

## **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**

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Head of Central Balance Sheet Data Office Division. Banco de España



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

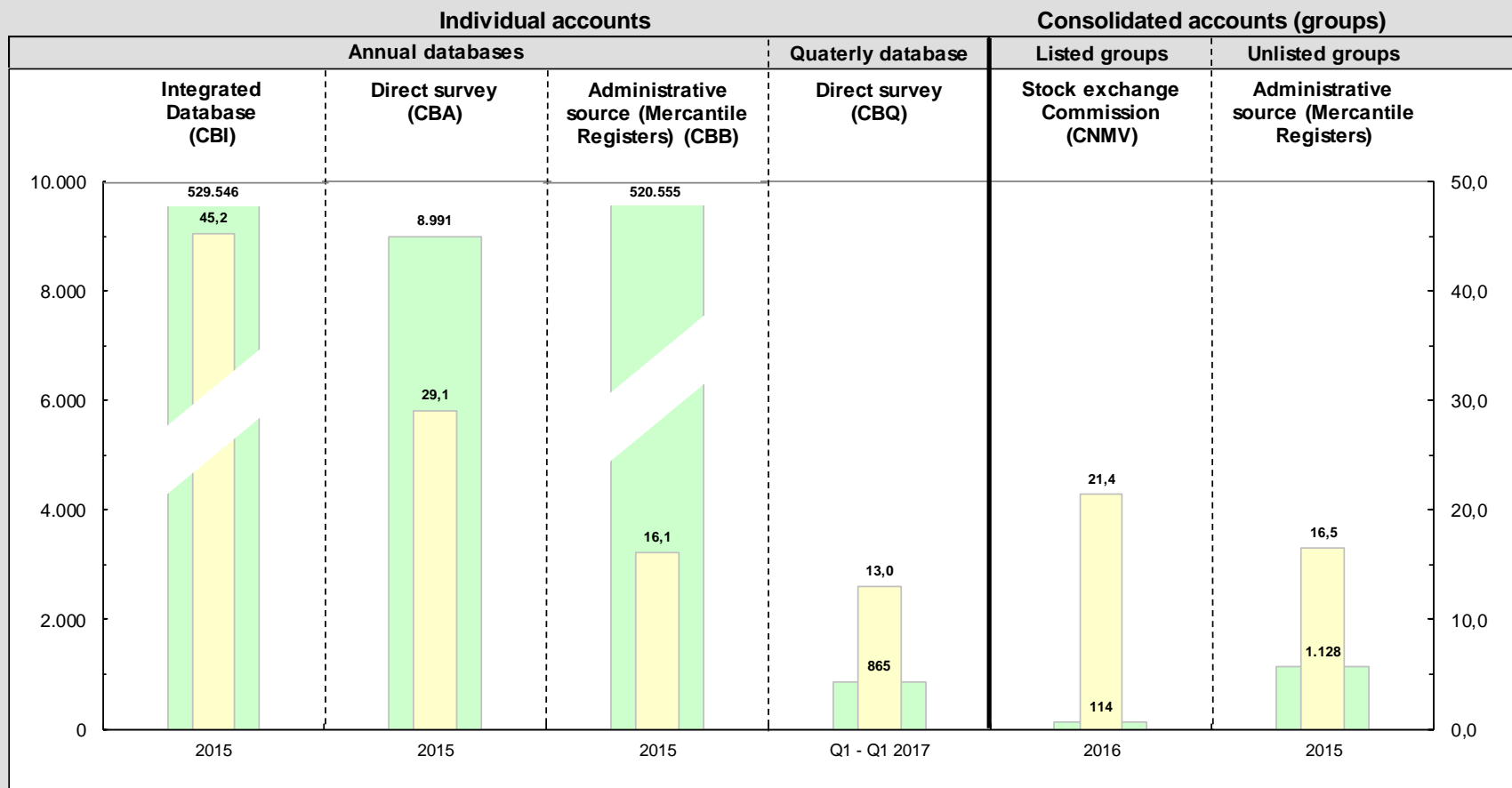
### **2. Recent remarkable developments:**

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

CBSO, main databases

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



■ 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.

# 1. Databases, products and users



CBSO, 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



CBSO, other products

- **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:**

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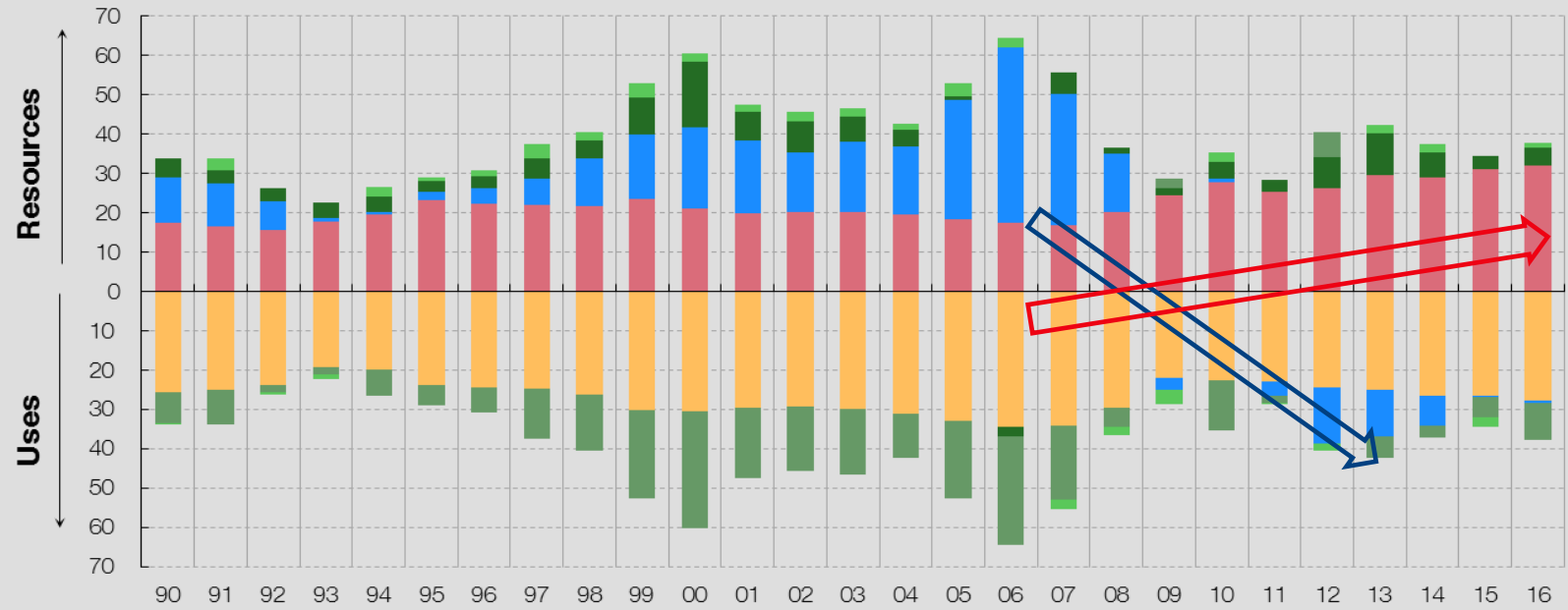
2.1. Recent remarkable developments: increase use of microdata (one example)



**“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)

**INVESTMENT AND FINANCING FLOWS**

% of NFC GVA



- GROSS FIXED CAPITAL FORMATION
- INTERNAL FUNDING (GROSS SAVING)
- FINANCIAL DEBT
- NEW SHARES AND OTHER EQUITY
- FINANCIAL ASSETS
- OTHER

