adjustments included by the firm (according to OE number 4/2016 AECA)

- Income (-) (other non-recurring income)
- Expenses (+) (other non-recurring expenses)

**Fine tuning:** non-recurring income or expenses, accordingly to Company opinion
2.4 EBITDA: an harmonization effort using CBSO data

SECTOR DATA: Available in the Excel template, coming from BACH DATABASE (3 ratios)

<table>
<thead>
<tr>
<th>Selection of comparative sector and size (BACH database 2014 - 2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information from BACH database updated in January 2017</td>
</tr>
<tr>
<td>Selection of year</td>
</tr>
<tr>
<td>2015</td>
</tr>
<tr>
<td>Clear questionnaire</td>
</tr>
<tr>
<td>Selection of sector</td>
</tr>
<tr>
<td>C10 - Manufacture of food products</td>
</tr>
<tr>
<td>Selection of size according to the amount of net turnover</td>
</tr>
<tr>
<td>All sizes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Name of Ratio</th>
<th>Number of firms</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
</tr>
</thead>
<tbody>
<tr>
<td>R33/BACH</td>
<td>EBITDA / Net turnover (2015)</td>
<td>3.883</td>
<td>1.69</td>
<td>4.88</td>
<td>9.76</td>
</tr>
<tr>
<td>R33/BACH</td>
<td>EBITDA / Net turnover (2014)</td>
<td>3.824</td>
<td>1.37</td>
<td>4.57</td>
<td>9.07</td>
</tr>
<tr>
<td>R22/BACH</td>
<td>EBITDA / Financial expenses (2015)</td>
<td>3.308</td>
<td>216.61</td>
<td>753.00</td>
<td>3.087,49</td>
</tr>
<tr>
<td>R22/BACH</td>
<td>EBITDA / Financial expenses (2014)</td>
<td>3.252</td>
<td>178.55</td>
<td>577.75</td>
<td>2.319,53</td>
</tr>
<tr>
<td>R21/BACH</td>
<td>Financial income / EBITDA (2015)</td>
<td>3.283</td>
<td>0.00</td>
<td>0.01</td>
<td>0.41</td>
</tr>
<tr>
<td>R21/BACH</td>
<td>Financial income / EBITDA (2014)</td>
<td>3.149</td>
<td>0.00</td>
<td>0.02</td>
<td>0.68</td>
</tr>
</tbody>
</table>
2.4 EBITDA: an harmonization effort using CBSO data

Using 14 accounting concepts available in the XBRL official obligatory file, in a nutshell, EBITDA of the company is calculated and compared.
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2.5. Recent developments: intragroup adjustments
Individual versus consolidated accounts

The importance of both data: Individual Accounts or Consolidated accounts?

**Individual accounts**
- Essential for sector of activity analysis
- Inconvenient: Duplicity of certain operations
- Solution in CBBE: Elimination adjustments for main groups and certain operations

**Consolidated accounts**
- Essential for some kind of analysis: risk analysis, financial positions (debt)
- Inconvenient:
  - *Perimeter changes*
  - *Non resident activity*
  - *Segmented information non homogeneous*
2.5. Recent developments: intragroup adjustments
Individual versus consolidated accounts

Map of possible uses of accounting data

- National accounts
- Monetary policy
- Bank supervision
- Economic analysis trends
- Economic analysis structures
- Risk assessment
- Research panel data
- Other statistics
- Financial stability
- Individual accounts: Aggregated
- Consolidated accounts: Same scope, Truncated

Source: ERICA WG of ECCBSO
1. **Since 1998 we keep record of intergroup relations:**
   
   30 Groups / 300 subsidiaries / 18.000 items of information
   
   Several targets:
   
   - correct analysis of aggregated figures (avoid double accounting)
   - improve quality (new checking to balance figures)
   - new information for analysts (financial links within group structure)
   
   Items collected:
   
   - Loans (credit/debit)
   - Interest (expenses/incomes)
   - Dividends (paid/received) / Superdividends
   - Negative revaluation of the portfolio / losses in the subsidiaries
   
   Indicators subject to consolidation (pseudo):
   
   - Net ordinary profit / Net result / Debt ratio (Debt/GAV)

2. **In 2016 we improved the quality of the system:**
   
   Individual counterpart, controlled in the uploading process
   
   More details about portfolio value for future developments (ROE adjusted)
2.5. Recent developments: intragroup adjustments

- New system allowing to capture details of subsidiary/partner at once

<table>
<thead>
<tr>
<th>Corporation 1</th>
<th>Corporation 2</th>
<th>Date of the operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporation 1</td>
<td>Corporation 2</td>
<td>Date of the operation</td>
</tr>
</tbody>
</table>

![Figure (thousand euro)](image_url)
Mixing data with groups structure database: map of financial relations

2.5. Recent developments: intragroup adjustments

Some possible uses
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2.6. New tools to detect outliers in quarterly database

