# SECTORAL ANALYSIS OF MANUFACTURE OF FOOD PRODUCTS

Central Balance-Sheet Studies

*November 2011*

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Banco de Portugal
EUROSYSTEM

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# FOREWORD

This analysis is based on data obtained from Simplified Corporate Information (IES) and held in the Central Balance-Sheet Database of Banco de Portugal. Through IES, enterprises are able to meet their obligation to report their annual accounts simultaneously to the Ministries of Finance and Justice, Banco de Portugal and Instituto Nacional de Estatística - INE (Statistics Portugal). The IES is usually reported within six and a half months of the end of the financial year, which, for most enterprises resident in Portugal, corresponds to 15 July of the year following the reference year. As regards data for 2010, and after the changes introduced into the accounting regulations applicable to most enterprises, the deadline for IES submission was extended to 30 September 2011. The IES submission relating to 2010 is the first corporate annual account report complying with the new Accounting Normalisation System, thus discontinuing some of the accounting concepts based on the old Official Chart of Accounts.

Therefore, most recent data available in the Central Balance-Sheet Database of Banco de Portugal for the Manufacture of Food Products sector refer to 2009. The Central Balance-Sheet Database also includes preliminary data for 2010, based on quarterly accounting data reported through the Quarterly Survey of non-financial corporations (NFC). This Survey is conducted by Statistics Portugal and Banco de Portugal among a group of enterprises, in order to obtain information on a small number of economic and financial variables. The answers gathered through this Survey, from approximately 3,000 enterprises, cover a significant proportion of the situation and activity of the NFC sector in Portugal and may be used to monitor their overall evolution. However, the quarterly results cannot be used to review the situation of NFCs in detail, due to the uneven nature of the Survey's coverage of the different economic sectors and size classes.

Furthermore, this Study includes some additional details for the year 2010 and the first half of 2011 as regards bank loans and debt securities financing, drawing from other databases in Banco de Portugal's Statistics Department, namely the Central Credit Register and the Securities Statistics Integrated System.

## SUMMARY

This publication examines the economic and financial situation of enterprises in the *Manufacture of Food Products* sector, based on information compiled by the Central Balance-Sheet Database of Banco de Portugal. This analysis focuses chiefly on the 2006-2009 period, for which there are detailed data on most enterprises in the sector, making it possible to evaluate their behaviour in some detail.

In 2009, the *Manufacture of Food Products* sector represented approximately 14% of the number of enterprises, 13% of the number of employees and 16% of turnover in *Manufacturing*. Considering NFCs as a whole, this sector represented 1.5% of the number of enterprises and around 3% of either the number of employees or turnover. Compared to the overall results of international trade, *Manufacture of Food Products* was responsible for more than 6% of national exports of goods in 2009.

Among the main characteristics of the *Manufacture of Food Products* sector in 2009 were, by enterprise size, small and medium-sized enterprises, responsible for 66% of the number of employees and 55% of turnover. In terms of their geographical location, enterprise head offices were chiefly concentrated in coastal areas. As regards their legal nature, public limited companies were predominant in this sector, and were responsible for more than 69% of total turnover. Turning to their maturity, enterprises established for more than 20 years prevailed in this sector (63% of total turnover), as opposed to enterprises established for less than 10 years (representing 12% of total turnover).

The most important activities in the *Manufacture of Food Products* sector related to *CAE 107 – Manufacture of bakery and farinaceous products*, responsible for 63% of the enterprises, 44% of the total number of employees, but only 14% of turnover. This latter variable was relatively well distributed across the different activities comprised in *Manufacture of Food Products*, the biggest share of which, 19% related to *CAE 101 – Processing and preserving of meat and production of meat products*.

Finally, the *Manufacture of Food Products* sector was also a market with no indication of business concentration, largely due to *CAE 107 – Manufacture of bakery and farinaceous products*, where the enterprise market share distribution was rather homogeneous. At the other end was *CAE 105 – Manufacture of dairy products*, where the five major enterprises in terms of market share aggregated more than 70% of turnover and more than half the number of employees in this activity.

Data on activity available in the Central Balance-Sheet Database of Banco de Portugal in 2009 pointed to a significant decline in *Manufacture of Food Products* turnover (7%). However, Earnings before interest, taxes, depreciation, and amortization (EBITDA) – grew by 5% and return on equity increased by 2.3 p.p., exceeding 5%. A key element for this EBITDA growth was the fall in operating costs of enterprises in this sector, whereas developments in return on equity were mainly due to a strong contraction in financial costs (22%).

The analysis by enterprise size revealed that in 2009 developments in the *Manufacture of Food Products* sector were rather influenced by large enterprises. Although this class showed a very significant fall in aggregate turnover (6%), its EBITDA increased (9%) and maintained the best return on equity (9%) in all size classes in the sector. By economic sector, the fall in turnover was broadly based. As regards aggregate EBITDA growth, however, reference should be made to the contributions from *CAE 107 – Manufacture of bakery and farinaceous products* (3.2 p.p.) and *CAE 101 – Processing and preserving of meat and production of meat products* (2.4 p.p.), whereas *CAE 105 – Manufacture of dairy products* had the most significant negative contribution (1.4 p.p.).

In terms of enterprise capital structure, the capital ratio level in *Manufacture of Food Products* stood at 37% in 2009, approximately 4 p.p. above the value for the NFC aggregate in Portugal. Also, the capital ratio level, in average terms, rose in tandem with enterprise size.

The sector's financing needs were mainly fulfilled through financial debt and trade credits (81%). Nonetheless, the retrenchment in activity led to a decline in *Manufacture of Food Products* liabilities (4%) in 2009. The largest

contribution was made by trade credits (-2 p.p.), followed by bank loans and debt securities aggregate (-1.3 p.p.). In turn, financial debt-related costs declined by 22%, decreasing in all size classes in the sector. The combination of these factors led to an improvement in the solvency indicators of *Manufacture of Food Products*, reflecting a more favourable position than that of the NFCs in Portugal as a whole. Therefore, 26% of EBITDA in this sector in 2009 was enough to pay interests, while short-term financial debt represented 0.7% of EBITDA (compared with 46% and 1.4% in the NFC aggregate, respectively).

Notwithstanding a decline in 2009, *Manufacture of Food Products* financing through trade credits grew by 9% in the 2006-2009 period. As regards enterprises in this sector, days payable outstanding were lower than days sales outstanding in 2009 (61 days and 80 days respectively). However, these did not represent the situation in most enterprises. Indeed, an analysis of the individual enterprises shows that approximately 75% of *Manufacture of Food Products* enterprises had positive differentials between the respective days sales outstanding and days payable outstanding, i.e. they received from their customers earlier than they paid to suppliers. This situation was favourable to a large majority of enterprises in the sector, but was not reflected in the result obtained for the sector average. By size class, results were more positive in microenterprises, where more than 75% of the enterprises had higher days payable outstanding than days sales outstanding.

Additional information from the Central Credit Register shows that loans granted by resident credit institutions to enterprises in the *Manufacture of Food Products* sector declined by 10% in 2009, stagnated in 2010, and increased by 3% in the first half of 2011. The non-performing loans ratio has deteriorated, to stand at 3.7% at the end of the first half of 2011, when approximately 20% of the enterprises in the sector experienced at least one non-performing situation. Nonetheless, *Manufacture of Food Products* continued to compare favourably with the NFC sector, where on the same date the non-performing ratio attained 5.7%, reflecting the situation in approximately 23% of the enterprises.

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## ACRONYMS

| | |
|---|---|
| **CAE** | Portuguese Classification of Economic Activities |
| **COGS** | Cost of goods sold and materials consumed |
| **EBITDA** | Earnings before interest, taxes, depreciation and amortisation |
| **SES** | Supplies and external services |
| **HHI** | Herfindahl-Hirschman Index |
| **IES** | Simplified Corporate Information |
| **INE** | Statistics Portugal |
| **p.p.** | Percentage points |
| **GDP** | Gross domestic product |
| **SMEs** | Small and medium-sized enterprises (excluding microenterprises) |
| **ESA 95** | European System of National and Regional Accounts in 1995 |
| **NFCs** | Non-financial corporations |

# SECTORAL ANALYSIS OF MANUFACTURE OF FOOD PRODUCTS


INTRODUCTION 1

CHARACTERISATION OF THE MANUFACTURE OF FOOD PRODUCTS SECTOR 2

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# I SECTORAL ANALYSIS OF MANUFACTURE OF FOOD PRODUCTS

## 1 INTRODUCTION



The *Sectoral Analysis of Manufacture of Food Products* evaluates the economic and financial situation of enterprises operating in the *Manufacture of Food Products* sector, based on information compiled by the Central Balance-Sheet Database of Banco de Portugal[1]. This database contains information on the enterprises belonging to the Non-Financial Corporations (NFCs) sector in Portugal, therefore excluding sole proprietors[2]. The analysis covers the 2006-2009 period, and includes some additional details for 2010 and the first half of 2011 as regards financing through bank loans and debt securities.

This study not only presents aggregate data, which can be easily obtained from Banco de Portugal's statistical publications[3], but also sets out to characterise these aggregates for the range of selected indicators, as regards the structure of individual results of the enterprises[4] forming the sector. For this purpose, data are frequently presented in terms of their breakdown by quartile[5], thus avoiding distortions caused by possible extreme observations biasing the analysis of aggregate results[6].

The study also analyses the contributions of different enterprise sub-groups in order to determine the aggregate results of *Manufacture of Food Products*. In this field, enterprises are broken down by Group[7] of the Portuguese Classification of Economic Activities – 3rd revision (CAE-Rev.3) and also by size class. In terms of size, three main classes are considered: micro, small and medium-sized and large enterprises. The criteria used for this classification were taken from European Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises. According to this Recommendation, a microenterprise is defined as an enterprise which employs fewer than ten persons and whose annual turnover and/or annual balance sheet total does not exceed €2 million. For the purpose of this *Study*, small and medium-sized enterprises (SMEs) exclude microenterprises, and are defined as those enterprises which employ fewer than 250 persons and have an annual turnover that does not exceed € 50 million

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1 The Central Balance-Sheet Database is a database with economic and financial information on NFC in Portugal. Information used in this *Study* is based on annual accounting data reported within the scope of the IES (Simplified Corporate Information), which cover nearly all enterprises in the NFC sector. For further details on the activities of the Central Balance-Sheet Database, please refer to the Supplements to the Statistical Bulletin 5/2005 – *Statistics on Non-Financial Corporations from the Central Balance-Sheet Database* and 1/2008 – *Simplified reporting: Inclusion of the Simplified Corporate Information in the Statistics on Non-Financial Corporations from the Central Balance-Sheet Database*, as well as the *Central Balance-Sheet Study |1, November 2010 – Enterprise and Sector Tables*.

2 The NFC sector represents one of the economy's institutional sectors. The institutional sectorisation of economic agents is carried out in accordance with the 1995 European system of national and regional accounts (ESA 95), approved by Council Regulation (EC) No 2223/96 of 25 June 1996. ESA95 is a harmonised reference on the compilation methodology and deadline for release of the national accounts of EU countries, including statistics of the responsibility of Banco de Portugal. Based on this regulation, sole proprietors are included in the households' institutional sector. Hence, all data throughout this document exclude sole proprietors (in Portugal these account for around two-thirds of the number of enterprises, but only for 5% of the respective turnover).

3 Central Balance-Sheet Database statistics are published in Banco de Portugal's Statistical Bulletin (Chapter G) and in Sector Tables, both available on the Banco de Portugal's website and BPstat | Statistics online.

4 For the sake of simplicity, this Study refers interchangeably to the expressions 'enterprise' and 'corporation', but both exclude the sole proprietor aggregate.

5 In order to calculate quartiles, the enterprise values for the indicator under analysis are considered in ascending order. The first quartile corresponds to the value of the enterprise in the position corresponding to 25% of the ordered sample (i.e. where 25% of enterprises show a lower value for that indicator and 75% a higher value). The second quartile (or median) corresponds to 50%, i.e. the indicator value for this enterprise divides the breakdown into two halves, where one half of the enterprises show a higher value and the other half a lower value. The third quartile corresponds to the 75% position of the ordered sample (75% of enterprises show a lower value for that indicator, and only 25% show a higher value). The inter-quartile range (obtained as the difference between the third and first quartiles) provides an indication of distribution dispersion. For further details on the calculation of these statistical measures, please refer to the Central Balance-Sheet Study Nr 1, November 2010 – Enterprise and Sector Tables.

6 Moreover, annual data in the scope of this analysis cover information on all enterprises of the *Manufacture of Food Products* sector reporting to the IES. In view of the non-exhaustive coverage of the population of enterprises in Portugal in the period prior to IES, the results of the historical series in the statistical publications of Banco de Portugal are based on data from common enterprises over two consecutive years.

7 According to the CAE-Rev.3, the *Manufacture of Food Products sector* (Division 10) includes the following Groups: CAE 101 – Processing and preserving of meat and production of meat products; CAE 102 – Processing and preserving of fish, crustaceans and molluscs; CAE 103 – Processing and preserving of fruit and vegetables; CAE 104 – Manufacture of vegetable and animal oils and fats; CAE 105 – Manufacture of dairy products; CAE 106 – Manufacture of grain mill products, starches and starch products; CAE 107 – Manufacture of bakery and farinaceous products; CAE 108 – Manufacture of other food products; CAE 109 – Manufacture of prepared animal feeds.

and/or an annual balance sheet total that does not exceed € 43 million. Large enterprises are any enterprises which are not classified above.

The analysis starts with the characterisation of *Manufacture of Food Products*, evaluating the structure in terms of economic activity, size class, geographical location, maturity and legal nature of the enterprises. It also presents data on business dynamics and concentration. The characterisation of the sector uses pre-2006 data, based on Banco de Portugal estimates for the population of NFCs in Portugal. This analysis also evaluates the economic and financial situation of the sector enterprises. For this purpose, turnover developments over the period under review are examined, in order to determine the extent to which these are reflected in business profitability. This implies a breakdown of the effects having a bearing on this profitability in the operating and financial components of business activity, also seeking to provide some information on the solvency capacity of the sector.