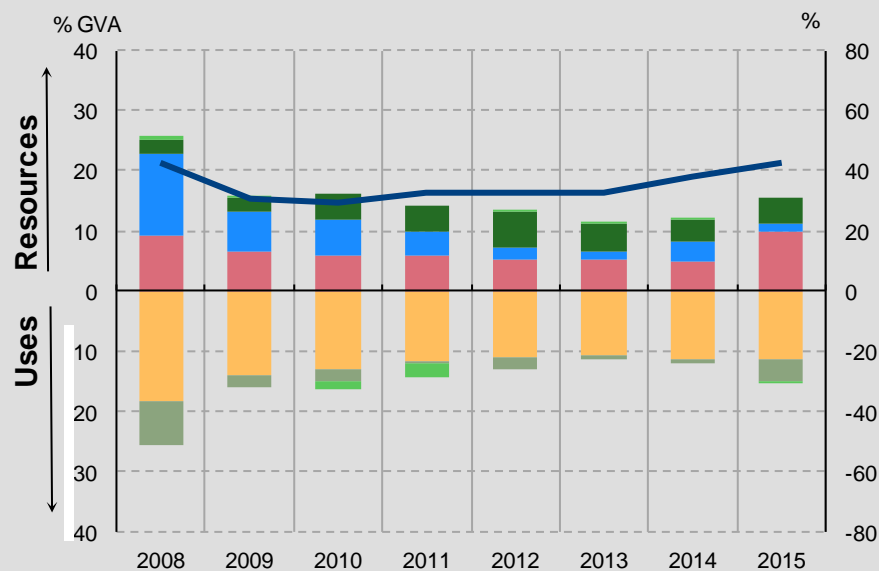
## 2.1. Recent remarkable developments: increase use of microdata (one example)



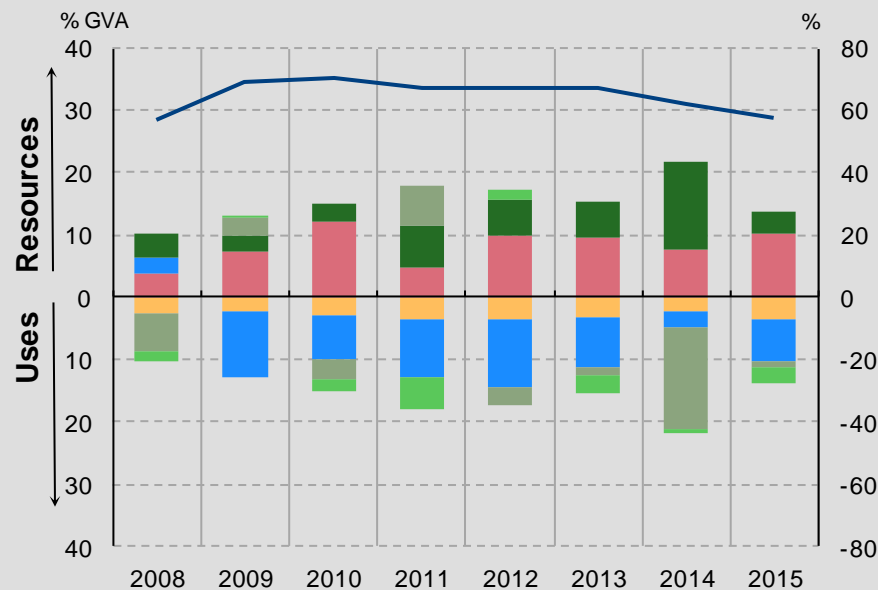
**“Aggregate deleveraging has been compatible with a significant share of investing firms raising their indebtedness”**

“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**



GROSS FIXED CAPITAL FORMATION  
FINANCIAL DEBT  
FINANCIAL ASSETS

INTERNAL FUNDING (GROSS SAVINGS)  
NEW SHARES AND OTHER EQUITY  
OTHER

**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



FASE (Financial Accounts of the Spanish Economy)

- 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)**

## 2.3. SMEs risk assessment analysis using CBSO data

- 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 compilers 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

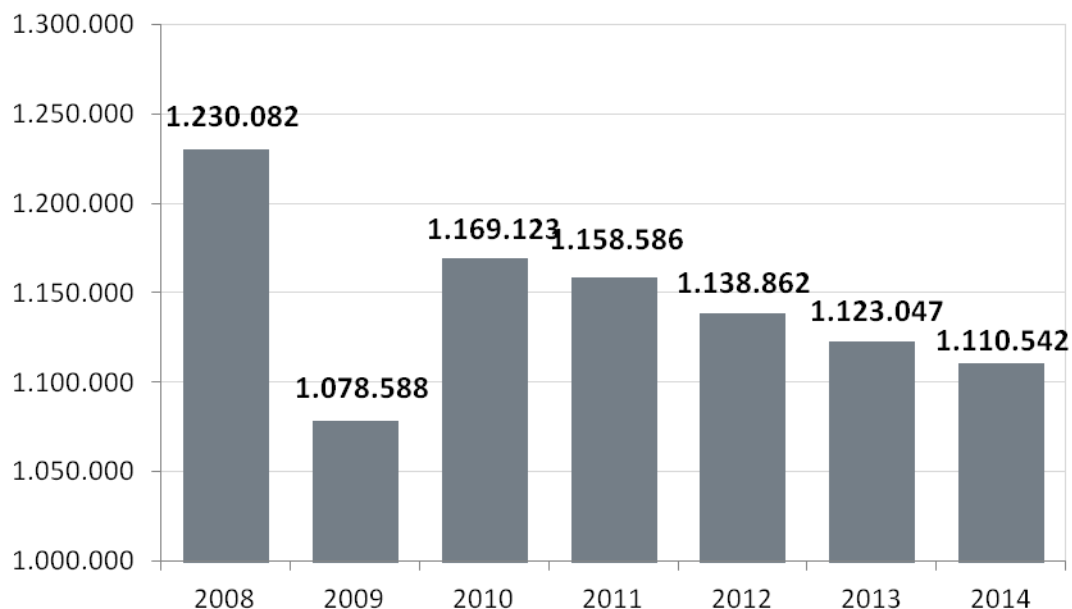
BALANCE DE		BALANCE DE PYMES		BP2.1		BALANCE DE PYMES		CUENTA DE PÉRDIDAS Y GANANCIAS DE PYMES		PP	
NIF: _____		NIF: _____		NIF: _____		NIF: _____		NIF: _____		NIF: _____	
DENOMINACIÓN SOCIAL: _____		DENOMINACIÓN SOCIAL: _____		DENOMINACIÓN SOCIAL: _____		DENOMINACIÓN SOCIAL: _____		DENOMINACIÓN SOCIAL: _____		DENOMINACIÓN SOCIAL: _____	
Español destinado para las firmas de		Español destinado para la		Español destinado para las firmas de los administradores		Español destinado para las firmas de los administradores		Español destinado para las firmas de los administradores		Español destinado para las firmas de los administradores	
ACTIVO		PATRIMONIO NETO Y PASIVO		PATRIMONIO NETO Y PASIVO		PATRIMONIO NETO Y PASIVO		(DEBE) / HABER		NOTAS DE LA MEMORIA	
										EJERCICIO (1)	
										EJERCICIO (2)	
A) ACTIVO NO CORRIENTE	111	A) PATRIMONIO NETO		C) PASIVO CORRIENTE	32000			1	Importe neto de la oferta de negocios	49100	
I. Inmovilizado intangible	111	A-1) Fondos propios		I. Provisiones a corto plazo	32200			2	Variación de existencias de productos terminados y en curso de fabricación	46200	
II. Inmovilizado material	111	I. Capital		II. Deudas a corto plazo	32300			3	Trabajos realizados por la empresa para su activo	46300	
III. Inversiones inmobiliarias	111	1. Capital suscrito		III. Prima de emisión	32320			4	Agrovisionamientos	46400	
IV. Inversiones en empresas del grupo y asociadas a largo plazo	111	2. (Capital no exigido)		IV. Reservas	32330			5	Otros ingresos de explotación	46500	
V. Inversiones financieras a largo plazo	111	III. Reservas		V. Otras deudas a corto plazo	32350			6	Gastos de personal	46600	
VI. Activos por impuesto diferido	111	IV. (Acciones y participaciones en patrimonio propias)		VI. Deudas con empresas del grupo y asociadas a corto plazo	32400			7	Otros gastos de explotación	46700	
VII. Deudas comerciales no corrientes	111	V. Resultados de ejercicios anteriores		VII. Acreedores comerciales y otras cuentas a pagar	32500			8	Amortización del inmovilizado	46800	
B) ACTIVO CORRIENTE	112	VI. Otras aportaciones de socios		III. Provedores	32550			9	Impugnación de subvenciones de inmovilizado no financiero y otras	46900	
I. Existencias	112	VII. Resultado del ejercicio		a) Provedores a largo plazo	32581			10	Excesos de provisiones	41000	
II. Deudas comerciales y otras cuentas a cobrar	112	VIII. (Dividendo a cuenta)		b) Provedores a corto plazo	32582			11	Deterioro y resultado por enajenaciones del inmovilizado	41100	
1. Clientes por ventas y prestaciones de servicios	112	A-2) Ajustes en patrimonio neto		2. Otros acreedores	32590			12	Otros resultados	41300	
a) Clientes por ventas y prestaciones de servicios a largo plazo	112	A-3) Subvenciones, donaciones y legados recibidos		V. Periodificaciones a corto plazo	32600			A) RESULTADO DE EXPLOTACIÓN	49100		
b) Clientes por ventas y prestaciones de servicios a corto plazo	112	B) PASIVO NO CORRIENTE		VI. Deuda con características especiales a corto plazo	32700			(1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12)			
2. Accionistas (socios) por desembolsos exigidos	112	I. Inversiones en empresas del grupo y asociadas a largo plazo		TOTAL PATRIMONIO NETO Y PASIVO (A + B + C)	30000			13. Ingresos financieros	41400		
3. Otros deudores	112	II. Inversiones financieras a corto plazo						a) Imputación de subvenciones, donaciones y legados de carácter financiero	41430		
III. Inversiones en empresas del grupo y asociadas a corto plazo	112	III. Deudas a largo plazo						b) Otros ingresos financieros	41480		
IV. Inversiones financieras a corto plazo	112	1. Deudas con entidades de crédito						14. Gastos financieros	41500		
V. Periodificaciones a corto plazo	112	2. Acreedores por aménagement financiero						15. Variación de valor razonable en instrumentos financieros	41600		
VI. Efectivo y otros activos líquidos equivalentes	112	3. Otras deudas a largo plazo						16. Diferencia de cambio	41700		
TOTAL ACTIVO (A + B)	300	III. Deudas con empresas del grupo y asociadas a largo plazo						17. Deterioro y resultado por enajenaciones de instrumentos financieros	41800		
		IV. Pasivos por impuesto diferido						18. Otros ingresos y gastos de carácter financiero	42100		
		V. Periodificaciones a largo plazo						a) Incorporación al activo de gastos financieros	42110		
		VI. Acreedores comerciales no corrientes						b) Ingresos financieros derivados de convenios de acreedores	42120		
		VII. Deuda con características especiales a largo plazo						c) Resto de ingresos y gastos	42130		
								B) RESULTADO FINANCIERO (13 + 14 + 15 + 16 + 17 + 18)	49200		
								C) RESULTADO ANTES DE IMPUESTOS (A + B)	49300		
								19. Impuestos sobre beneficios	41900		
								D) RESULTADO DEL EJERCICIO (C + 19)	49500		