1. “Demetra” / “Tramo-Seats” / “Terror” (module to detect outliers)
2. Since 2000 used for aggregated quality controls
3. Recently (2015), used for microdata checking:
   1. Observed figure
   2. ARIMA forecast obtained using Terror
   3. “Tramo” qualify the outlier: “likely” / “possible” outlier

<table>
<thead>
<tr>
<th>Nser</th>
<th>Series Title</th>
<th>Date</th>
<th>New Val</th>
<th>Foreca</th>
<th>Log(New Val)</th>
<th>Log(Foreca)</th>
<th>Difference</th>
<th>Std Deviation</th>
<th>T-Value</th>
<th>Result</th>
<th>dif valor abs</th>
</tr>
</thead>
<tbody>
<tr>
<td>387</td>
<td>CANAL DE ISABEL II</td>
<td>03-2014</td>
<td>2.871</td>
<td>108.273</td>
<td>-</td>
<td>-</td>
<td>-105402,2</td>
<td>11038,68</td>
<td>-9.54845</td>
<td>Likely</td>
<td>105.402</td>
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<tr>
<td>1663</td>
<td>NAVANTIA, S_A_</td>
<td>03-2014</td>
<td>176.324</td>
<td>81.866</td>
<td>12,0808</td>
<td>11,3128</td>
<td>-7672361</td>
<td>0,1304431</td>
<td>5.88177</td>
<td>Likely</td>
<td>94.458</td>
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<td>380</td>
<td>CALSONIC KANSEI SPAIN S_A_</td>
<td>03-2014</td>
<td>23.697</td>
<td>7.224</td>
<td>10,3051</td>
<td>8,885186</td>
<td>1420328</td>
<td>0.2530033</td>
<td>5.61387</td>
<td>Likely</td>
<td>22.673</td>
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<tr>
<td>1506</td>
<td>LIVE NATION ESPANA, SAU</td>
<td>03-2014</td>
<td>16.919</td>
<td>184</td>
<td>9,736193</td>
<td>5,214274</td>
<td>4,521918</td>
<td>0,7001137</td>
<td>6,458835</td>
<td>Likely</td>
<td>16.735</td>
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<td>1381</td>
<td>INTERPARTNER ASSISTANCE SERV_ESPANA,S_A_</td>
<td>03-2014</td>
<td>16.076</td>
<td>5.708</td>
<td>9,685083</td>
<td>8,649669</td>
<td>1,035413</td>
<td>0,2414655</td>
<td>4,288039</td>
<td>Possible</td>
<td>10.368</td>
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<tr>
<td>444</td>
<td>CEMENGAL SA</td>
<td>03-2014</td>
<td>74</td>
<td>8.234</td>
<td>4,304065</td>
<td>9,016034</td>
<td>-4,711969</td>
<td>0,9562404</td>
<td>-4,927599</td>
<td>Possible</td>
<td>8.160</td>
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<td>1247</td>
<td>IBERDROLA GENERACION, S_A_U_</td>
<td>03-2014</td>
<td>6.121</td>
<td>3.025</td>
<td>8,71949</td>
<td>8,014724</td>
<td>0,7046847</td>
<td>0,1552985</td>
<td>4,537615</td>
<td>Possible</td>
<td>2.595</td>
</tr>
<tr>
<td>1420</td>
<td>IBERDROLA DISTRIBUCION ELECTRICA, S_A_U_</td>
<td>03-2014</td>
<td>384</td>
<td>474</td>
<td>6,749855</td>
<td>6,16185</td>
<td>0,588003</td>
<td>0,120709</td>
<td>4,871262</td>
<td>Possible</td>
<td>380</td>
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<td>575</td>
<td>COMUNIDAD DE PROPIETARIOS APARTOTEL MEL</td>
<td>03-2014</td>
<td>3.856</td>
<td>5.761</td>
<td>9,030735</td>
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<td>2.595</td>
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<td>1907</td>
<td>REPSOL TESORERIA Y GESTION FINANCIERA SA</td>
<td>03-2014</td>
<td>3.636</td>
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<td>8,294131</td>
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<td>-0,05062</td>
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<td>364</td>
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<td>2033</td>
<td>SERVICIO DE AGUAS Y SANEAMIENTO DE TERUE</td>
<td>03-2014</td>
<td>458</td>
<td>337</td>
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<td>5,821554</td>
<td>0,3053155</td>
<td>0,072308</td>
<td>4,222432</td>
<td>Possible</td>
<td>121</td>
</tr>
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<td>1092</td>
<td>GENERAL DE TERRENO Y EDIFICIOS, S_L_</td>
<td>03-2014</td>
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<td>4,765938</td>
<td>-4,072791</td>
<td>0,8210099</td>
<td>-4,960708</td>
<td>Possible</td>
<td>115</td>
</tr>
</tbody>
</table>
THANK YOU FOR YOUR ATTENTION
2.2. Use of CBSO in SNA 2008 implementation

More details in next slides
Intermediate system, from business accounting to NA:

- To obtain the full set of accounts and balances
- Adjustments from accounting value to a proxy of market value

Data are classified into a matrix according to:

- Legal form (public limited companies / private limited companies / cooperatives and similar / state-owned companies)
- Size (9 categories)
- Sector of activity (37 categories)

Grossing up, from sample to population:

The matrix is grossed up to the total economy using an extrapolation factor for each cell (c_i), where:

\[ c_i = \frac{\text{workers DIRCE}}{\text{workers CBSO}} \]

Rare companies (outliers) excluded ahead of grossing-up

*DIRCE: INE (NSI) Central Directory of Firms.
## 2.2. SNA 2008 implementation: use of CBSO in FASE

Grossing-up of non financial corp (MENF project)

### Use of CBSO data in FASE (SNA 2008)

<table>
<thead>
<tr>
<th></th>
<th>Balance sheets</th>
<th></th>
<th>Financial transactions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FA</td>
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<tr>
<td>Currency and deposits</td>
<td>Currency (1)</td>
<td></td>
<td>Currency (1)</td>
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<tr>
<td>Debt securities</td>
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<tr>
<td>Loans</td>
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<tr>
<td>Listed shares</td>
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<td></td>
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<tr>
<td>Unlisted shares</td>
<td>(2)</td>
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<tr>
<td>Other equity</td>
<td>(3)</td>
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<td>(3)</td>
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<tr>
<td>Mutual fund shares</td>
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<tr>
<td>Insurance, pension and standardised guarantees</td>
<td>(4)</td>
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<td>(4)</td>
<td></td>
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<tr>
<td>Financial derivatives and stock options</td>
<td>(4)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Trade credits</td>
<td>(5)</td>
<td></td>
<td>(5)</td>
<td>(5)</td>
</tr>
<tr>
<td>Other accounts receivable</td>
<td></td>
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</tr>
</tbody>
</table>
2.2. SNA 2008 implementation: use of CBSO in FASE
Grossing-up of non financial corp (MENF project)

Partial integration of data, mainly by ratios
(no direct integration of aggregated figures)

- [1] Currency: cash ratio (currency/transferable deposits)
- [2] Unquoted shares issued by NFCs
  
  \[ \text{Market value} = \frac{\text{ONR (Profits)}}{[r \ (\text{Discount rate}) + 3\%]} \]

  \[ r = \text{IRR from stock market} \]

  \[ 3\% = \text{illiquidity premium} \]

- [3] Shares held by general government (State portfolio in NFCs)
  
  \[ \text{Book value or market value (for public liability companies)} \]

- [4] Pension entitlements / Stock options
  
  \[ \text{Accounting data provided by companies (actuarial calculations)} \]

- [5] Trade credits (aim: to maintain same structure of balance sheet)
  
  \[ R1 = \text{suppliers / MFI loans} \]

  \[ R2 = \text{clients / suppliers} \]

  \[ \text{Information on commercial paper discounted at MFIs} \]

  \[ \text{Ratio loans granted / received from RoW} \]
2.2. Other uses of CBSO in FASE: SNA 2008, Stock Options at NFCs

1. Data available in business accounting:
   - Theoretically the following information is available:
     - 1. IFRS 2, for listed groups
     - 2. Valuation rule 17, in Spanish GAAP
   - In 2014, 29 companies (individual) reported to CBSO that they had stock option plans for their staff (Yes/No)

2. But the reality is different:
   - Later special survey for details on these 29 companies, some said “No” where the said “yes” before
   - Lack of harmonisation. Example of 15 listed groups, whose data have to be provided in their Annex; some results:
     - 1. Lack of harmonisation in definition of plans (who will provide the shares?): parent company shares / subsidiaries (Spanish or foreign)
     - 2. Lack of harmonisation in information disclosed: compensation to employees well declared; difficult to distinguish between financial transactions and revaluation
   - Anyway, information received since 2015 has improved its quality
2.2. Other uses of CBSO in FASE:
SNA 2008, Holding Companies in Spain

1. We follow the decisions taken by the Task Force on Holding Companies, Head Offices and similar entities (June 2013), in brief:

   1. To be an institutional unit (independence), and signs (obtained by CBSO):
      1. More than 1 owner
      2. In all cases when the owner is “Rest of the world” (non-resident units)

   2. Declaring itself to be a holding company (NACE 6420) and having more than 50% of its assets in shares and other equity, and less than 3 employees (0,1 or 2)

   3. Not having significant turnover

2. Some figures:

   1. Number of corporations changed from NFCs to Financial institutions: 370

   2. Balance sheet data transferred (% of GVA)
      1. Total liabilities (18%)
      2. Loans (3%)
      3. Shares and other equity (15%)
2.2. Other uses of CBSO in FASE: NFC balance sheets, proxy to market value (non-financial assets)

FASE (Financial Accounts of the Spanish Economy)

Accounting data (historical cost): need of adjustments to market value