This Study also compares the situation in *Manufacture of Food* Products and in the NFC aggregate in Portugal for all indicators under analysis. For further details on the results obtained for the NFC aggregate, please see Studies Nrs 2 and 3 of the Central Balance-Sheet Database of Banco de Portugal (December 2010 and September 2011), entitled: *Structure and Dynamics of Non-financial Corporations in Portugal* and *Sectoral Analysis of Non-financial Corporations in Portugal*.

## 2 CHARACTERISATION OF THE MANUFACTURE OF FOOD PRODUCTS SECTOR

This Section uses data for years prior to 2006, based on the population of NFCs in Portugal in the statistical databases made available by Banco de Portugal. These have made it possible to evaluate developments in the *Manufacture of Food Products* sector, in terms of its characteristics and composition over a decade (2000-2009). Information from the IES, starting in 2006, made a considerable contribution to assessing that population.

### 2.1 Structure

The *Manufacture of Food Products* sector is one of the 24 Divisions of the *Manufacturing* Section of CAE-Rev.3, and aggregates the *transformation of agriculture, animal production and fishing products into products for human or animal consumption or into intermediate products not directly consumed and intended to be integrated in the chain of production of other activities in Manufacturing.*

In 2009, the *Manufacture of Food Products* aggregated close to 5,600 enterprises, representing 16% of turnover, 13% of sector the number of employees and 14% of the number of enterprises in *Manufacturing*[8] (Table 1). In 2000, with approximately the same weight in number of enterprises (13%), *Manufacture of Food Products* represented 3 p.p. less at the level of both turnover and the number of employees in *Manufacturing*. In 2009, in terms of total NFCs in Portugal, the *Manufacture of Food Products* sector represented approximately 1.5% of the number of enterprises, 3% of the number of employees and 3.4% of turnover.

**Table 1**

**WEIGHT OF THE SECTOR IN MANUFACTURING AND NFC |** *2000 and 2009*

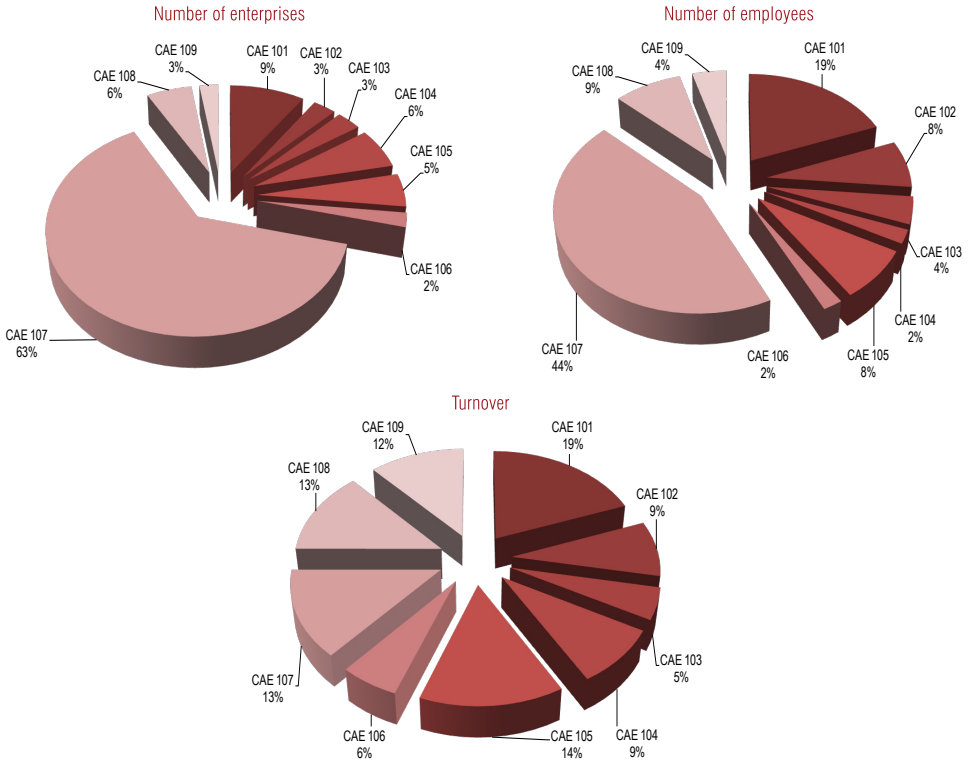
| | | Weight in *Manufacturing* | Weight in NFC |
|---|---|---|---|
| 2000 | Number of Enterprises | 13.0% | 1.8% |
| | Turnover | 13.2% | 3.4% |
| | Number of Employees | 10.0% | 3.4% |
| 2009 | Number of Enterprises | 13.5% | 1.5% |
| | Turnover | 16.2% | 3.4% |
| | Number of Employees | 12.9% | 3.0% |

Chart 1 shows the composition of *Manufacture of Food Products* by CAE Group, based on three quantitative variables. In terms of the number of enterprises and number of employees, this sector was clearly dominated by *CAE 107 – Manufacture of bakery and farinaceous products*, which represented approximately 63% of the number of enterprises and 44% of the number of employees. In terms of turnover, however, this activity did not exceed 14%. Turnover in the *Manufacture of Food Products* was evenly distributed across the different activities covered. Still, *CAE 101 – Processing and preserving of meat and production of meat products* stands out as the most expressive activity, with 19% of turnover. At the opposite end was *CAE 103 – Processing and preserving of fruit and vegetables*, with only 5%.

8 In 2009 *Manufacturing* aggregated in Portugal more than 11% of the enterprises, close to 24% of the number of employees and approximately 21% of turnover in NFCs.

**Chart 1**

**STRUCTURE OF THE SECTOR |** *By CAE-Rev.3 group (2009)*




**Note: CAE 101** – Processing and preserving of meat and production of meat products; **CAE 102** – Processing and preserving of fish, crustaceans and molluscs; **CAE 103** – Processing and preserving of fruit and vegetables; **CAE 104** – Manufacture of vegetable and animal oils and fats; **CAE 105** – Manufacture of dairy products; **CAE 106** – Manufacture of grain mill products, starches and starch products; **CAE 107** – Manufacture of bakery and farinaceous products; **CAE 108** – Manufacture of other food products; **CAE 109** – Manufacture of prepared animal feeds.

As a result of the above specificities of *CAE 107 – Manufacture of bakery and farinaceous products*, the other CAE Groups played more relevant roles in turnover of *Manufacture of Food Products* than in number of enterprises.

Development-wise, the structure of *Manufacture of Food Products* did not undergo significant changes over the last decade. Nonetheless, all indicators under analysis showed a slightly increased relevance of *CAE 107 – Manufacture of bakery and farinaceous products*, as opposed to *CAE 103 – Processing and preserving of fruit and vegetables*, *CAE 104 – Manufacture of vegetable and animal oils and fats* and *CAE 109 – Manufacture of prepared animal feeds*.

Considering the breakdown of *Manufacture of Food Products* based on **enterprise size**, SMEs stand out in the sector, aggregating 32% of the enterprises, 66% of the number of employees and 55% of turnover. This compares with 13%, 46% and 43% respectively, in the NFC aggregate in Portugal (Table 2). In turn, microenterprises in this sector represented 20 p.p. less in the number of enterprises and 10 p.p. less in the number of employees and turnover than in total NFCs. Large enterprises also had a smaller weight in *Manufacture of Food Products*, chiefly in number of employees.

**Table 2**

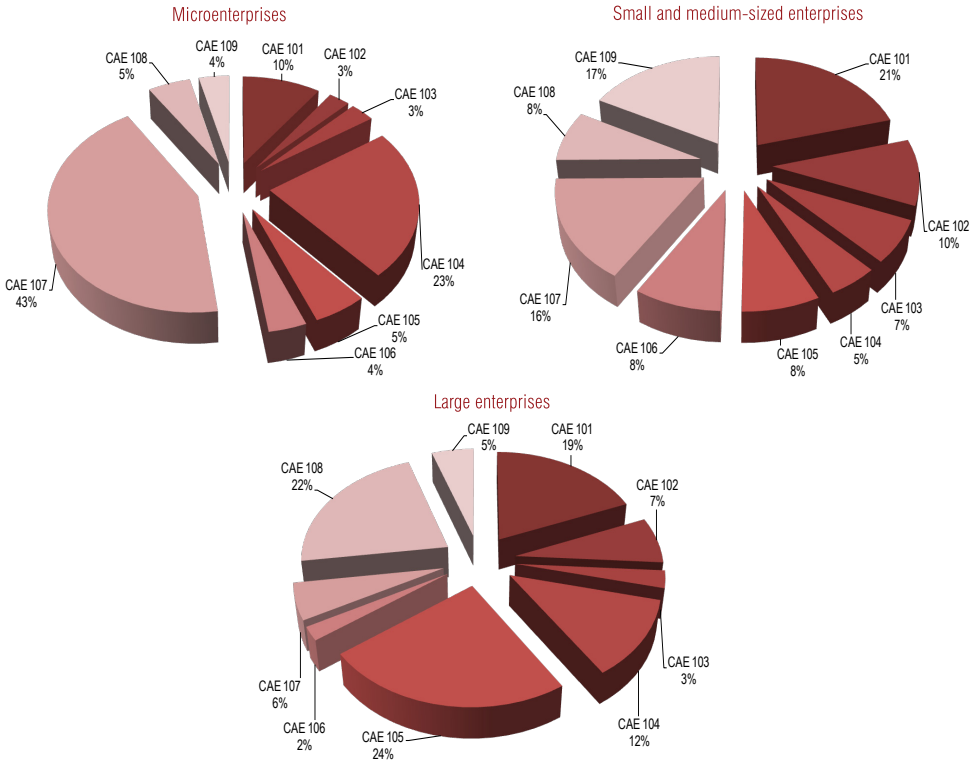
**STRUCTURE OF THE SECTOR |** *By enterprise size (2009)*

| | | NFC | Manufacture of Food Products |
|---|---|---|---|
| Enterprises | Microenterprises | 87.2% | 67.0% |
| | Small and medium-sized enterprises | 12.5% | 32.2% |
| | Large enterprises | 0.3% | 0.7% |
| Turnover | Microenterprises | 15.7% | 5.9% |
| | Small and medium-sized enterprises | 43.1% | 55.3% |
| | Large enterprises | 41.2% | 38.8% |
| Employees | Microenterprises | 25.5% | 15.2% |
| | Small and medium-sized enterprises | 46.0% | 65.7% |
| | Large enterprises | 28.4% | 19.1% |

Chart 2 shows the structure of each size class, based on the turnover generated by each CAE Group. Therefore, *CAE 107 – Manufacture of bakery and farinaceous products* was predominant in microenterprises and was responsible for 43% of turnover. As regards SMEs, in spite of great homogeneity among the different activities related to this indicator, the most relevant groups were *CAE 101 – Processing and preserving of meat and production of meat products* (21%), *CAE 109 – Manufacture of prepared animal feeds* (17%) and *CAE 107 – Manufacture of bakery and farinaceous products* (16%). In large enterprises, three activities jointly aggregated 65% of total turnover: *CAE 105 – Manufacture of dairy products* (24%), *CAE 108 – Manufacture of other food products* (22%) and *CAE 101 – Processing and preserving of meat and production of meat products* (19%).

**Chart 2**

**STRUCTURE OF ENTERPRISE SIZE CLASSES** | *Turnover - 2009*




**Note: CAE 101** – Processing and preserving of meat and production of meat products; **CAE 102** – Processing and preserving of fish, crustaceans and molluscs; **CAE 103** – Processing and preserving of fruit and vegetables; **CAE 104** – Manufacture of vegetable and animal oils and fats; **CAE 105** – Manufacture of dairy products; **CAE 106** – Manufacture of grain mill products, starches and starch products; **CAE 107** – Manufacture of bakery and farinaceous products; **CAE 108** – Manufacture of other food products; **CAE 109** – Manufacture of prepared animal feeds.

In terms of **geographical location**[9], the *Manufacture of Food Products* sector was mostly concentrated in coastal areas, especially in the Lisbon and Oporto districts, in line with the general distribution of NFCs in Portugal (Illustration 1). The Lisbon district, however, had a smaller relative weight (32% of turnover in the sector, compared with 44% in the NFC population in Portugal). When assessed in terms of number of enterprises, it was outpaced by the Oporto district. Overall, there were other more relevant districts in the geographical distribution of *Manufacture of Food Products* than in the NFC population, a characteristic particularly notorious when number of enterprises is the considered variable.

An evaluation of the geographical location of *Manufacture of Food Products* in terms of turnover points to the higher relevance, compared with the NFC population, of the Santarém (from 3% to 9%) and Coimbra (from 2% to 5%) districts, as well as to the greatest importance of some districts away from the coast, such as Viseu (from 2% to 4%) and Castelo Branco (from 0.7% to 3%). In what concerns Autonomous Regions, Ponta Delgada was more relevant in *Manufacture of Food Products* (4%, compared with 1% in NFC population) to the detriment of Funchal (1%, compared with 5% in NFC population).

9 Geographical location means the district where the enterprise head office is located.

Table 3 presents the main locations in 2009 of each CAE Group integrating *Manufacture of Food Products*. Again the Lisbon and Oporto districts stood out, systematically being the most relevant locations. The exceptions to be noted were in *CAE 103 – Processing and preserving of fruit and vegetables*, in terms of turnover and number of employees (Santarém with 31% and 22% respectively), *CAE 102 – Processing and preserving of fish, crustaceans and molluscs*, in terms of the number of enterprises and number of employees (Aveiro with 18% and 17% respectively) and finally *CAE 104 – Manufacture of vegetable and animal oils and fats*, where Lisbon and Oporto were not even among the three main locations in terms of the number of enterprises (Castelo Branco with 23%, Santarém with 12% and Bragança with 10%).

