SECTORAL ANALYSIS OF THE CONSTRUCTION SECTOR

Central Balance Sheet Studies

January 2014

15

Banco de Portugal
EUROSYSTEM

SECTORAL ANALYSIS OF THE CONSTRUCTION SECTOR

Central Balance Sheet Studies

January 2014

15

Banco de Portugal
EUROSYSTEM

BANCO DE PORTUGAL

Av. Almirante Reis, 71

1150-012 Lisboa

www.bportugal.pt

Edition

Statistics Department

Design and printing

Administrative Services Department

Editing and Publishing Unit

Lisbon, 2015

ISBN 978-989-678-266-5 (online)

ISSN 2182-1712 (online)

Legal Deposit no. 320301/10

FOREWORD

This analysis is based mainly on data obtained from *Informação Empresarial Simplificada – IES* (Simplified Corporate Information) 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).

IES is usually reported within six and a half months from the financial year end, which, for most enterprises resident in Portugal, corresponds to 15 July of the year following the reference year. Currently, the most recent *IES* data refer to 2012.

Annual data are supplemented by indicators for 2013 obtained from responses to the *Inquérito Trimestral às Empresas Não Financeiras* (*ITENF* – Quarterly Survey of non-financial corporations) by a number of enterprises. The results for total non-financial corporations in Portugal are thus analysed and calculated by extrapolating data obtained through *ITENF*. The analysis focuses on data available up to the third quarter of 2013.

Data reported by enterprises through *IES* and *ITENF* are subject to a quality control by Banco de Portugal mainly to ensure the coherence and integrity of accounting information for the economic year and that the main aggregates are consistent throughout the years. This analysis also involves matching the reported information with data obtained from other statistical systems available within Banco de Portugal, namely *Central de Responsabilidades de Crédito* (Central Credit Register – CCR), *Sistema Integrado de Estatísticas de Títulos* (Securities Statistics Integrated System – SSIS) and the Balance of Payments.

In addition to information obtained through *IES*, this *Study* is complemented with the latest data on the financial debt of Portuguese enterprises available in other databases of Banco de Portugal's Statistics Department, namely the CCR and SSIS. Such data make it possible to characterise a significant share of Portuguese enterprises' financial liabilities, namely in what regards loans from the financial sector and securitised debt. Based on CCR and SSIS data, the financial debt of enterprises as at the end of the third quarter of 2013 is analysed.

Finally, for purposes of comparison with other countries, information from the European database Bank for the Accounts of Companies Harmonized (BACH), managed by the European Committee of Central Balance Sheet Data Offices (ECCBSO), is used. This information makes it possible to compare the situation of enterprises in nine European countries in terms of profitability, indebtedness and productivity, broken down by economic activity sector and size class. The most recent information available in this database refers to 2012.

SUMMARY

According to data available in the Central Balance Sheet Database of Banco de Portugal, in 2012 the *Construction* sector accounted for around 12% of enterprises, 7% of turnover and 11% of the number of employees in the non-financial corporations (NFC) institutional sector.

Turnover in *Construction* is broken down by the following economic activity segments: *Construction of buildings* (40%), *Civil engineering* (38%) and *Specialized construction activities* (22%). By enterprise size class, SMEs made the largest contributions to *Construction*'s turnover (45%, compared with 37% by large enterprises and 19% by microenterprises).

In 2012 both turnover and operating costs in the *Construction* sector fell markedly (-26%). Consequently, EBITDA (earnings before interest, taxes, depreciation and amortisation) declined (-6%) and return on equity remained in negative territory (-8%).

In 2012 the *Construction* sector's capital ratio was, on average, 20% (30% in NFCs), while approximately half of its enterprises had a lower capital ratio. Financial debt and trade credits were the main components (76%) under liabilities.

Despite lower financing costs, financial pressure on *Construction* (weight of interest paid in EBITDA) increased somewhat (1 p.p.) owing to a fall in EBITDA. In 2012 the weight of interest paid in EBITDA was 133%.

Banco de Portugal's Central Credit Register data show that bank funding granted by resident credit institutions to *Construction* enterprises was, at the end of 2012, 13% lower than in the same period one year earlier. The downward trend continued in 2013: at the end of September, credit granted to the sector had declined from the end of 2012 (9.5%). In turn, the non-performing loans ratio, which amounted to 23.7% at the end of the third quarter of 2013, had grown 4.7 p.p. from the end of 2012. The non-performing loans ratio of the NFC sector stood at 13.4% during the same period.

At the end of 2012 debt securities issues accounted for 6% of the *Construction* sector's financial debt. According to additional data available in the Securities Statistics Integrated System, debt securities issues in this sector were chiefly concentrated in SMEs and the *Construction of buildings* and *Civil engineering* segments.

With regard to trade credits, in 2012 average days sales outstanding in *Construction* (161) were lower than average days payable outstanding (170). In net terms (balance between suppliers and customers), the sector did not finance itself through trade credit. The balance of suppliers exceeded that of customers only in microenterprises and the *Construction of buildings* segment.