## 2.3. SMEs risk assessment analysis using CBSO data



Mercantile Registers receive every year thousands of annual accounts (XBRL instance documents)

### NUMBER OF ANNUAL ACCOUNTS FILED



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

## 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

BANCO DE ESPAÑA Eurosistema		eccbso		Registadores	
<b>Ratios Sectoriales de las Sociedades no Financieras</b>					
País: España					
Año: 2014					
Sector de actividad (CMAE): N829 Actividades de apoyo a las empresas n.o.o.p.					
Tamaño (cifra neta de negocio): Total tamaños					
Tasa de cobertura (% número de empresas): 4,64					
Tasa de cobertura (% número de empleados): 34,4					
Ratio	Nombre de Ratio	Empresa	Q1	Q2	Q3
<b>Costes operativos, beneficios y rentabilidades</b>					
R01	Valor añadido / Cifra neta de negocios	1874	35,26	59,33	79,86
R02	Gastos de personal / Cifra neta de negocios	1874	27,65	49,09	74,72
R03	Resultado económico bruto / Cifra neta de negocios	1874	-0,48	5,30	17,82
R04	Cash flow (resultado económico bruto) / Total deuda neta	1280	-2,18	8,30	31,59
R05	Resultado económico neto / Cifra neta de negocios	1874	-3,81	2,79	12,85
R16	Cifra neta de negocios / Total activo	1956	23,17	101,13	209,20
R10	Resultado económico neto / Total activo	1956	-1,53	2,39	9,38
R11	Resultado antes de impuestos / Fondos propios	1707	0,00	6,40	24,80
R12	Resultado después de impuestos / Fondos propios	1707	-0,10	4,88	19,38
<b>Capital circulante</b>					
R17	Existencias / Cifra neta de negocios	1874	0,00	0,00	0,04
R18	Deudores comerciales / Cifra neta de negocios	1874	3,21	13,38	29,35
R19	Acreedores comerciales / Cifra neta de negocios	1874	0,00	0,00	2,88
R20	Capital circulante / Cifra neta de negocios	1874	-0,17	10,53	26,48
<b>Gastos e ingresos financieros</b>					
R07	Gastos financieros y similares / Cifra neta de negocios	1874	0,00	0,18	1,47
R06	Gastos financieros y similares / Resultado económico bruto	1408	0,00	2,57	16,80
R09	Resultado financiero / Cifra neta de negocios	1874	-1,01	-0,04	0,01
R08	Resultado financiero / Resultado económico bruto	1408	-12,64	-0,34	0,03
<b>Estructura del activo</b>					
R13	Inmovilizado financiero / Total activo	1956	0,00	0,37	9,24
R14	Inmovilizado material / Total activo	1956	0,39	7,67	34,60
R15	Activo circulante / Total activo	1956	28,26	68,05	93,37
R21	Activos financieros a corto plazo y dispon. / Total activo	1956	5,19	21,81	52,70
<b>Estructura del pasivo</b>					
R22	Fondos propios / Total patrimonio neto y pasivo	1956	16,37	47,39	78,53
R23	Provisiones para riesgos y gastos / Total patrimonio neto y pasivo	1956	0,00	0,00	0,00
R24	Deudas con entidades de crédito / Total patrimonio neto y pasivo	1956	0,00	0,00	13,62
R25	Deudas con entidades de crédito, medio y largo plazo / Total patrimonio neto y pasivo	1956	0,00	0,00	6,04
R26	Deudas con entidades de crédito, corto plazo / Total patrimonio neto y pasivo	1956	0,00	0,00	0,33
R27	Deudas a medio y largo plazo / Total patrimonio neto y pasivo	1956	0,00	0,00	19,37
R28	Deudas a corto plazo / Total patrimonio neto y pasivo	1956	9,32	30,28	62,50
<b>Actividad</b>					
T1	Tasa de variación de la cifra neta de negocios	1847	-12,32	1,62	23,19

Fuente: Base de datos RSE (ratios sectoriales de sociedades no financieras), Banco de España (Central de Balances) / Registro de España (Registro Mercantil - CPE) - Comité Europeo de Control de Balances.

Aviso: Las empresas incluidas en la base de datos RSE no forman una muestra aleatoria. Se prohíbe la distribución de los datos, incluso cuando pretenda hacerlos anónimos. ©Copyright Banco de España/Registro de España, 2005, Madrid. Reservados todos los derechos.