**Illustration 1**

**GEOGRAPHICAL LOCATION |** *Portugal (2009)*

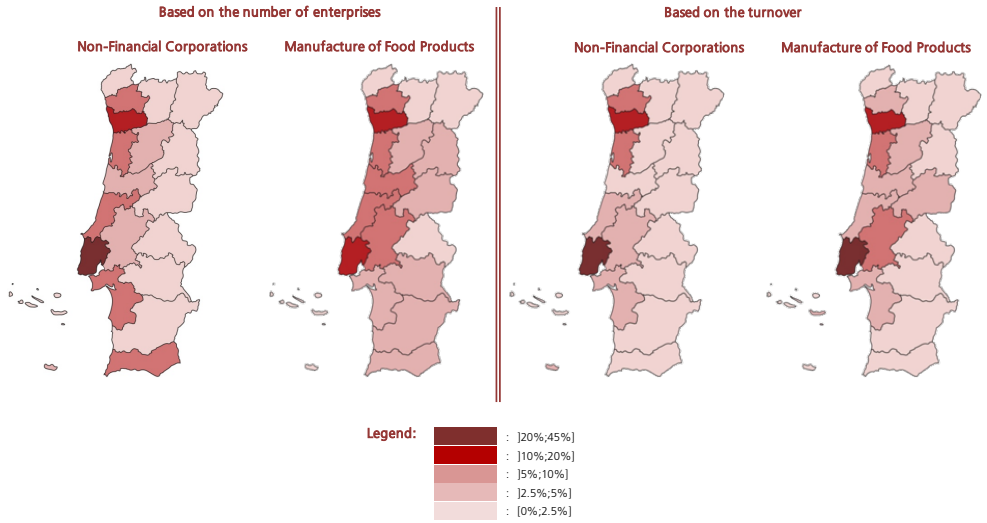


**Table 3**

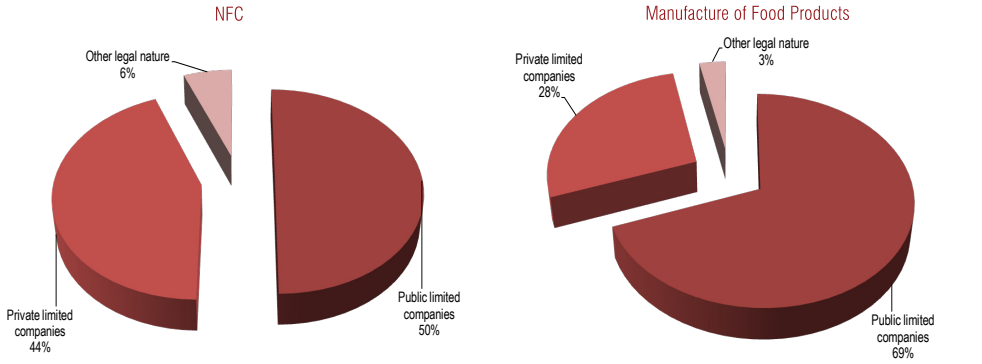
**GEOGRAPHICAL LOCATION** | *By CAE Rev.3 Group (2009)*

| CAE Rev. 3 Group | | Number of enterprises | | Turnover | | Employees | |
|---|---|---|---|---|---|---|---|
| | | District (TOP 3) | % of total | District (TOP 3) | % of total | District (TOP 3) | % of total |
| CAE 101 | Processing and preserving of meat and production of meat products | Lisbon | 13.3% | Lisbon | 30.7% | Lisbon | 27.9% |
| | | Oporto | 9.4% | Santarém | 13.7% | Braga | 11.1% |
| | | Braga | 8.7% | Coimbra | 11.2% | Coimbra | 9.5% |
| CAE 102 | Processing and preserving of fish, crustaceans and molluscs | Aveiro | 17.5% | Lisbon | 19.3% | Aveiro | 16.5% |
| | | Oporto | 14.4% | Aveiro | 17.0% | Oporto | 14.2% |
| | | Leiria | 11.3% | Viseu | 12.9% | Ponta Delgada | 11.5% |
| CAE 103 | Processing and preserving of fruit and vegetables | Lisbon | 15.6% | Santarém | 30.7% | Santarém | 21.5% |
| | | Santarém | 9.2% | Lisbon | 19.8% | Lisbon | 21.3% |
| | | Setúbal | 8.1% | Coimbra | 8.7% | Coimbra | 12.8% |
| CAE 104 | Manufacture of vegetable and animal oils and fats | Castelo Branco | 22.9% | Lisbon | 61.6% | Lisbon | 36.1% |
| | | Santarém | 11.9% | Setúbal | 11.1% | Beja | 12.8% |
| | | Bragança | 9.9% | Viseu | 8.1% | Aveiro | 12.5% |
| CAE 105 | Manufacture of dairy products | Lisbon | 10.7% | Oporto | 45.3% | Oporto | 27.8% |
| | | Évora | 10.0% | Ponta Delgada | 14.1% | Ponta Delgada | 15.9% |
| | | Guarda | 9.7% | Castelo Branco | 11.9% | Lisbon | 13.8% |
| CAE 106 | Manufacture of grain mill products, starches and starch products | Oporto | 18.5% | Oporto | 30.4% | Oporto | 26.8% |
| | | Lisbon | 14.5% | Lisbon | 20.8% | Lisbon | 18.5% |
| | | Santarém | 12.1% | Aveiro | 16.5% | Santarém | 12.7% |
| CAE 107 | Manufacture of bakery and farinaceous products | Oporto | 20.8% | Lisbon | 26.3% | Lisbon | 20.2% |
| | | Lisbon | 12.6% | Oporto | 19.5% | Oporto | 18.5% |
| | | Aveiro | 12.1% | Aveiro | 8.6% | Braga | 9.2% |
| CAE 108 | Manufacture of other food products | Lisbon | 27.2% | Lisbon | 64.6% | Lisbon | 48.6% |
| | | Oporto | 20.1% | Oporto | 14.0% | Oporto | 17.8% |
| | | Braga | 8.0% | Santarém | 8.3% | Santarém | 6.5% |
| CAE 109 | Manufacture of prepared animal feeds | Lisbon | 29.0% | Lisbon | 31.1% | Lisbon | 23.6% |
| | | Leiria | 16.8% | Leiria | 18.4% | Leiria | 14.9% |
| | | Santarém | 13.0% | Santarém | 13.3% | Setúbal | 12.0% |

By **legal nature**[10] of the enterprises, turnover in *Manufacture of Food Products* was generated almost exclusively by enterprises classified as public limited companies and private limited companies (Chart 3), a trend that had already been seen in this sector in 2000. Compared with the NFC aggregate in Portugal, turnover originated in *Manufacture of Food Products* by public limited companies was higher (69%, vis-à-vis 50% in total NFC) to the detriment of private limited companies (27%, vis-à-vis 44%).

**Chart 3**

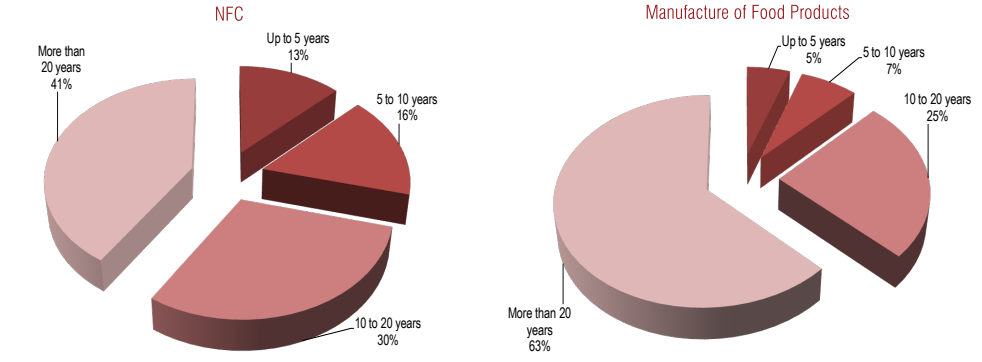
**STRUCTURE OF THE SECTOR |** *By legal nature (turnover - 2009)*




By enterprise **maturity**[11], the *Manufacture of Food Products* sector was dominated by enterprises with more than 20 years. This can be observed in Chart 4 presenting the structure of the sector in 2009 by enterprise maturity, which is similar to that for 2000 (even though the share of enterprises with more than 20 years was relatively smaller – 54% of turnover in the sector). When compared with the NFC aggregate, the class of enterprises with more than 20 years showed a higher share in *Manufacture of Food Products* (63% in terms of turnover, that compares with 41% in NFC). This means that younger enterprises were less relevant in the sector. In effect, whereas in the NFC aggregate enterprises with less than five years were responsible for 13% of turnover, in *Manufacture of Food Products* that share was only 5%. In enterprises with five to ten years, the difference between both sectors was 9 p.p. (16% in total NFC and 7% in *Manufacture of Food Products*), and in enterprises with 10 to 20 years, it stood at 5 p.p. (30% in NFC and 25% in *Manufacture of Food Products*).

**Chart 4**

**STRUCTURE OF THE SECTOR |** *By enterprise maturity (turnover - 2009)*




**10** Considering the numerous categories included in national regulations for the classification of enterprises by legal nature, we opted for highlighting only public limited companies and private limited companies, whereas the remaining legal nature is aggregated under 'other legal nature'.

**11** The enterprise maturity corresponds to the age of the enterprise at the analysis reference date. In order to define relatively homogeneous groups, meaningful at produced information level, four maturity classes were built: up to and including five years; from five to and including ten years; from 10 to and including 20 years; and more than 20 years.

## 2.2 Business concentration

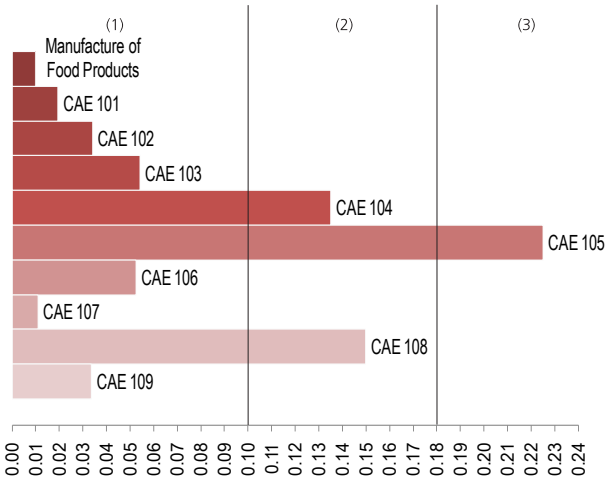
With the purpose of characterising the *Manufacture of Food Products* sector in terms of business concentration, the Herfindahl-Hirschman Index (HHI) was calculated, based on the market share of each enterprise in its activity sector[12] (Chart 5).

Based on the results obtained, *Manufacture of Food Products* corresponded to a market with no indication of business concentration. Broken down into the CAE Groups integrating this sector, *CAE 107 – Manufacture of bakery and farinaceous products* was the group where the market share was most weak, i.e. represented the lowest business concentration. At the opposite end was *CAE 105 – Manufacture of dairy products* where the HHI classified it in a highly concentrated market segment. The five enterprises in this CAE Group with highest market share were responsible for more than 70% of turnover and close to half the number of employees in the aggregate.

*CAE 104 – Manufacture of vegetable and animal oils and fats*, with a HHI of 0.14, and *CAE 108 – Manufacture of other food products*, with a HHI of 0.15, showed some indication of business concentration. The other activities in *Manufacture of Food Products* revealed a low level of business concentration.

**Chart 5**

**HERFINDAHL-HIRSCHMAN INDEX (2009)**




**Note**: **(1)** HHI<0.1, i.e. market with no indication of business concentration; **(2)** 0.1<HHI<0.18, i.e. market with some business concentration; **(3)** HHI>0.18 , i.e. market with high business concentration. **CAE 101** – Processing and preserving of meat and production of meat products; **CAE 102** – Processing and preserving of fish, crustaceans and molluscs; **CAE 103** – Processing and preserving of fruit and vegetables; **CAE 104** – Manufacture of vegetable and animal oils and fats; **CAE 105** – Manufacture of dairy products; **CAE 106** – Manufacture of grain mill products, starches and starch products; **CAE 107** – Manufacture of bakery and farinaceous products; **CAE 108** – Manufacture of other food products; **CAE 109** – Manufacture of prepared animal feeds.

12 The HHI index assumes values between 1/n and 1, with values between 1/n and 0.1 denoting a market with no indication of business concentration, between 0.1 and 0.18 representing markets with some concentration and above 0.18 denoting high business concentration. The value 1 is assumed in a monopoly situation where an enterprise holds the whole market share.

The business concentration levels shown by most CAE Groups in *Manufacture of Food Products* did not undergo significant changes over the last decade, and maintained a relative position with one another. *CAE 104 – Manufacture of vegetable and animal oils and fats* was an exception, with an increase in the business concentration level over the last ten years, given that the HHI rose from 0.1 in 2000 to 0.14 in 2009 (in 2000, the five major enterprises in this Group represented slightly more than 60% of the respective turnover, whereas in 2009 it represented 73%).

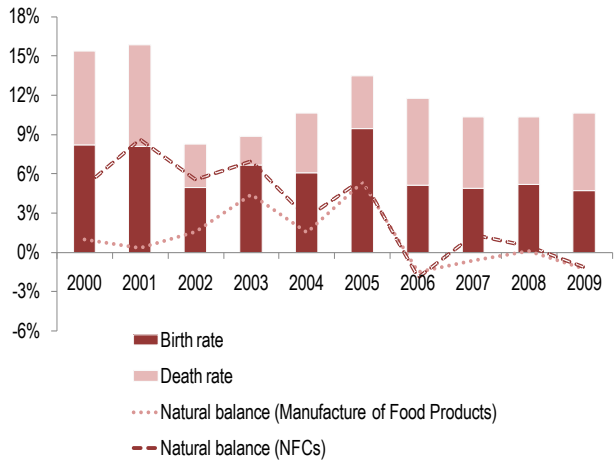
## 2.3 Dynamics

Chart 6 presents the churn rate[13] of the *Manufacture of Food Products* sector. In the period under review, this rate reached its peak (around 16%) in 2000 and 2001, similarly to the NFC aggregate (with churn rates ranging between 20% and 25%). In the subsequent periods this rate was more stable and ranged between 8% and 13% (compared with 13% and 18% for the NFC aggregate).