On the basis of data available at the Bank for the Accounts of Companies Harmonized (BACH) database, in 2012 large enterprises in the Portuguese *Construction* sector compared favourably with their European counterparts as regards their operating margin (as measured by the weight of EBITDA in turnover). However, return on equity was lower than in most other countries, which largely resulted from the financing structure of these enterprises in Portugal, characterised by a high dependence on debt, chiefly in the form of loans from credit institutions. As regards trade credits, large enterprises in the Portuguese *Construction* sector did not manage to obtain net funding.

CONTENTS

I SECTORAL ANALYSIS OF THE CONSTRUCTION SECTOR

CHARTS

TABLES

FIGURES

ACRONYMS

BACH	Bank for the Accounts of Companies Harmonized
CAE	Portuguese Classification of Economic Activities
CoGS	Cost of Goods Sold and Materials Consumed
CIs	Credit institutions
EBITDA	Earnings before interest, taxes, depreciation and amortisation
ESA 95	European System of National and Regional Accounts 1995
GDP	Gross domestic product
GFCF	Gross fixed capital formation
HHI	Herfindahl-Hirschman Index
IES	Simplified Corporate Information (*Informação Empresarial Simplificada*)
INE	Statistics Portugal (*Instituto Nacional de Estatística*)
ITENF	Quarterly Survey to non-financial corporations (*Inquérito Trimestral às Empresas Não Financeiras*)
NFC	Non-financial corporations
POC	Official Chart of Accounts (*Plano Oficial de Contabilidade*)
p.p.	Percentage points
SES	Supplies and External Services
SMEs	Small and medium-sized enterprises (excluding microenterprises)
SNC	Accounting Normalisation System (*Sistema de Normalização Contabilística*)

SECTORAL ANALYSIS OF THE CONSTRUCTION SECTOR

I SECTORAL ANALYSIS OF THE CONSTRUCTION SECTOR

1 INTRODUCTION

The *Study Sectoral Analysis of the Construction Sector* looks into the economic and financial situation of enterprises within the *Construction* sector, based on information compiled by the Central Balance Sheet Database of Banco de Portugal.[1] For the purposes of this analysis, the *Construction* sector comprises Section F of the Portuguese Classification of Economic Activities, Revision 3 (CAE-Rev. 3).

The results presented in this publication complement aggregate data on non-financial corporations (NFCs),[2] also found in the Central Balance Sheet Database and issued among other publications of Banco de Portugal.[3] The analysis focuses mainly on 2008-12 developments, based on Simplified Corporate Information (*Informação Empresarial Simplificada – IES*) data, with some additional detail on 2013, in what regards bank loans and debt securities financing.

This *Study* characterises the *Construction* sector, by analysing a group of selected indicators for its enterprises.[4] For this purpose, some results are shown on the distribution of aggregate enterprises' data (i.e. quartiles), which allow for an alternative analysis to the one provided by the summary indicator on the sector's average and provide unbiased measures by extreme values. Furthermore, the analysis covers the contributions from the different sub-groups of enterprises in order to determine the sector's aggregate results. Therefore, details on the segments of economic activity and size classes are also presented.

This publication also compares the situation in the *Construction* sector and the NFC aggregate in Portugal. For further details on the results for the NFC sector, please refer to Banco de Portugal's Central *Balance Sheet Studies* 12 and 13 (both released in November 2013).

The analysis begins with a characterisation of the *Construction* sector, particularly regarding its composition in terms of economic activity, size, geographical location and maturity of the enterprises comprising it. It also presents data on market concentration and business dynamics. Afterwards, it reviews recent developments in turnover to determine the extent to which these are reflected in enterprise profitability. This involves a breakdown of the effects that influence profitability into operational and financial components of enterprises' activity, while providing some information on the sector's solvency capacity.

Based on additional information available at the Central Credit Register (CCR) and the Securities Statistics Integrated System (SSIS), details are given on the financial debt of *Construction* enterprises, particularly in what regards loans granted by the financial sector in Portugal and debt securities issued by sector's enterprises.

---

1 The Central Balance Sheet Database of Banco de Portugal is a database with economic and financial information on NFCs in Portugal. Information used in this *Study* is based on annual accounting data reported within the scope of the *IES* (*Informação Empresarial Simplificada* – Simplified Corporate Information) and quarterly accounting data reported by enterprises through the Quarterly Survey of Non-financial Corporations. Annual data cover nearly all NFCs and quarterly data cover around 4,000 enterprises, representing 50% of turnover in the sector. For further details on the activity of the Central Balance Sheet Database, please refer to the *Supplements to the Statistical Bulletin* 1/2008 – *Simplified reporting: inclusion of the Simplified Corporate Information in the statistics on non-financial corporations from the Central Balance Sheet Database* and 2/2013 – *Statistics on non-financial corporations of the Central Balance Sheet Database – Methodological Notes*, as well as the publication *Central Balance Sheet Study | 6 – New enterprise and sector tables: adjustment to the Accounting Normalisation System*, of December 2011.