# 2.3. SMEs risk assessment analysis using CBSO data

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

**BANCO DE ESPAÑA**  
Eurosistema

**eccbso**  
Registadores de España

**Ratios Sectoriales de las Sociedades no Financieras**

**País:** España  
**Año:** 2012  
**Sector de actividad (CNAE):** C13 Industria textil  
**Tamaño (cifra neta de negocio):** Total tamaños  
**Tasa de cobertura (% número de empresas):** 28.35  
**Tasa de cobertura (% número de empleados):** 35.25

Ratio	Nombre de Ratio	Empresas	Q1	Q2	Q3
<b>Costes operativos, beneficios y rentabilidades</b>					
R01	Valor añadido / Cifra neta de negocios	982	20.41	33.46	47.72
R02	Gastos de personal / Cifra neta de negocios	982	17.92	29.80	46.85
R03	Resultado económico bruto / Cifra neta de negocios	982	-0.77	4.53	9.05
R04	Cash flow (resultado económico bruto) / Total deuda neta	848	-1.63	9.76	22.76
R05	Resultado económico neto / Cifra neta de negocios	982	-5.40	1.41	4.11
R16	Cifra neta de negocios / Total activo	993	64.03	107.89	159.16
R10	Resultado económico neto / Total activo	993	-4.54	1.41	4.44
R11	Resultado antes de impuestos / Fondos propios	888	-3.50	1.97	8.47
R12	Resultado después de impuestos / Fondos propios	888	-2.73	1.44	6.48
<b>Capital circulante</b>					
R17	Existencias / Cifra neta de negocios	982	4.73	19.58	43.52
R18	Deudores comerciales / Cifra neta de negocios	982	10.65	20.56	31.22

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)

BANCO DE ESPAÑA  
Eurosistema

BANCO DE ESPAÑA  
Eurosistema



Final Report

### Posición relativa de

BANCO DE ESPAÑA  
Eurosistema

### Hoja de carga de datos Ratios Sectoriales de

#### - Datos de la empresa:

País: España  
Año: 2014  
Sector de actividad (CNAE):  
Tamaño (cifra neta de negocio)  
Tasa de cobertura (% número)  
Tasa de cobertura (% número)

#### - Datos del Agregado:

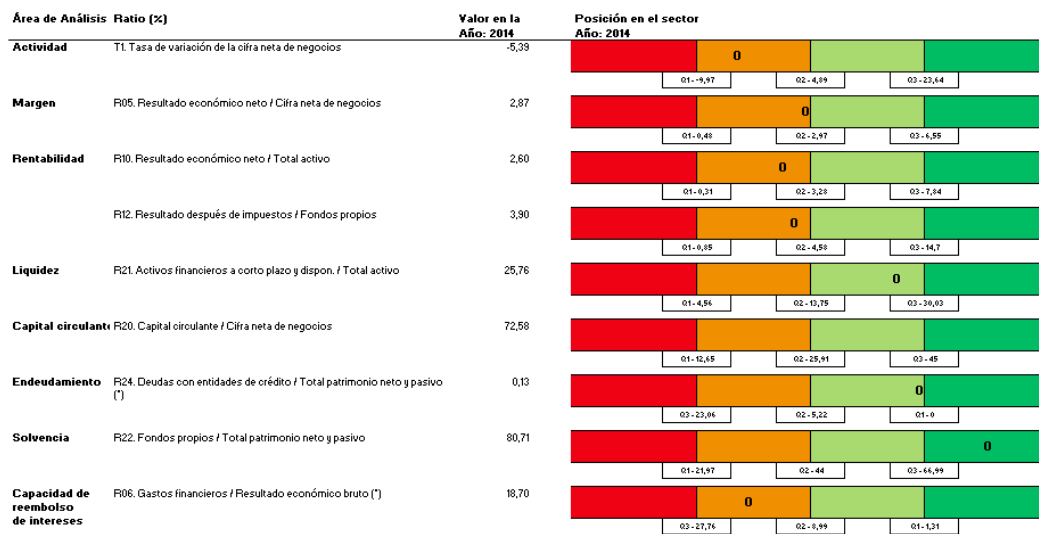
Activo	Partida	Ratio	Nombre de Ratio
11700	Deudores comerciales		
12200	Existencias	R01	Valor añadido / Cifra neta de negocio
12380	Ciudadanos por ventas	R02	Gastos de personal / Cifra neta de negocio
12370	Accionistas (socios)	R03	Resultado económico bruto / Cifra neta de negocio
12400	Inversiones en empresas	R04	Cash flow (resultado económico) / Cifra neta de negocio
12500	Inversiones financieras	R05	Resultado económico bruto / Cifra neta de negocio
12700	Efectivo y otros activos	R16	Cifra neta de negocio / Cifra neta de negocio
10000	Total activo (= Total)	R10	Resultado económico bruto / Cifra neta de negocio

#### - Informe plantilla En

Patrimonio neto y pasivo	Partida	Ratio	Nombre de Ratio
21000	Fondos Propios		
31220	Deudas con entidades de crédito a corto plazo	R17	Existencias / Cifra neta de negocio
31230	Acreedores por arrendamiento financiero a corto plazo	R18	Deudores comerciales / Cifra neta de negocio
31600	Acreedores comerciales	R19	Acreedores comerciales / Cifra neta de negocio
32320	Deudas con entidades de crédito a corto plazo		
32330	Acreedores por arrendamiento financiero a corto plazo		
32580	Proveedores		

### Informe-plantilla sobre la posición del acreditado respecto a su sector de actividad

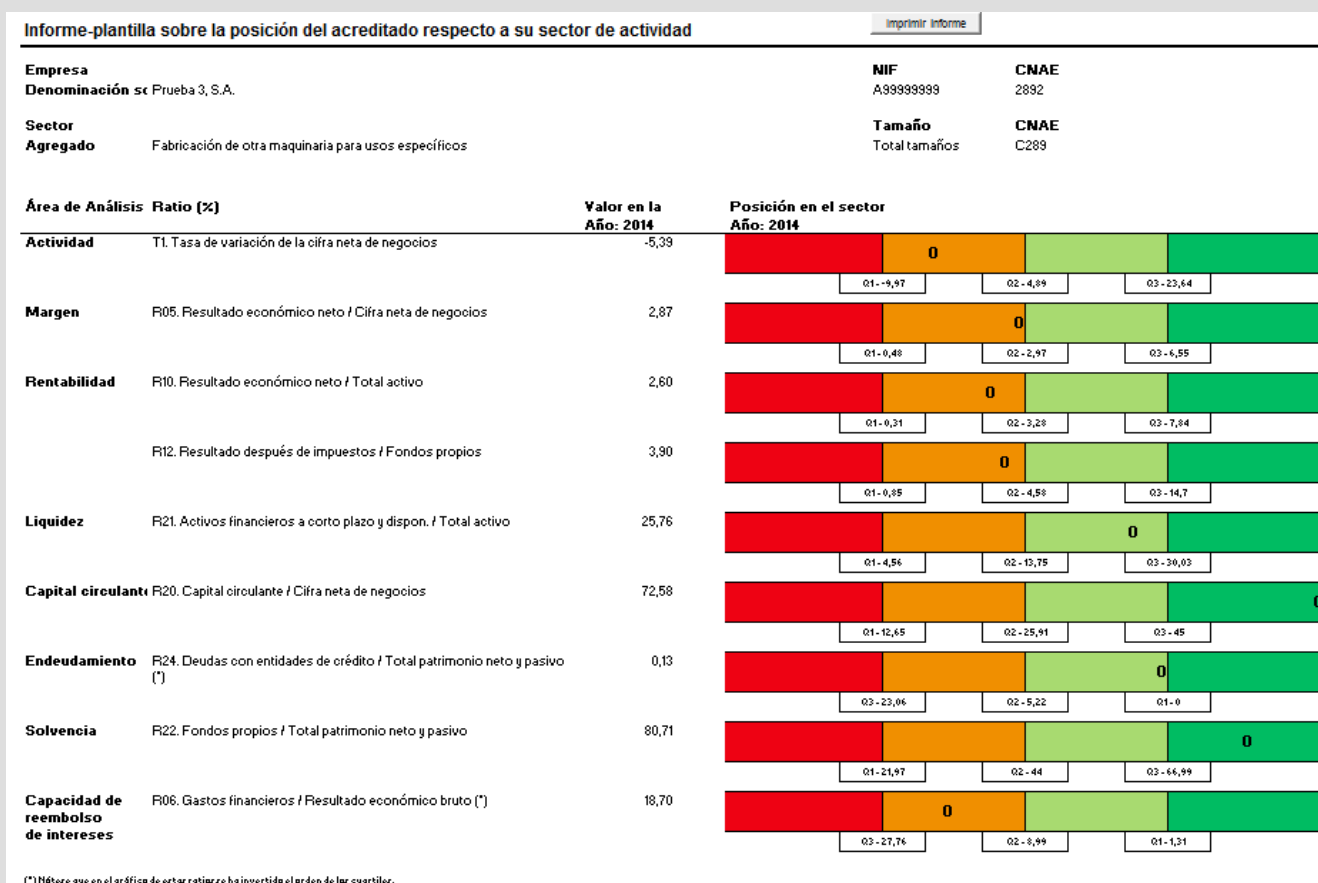
<b>Empresa</b>	<b>NIF</b>	<b>CNAE</b>
Denominación social: Prueba 3, S.A.	A99999999	2892
<b>Sector</b>	<b>Tamaño</b>	<b>CNAE</b>
Agregado: Fabricación de otra maquinaria para usos específicos	Total tamaños	C289