The natural balance (given by the difference between the birth rate and the death rate) in *Manufacture of Food Products* was always lower than in the NFC aggregate, although following the same trend. After 2005, this indicator even registered negative figures in some periods, reflecting a decline in the number of enterprises operating in the *Manufacture of Food Products* sector.

**Chart 6**

**CHURN RATE**

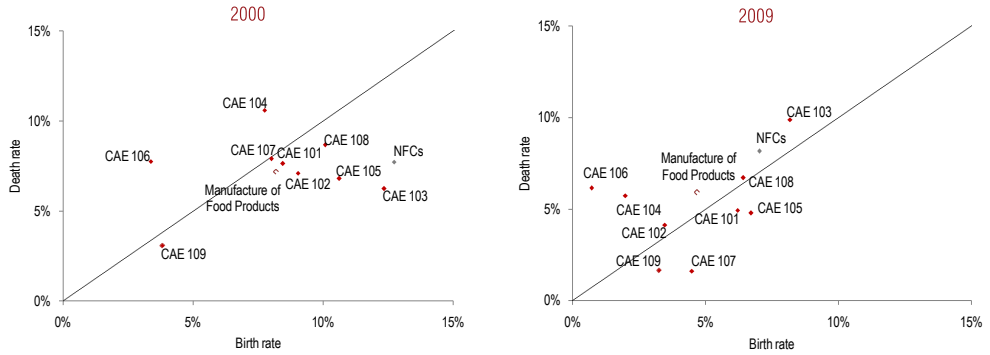



By CAE Group, most activities relating to *Manufacture of Food Products* had smaller birth rates and death rates in 2009 than in 2000 (Chart 7). Noteworthy among the activities with negative natural balance in 2009 was *CAE 106 – Manufacture of grain mill products, starches and starch products*. At the opposite end, *CAE 107 – Manufacture of bakery and farinaceous products* had the most positive natural balance.

**13** The churn rate makes it possible to assess the dynamics regarding the creation and closing of enterprises in an economy. It is calculated from the sum of the enterprise birth rate (calculated from the ratio of enterprises starting their activity to the number of active enterprises in the reference period) and the respective death rate (resulting from the ratio of enterprises ceasing their activity to the number of active enterprises in the reference period).

**Chart 7**

**CHURN RATE |** *By CAE-Rev.3 Group*

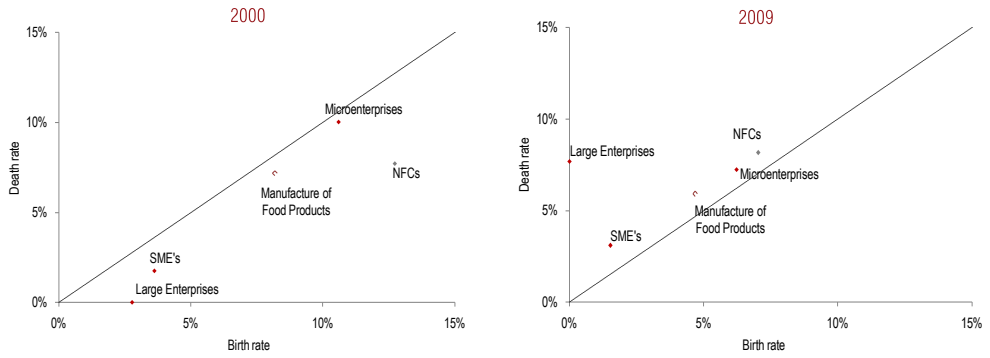



**Note: CAE 101** – Processing and preserving of meat and production of meat products; **CAE 102** – Processing and preserving of fish, crustaceans and molluscs; **CAE 103** – Processing and preserving of fruit and vegetables; **CAE 104** – Manufacture of vegetable and animal oils and fats; **CAE 105** – Manufacture of dairy products; **CAE 106** – Manufacture of grain mill products, starches and starch products; **CAE 107** – Manufacture of bakery and farinaceous products; **CAE 108** – Manufacture of other food products; **CAE 109** – Manufacture of prepared animal feeds.

The decline in the churn rate was also broadly based across all enterprise size classes, as shown in Chart 8. Microenterprises had the highest churn rates in the two years under review, but the natural balance was always close to balance. SMEs and large enterprises in the sector, that in 2000 had clearly positive natural balances, moved to an opposite situation in 2009.

**Chart 8**

**CHURN RATE |** *By enterprise size*




Nonetheless, even with negative natural balances in the most recent periods, the level accumulated over the last ten years showed an expansion in the number of enterprises in the *Manufacture of Food Products* sector, growing from close to 5,000 enterprises in 2000 to approximately 5,600 enterprises in 2009.

# 3 ECONOMIC AND FINANCIAL ANALYSIS

## 3.1 Economic Environment

The evolution of the *Manufacture of Food Products* sector cannot be separated from the situation of NFCs as a whole in Portugal and, ultimately, from the wider context of the Portuguese economy.

The year 2009 was thus characterised by a retrenchment in the Portuguese GDP (2.5%), after a number of years of low growth of economic activity (GDP's year-on-year rate of change was nil in 2008, and stood at 2.4% in 2007 and 1.4% in 2006). GDP grew in 2010 (1.3%), but decelerated throughout the year[14].

The activity of NFCs in Portugal was a key factor in the development of Portuguese GDP in the 2006-2010 period, and was highly dependent on their access to credit. In effect, NFCs in Portugal evinced one of the highest indebtedness levels in the euro area as a whole. At the end of 2010, this sector's financial debt exceeded 150% of GDP (compared with 102% in the euro area), in the wake of a strong acceleration over the last decade (in 2000 it accounted for 114% of GDP)[15].

During most of the period under review in this Study, enterprises benefitted from the relatively favourable financing conditions of the Portuguese economy. In 2010, however, the sovereign debt crisis in the euro area became more acute, and the conditions of access to international financing markets deteriorated sharply, with an impact on enterprise financing in Portugal[16].

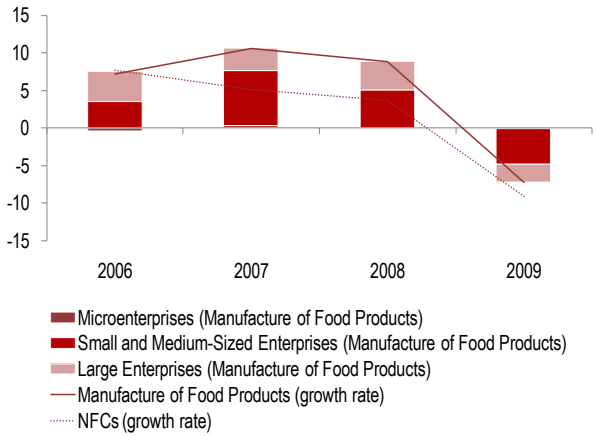
## 3.2 Activity and profitability

### 3.2.1 Turnover

Turnover in *Manufacture of Food Products* increased sharply in the 2006-2008 period, and decreased by 7% in 2009. Nevertheless, in the period under review, growth rates in this sector were systematically above those in NFCs as a whole in Portugal (Chart 9).

**Chart 9**

**TURNOVER |** *Total and by enterprise size*
- annual growth rate (%) and contributions (p.p.)



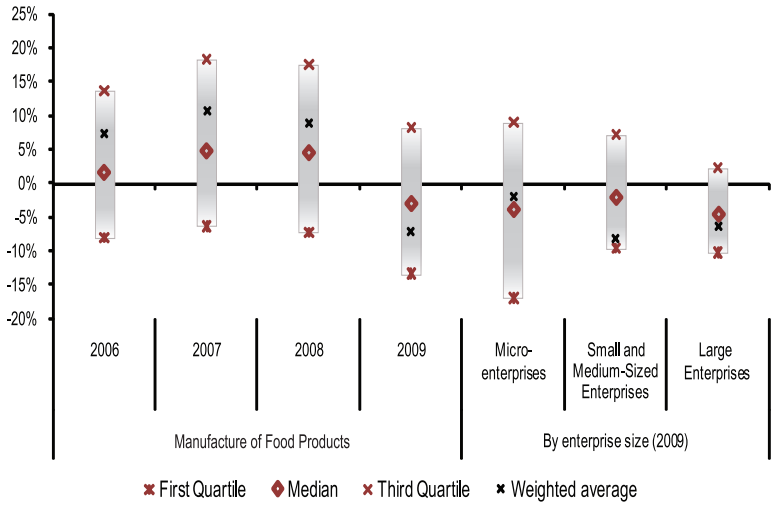

14 All references to GDP developments relate to changes in volume.

15 Data relating to non-consolidated financial accounts of NFCs.

16 For further macroeconomic information, please refer to Banco de Portugal's Annual Report and also to the Economic Bulletin published on a quarterly basis. Both publications are available at *http://www.bportugal.pt*.

**Chart 10**

**TURNOVER |** *Total and by enterprise size*
- quartile distribution of the annual growth rate

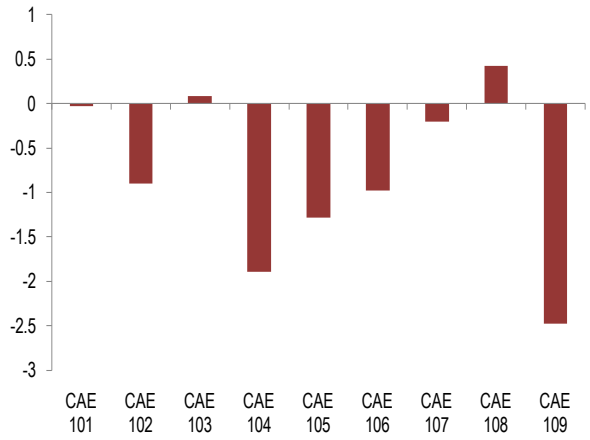



In terms of **enterprise size** the turnover decline in *Manufacture of Food Products* in 2009 was, on average, more marked in SMEs (8%) and large enterprises (6%) than in microenterprises (2%). Considering their weight in the sector (94% in terms of turnover), larger enterprises (SMEs and large enterprises) were behind the results in the *Manufacture of Food Products* sector.

Chart 10 shows that in 2009 turnover declined by more than 3% in half the enterprises (median) in *Manufacture of Food Products*, whereas in the previous year it had increased by more than 4% in around the same share of enterprises. The deterioration of this indicator in 2009 is also apparent at the level of the first and third quartiles (6 p.p. and 9 p.p. declines respectively), confirming that the fall in turnover was broadly based across the sector enterprises.

**Chart 11**

**TURNOVER |** *By CAE-Rev.3 Group (2009)*
- contributions to the annual growth rate (p.p.)




**Note**: **CAE 101** – Processing and preserving of meat and production of meat products; **CAE 102** – Processing and preserving of fish, crustaceans and molluscs; **CAE 103** – Processing and preserving of fruit and vegetables; **CAE 104** – Manufacture of vegetable and animal oils and fats; **CAE 105** – Manufacture of dairy products; **CAE 106** – Manufacture of grain mill products, starches and starch products; **CAE 107** – Manufacture of bakery and farinaceous

The median of this indicator does not differ substantially among **enterprise size** classes. Large enterprises, however, show the most negative value (-5%). The comparison between the different size classes also points to more homogeneous results at SME and large enterprise level, vis-à-vis microenterprises, where the inter-quartile range was considerably higher (26 p.p., compared with 17 p.p. in SMEs and 13 p.p. in large enterprises).

By **economic sector**, turnover developments were negative in all activities integrating *Manufacture of Food Products*, excluding *CAE 108 – Manufacture of other food products* and, marginally, *CAE 103 – Processing and preserving of fruit and vegetables*. The major contributions[17] to the fall in turnover of *Manufacture of Food Products* were due to *CAE 109 – Manufacture of prepared animal feeds* and *CAE 104 – Manufacture of vegetable and animal oils and fats* (Chart 11).

**17** The contribution from a given class is calculated from the result obtained at class level and its weight in the respective aggregate. The sum of the contributions from the different classes corresponds to the value of the indicator calculated for the aggregate.

## BOX 1: EXTERNAL MARKET IMPORTANCE ON THE MANUFACTURE OF FOOD PRODUCTS SECTOR'S ACTIVITY

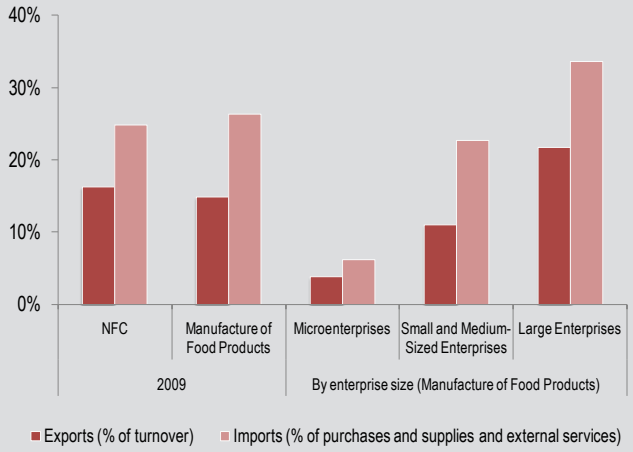
This Box evaluates the weight of the external market in the operational activity of enterprises in the *Manufacture of Food Products* sector, based on the IES's database[18].

In 2009, exports of goods and services represented 15% of aggregate turnover in *Manufacture of Food Products*. This share was more significant in larger classes, reaching 22% in large enterprises, whereas in microenterprises only 4% of turnover was export-oriented (Chart 1.1). The share of exports in turnover of Manufacture of Food Products followed an upward trend (in 2006 it stood at 11%), and in 2009 it moved significantly closer to the NFC aggregate.