2 The NFC sector represents one of the economy's five 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. ESA 95 is a harmonised reference on the compilation methodology and deadline for release of the national accounts of EU countries, including statistics under Banco de Portugal's responsibility. Based on this regulation, sole proprietors are included in the households' institutional sector. Hence, all data on the NFC sector throughout this document exclude sole proprietors (in Portugal these represent around two-thirds of the number of enterprises, but only 5% of the respective turnover). This also excludes enterprises classified under Section O – *Public administration and defence; compulsory social security*, Section T – *Activities of households as employers; undifferentiated goods – and services-producing activities of households for their own use*, and Section U – *Activities of extraterritorial organisations and bodies* of CAE-Rev.3, as they are not included in the NFC institutional sector, as well as Section K – *Financial and insurance activities*, that groups together non-financial holding enterprises (with the SGPS denomination) not involved in subsidiary management, which, despite still belonging to the NFC sector (as regulated under ESA 95), were not analysed due to their very specific characteristics that set them apart from the other NFCs.

3 Central Balance Sheet Database statistics are published in Banco de Portugal's *Statistical Bulletin* (Chapters A and G) and in Sector Tables, both available on 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', which refer to NFCs as defined in footnote 2.

Finally, for international comparison purposes, Bank for the Accounts of Companies Harmonized (BACH) data are used to compare the situation of *Construction* sector large enterprises across nine European countries, namely in terms of activity, profitability, financing structure, financing and solvency, and net trade credit financing.

The Annex provides a summary table of the main indicators and a methodological summary with the definition of the main concepts used throughout the *Study*. The statistical series (in Excel format) under analysis can also be found on Banco de Portugal's website.

2 STRUCTURE AND DYNAMICS[5]

2.1 Structure

The ***Construction*** sector analysed in this *Study* corresponds to Section F of CAE-Rev.3.[6] As such, it includes the following CAE-Rev.3 divisions:

- ***Property development (development of building projects; Construction of residential and non-residential buildings*** *(Division 41): "includes Construction, additions, alterations and repair of buildings (…) It includes general Construction of buildings of all kinds, as well as bringing together technical, legal and financial means to realise the Construction projects for later sale (property development)", hereinafter shortened to "Construction of buildings";*
- ***Civil engineering (Division 42)****: "includes: (i) Construction of motorways, bridges, tunnels, airfields and railways, (ii) Construction of water projects, sewerage systems, electric lines, telecommunications and other networks, and (iii) the Construction of other civil engineering works such as utility projects for fluids"; and,*
- ***Specialized Construction activities (Division 43)****: "includes specialized activities, such as: demolition; site preparation; drilling; foundation work; erection of steel structures; electrical and plumbing installation; building completion and finishing; technical equipment installation activities as part of the Construction process. It includes the repair of specialized Construction activities included here, as well as the rental of Construction and demolition equipment", hereinafter shortened to "Specialized activities".*

In 2012, according to Banco de Portugal's Central Balance Sheet Database data, the *Construction* sector comprised approximately 46,000 enterprises, accounting for 12% of the number of enterprises, 7% of turnover and 11% of the number of employees in Portuguese NFCs. Also in 2012, in total NFCs, this sector was the second greatest in terms of number of enterprises and the third in terms of turnover and number of employees (Table 1).

In 2012 *Construction* was the second largest sector in terms of number of enterprises (12% of NFCs in Portugal)

Nevertheless, compared with 2002, the *Construction* sector lost some relevance in total NFCs: -2 p.p. in number of enterprises and number of employees and -3 p.p. in turnover.

Table 1

TOP 3 ECONOMIC ACTIVITY SECTORS IN THE NFC AGGREGATE | *Weight in NFCs (2012)*

	Number of enterprises		Turnover		Number of employees	
	% NFCs	Ranking	% NFCs	Ranking	% NFCs	Ranking
Trade	26.9%	1	37.0%	1	21.4%	2
Construction	12.1%	2	6.9%	3	10.6%	3
Manufacturing	10.6%	3	24.4%	2	23.0%	1

By economic activity segment, *Construction of buildings* was predominant in terms of number of enterprises (accounting for approximately 60% of the total, compared with 34% in *Specialized activities* and 6% in *Civil engineering*). However, the contribution made by *Construction of buildings* to turnover was lower (40%), followed by *Civil engineering* (38%) (Table 2).

Construction of buildings accounted for 60% of enterprises and 40% of turnover in *Construction* in 2012

Between 2002 and 2012 the weight of *Construction of buildings* in the *Construction* sector declined across all indicators, particularly in turnover, which declined by more than 8 p.p. Conversely, the

5 For a detailed comparison of the structure and dynamics of the *Construction* sector with the remaining economic activity sectors in Portugal, see *Central Balance Sheet Studies* | 12 – *Structure and dynamics of non-financial corporations* in Portugal, 2006-12, November 2013.