(\*) Número que en el gráfico de esta ratio se ha invertido el orden de las cuartiles.  
NOTA: La información sectorial proporcionada en este informe ha sido obtenida utilizando la base de datos facilitada por el Centro de Balances del Banco de España (base BSE) (ratios sectoriales de la actividad de las empresas). Banco de España (Centro de Balances) / Registro de España (Registro Mercantil - CPE) / Comité Español de Control de Balances.

AVISO: La empresa podrá obtener de la Central de Balances de forma gratuita, previa aportación de información adicional, un estudio individual más pormenorizado con datos sectoriales de contraste. Para más detalles, véase [www.bde.es/f/webbde/SSE/cen/bal/ventas/ficheros/es/estudio\\_individual.asp](http://www.bde.es/f/webbde/SSE/cen/bal/ventas/ficheros/es/estudio_individual.asp)

## 2.3. SMEs risk assessment analysis using CBSO data



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**)

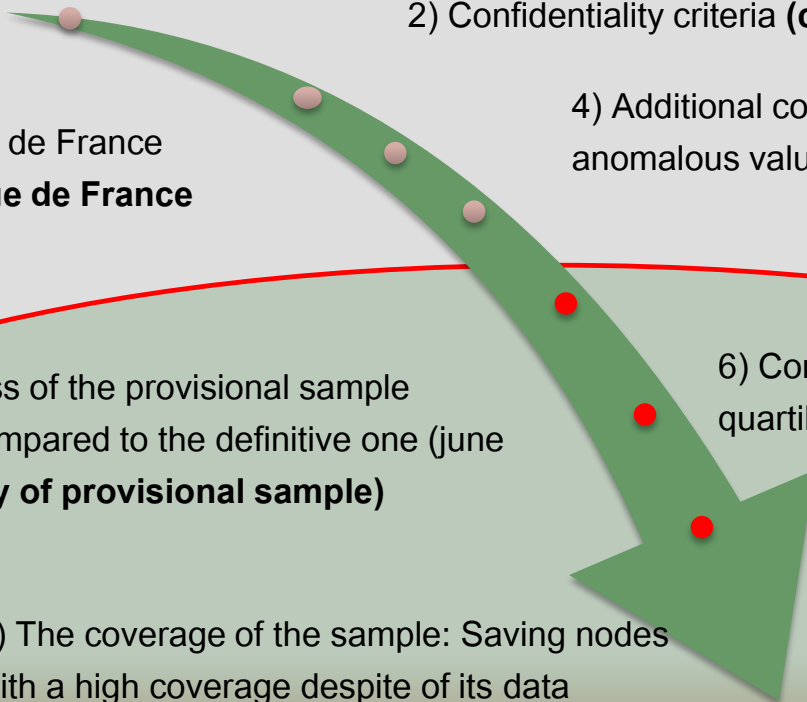
3) Revision of Banque de France Requirements (**Banque de France Requirements**)

4) Additional controls to censure 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**)





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

### 2. Recent remarkable developments:

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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

# 2.4 EBITDA: an harmonization effort using CBSO data



Detailed data vs KPI (key performance indicators)

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"



# 2.4 EBITDA: an harmonization effort using CBSO data

This applies also to financial reports, annual accounts and studies of a company: "less is more"

2013	CBA + CBE	NORMAL	RENTICHO	NORMAL	ABREVIADO
5. Otras deudas a corto plazo con empresas del grupo y asociadas con coste financiero	94,9				
6. Pasivos vinculados a activos no corrientes mantenidos para la venta. Resto de deudas a largo plazo	5,62				
7. (-) Resto de deudas financieras con no residentes a largo y corto plazo	99,91				
8. Deuda con características especiales	5,08				
1. Deuda con características especiales a largo plazo	4,46				
2. Deuda con características especiales a corto plazo	2,21				
3. (-) Deuda con características especiales de entidades de crédito	1,73				
4. (-) Deuda con características especiales de resto del mundo	10,81				
9. Sin clasificar	16				
10. Ajuste por titulación de la moratoria nuclear	1,047,96				
AF.5 PARTICIPACIONES EN EL CAPITAL Y EN FONDOS DE INVERSIÓN	1,047,96				
AF.51 PARTICIPACIONES EN EL CAPITAL	698,06				
Valor en libros	222,23				
1. Capital social	200,71				
1. Capital escrutado	-0,01				
2. Acciones y participaciones en patrimonio propias	-14				
3. Capital no exigido	23,6				
4. (-) Accionistas (socios) por desembolsos exigidos	4,1				
5. Otras aportaciones de socios	439,11				
6. Acciones propias de SA cotizadas	272,14				
2. Reservas	49,11				
1. Reservas	-70,8				
2. Resultado del ejercicio	17,23				
3. (Dividendo a cuenta)	-71,4				
4. Resultados de ejercicios anteriores	-16,61				
1. Remanente	-2,03				
2. (Resultados negativos de ejercicios anteriores)	203,5				
3. Sin clasificar	26,1				
5. Ajustes por cambios de valor	36,2				
6. Prima de emisión	33,4				
3. Subvenciones, donaciones y legados recibidos	4,9				
4. Provisiones	5,3				
1. Provisiones a largo plazo	23,0				
1. Provisiones por reestructuración a largo plazo	5				
2. Provisiones para actuaciones medioambientales a largo plazo	8,4				
3. Obligaciones por prestaciones a largo plazo al personal a largo plazo	5,6				
4. Otras provisiones a largo plazo	7,6				
5. Sin clasificar	-23,4				
2. Provisiones a corto plazo	42,2				
3. (-) Obligaciones por prestaciones a largo plazo al personal	16,7				
5. Deterioro de valor de créditos comerciales	349,8				
6. Ajuste contable del impuesto de sociedades	390,8				
1. (-) Activos por impuesto diferido	406,8				
2. Pasivos por impuesto diferido	250,2				
Ajuste para valorar a precios de mercado	698,06	574,760	19,780	10,691	92,838
1. Valor de mercado Sociedades Anónimas que cotizan en Bolsa	5,659	5,652	...	7	...
2. Valor de mercado Sociedades Anónimas que no cotizan en Bolsa	5,659	5,652	...	7	...
3. Valor de mercado resto de sociedades	...	...	...	...	...
4. (-) Valor en libros	...	...	...	...	...
AF.6 SISTEMAS DE SEGUROS, DE PENSIONES Y DE GARANTÍAS ESTANDARIZADAS	...	...	...	...	...
1. Obligaciones por prestaciones a largo plazo al personal	...	...	...	...	...



## HOJA RESUMEN. DATOS DE LA EMPRESA COMPARADOS CON SU SECTOR

EMPRESA DE PRUEBA  
SECTOR DE COMPARACIÓN: OTRO COMERCIO ..