As regards imports, 26% of the purchases of goods and services made in 2009 by *Manufacture of Food Products* stemmed from abroad. By enterprise size it is also possible to see the relationship established at export level, where microenterprises were relatively less involved in imports (only 6% of purchases and supplies and external services came from abroad) than large enterprises (close to 34%). In addition, the share of imports of goods and services in the *Manufacture of Food Products* sector was slightly higher over the whole 2006-2009 period than in the NFC aggregate in Portugal.

**Chart 1.1**

**EXPORTS AND IMPORTS OF GOODS AND SERVICES**



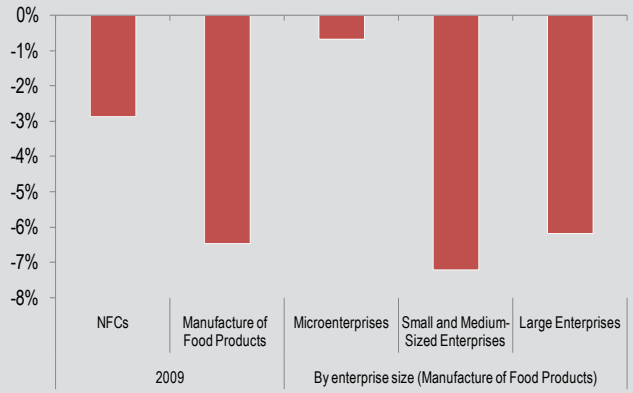

Thus, in 2009 *Manufacture of Food Products* posted a deficit balance in trade operations with abroad, where imports exceeded exports by an amount equivalent to approximately 7% of turnover, that compares with 3% in aggregate NFC in Portugal. This, however, shows an improvement from 2006, the year when the deficit balance stood at 11%.

18 Data reported by the enterprises within the scope of the IES regarding exports and imports of goods and services are subject to quality control by Banco de Portugal, especially through their comparison with balance of payments data. Nevertheless, this control does not guarantee that the final data on each enterprise in the IES are fully coincident with corresponding data in international trade statistics.

Chart 1.2 shows that this deficit was broadly based across all enterprise size classes. In microenterprises, it was estimated at only 1% of the respective turnover, reflecting the small involvement of this type of enterprise with abroad. In SMEs the negative balance stood at 7%, and in large enterprises at 6%.

**Chart 1.2**

**BALANCE OF TRANSACTIONS WITH ABROAD**
- as a percentage of turnover

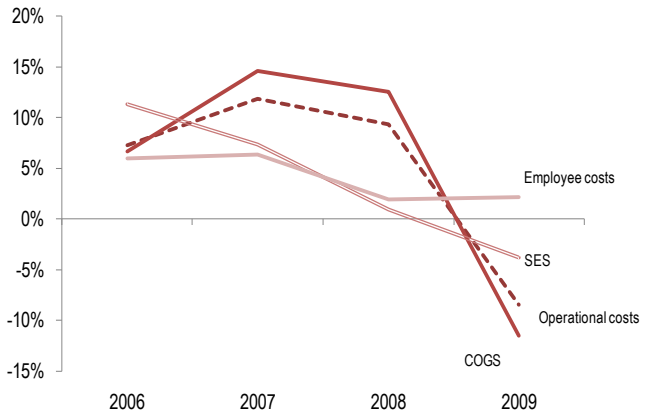


### 3.2.2 Operating costs

The operating costs of *Manufacture of Food Products* rose consecutively in the 2006-2008 period, but declined significantly in 2009, when its annual rate of change stood at -8% (Chart 12). This retrenchment was in line with the 9% fall in the NFC aggregate in Portugal.

**Chart 12**

**OPERATIONAL COSTS**
- annual growth rate




The decline observed in 2009 in the operating costs of *Manufacture of Food Products* was seen in virtually all its components, albeit with different intensity. The cost of goods sold and materials consumed (COGS) and supplies and external services (SES) declined significantly (by 12% and 4% respectively). Employee costs rose marginally, maintaining moderate changes throughout the whole period under review.

**Chart 13**

**STRUCTURE OF OPERATIONAL COSTS** | *2009*

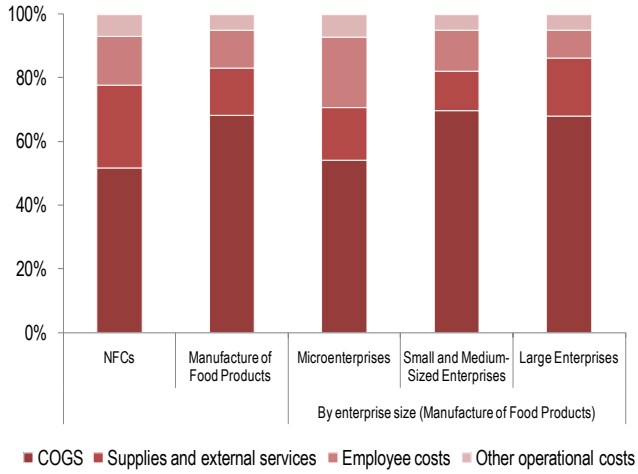


Chart 13 shows that the operating costs structure of *Manufacture of Food Products* in 2009 was different from that of the NFC aggregate in Portugal. COGS was more relevant in *Manufacture of Food Products* (+17 p.p.), which was compensated by the lower weight of the other items, especially SES (-11 p.p.) and employee costs (-4 p.p.). It is therefore not surprising that more than 90% of the fall in the operating costs of *Manufacture of Food Products* was due to developments in COGS.

In terms of cost structure, it was possible to detect some differences in the **enterprise size** function within the *Manufacture of Food Products* sector itself. Employee costs in microenterprises represented approximately 22% of the respective operating costs, whereas in SMEs and large enterprises this share was 13% and 9% respectively. In turn, COGS in microenterprises was responsible for only 54% of total operating costs, whereas in the other size classes this component represented close to 70%.

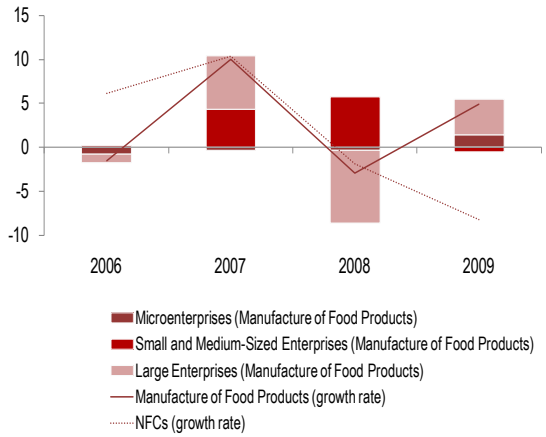
By **economic sector**, the microenterprise structure reflected chiefly the situation in *CAE 107 – Manufacture of bakery and farinaceous products,* in which COGS represented only 44% of the respective operating costs, while employee costs represented 29%. *CAE 109 – Manufacture of prepared animal feeds* and *CAE 104 – Manufacture of vegetable and animal oils and fats* saw opposite developments, in which COGS represented more than 80% of the respective operating costs, while employee costs stood at 5%.

### 3.2.3 EBITDA[19]

EBITDA growth rate in *Manufacture of Food Products* showed some instability, oscillating between positive and negative values over the period under review. In 2007 and 2008, EBITDA growth rate in *Manufacture of Food Products* was very close to the level seen in the NFC sector. In 2009, however, this diverged significantly, with EBITDA in *Manufacture of Food Products* growing by 5%, while in NFCs as a whole, it declined by 8% (Chart 14).

**Chart 14**

**EBITDA |** *Total and by enterprise size*
- annual growth rate (%) and contributions (p.p.)



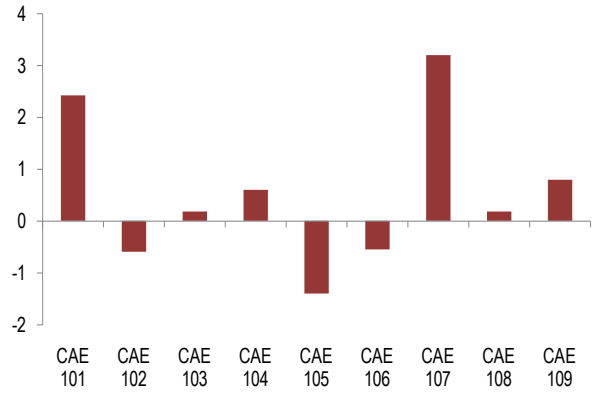

19 EBITDA stands for Earnings Before Interest, Taxes, Depreciation and Amortisation. It corresponds to profit or loss for the year plus costs related to interest, taxes, depreciation and amortisation.

A review of the different **enterprise size classes** shows that in 2009 only SMEs did not contribute positively to growth in the sector. Instead, this growth was mainly due to large enterprises, where EBITDA rose by 9%, contributing with approximately 4 p.p. to the overall result of *Manufacture of Food Products*. This is explained by the greater capacity of large enterprises to adjust their operating costs in order to address the fall in turnover. In addition to 2009, large enterprises were determined for EBITDA's behaviour in the *Manufacture of Food Products* sector over the whole period under analysis.

By **economic sector**, Chart 15 highlights two significant contributions to EBITDA growth in *Manufacture of Food Products* in 2009: *CAE 107 - Manufacture of bakery and farinaceous products* (where all size classes had expressive growth) and *CAE 101 – Processing and preserving of meat and production of meat products* (where the contribution of large enterprises was significant). In turn, *CAE 105 – Manufacture of dairy products* had a negative contribution.

**Chart 15**

**EBITDA |** *By CAE-Rev.3 Group (2009)*
- contributions to the annual growth rate (p.p.)




**Note**: **CAE 101** – Processing and preserving of meat and production of meat products; **CAE 102** – Processing and preserving of fish, crustaceans and molluscs; **CAE 103** – Processing and preserving of fruit and vegetables; **CAE 104** – Manufacture of vegetable and animal oils and fats; **CAE 105** – Manufacture of dairy products; **CAE 106** – Manufacture of grain mill products, starches and starch products; **CAE 107** – Manufacture of bakery and farinaceous products; **CAE 108** – Manufacture of other food products; **CAE 109** – Manufacture of prepared animal feeds.

Hence, considering EBITDA's recovery, it can be concluded that the decline in turnover in 2009 was balanced with the fall in operating costs in the *Manufacture of Food Products* sector.

### 3.2.4 Return on equity[20]

Return on equity of *Manufacture of Food Products* has closely followed the value for the NFC aggregate in Portugal, except in 2007, when return in this sector was 4 p.p. lower (Chart 16). In 2009, return on equity of *Manufacture of Food Products* stood above 5% (this sector was therefore above the NFC aggregate for the first time in the period under review), which represents a 2.3 p.p. increase from 2008. This increase was due not only to an improvement in EBITDA,

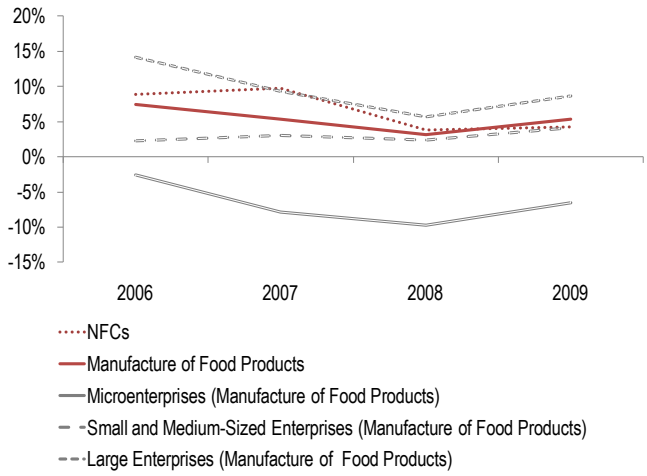
**20** This is calculated from the ratio of profit or loss for the year to equity, and measures return from equity invested by shareholders/partners. As mentioned in Central Balance-Sheet Study No 1, November 2010 – Enterprise and sector tables, return on equity is derived from individual data only for enterprises with equity > 0.

as mentioned in the foregoing section, but also to the positive contribution from the financial component, as discussed below.

Considering the breakdown by **enterprise size**, return on equity, in average terms, was always negative in microenterprises and was systematically positive in the other classes. Similarly to developments in the NFC aggregate over the period under review, this sector also shows that, on average, the highest return on equity was seen in large enterprises. In 2009, return on equity rose in all classes, thus contributing positively to an increase in the average value of the sector.

**Chart 16**

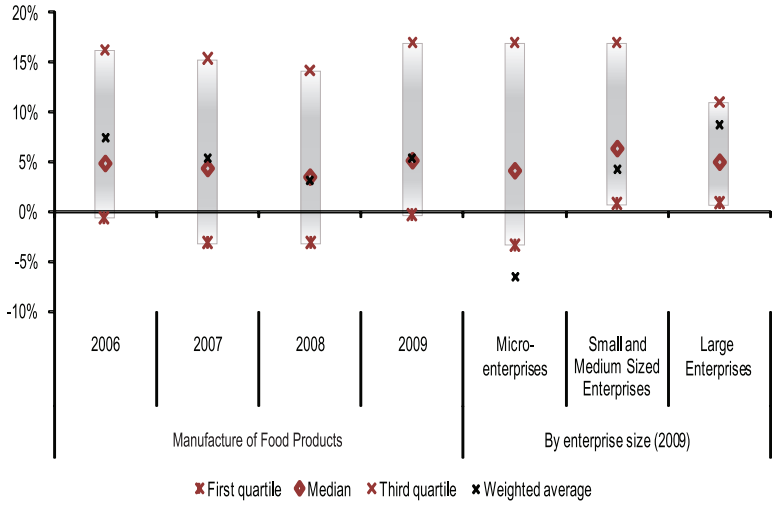
**RETURN ON EQUITY** | *Total and by enterprise size*



An analysis of individual results shows that return on equity has been positive for most enterprises in *Manufacture of Food Products* (Chart 17). In 2009 there was even an improvement in this indicator. Three quarters of the enterprises had positive return on equity, and half of total enterprises even reached values above 5%. As a result, in 2009 the *Manufacture of Food Products* sector was in a more favourable situation than the NFC aggregate.