6 CAE-Rev. comprises a total of 21 sections, 17 of which are included in the NFC aggregate.

weight of *Civil engineering* and *Specialized activities* increased, both in terms of turnover and the number of employees.

Table 2

STRUCTURE OF THE CONSTRUCTION SECTOR BY ECONOMIC ACTIVITY SEGMENT | *2002 and 2012*

	Number of enterprises		Turnover		Number of employees	
	2002	2012	2002	2012	2002	2012
Construction of buildings	62.6%	59.9%	48.4%	40.0%	51.0%	44.6%
Civil engineering	8.7%	6.1%	35.2%	38.3%	22.9%	24.1%
Specialized activities	28.8%	34.0%	16.4%	21.6%	26.1%	31.4%

The vast majority of enterprises in *Construction* are microenterprises…

The distribution of *Construction* enterprises by **size class**[7] globally reflects what happens in the NFC aggregate. In 2012 the vast majority of the sector was comprised of microenterprises (88%, compared with 89% in NFCs), while large enterprises accounted for only 0.1% of the sector (0.3% in NFCs) (Table 3).

…but SMEs play an important role in the sector's turnover and employment

Turning to employment and turnover, the weight of microenterprises and small and medium-sized enterprises (SMEs) in *Construction* exceeded that in the NFC aggregate in Portugal (between 4 p.p. and 6 p.p.). In 2012 SMEs were the most predominant enterprise size class in these variables, accounting for 49% of employment and 45% of total turnover in *Construction*.

A cross-check of **size classes and economic activity segments** shows that large enterprises were more relevant in the *Civil engineering* segment. In 2012, albeit accounting for only 1% in terms of number of enterprises, the large enterprises size class accounted for 54% of employment and 67% of turnover. In the remaining segments, SMEs were the predominant class.

Table 3

STRUCTURES | *By economic activity segment and enterprise size class (2012)*

		Number of enterprises	Turnover	Number of employees
Microenterprises	NFCs	88.8%	14.4%	26.8%
	Construction	87.6%	18.5%	32.7%
	Construction of buildings	89.0%	28.8%	41.2%
	Civil engineering	72.3%	2.9%	6.5%
	Specialized activities	88.0%	27.3%	40.8%
Small and medium--sized enterprises	NFCs	10.9%	40.6%	43.9%
	Construction	12.2%	44.5%	49.4%
	Construction of buildings	11.0%	51.3%	53.6%
	Civil engineering	26.4%	29.6%	39.1%
	Specialized activities	11.9%	58.4%	51.2%
Large enterprises	NFCs	0.3%	45.0%	29.3%
	Construction	0.1%	37.0%	17.9%
	Construction of buildings	0.1%	20.0%	5.2%
	Civil engineering	1.3%	67.5%	54.5%
	Specialized activities	0.1%	14.3%	8.0%

7 A definition of corporate size classes used in this *Study* is detailed in the Annex.

Concerning the **geographical location**[8] of enterprise head offices, in 2012 the *Construction* sector, similarly to the NFC aggregate in Portugal, was highly concentrated in coastal areas, more specifically in the Lisbon and Porto districts. These districts concentrated 40% of the number of enterprises and 54% of turnover of the *Construction* sector (in NFCs, 46% and 59% respectively).

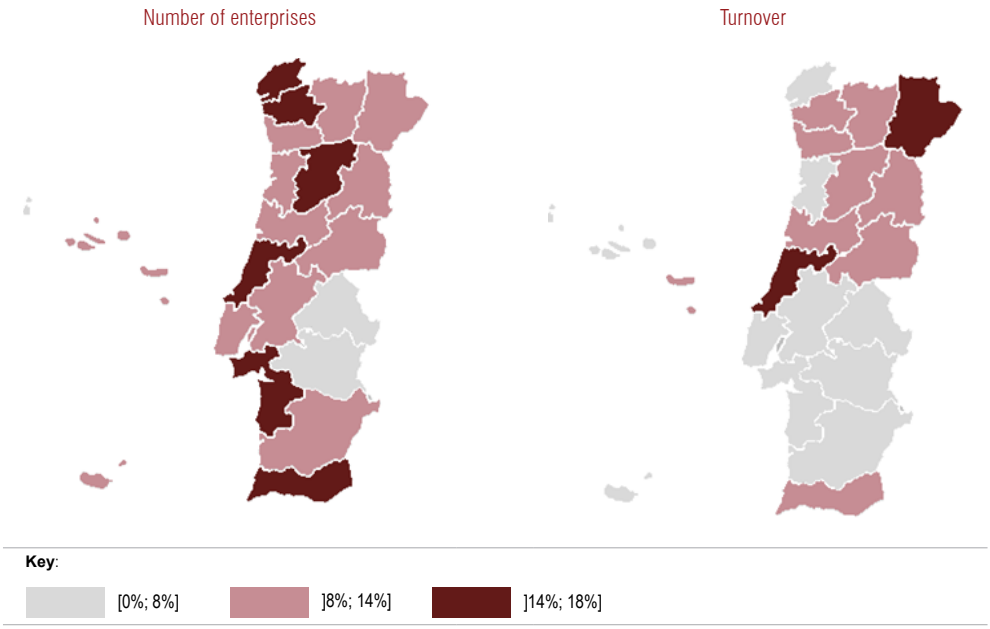
The Lisbon and Porto districts concentrate more than half of *Construction*'s turnover (54% in 2012)