COMPARACIÓN SERIE HISTÓRICA, EMPRESA-SECTOR (1)

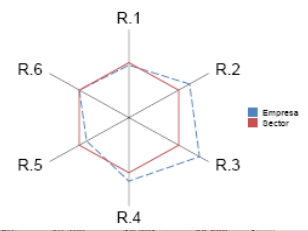
	N-4		N-3		N-2		N-1		N	
	Empresa	Sector	Empresa	Sector	Empresa	Sector	Empresa	Sector	Empresa	Sector
Cifra neta de negocios (Tasa de variación)	3,2	6,8	2,9	6,1	6,6	5,2	0,5	5,6	-0,2	5,3
Gastos de personal por trabajador (Tasa de variación)	4,2	3,7	2,9	2,9	-1,7	4,1	9,3	4,2	-3,5	4,3
Resultado ordinario neto (Tasa de variación)	-12,5	17,2	14,3	13,6	68,8	6,1	88,9	0,2	26,4	10,3
Rentabilidad ordinaria del activo (Porcentaje)	2,8	8,2	3,1	8,3	5,1	8,0	9,2	7,3	11,7	8,5
Coste medio de la financiación (Ratio)	0,0	6,4	0,0	6,8	0,0	5,8	0,0	5,6	n.s	6,8
Endeudamiento (Ratio. Saldos medios)	0,0	47,4	0,0	47,3	0,0	46,4	0,0	46,8	0,0	47,4

(1) Información del sector en media ponderada

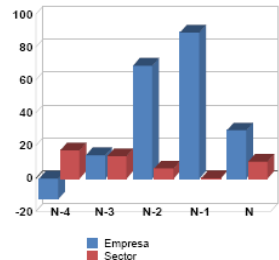
n.d. = dato no disponible    n.s. = dato no significativo    n.c. = no calculable

### SITUACIÓN COMPETITIVA EMPRESA-SECTOR AÑO N (2)

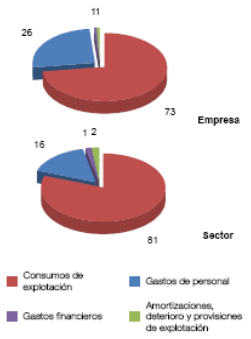
- R.1 Crecimiento Cifra neta de negocios
- R.2 Crecimiento Resultado ordinario neto
- R.3 VAB cf / Cifra neta de negocios
- R.4 Margen bruto de explotación
- R.5 Cifra neta de negocios / Empleados
- R.6 Rentabilidad ordinaria de los recursos propios



### RESULTADO ORDINARIO NETO (Tasa de variación)



### ESTRUCTURA DE GASTOS AÑO N



## 2.4 EBITDA: an harmonization effort using CBSO data / KPI vs detailed data



Accounting information provides both options

- **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](http://www.aeca.es))

Manual data upload    XBRL file upload    Clear questionnaire

### Upload of firm data

Identification

**Name of firm**

**Tax identification number**

**NACE**

**YEAR**

Manual Filling

XBRL Import

**Name of firm**

**Tax identification number**

**NACE**

**YEAR** N

Statement of profit or loss

Code	Item	N-1	N
40100	Net turnover (+)		
40800	Depreciation and amortization of intangible and tangible fixed assets (-)		
40900	Government grants of non-financial assets recognised as income during the year (+)		
41100	Impairment and gain/loss on intangible and tangible fixed assets (+/-)		
41200	Negative goodwill resulting from business combinations <sup>(1)</sup> (+)		
41300	Other gains/losses (+/-)		
41400	Financial income (+)		
41500	Financial expenses (-)		
41600	Gain/loss in changes in fair value of financial instruments (+/-)		
41700	Exchange differences (+/-)		
41800	Impairment and gain/loss on financial instruments (+/-)		
42100	Other financial income/expenses (+/-)		
41900	Tax on profit (+/-)		
42000	Profit/loss from discontinued operations net of tax <sup>(1)</sup> (+/-)		
49500	Net profit or loss for the year (+/-)		

**Amount (units)**

## 2.4 EBITDA: an harmonization effort using CBSO data

EBITDA: calculation with company data

EBITDA. AECA definition. Calculation		Amount (units)	
		N-1	N
49500	<b>1. Net profit or loss for the year</b>	0,00	0,00
	<b>2. Adjustments to profit/loss</b>	0,00	0,00
42000	- Profit/loss from discontinued operations	0,00	0,00
41900	- Tax on profit	0,00	0,00
41400	- Financial income	0,00	0,00
41500	- Financial expenses	0,00	0,00
41600	- Gain/loss in changes in fair value of financial instruments	0,00	0,00
41700	- Exchange differences	0,00	0,00
41100	- Impairment and gain/loss on intangible and tangible fixed assets	0,00	0,00
41800	- Impairment and gain/loss on financial instruments	0,00	0,00
42100	- Other financial income/expenses	0,00	0,00
40800	- Depreciation and amortisation of intangible and tangible fixed assets	0,00	0,00
40900	- Government grants of non-financial assets recognised as income during the year	0,00	0,00
41300	- Other gains/losses	0,00	0,00
41200	- Negative goodwill resulting from business combinations <sup>(1)</sup>	0,00	0,00
	<b>3. Other adjustments included by the firm (according to OE number 4/2016 AECA)</b>	0,00	0,00
	- Income (-) (other non-recurring income)		
	- Expenses (+) (other non-recurring expenses)		

**AECA DEFINITION OF EBITDA:**  
Indirect approach:  
Adjustments to Total Losses and profits

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)

### Selection of comparative sector and size (BACH database 2014 - 2015)

Information from BACH database updated in January 2017

Selection of year

2015

Clear questionnaire

Selection of sector

C10 - Manufacture of food products

Selection of size according to the amount of net turnover

All sizes

Ratio	Name of Ratio	Number of firms	Percentage (%)		
			Q1	Q2	Q3
<b>Operating costs, earnings and profitability</b>					
R33/BACH	EBITDA / Net turnover (2015)	3.883	1,69	4,88	9,76
R33/BACH	EBITDA / Net turnover (2014)	3.824	1,37	4,57	9,07
R22/BACH	EBITDA / Financial expenses (2015)	3.308	216,61	753,00	3.087,49
R22/BACH	EBITDA / Financial expenses (2014)	3.252	178,55	577,75	2.319,53
R21/BACH	Financial income / EBITDA (2015)	3.283	0,00	0,01	0,41
R21/BACH	Financial income / EBITDA (2014)	3.149	0,00	0,02	0,68