**Chart 17**

**RETURN ON EQUITY |** *Total and by enterprise size*
- quartile distribution

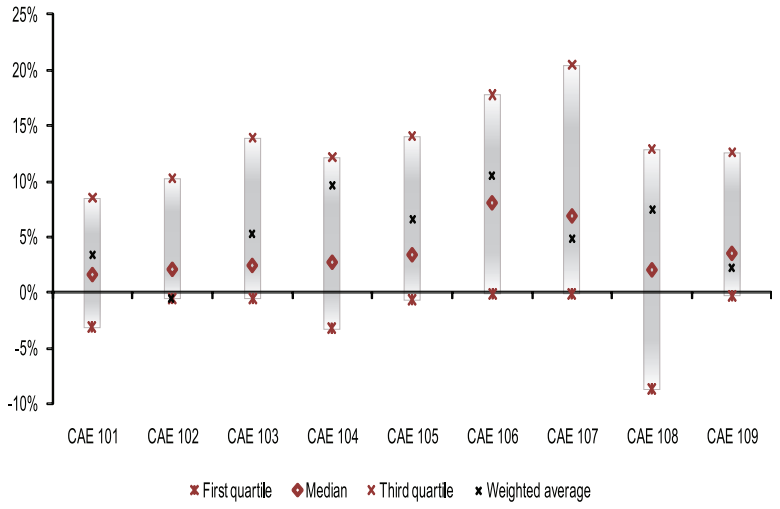



The distribution of enterprise return on equity by size class shows marked heterogeneity of results at microenterprise level. In effect, return on equity in one quarter of the enterprises in this class was below -3%, while in another quarter it exceeded 17%. However, the negative average value of microenterprises showed that most enterprises in this class were in the negative group. At the opposite end, large enterprises were clearly the most homogeneous class, with an inter-quartile range of 10 p.p. (1% and 11% in the first and third quartiles respectively). In terms of the median, microenterprises showed the lowest return on equity (4%), whereas SMEs had the highest (6%).

By **economic sector**, most enterprises in all CAE Groups had positive return on equity (Chart 18). Worthy of note is, however, *CAE 108 – Manufacture of other food products*, where one quarter of the enterprises had return on equity below -8% (even though the average value of return on equity in this activity was 7%). In turn, *CAE 107 – Manufacture of bakery and farinaceous products* had the highest value in the third quartile (20%), in spite of a wider dispersion of this indicator (inter-quartile range of 20 p.p.).

**Chart 18**

**RETURN ON EQUITY |** *By CAE-Rev.3 Group (2009)*
- quartile distribution




**Note**: **CAE 101** – Processing and preserving of meat and production of meat products; **CAE 102** – Processing and preserving of fish, crustaceans and molluscs; **CAE 103** – Processing and preserving of fruit and vegetables; **CAE 104** – Manufacture of vegetable and animal oils and fats; **CAE 105** – Manufacture of dairy products; **CAE 106** – Manufacture of grain mill products, starches and starch products; **CAE 107** – Manufacture of bakery and farinaceous products; **CAE 108** – Manufacture of other food products; **CAE 109** – Manufacture of prepared animal feeds.

In average terms, *CAE 106 – Manufacture of grain mill products*, *starches* and *starch products* had the highest level of return on equity (exceeding 10%), which contrasts with *CAE 102 - Processing and preserving of fish, crustaceans* and *molluscs*, the single activity in the sector with negative average value in return on equity (close to -1%), very close to the value for the first quartile of the respective distribution.

## 3.3 Financial situation

### 3.3.1 Financial structure

Capital ratio[21] in *Manufacture of Food Products* stood, on average, around 36% in the 2006-2009 period, approximately 4 p.p. above the value obtained by the NFC aggregate in Portugal (Chart 19). In the sector under review the capital ratio level rose also in tandem with the **enterprise size** class. In effect, in 2009 microenterprises' capital ratio level stood at 22%, compared with 34% in SMEs and 44% in large enterprises.

**21** Calculated from the ratio of equity to total assets.

The quartile distribution shows that most enterprises were below the sector's average level (Chart 20). In effect, in 2009 the capital ratios stood below 27% in half the enterprises (median), i.e. their equity corresponded, at most, to 27% of the assets. Moreover, the capital ratios in one quarter of sector's enterprises (first quartile) were below 3%, i.e. nearly all these enterprise assets were financed by third-parties.

**Chart 19**

**CAPITAL RATIO |** *Total and by enterprise size*

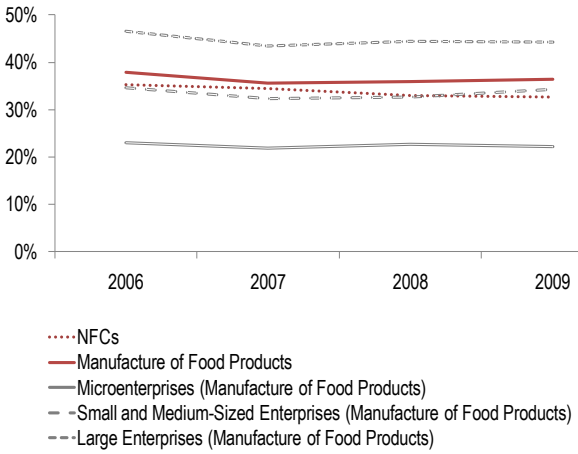
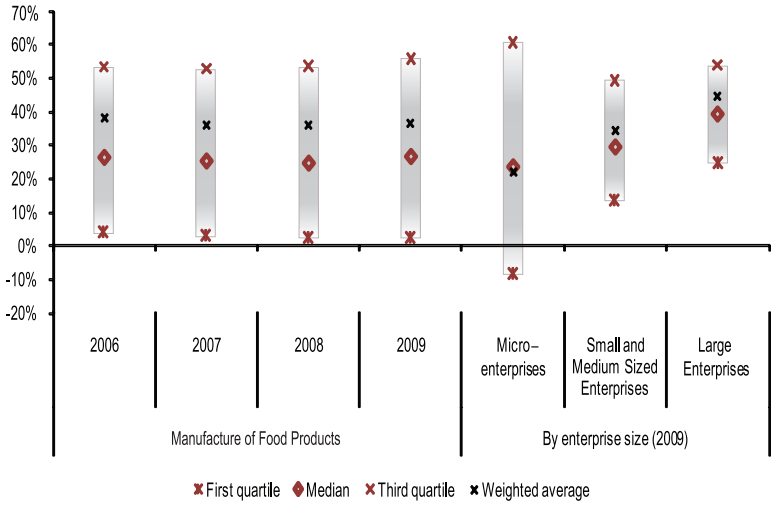



**Chart 20**

**CAPITAL RATIO |** *Total and by enterprise size*
- quartile distribution

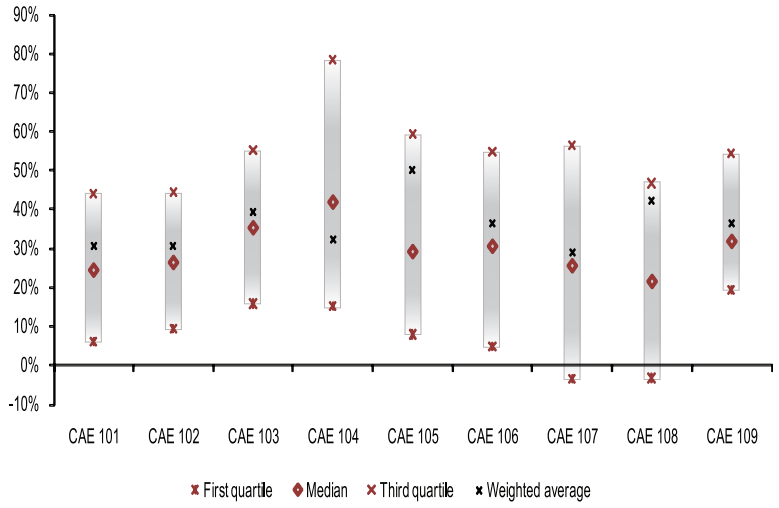



In addition, microenterprises had the most worrisome situation. In 2009 more than one quarter of microenterprises had negative capital ratio levels, as a result of negative equity, often associated with loss accumulation in consecutive years. This was also the class with greater dispersion of individual results.

Considering the **economic sectors** (Chart 21), the situation in microenterprises was reflected in *CAE 107 - Manufacture of bakery and farinaceous products* and *CAE 108 – Manufacture of other food products*. At least one quarter of the enterprises in these sectors were exclusively financed by third-parties equity. However, the capital ratio levels in these activities, on average, stood at higher levels (28% and 42% respectively).

**Chart 21**

**CAPITAL RATIO |** *By CAE-Rev.3 Group (2009)*
- quartile distribution




**Note**: **CAE 101** – Processing and preserving of meat and production of meat products; **CAE 102** – Processing and preserving of fish, crustaceans and molluscs; **CAE 103** – Processing and preserving of fruit and vegetables; **CAE 104** – Manufacture of vegetable and animal oils and fats; **CAE 105** – Manufacture of dairy products; **CAE 106** – Manufacture of grain mill products, starches and starch products; **CAE 107** – Manufacture of bakery and farinaceous products; **CAE 108** – Manufacture of other food products; **CAE 109** – Manufacture of prepared animal feeds.

An analysis of the enterprise's external financing sources[22] shows that broad financial debt and trade credits represented, as a whole, close to 81% of liabilities[23] in *Manufacture of Food Products*. This percentage ranged between 74% in microenterprises and 85% in large enterprises (Chart 22). These structures remained virtually unchanged in the 2006-2009 period.

**Chart 22**

**LIABILITIES STRUCTURE** | *Total and by enterprise size (2009)*


(A) - Bank loans and debt securities; (B) - Debt to group enterprises; (C) - Debt to shareholders/partners

The combined weight of these two financing sources in *Manufacture of Food Products* was in line with that of the NFC aggregate. However, trade credits alone were more relevant in this sector (28% vis-à-vis 18% in total NFCs), in contrast with the smaller weight of financial debt.

By **enterprise size** financial debt had a similar share in the different classes. In SMEs and large enterprises, however, the most relevant share was formed by bank loans and debt securities, while in microenterprises loans from to shareholders/partners were also worth noting. The weight of trade credits in enterprise liabilities ranged between 17% in microenterprises and approximately 30% in SMEs and large enterprises.

By **economic sector**, financial debt was particularly significant in *CAE 106 – Manufacture of grain mill products, starches* and *starch products*, representing more than two thirds of liabilities (80% of which allocated to bank loans). Trade credits gained more relevance in *CAE 101 – Processing and preserving of meat and production of meat products*, representing 37% of liabilities.

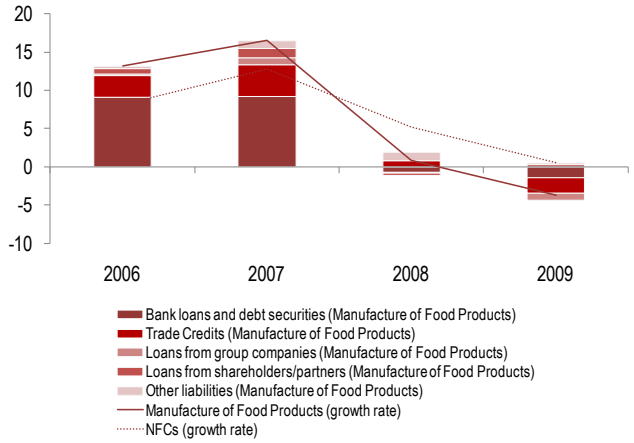
22 For the purpose of this analysis, enterprise financing sources were broken down into: broad financial debt (bank loans and securities issued, loans from group enterprises and loans from shareholders/partners), trade credits and other liabilities (fixed asset suppliers, State and other creditors).

23 Excluding components eminently related with accounting procedures, such as accrued and deferred income and provisions.

Developments in liabilities in *Manufacture of Food Products* (Chart 23) show that after peaking at 17% in 2007, the growth rate fell to 1% in 2008 and -4% in 2009. In all periods, the conduct of bank loans and debt securities as a whole was key for liabilities developments. Nevertheless, in 2009 all components excluding loans from to shareholders/partners and other liabilities contributed to the liabilities decline in *Manufacture of Food Products.*

**Chart 23**

**LIABILITIES**
- annual growth rate(%) and contributions (p.p.)



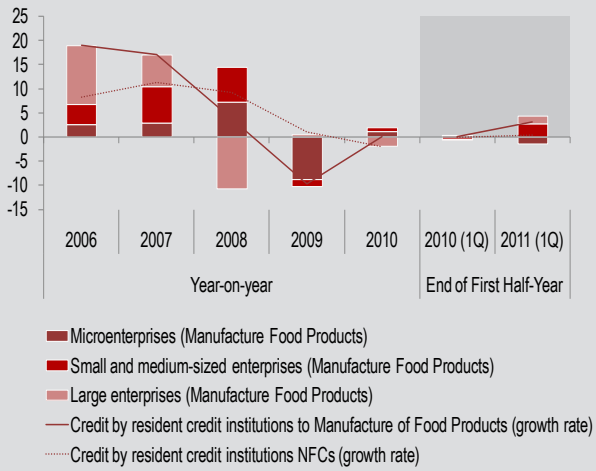
## BOX 2: LOANS FROM RESIDENT CREDIT INSTITUTIONS – CHARACTERISATION BASED ON THE CENTRAL CREDIT REGISTER[24]

Based on information available in the Central Credit Register of Banco de Portugal, this Box presents an analysis of the component related to loans from credit institutions resident in Portugal. In 2009 this comprised nearly all (99%) loans obtained from credit institutions by *Manufacture of Food Products*, and involved 73% of the sector's enterprises.

In the period under review, the growth rate of credit obtained from credit institutions by enterprises in *Manufacture of Food Products* decelerated from its peak in 2006 (19%), reaching negative values in 2009 (-10%). In 2010 it rose again, although marginally (0.01%), exceeding the NFC aggregate rate (-2%). This situation continued into the first half of 2011, with credit to *Manufacture of Food Products* growing by 3% from December 2010, compared with the 0.3% growth in NFCs as a whole (Chart 2.1).