With regard to the importance of the *Construction* sector in total activities carried out in each district, the greatest weight in terms of number of enterprises was recorded by the Viana do Castelo (17%), Leiria (16%) and Faro (16%) districts (Figure 1). In terms of turnover, Bragança (16%) and Leiria (14%) were particularly relevant. Évora and Portalegre, in turn, were the districts with the least relevant weight in *Construction*, assessed in terms of turnover (3% in both cases).

Overall, the sector's weight in terms of number of enterprises greatly exceeded that in terms of turnover. Viana do Castelo and Setúbal were particularly relevant, with a 10 p.p. differential. Conversely, Bragança was an exception, with the weight of *Construction* in turnover of total activities carried out in the district exceeding by 4 p.p. the weight in the number of enterprises. This was chiefly due to the predominance of the *Civil engineering* segment in the district.

Figure 1

WEIGHT OF THE CONSTRUCTION SECTOR IN THE DISTRICT'S TOTAL ACTIVITIES (2012)



With regard to **enterprise maturity**,[9] in 2012 more than half of the enterprises in the *Construction* sector had been established for more than ten years (53%). In the *Construction* sector, as in the NFC aggregate, enterprises with the longest maturities concentrated the highest share of turnover and employment (75% and 69% respectively) (Chart 1).

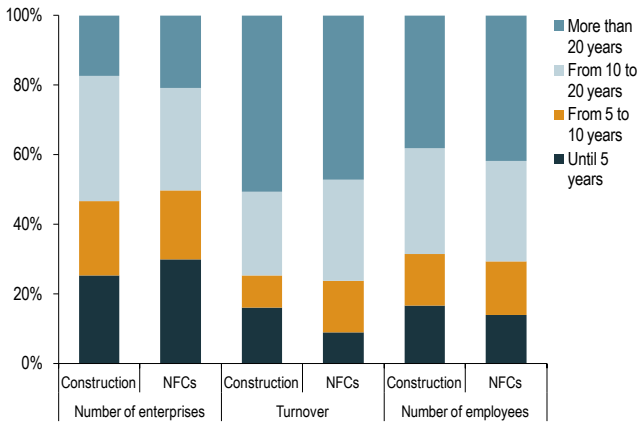
Enterprises established for more than ten years accounted for approximately three-quarters of the sector's turnover in 2012

8 Geographical location refers to the district where the enterprise head office is located.

9 The enterprise maturity corresponds to the age of the enterprise as at the analysis reference date. Four maturity classes are considered: up to (but not including) five years; from five to (but not including) ten years; from ten to (but not including) 20 years; and more than 20 years (which comprises enterprises established for 20 years).

Chart 1

STRUCTURE BY MATURITY CLASS (2012)



2.2 Market concentration

In 2012, 11% of employment in the 100 largest enterprises in Portugal belonged to the *Construction* sector

In 2012 the 100 largest enterprises in Portugal, in terms of turnover, included seven enterprises in the *Construction* sector. These enterprises were mostly part of the *Civil engineering* segment, and accounted for 11% of the number of employees and 4% of turnover of the TOP 100 enterprises (Table 4).

Table 4

TOP 100 NFCs | *Weight in total NFCs and weight in the Construction sector (2012)*

	Number of enterprises	Turnover	Number of employees
Weight of the 100 largest NFCs (in turnover) in total NFCs	0.03%	26. 0%	7.4%
Weight of Construction in the 100 largest NFCs (in turnover)	7.0%	4.3%	10.7%

None of *Construction*'s economic activity segments showed any evidence of concentration in 2012. However, over the past decade, the concentration index has increased somewhat

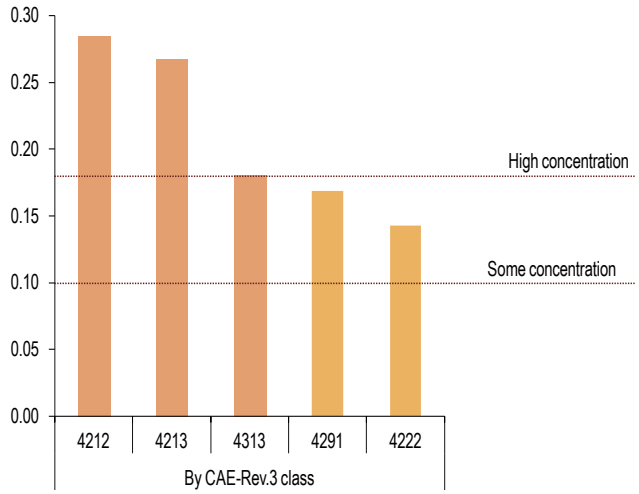
Concerning the **sectoral concentration** on the basis of the Herfindahl-Hirschman Index (HHI), which weighs each enterprise's market share in its activity,[10] in 2012 there was no evidence of concentration in any of the economic activity segments in *Construction*. The highest HHI value was seen in *Civil engineering* (0.030) and the lowest in *Specialized activities* (0.003). Although HHI figures have not been significant, concentration has followed a slightly upward path over the past decade (0.004 in *Construction of buildings* and 0.01 in *Civil engineering*).