## 2.4 EBITDA: an harmonization effort using CBSO data



### EBITDA (AECA definition) - Firm / sector of activity comparison

Firm  
Name of firm

Print report

National identification code

B99999999

Sector

Aggregate C10 - Manufacture of food products

Size

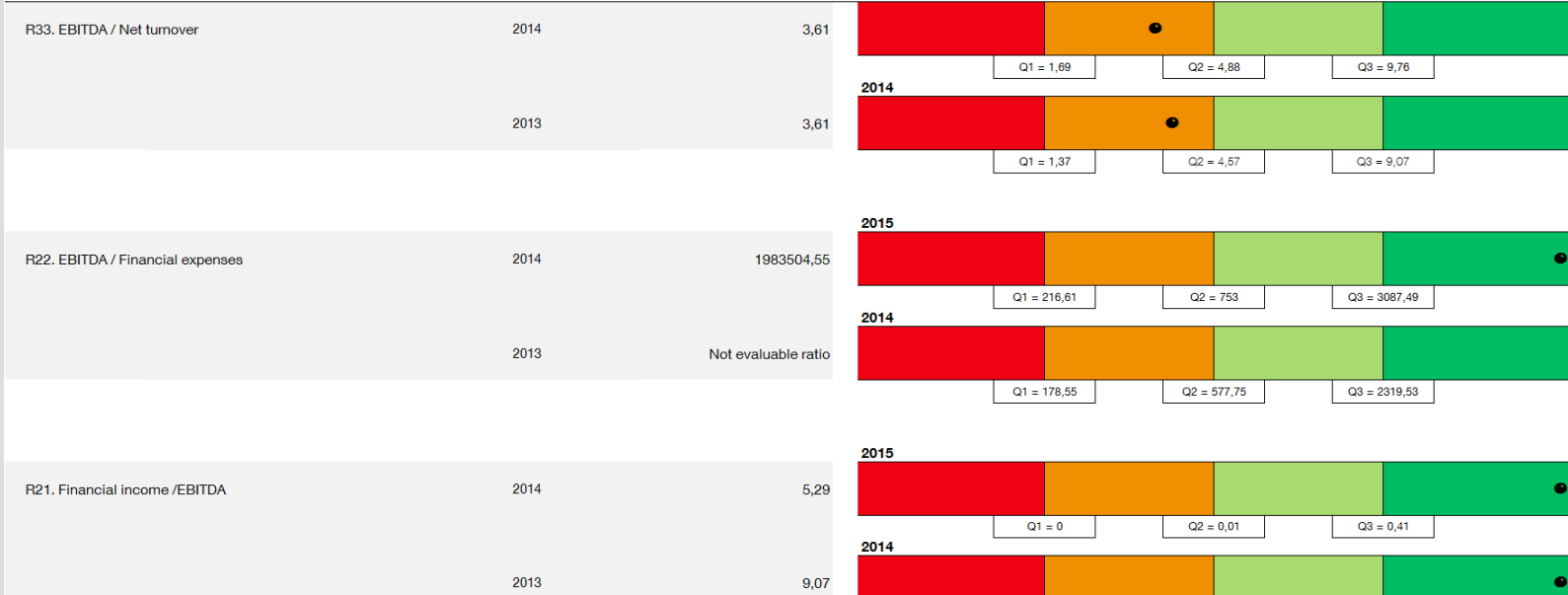
All sizes

Ratio (%)

Year

Firm value

Position in the sector  
2015



Final summarized report comparing EBITDA ratios between Company data and its sector of activity and size

Using 14 accounting concepts available in the XBRL official obligatory file, in a nutshell, EBITDA of the company is calculated and compared



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

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6. New tools to detect outliers in quarterly database

## 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*

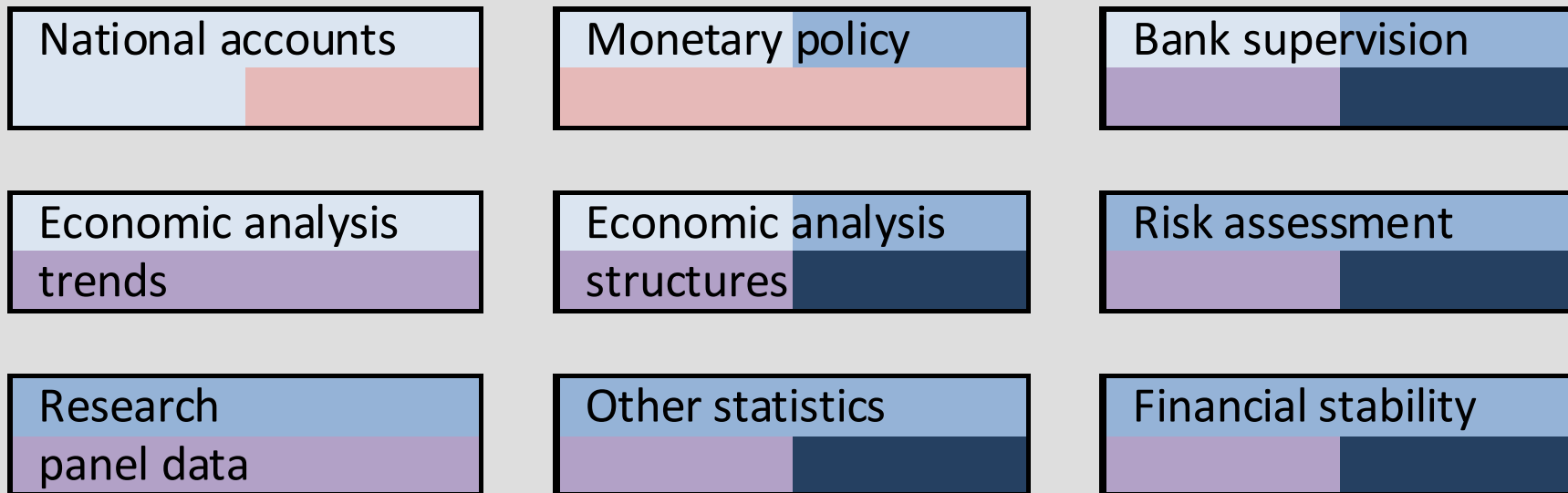


## 2.5. Recent developments: intragroup adjustments

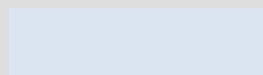
### Individual versus consolidated accounts



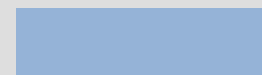
Map of possible uses of accounting data



Individual accounts



Aggregated



Individual

Consolidated accounts



Same scope



Dif. scope



Truncated

Source: ERICA WG of ECCBSO

## 2.5. Recent developments: intragroup adjustments

Needs and scope of the exercise

### 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 tool to improve the system

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

### 28 AJUSTE EN EMPRESAS DEL GRUPO COLABORADORAS POR INFORMACIONES DUPLICADAS

		2015	2014
1. Intereses recibidos por financiación entregada a emp.grupo colab.	81401	30.645	24.125
2. Intereses por financiación recibida de emp.grupo colab (-)	81402		
3. Dividendos recibidos (de empresas grupo colaboradoras)	81403	3.168.407	5.633.609
4. Dividendos pagados (a empresas grupo colaboradoras) (-)	81420		
5. Deterioro de la cartera valores (por pérdidas emp.grupo colaboradoras) (-)	81404	-1.142.000	
6. Contrapartida del deterioro de la cartera de valores	81421		
7. Dotaciones de provisiones largo plazo (saneamiento cartera valores) (-)	81408		
8. Contrapartida dotaciones de provisiones largo plazo	81422		
9. Créditos concedidos a empresas del grupo colaboradoras	81103	3.073.376	2.874.761
- A largo plazo	81104	1.295.000	1.950.000
- A corto plazo	81105	1.778.376	424.031
	81301		
	81302		
	81303		

Corporation 1

Corporation 2

Date of the operation

COD_NINT_EMPRESA1	COD_CLAVE1	COD_NINT_EMPRESA2	COD_CLAVE2	COD_TIPO_CUESTIONARIO	COD_PLAN_CONTABLE	COD EJERCICIO	COD_TRIMESTRE	IMPORTE	FECHA_MODIFICACION
36251	813019	177979	811039	CBA	2007	2008	0	5533835	22/06/2016 13:46:27
36251	813029	177979	811049	CBA	2007	2008	0	5533835	22/06/2016 13:46:27
36251	81302	177979	81104	CBT	2007	2008	1	4610080	03/11/2016 15:25
36251	81301	177979	81103	CBT	2007	2008	1	4610080	03/11/2016 15:25
83575	81105	1711859	81303	CBA	2007	2008	0	4505614	27/06/2016 15:50:29
83575	81103	1711859	81301	CBA	2007	2008	0	4505614	27/06/2016 15:50:29
83575	81105	1711859	81303	CBT	2007	2008	4	4505614	07/11/2016 17:54
83575	81103	1711859	81301	CBT	2007	2008	4	4505614	07/11/2016 17:54
83575	81105	1711859	81303	CBT	2007	2008	1	4500000	07/11/2016 17:54
83575	81103	1711859	81301	CBT	2007	2008	1	4500000	07/11/2016 17:54

Accounting Item 1  
I.e. Credit (asset)

Accounting Item 2  
I.e. Debt (liability)

Figure (thousand euro)

Clave del cuestionario compensadora: 81104.  
Créditos concedidos a empresas grupo colaboradoras largo plazo  
Año 2015

Clave a compensar: 81302.  
Deudas financieras con empresas grupo colaboradoras largo plazo  
Año 2015

Insertar Eliminar

Cancelar Aceptar





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## 2.6. New tools to detect outliers in quaterly 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