**Chart 2.1**

**FINANCING OBTAINED FROM RESIDENT CREDIT INSTITUTIONS**
- growth rate (%) and contributions (p.p.)




By enterprise size, the fall in 2009 was largely due to microenterprises, where this type of credit shrank by approximately 48%. In 2010 only large enterprises contributed negatively to the average value in the sector (credit in this class declined by 9%), whereas growth in the first half of 2011 was largely due to SMEs, where credit grew by 4%.

By economic sector, *CAE 102 – Processing and preserving of fish, crustaceans* and *molluscs* grew by approximately 15% in the first half of 2011, thus making the largest positive contribution to developments in credit to *Manufacture of Food Products*. At the opposite end, *CAE 107 – Manufacture of bakery and farinaceous products* contracted by 4.4%.

At the end of 2010, 48% of the enterprises in the *Manufacture of Food Products sector* receiving credit from credit institutions were financed by single credit institution, to an overall amount corresponding to 10% of credit granted to the sector. This shows that financing by institutions in the resident financial system to *Manufacture*

24 The Central Credit Register is a database managed by Banco de Portugal, that gathers information provided by participating entities (credit-granting resident institutions) regarding credit granted. For further information, please refer to Supplement 1|2005 to Banco de Portugal's Statistical Bulletin, A new source for Monetary and Financial Statistics: the Central Credit Register.

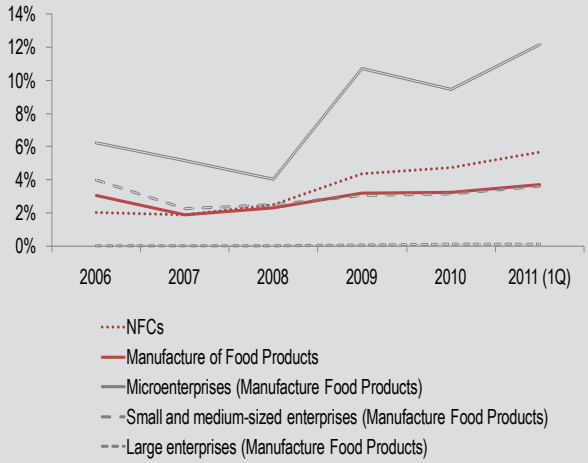
*of Food Products* was more dispersed than to NFCs as a whole in Portugal (55% of which were related to a single bank, representing 21% of total credit).

Looking into the maturities of loans granted by credit institutions to *Manufacture of Food Products*, the short term (53%) slightly exceeded the long term (47%). This was the opposite of the situation in the population of NFCs in Portugal, where the short term represented 47% and the long term 53% of total credit.

As regards the ratio of non-performing loans at the end of the first half of 2011, *Manufacture of Food Products* was in a more favourable situation than the NFC aggregate (3.7% and 5.7% respectively). In 2007 those sectors had a similar result, but in the subsequent years that ratio rose by 1.8 p.p. in *Manufacture of Food Products* and increased by 3.8 p.p. in the NFC population (Chart 2.2).

**Chart 2.2**

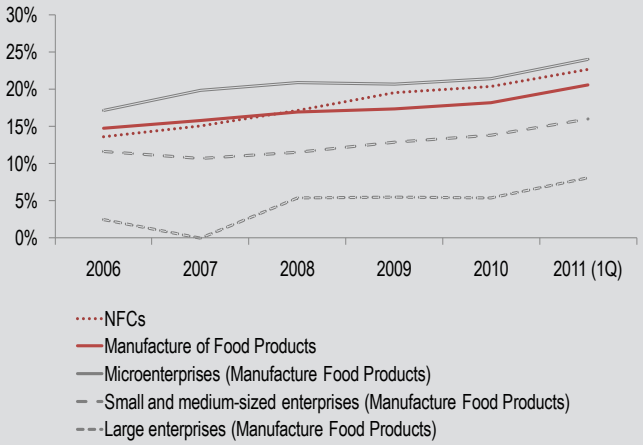
**NON-PERFORMING LOANS RATIOS**




The increase in the ratio of non-performing loans in *Manufacture of Food Products* was reflected in all size classes, and was particularly marked in microenterprises (12.2% in 2011, compared to 5.2% in 2007). Large enterprises, in turn, maintained very low non-performing levels during the whole period (around 0.1%). By economic sector, the highest non-performing level was in *CAE 102 – Processing and preserving of fish, crustaceans* and *molluscs*, where 5.2% of credit granted by credit institutions was non-performing. This activity also had the largest deterioration in this indicator since 2007 (3.5 p.p.).

**Chart 2.3**

**NON-PERFORMING ENTERPRISES**
- weight in the respective aggregate, % of the number of enterprises




The increase in the non-performing loans ratios also reflected a rise in the number of enterprises with non performing loans (Chart 2.3). Therefore, between 2007 and the first half of 2011, the percentage of enterprises in this situation in *Manufacture of Food Products* rose by 4.8 p.p. to 20.6%, which compares with 7.6 p.p. and 22.7% in total NFCs.

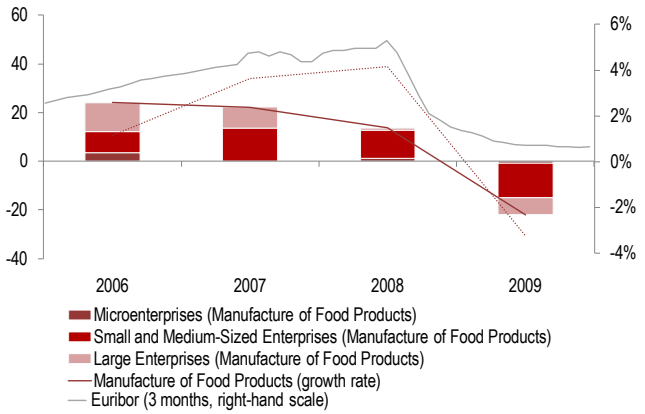
The position of the microenterprise class in *Manufacture of Food Products* should be pointed out, where 24% of the enterprises receiving credit from credit institutions were non-performing, compared with 16% in SMEs and 8% in large enterprises. By economic sector, stress is again laid on *CAE 102 - Processing and preserving of fish, crustaceans and molluscs*, in which around 27% of the enterprises receiving credit from credit institutions were non-performing. In the opposite situation was *CAE 104 – Manufacture of vegetable and animal oils and fats*, where the non-performing situation affected slightly more than 15% of the enterprises receiving credit from credit institutions.

### 3.3.2 Financial costs and solvency

Data from the Central Balance-Sheet Database of Banco de Portugal show that financing costs of NFCs have in general followed the trend of reference market interest rates (Chart 24). In the case of *Manufacture of Food Products*, financial costs rose between 2006 and 2008, but at a declining pace, and had a smaller decrease (22%) than the NFC aggregate (31%) in 2009.

**Chart 24**

**FINANCIAL COSTS |** *Total and by enterprise size*
- annual growth rate (%), contributions (p.p.) and market interest rate




This decrease was particularly marked in SMEs (24%) and large enterprises (20%), whereas in microenterprises financial costs fell by 13%. Therefore, all size classes contributed to the financial cost decline in *Manufacture of Food Products* in 2009. Also, the same occurred in all activities composing the sector.

In order to evaluate the solvency of enterprises of the *Manufacture of Food Products* sector, two indicators have been calculated. The first one relates EBITDA with financial costs. The second one compares short-term financial debt to EBITDA.

Chart 25 summarises the results of the first indicator, and shows that the share of interest paid on EBITDA rose until 2008, but this trend was reversed in 2009. In this latter year, interest paid by *Manufacture of Food Products* represented approximately 26% of EBITDA, a share that was substantially lower than in the NFC aggregate in Portugal (46%). This also derives from the higher capital ratio in the sector under review (see Section 3.3.1).

**Chart 25**

**WEIGHT OF INTERESTS PAID ON EBITDA |** *Total and by enterprise size*

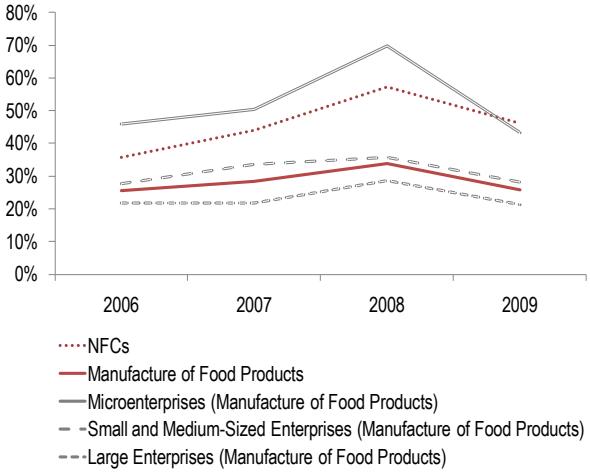
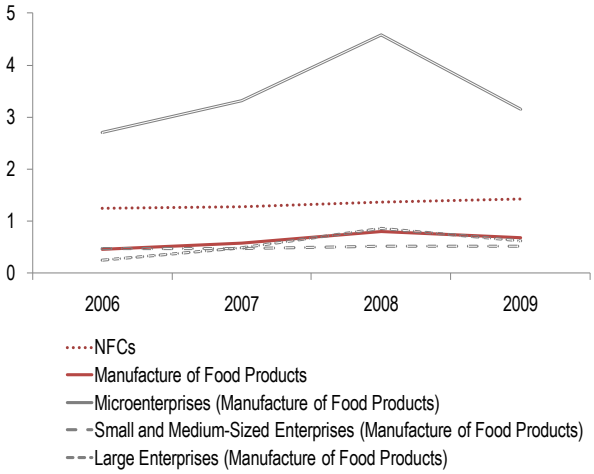



Chart 25 also shows a positive relationship between enterprise size and its capability to generate income to pay for interests. Therefore, in 2009 interests in microenterprises absorbed approximately 43% of generated EBITDA, while in large enterprises that percentage declined to 21%. By economic sector, *CAE 102 – Processing and preserving of fish, crustaceans and molluscs* had the highest share of interests paid on EBITDA (53%), while *CAE 105 – Manufacture of dairy products* was in the opposite position (16%).

**Chart 26**

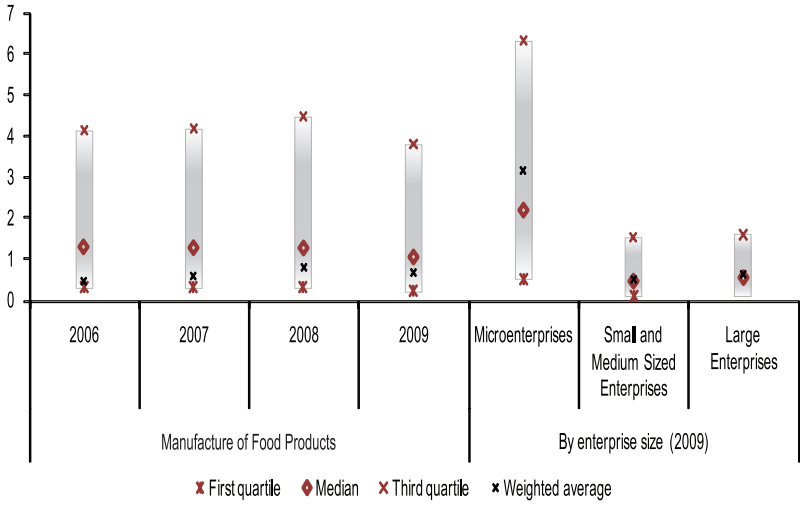
**RATIO OF SHORT-TERM FINANCIAL DEBT TO EBITDA |** *Total and by enterprise size*



An analysis of the ratio of short-term financial debt to EBITDA (Chart 26) shows that during the period under review, on average, *Manufacture of Food Products* were in a better position to meet their short-term commitments than the NFC sector in Portugal. In effect, considering the year 2009, short-term financial debt represented 69% of EBITDA in *Manufacture of Food Products* and 140% in the NFC sector. The value calculated for *Manufacture of Food Products* chiefly reflected the situation in SMEs and large enterprises, since in microenterprises it diverged clearly, and short-term financial debt was three times higher than EBITDA generated in that year. By economic sector, in 2009 the average ratios in *CAE 104 – Manufacture of vegetable and animal oils and fats*, *CAE 102 – Processing and preserving of fish, crustaceans and molluscs* and *CAE 106 – Manufacture of grain mill products, starches and starch products* were higher than one (1.36, 1.28 and 1.11 respectively), i.e. EBITDA generated in these activities in one year was not enough to fully close the short-term financial debt.

**Chart 27**

**RATIO OF SHORT-TERM FINANCIAL DEBT TO EBITDA |** *Total and by enterprise size*
- quartile distribution




The quartile distribution in Chart 27 shows that the improvement in the ratio of short-term financial debt to EBITDA in 2009 was broadly based across the enterprises whitin the *Manufacture of Food Products* sector. In effect, the values estimated for the three quartile distributions (first quartile, median and third quartile) were the lowest in the four years under review. The sector median (1.1), however, was clearly above the average (0.7), indicating that the position of most enterprises was actually less favourable than suggested by the average indicator. This was chiefly due to microenterprises, where half the enterprises required more than two years to fully close the short-term financial debt using EBITDA generated in the year[25]. The results in SMEs and large enterprises were more positive and clearly more homogeneous.

**25** Under the assumption of a constant EBITDA.

## BOX 3: CREDIT OBTAINED THROUGH DEBT SECURITIES ISSUES – CHARACTERISATION BASED ON THE SECURITIES STATISTICS INTEGRATED SYSTEM[26]

In the period from 2006 to 2010, financing through the issue of debt securities represented, on average, approximately 12% of total financial debt in *Manufacture of Food Products* (10% in NFCs).