Looking to the HHI of all 22 CAE-Rev.3 classes included in the *Construction* sector, the HHI in three of these classes shows values similar to those of highly concentrated markets. The two classes with the highest concentration levels are included in *Civil engineering*: *Construction of railways and underground railways* (Class 4212) and *Construction of bridges and tunnels* (Class 4213) (Chart 2).

10 The market share s_i was derived from individual turnover Yi while $s_i = y_i / \sum_{i=1}^{n} y_i$, with HHI corresponding to $\sum_{i=1}^{n} s_i^2$. HHI is between 1/n and 1, with an index between 1/n and 0.1 corresponding to unconcentrated markets, between 0.1 and 0.18 indicating moderately concentrated markets and above 0.18 indicating high corporate concentration. 1 corresponds to a monopoly situation, in which one enterprise holds the entire market share.

Chart 2

HERFINDAHL-HIRSCHMAN INDEX BY CAE-REV.3 CLASS | *Turnover (2012)*



Key: Left to right – **Class 4212**: *Construction of railways and underground railways*, **Class 4213**: *Construction of bridges and tunnels*, **Class 4313**: *Test drilling and boring*, **Class 4291**: *Construction of water projects*, **Class 4222**: *Construction of utility projects for electricity and telecommunications*.

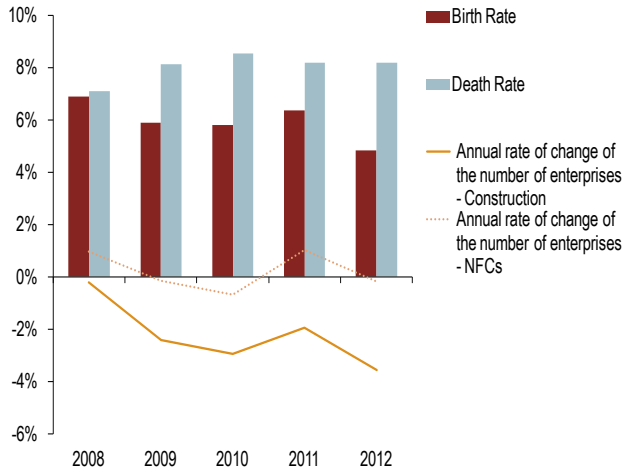
2.3 Dynamics

In 2012 and for the fifth year in a row, the number of enterprises operating in the *Construction* sector declined (4%). Indeed, the death rate of enterprises in this sector has exceeded the birth rate since 2008. In 2012 the number of enterprises operating in the NFC aggregate declined by 0.2% (Chart 3).

The number of enterprises operating in the sector has declined over the past five years…

Chart 3

DEMOGRAPHIC INDICATORS IN THE CONSTRUCTION SECTOR



By economic activity segment, *Specialized activities* indicators were the least negative. Nonetheless, its number of enterprises declined somewhat in the period under review. The remaining segments in *Construction* contracted markedly, in terms of number of enterprises, with the number of deaths doubling that of births in 2012 (Table 5).

…despite a smaller fall in *Specialized activities*

With regard to enterprise size classes, the fall in the number of enterprises in *Construction* was particularly substantial in microenterprises and SMEs. In the latter, the birth/death ratio has been below 0.5 since 2010 (0.32 in 2012).

Table 5

BIRTH/DEATH RATIO					
	2008	2009	2010	2011	2012
Construction of buildings	0.88	0.60	0.53	0.60	0.46
Civil engineering	0.46	0.57	0.54	0.54	0.46
Specialized activities	1.30	0.99	0.97	1.17	0.82
Construction	0.97	0.71	0.66	0.76	0.57

3 ECONOMIC AND FINANCIAL ANALYSIS

3.1 Economic environment

In 2012 gross domestic product fell and unemployment increased in the Portuguese economy. This was set against an unfavourable external environment, characterised by the euro area recession in and a slowdown in global economic growth. On the domestic side, fiscal policy guidelines remained tight and, in spite of a slight improvement, monetary and financial conditions continued to be constrained.

In contrast to the decrease in economic activity, progress was made in the adjustment process in the Portuguese economy, specifically in rebalancing the joint current and capital account balance and reducing the primary and structural deficit.

GDP in Portugal declined by 3.2% in 2012

In 2012 Portuguese GDP fell by 3.2%, following a decrease of 1.3% in 2011. Private consumption and investment fell even further than in 2011, while public consumption declined slightly less than in the previous year. Foreign trade operations continued to contribute positively to developments in GDP, with exports growing, albeit at a slower pace than in 2011, and imports falling more markedly (Table 6).