Nse	series Title	Date	New Val	Forec	Log(New Val)	Log(Forec)	Differen	Std Deviat	T-Valu	Result	dif valor a
387	CANAL DE ISABEL II	03-2014	2.871	108.273	-	-	-105402,2	11038,68	-9,54845	Likely	105.402
1663	NAVANTIA, S_A_	03-2014	176.324	81.866	12,08008	11,31284	0,7672361	0,1304431	5,88177	Likely	94.458
380	CALSONIC KANSEI SPAIN S_A_	03-2014	29.897	7.224	10,30551	8,885186	1,420328	0,2530033	5,61387	Likely	22.673
1506	LIVE NATION ESPANA, SAU	03-2014	16.919	184	9,736193	5,214274	4,521918	0,7001137	6,458835	Likely	16.735
1381	INTERPARTNER ASSISTANCE SERV_ ESPANA, S_	03-2014	16.076	5.708	9,685083	8,649669	1,035413	0,2414655	4,288039	Possible	10.368
444	CEMENGAL SA	03-2014	74	8.234	4,304065	9,016034	-4,711969	0,9562404	-4,927599	Possible	8.160
1247	IBERDROLA GENERACION, S_A_U_	03-2014	6.121	3.025	8,719409	8,014724	0,7046847	0,1552985	4,537615	Possible	3.095
575	COMUNIDAD DE PROPIETARIOS APARTOTEL MEL	03-2014	8.356	5.761	9,030735	8,658912	0,3718232	0,0885171	4,20058	Possible	2.595
1240	IBERDROLA DISTRIBUCION ELECTRICA, S_A_U_	03-2014	854	474	6,749855	6,16185	0,5880053	0,120709	4,871262	Possible	380
1907	REPSOL TESORERIA Y GESTION FINANCIERA SA	03-2014	3.636	4.000	8,198639	8,294131	-0,095492	0,019079	-5,005062	Likely	364
2033	SERVICIO DE AGUAS Y SANEAMIENTO DE TERUE	03-2014	458	337	6,126869	5,821554	0,3053155	0,072308	4,222432	Possible	121
1092	GENERAL DE TERRENOS Y EDIFICIOS, S_L_	03-2014	2	117	0,6931472	4,765938	-4,072791	0,8210099	-4,960708	Possible	115



MANUEL ORTEGA

THANK YOU FOR YOUR ATTENTION

BANCO DE **ESPAÑA**  
Eurosistema

STATISTICS DEPARTMENT

## 2.2. Use of CBSO in SNA 2008 implementation



FASE (Financial Accounts of the Spanish Economy)

More details in next slides

## 2.2. SNA 2008 implementation: use of CBSO in FASE

### Grossing-up of non financial corp (MENF project)



FASE (Financial Accounts of the Spanish Economy)

#### ❑ **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:

$$c_i = \text{workers DIRCE}^* / \text{workers CBSO}$$

*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)



FASE (Financial Accounts of the Spanish Economy)

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

	Balance sheets		Financial transactions	
	FA	L	FA	L
Currency and deposits	Currency (1)		Currency (1)	
Debt securities				
Loans				
Listed shares				
Unlisted shares		(2)		
Other equity		(3)		(3)
Mutual fund shares				
Insurance, pension and standardised guarantees		(4)		(4)
Financial derivatives and stock options		(4)		
Trade credits	(5)	(5)	(5)	(5)
Other accounts receivable				



## 2.2. SNA 2008 implementation: use of CBSO in FASE

### Grossing-up of non financial corp (MENF project)



FASE (Financial Accounts of the Spanish Economy)

**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**
  - Market value = ONR (Profits)/[r (Discount rate) +3%]***
  - r = IRR from stock market***
  - 3% = illiquidity premium***
- **[3] Shares held by general government (State portfolio in NFCs)**
  - Book value or market value (for public liability companies)***
- **[4] Pension entitlements / Stock options**
  - Accounting data provided by companies (actuarial calculations)***
- **[5] Trade credits (aim: to maintain same structure of balance sheet)**
  - R1 = suppliers / MFI loans***
  - R2 = clients / suppliers***
  - Information on commercial paper discounted at MFIs***
  - Ratio loans granted / received from RoW***

## 2.2. Other uses of CBSO in FASE: SNA 2008, Stock Options at NFCs



FASE (Financial Accounts of the Spanish Economy)

### 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 they 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



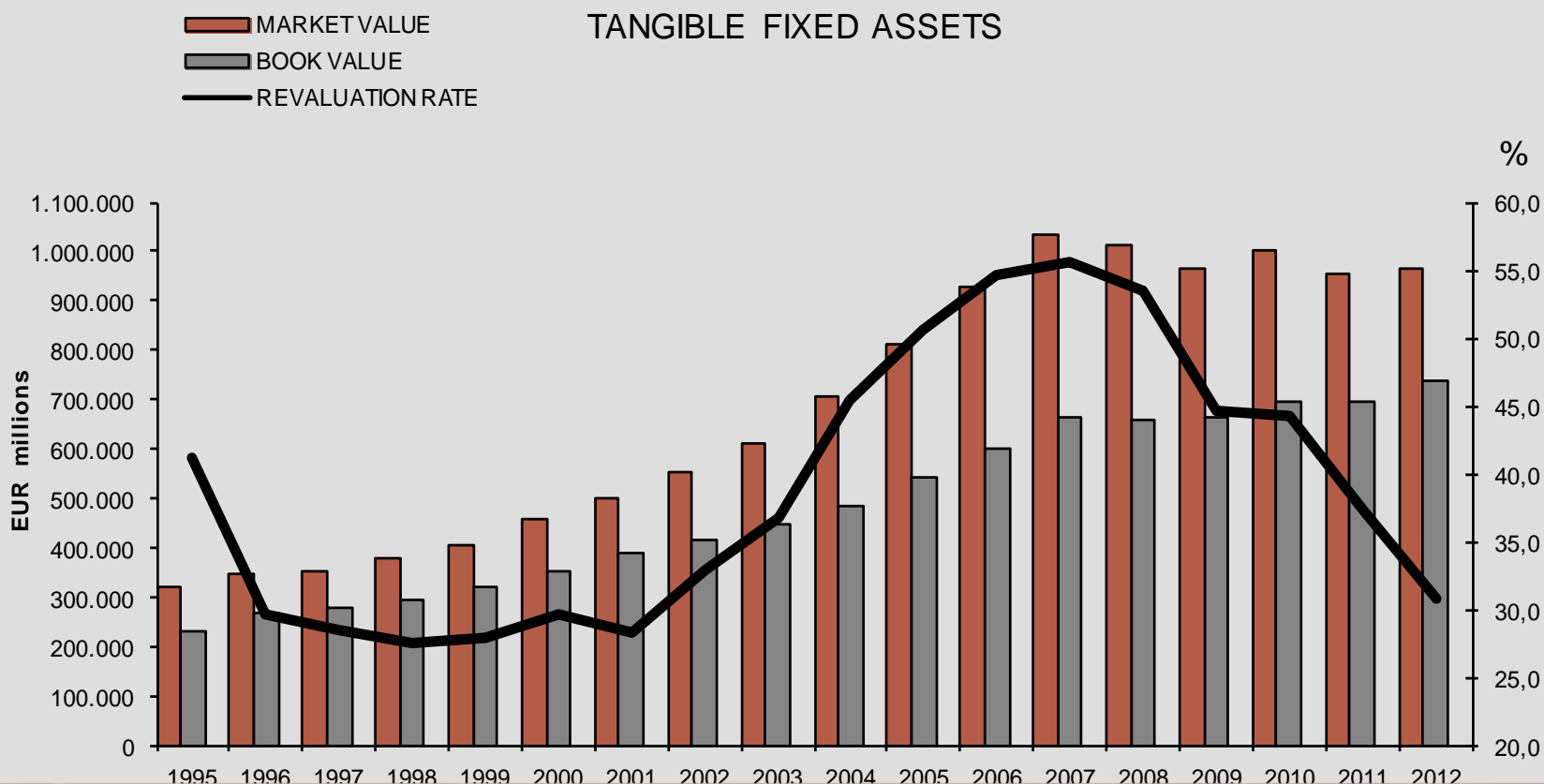
FASE (Financial Accounts of the Spanish Economy)

- 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**