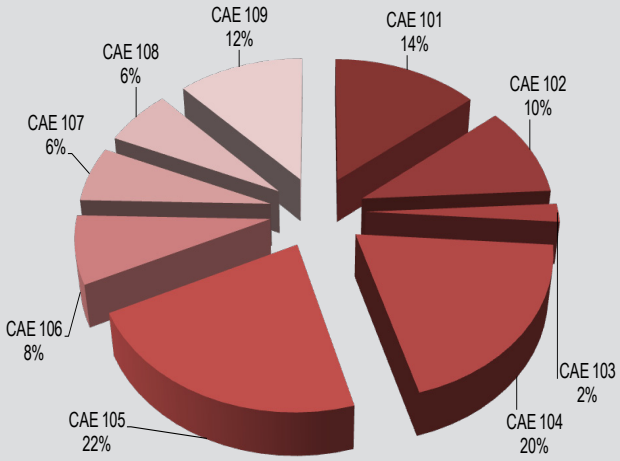
During this period, this form of financing more than doubled (in spite of falling back by approximately 5% in 2010 from the previous year), and moved from slightly more than €147 million in 2006 to nearly €362 million in 2010. This is not, however, the form of financing mostly used by enterprises in the sector, given that in 2010 only approximately 50 enterprises (1% of the sector enterprises) held debt securities in their liabilities, to a value corresponding to around 2% of the total amount of debt securities issued by NFCs. In the first half of 2011, the total amount of debt securities issued declined by 6% from the end of 2010.

By enterprise size, debt securities in the *Manufacture of Food Products* sector were chiefly issued by large enterprises, responsible for 75% of the value issued. The other 25% were fully issued by SMEs.

As regards security maturities, the *Manufacture of Food Products* sector issued almost exclusively short-term securities. In the NFC aggregate in Portugal this type of issues was also relevant, but its weight did not exceed 60%. Turning to the type of rates associated with the issues, the option for shorter maturity securities explains the relevance of fixed-rate issues. This is why, at the end of the first half of 2011, nearly all debt securities issued by enterprises in the *Manufacture of Food Products* sector beared fixed rate interest payments.

**Chart 3.1**

**TOTAL DEBT SECURITIES ISSUED |** *By enterprises from the Manufacture of Food Products sector (Structure at June 2011)*




**Note**: **CAE 101** – Processing and preserving of meat and production of meat products; **CAE 102** – Processing and preserving of fish, crustaceans and molluscs; **CAE 103** – Processing and preserving of fruit and vegetables; **CAE 104** – Manufacture of vegetable and animal oils and fats; **CAE 105** – Manufacture of dairy products; **CAE 106** – Manufacture of grain mill products, starches and starch products; **CAE 107** – Manufacture of bakery and farinaceous products; **CAE 108** – Manufacture of other food products; **CAE 109** – Manufacture of prepared animal feeds.

By economic sector (Chart 3.1), the issue of debt securities was relatively well distributed across the activities integrated in *Manufacture of Food Products*. Nonetheless, *CAE 104 – Manufacture of vegetable and animal oils and fats* had the highest share (20%), while *CAE 103 – Processing and preserving of fruit and vegetables* had the lowest (1%).

**26** The Securities Statistics Integrated System is an information system managed by Banco de Portugal regarding the securities issues and portfolios, on a 'security-by-security' and 'investor-by-investor' basis. For further information, please refer to Supplement 2|2008 to Banco de Portugal's Statistical Bulletin, Securities statistics: Integrated System Features and Main Results.

### 3.3.3 Trade debt financing

Trade debt financing increased by 9% in the 2006-2009 period, representing approximately 28% of total liabilities in *Manufacture of Food Products* in 2009. In this latter year, however, trade debt contracted by approximately 7%.

In principle, trade credits do not have an associated explicit cost, and are a relatively accessible means to obtain short-term financing. Since this is theoretically a very short-term financing source, the net contribution of borrowing and lending trade credits for enterprise financing is frequently analysed, for instance through days sales outstanding and days payable outstanding and the respective differential.

In 2009 days payable outstanding in the *Manufacture of Food Products* sector (61 days) were lower than days sales outstanding (80 days). This contrasts with the balance observed in NCFs as a whole in Portugal (90 days for both). The average results show that the sector under review could not be financed through trade credits, because they had to pay to suppliers earlier than they received from their customers.

**Chart 28**

**DAYS SALES OUTSTANDING**
- quartile distribution

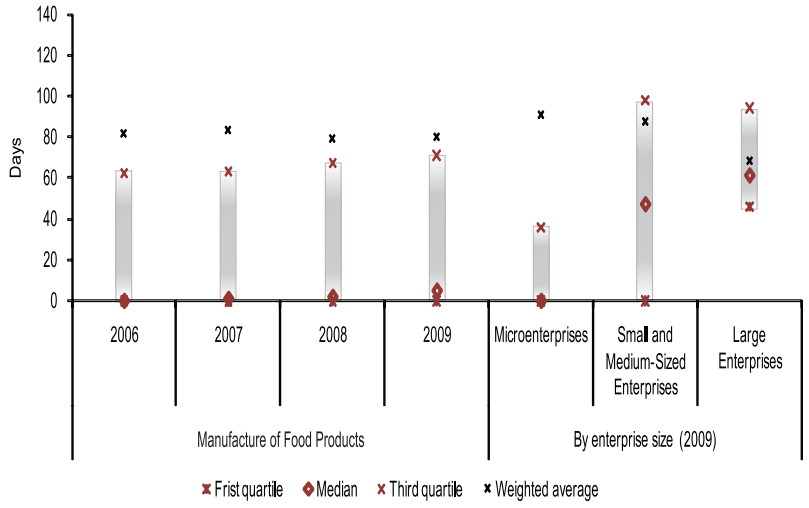
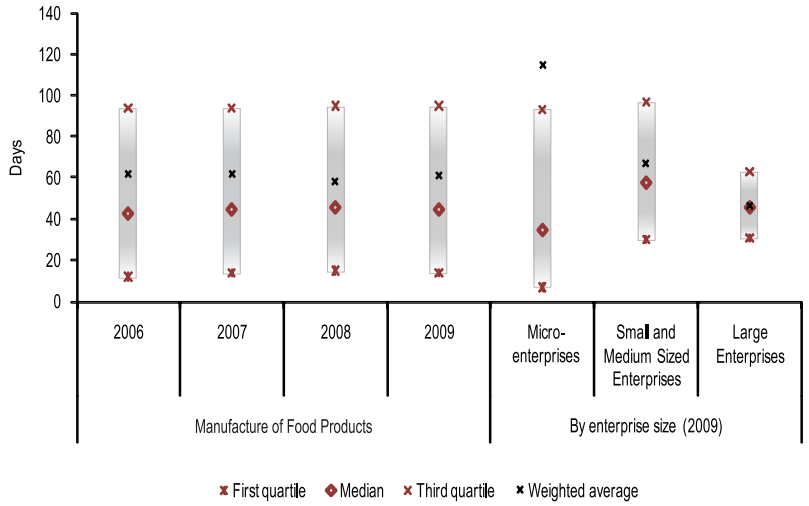


Chart 29

**DAYS PAYABLE OUTSTANDING**
- quartile distribution



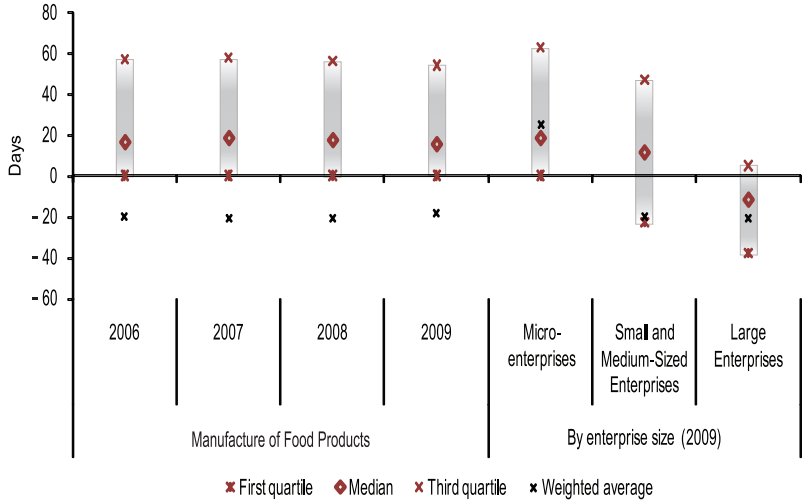

The average value obtained for *Manufacture of Food Products*, however, does not show the situation of most enterprises, and suggests strongly biased results, due to the influence of a sub-group of enterprises (Charts 28 and 29). In effect, in 2009 days sales outstanding were under five days in half the enterprises in the sector, and were above the average (80 days) in less than 25% of the enterprises. On the liabilities side, days payable outstanding were under 45 days in at least half the enterprises, i.e.16 days below the average for the sector.

Therefore, in order to better understand the actual situation experienced by most enterprises making up *Manufacture of Food Products*, we calculated the differential between days payable outstanding and days sales outstanding, on an enterprise-by-enterprise basis. The results presented in Chart 30 show that more than three quarters of the sector enterprises had favourable results in the management of days payable outstanding and days sales outstanding, i.e. they received from their customers earlier than they paid to suppliers, thus obtaining short-term financing.

By enterprise size class, the favourable situation in terms of days outstanding was due to microenterprises, where days payable outstanding were higher than days sales outstanding in three quarters of the enterprises. This result was largely due to the fact that approximately half the enterprises in this size class did not grant credit to their customers (see the values of the distribution median in Chart 28). The distribution of results in SMEs was somewhat balanced, whereas days sales outstanding were higher than days payable outstanding in most large enterprises, which stands in contrast to microenterprises.

**Chart 30**

**DIFFERENTIAL BETWEEN DAYS PAYABLE OUTSTANDING AND DAYS SALES OUTSTANDING**
- quartile distribution




By **economic sector**, due to the particular situation of *CAE 107 – Manufacture of bakery and farinaceous products*, where half the respective enterprises had nil days sales outstanding, three quarters of the enterprises in this Group had a positive differential between days payable outstanding and days sales outstanding. This was also seen in *CAE 104 – Manufacture of vegetable and animal oils and fats*. In the opposite situation was *CAE 109 – Manufacture of prepared animal feeds*, where days payable outstanding were lower than days sales outstanding in close to three quarters of the enterprises

## Annex

### MAIN INDICATORS OF THE MANUFACTURE OF FOOD PRODUCTS SECTOR (2009)

| | Characterisation of the sector | | | Activity | | | Financing | | | | | | Profitability |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Growth rates | | | Growth rates | | | | Loans from resident credit institutions (June 2011) | | |
| | Weight in turnover | Turnover held by large enterprises | Business concentration (HHI) | Turnover | EBITDA | Capital ratio | Trade credits | Bank loans and securities issued | Differential between days payable outstanding and days sales outstanding (median, in days) | Weight of interests paid on EBITDA | % of non-performing enterprises | Non-performing loans ratio | Return on equity |
| Manufacture of food products | 100% | 38.8% | 0.0099 | -7.3% | 4.9% | 36.5% | -7.0% | -3.2% | 15 | 25.9% | 20.6% | 3.7% | 5.4% |
| CAE 101 | 19.3% | 37.7% | 0.0195 | -0.2% | 21.3% | 30.6% | 1.6% | 8.1% | 0 | 26.4% | 24.7% | 5.0% | 3.3% |
| CAE 102 | 8.7% | 32.1% | 0.0340 | -10.0% | -8.5% | 30.6% | -11.7% | -8.1% | 0 | 53.1% | 26.8% | 5.2% | -0.5% |
| CAE 103 | 5.0% | 21.3% | 0.0542 | 1.8% | 2.8% | 39.2% | -14.4% | 7.2% | 0 | 31.9% | 20.8% | 4.9% | 5.3% |
| CAE 104 | 8.8% | 53.6% | 0.1351 | -20.5% | 9.8% | 32.3% | -17.6% | 3.5% | 0 | 37.6% | 15.5% | 2.5% | 9.7% |
| CAE 105 | 13.8% | 67.3% | 0.2250 | -9.0% | -7.2% | 49.8% | -9.4% | -26.4% | 0 | 15.7% | 17.6% | 2.0% | 6.6% |
| CAE 106 | 5.7% | 14.5% | 0.0525 | -15.5% | -8.1% | 36.5% | -15.4% | -22.1% | 0 | 25.0% | 19.8% | 2.0% | 10.5% |
| CAE 107 | 13.7% | 16.2% | 0.0109 | -1.6% | 21.7% | 28.8% | -8.6% | 7.2% | 23 | 21.2% | 20.0% | 3.9% | 4.8% |
| CAE 108 | 13.2% | 64.4% | 0.1499 | 3.5% | 1.0% | 42.0% | -2.7% | 10.5% | 0 | 19.8% | 21.9% | 1.8% | 7.4% |
| CAE 109 | 11.8% | 7.2% | 0.0337 | 18.4% | 8.6% | 36.3% | -6.1% | -0.6% | -38 | 34.3% | 19.6% | 3.1% | 2.2% |
| NFCs | - | 41.2% | 0.0012 | -9.1% | -8.2% | 32.6% | -1.9% | 1.5% | 0 | 46.3% | 22.7% | 5.7% | 4.3% |

**Note: CAE 101 –** Processing and preserving of meat and production of meat products; **CAE 102 –** Processing and preserving of fish, crustaceans and molluscs; **CAE 103 –** Processing and preserving of fruit and vegetables; **CAE 104 –** Manufacture of vegetable and animal oils and fats; **CAE 105 –** Manufacture of dairy products; **CAE 106 –** Manufacture of grain mill products, starches and starch products; **CAE 107 –** Manufacture of bakery and farinaceous products; **CAE 108 –** Manufacture of other food products; **CAE 109 –** Manufacture of prepared animal feeds.

| | Weight of the sector in total NFC | | | | | |
|---|---|---|---|---|---|---|
| | Number of enterprises | | Turnover | | Number of employees | |
| | 2000 | 2009 | 2000 | 2009 | 2000 | 2009 |
| Manufacture of food products | 1.8% | 1.5% | 3.4% | 3.4% | 3.4% | 3.0% |

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# CENTRAL BALANCE-SHEET STUDIES

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