At the end of the first half of 2013 GDP had declined by 3.1%, year-on-year

Data available for the first half of 2013 show a decrease in output of around 3.1% year-on-year. At the end of 2013, Banco de Portugal's most recent estimates, published in the *Winter Economic Bulletin*, pointed to drop of 1.5%[11] in GDP.

Table 6

GDP AND MAIN COMPONENTS | *Annual growth rate*					
	2009	2010	2011	2012	2013 (1st half-year)
GDP	-2.9%	1.9%	-1.3%	-3.2%	-3.1%
Private consumption	-2.3%	2.5%	-3.3%	-5.4%	-3.3%
Public consumption	4.7%	0.1%	-5.0%	-4.7%	-3.3%
Gross fixed capital formation	-8.6%	-3.1%	-10.5%	-14.4%	-11.7%
Exports	-10.9%	10.2%	6.9%	3.2%	4.0%
Imports	-10.0%	8.0%	-5.3%	-6.6%	0.9%

Sources: *INE* and Banco de Portugal.

11 For more information on economic activity developments in Portugal, refer to Banco de Portugal's *Annual Report* as well as its *Economic Bulletin*, which is published on a quarterly basis. Both publications are available at http://www.bportugal.pt.

3.2 Activity and profitability

3.2.1 Turnover

Construction's turnover fell by 17% and 26% respectively in 2011 and 2012

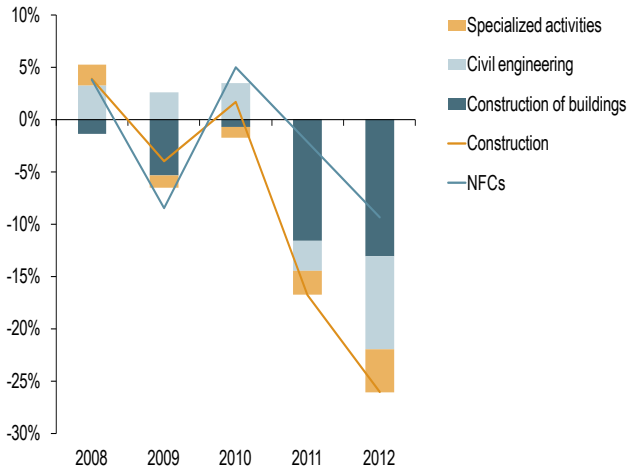
Developments in *Construction*'s turnover were particularly negative in 2011 and 2012.[12] In 2012 the sector's turnover fell by 26%, after a 17% drop in 2011. In the NFC aggregate, turnover also fell in both years, albeit less markedly (2% in 2011 and 9% in 2012). Among the main economic activity sectors, the largest falls in turnover were seen in *Construction*.[13] According to preliminary data, turnover in *Construction* continued to follow a negative path up to the third quarter of 2013.

In 2012 the most negative contribution to these developments was made by *Construction of buildings*

By economic activity segment, the most substantial fall in turnover in 2012 was recorded by *Construction of buildings* (32%), which also made the largest contribution (13 p.p.) to a contraction in *Construction* (Chart 4). In the remaining segments, turnover declined by 23% in *Civil engineering* and 20% in *Specialized activities*. Over the period under review, turnover in *Construction of buildings* and *Specialized activities* systematically recorded negative developments. In *Civil engineering*, turnover only started to record negative growth rates in this indicator after 2010.

Chart 4

TURNOVER | *Annual growth rate (%) and contributions (p.p.)*



In 2012 turnover contracted across all size classes in the sector

In 2012 turnover contracted across all enterprise size classes in the *Construction* sector. In SMEs the decline stood at 30%, in large enterprises at 25% and in microenterprises at 20%. Considering the 2008-12 time horizon, turnover in both SMEs and microenterprises declined consecutively. Turning to large enterprises, negative developments only emerged in 2011.

Half of *Construction*'s enterprises had a fall in turnover of more than 23%

Individual data show that the average growth rate in turnover in the *Construction* sector in 2012 (-26%) is deemed representative of the overall situation of the sector's enterprises, as it is close to the median (-23%). This is also the case across the three economic activity segments under review (Chart 5).

12 Box 1 "External market importance for *Construction* enterprises' activity" provides additional information on the weight of the external market in the activities of enterprises in the sector.

13 For a detailed comparison of economic and financial indicators in the *Construction* sector with the remaining economic activity sectors in Portugal, see *Central Balance Sheet Studies | 13 – Sectoral analysis of non-financial corporations in Portugal 2012/13*, November 2013.

At enterprise level, data also show that, in 2012, falls in turnover in one-fourth of *Construction* enterprises exceeded 60% (in the first quartile). In the opposite end of the distribution, in 25% of the sector's enterprises, turnover grew more than 9% (in the third quartile). Compared with 2011, distributions are moving downwards. This points to more negative developments in turnover in 2012 for most *Construction* enterprises, regardless of the economic activity segment.

Chart 5

TURNOVER | *Quartile distribution of the annual growth rate and weighted average*

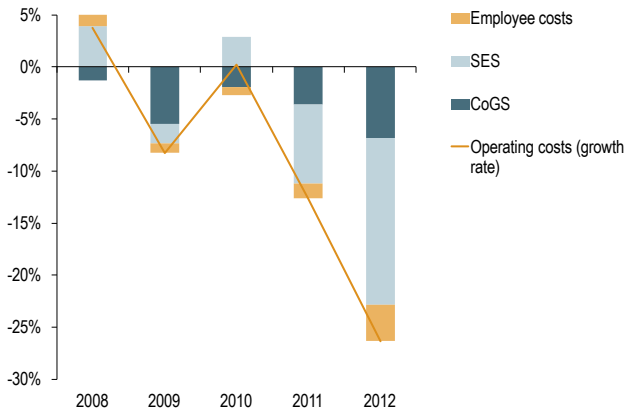
3.2.2 Operating costs[14]

Operating costs decreased by 26% in 2012, with SES making the most substantial contribution to this fall (16 p.p.)

In line with a fall in turnover in 2012, operating costs in *Construction* declined by 26% from the same period one year before, with a fall across all components (Chart 6). The most substantial reduction was seen in Supplies and External Services (SES) (29%) and the lowest in staff costs (18%).

Chart 6

OPERATING COSTS | *Annual growth rate (%) and contributions (p.p.)*



14 The "operating costs" aggregate, calculated on the basis of the sum of Cost of Goods Sold and Materials Consumed (CoGS) and Supplies and External Services (SES) and Staff Costs, roughly corresponds to the concept of "operating costs" of the Official Chart of Accounts (accounting standard for corporate accounts up to 2009).

SES accounted for 53% of operating costs in the sector under review, opposite to the Cost of Goods Sold and Materials Consumed (CoGS) (25%) and staff costs (22%). The contribution made by SES to developments in *Construction* operating costs in 2012 (-26%) was therefore significant: 16 p.p..

The weight of SES in total operating costs increases in tandem with size class: in 2012, 37% in microenterprises, 48% in SMEs and 66% in large enterprises

Developments in operating costs by size class and economic activity segment were also in line with a fall in their activity. By size class, the largest decline was recorded by SMEs (29%), while, by economic activity segment, there was a 32% contraction in *Construction of buildings*.

In the *Construction* sector, the operating cost structure by size class and economic activity segment is considerably mixed. By size class, the larger the enterprise, the greater the share of SES in total operating costs, as opposed to CoGS and staff costs. In 2012 SES accounted for 66% of total costs in large enterprises, in contrast to 48% in SMEs and 37% in microenterprises (Table 7).

By economic activity segment, *Civil engineering* had an operating cost structure similar to that of large enterprises, reflecting the fact that this class of enterprises accounted for 67% of this segment's turnover. Also, *Construction of buildings* and *Specialized activities* had operating cost structures similar to those of SMEs and microenterprises respectively.

The structure of operating costs in *Civil engineering* was similar to that of large enterprises

Table 7

OPERATING COSTS | *Structure by size class and economic activity segment (2012)*

		CoGS	SES	Staff costs
	Construction	25.3%	52.5%	22.2%
By size class	Microenterprises	37.5%	36.5%	25.9%
	Small and medium-sized enterprises	26.2%	47.8%	26.0%
	Large enterprises	18.2%	66.0%	15.9%
By economic activity segment	Construction of buildings	27.7%	49.1%	23.3%
	Civil engineering	19.0%	65.1%	15.9%
	Specialized activities	32.8%	35.7%	31.5%

BOX 1 | EXTERNAL MARKET IMPORTANCE FOR CONSTRUCTION ENTERPRISES' ACTIVITY

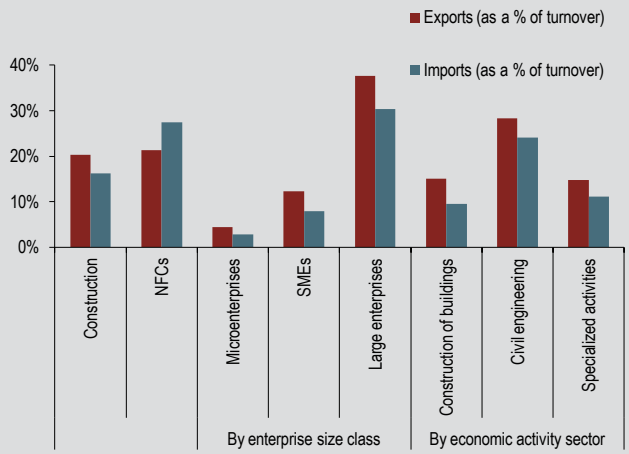
This *Box* assesses the importance of the external market for the operating activity of *Construction* enterprises in Portugal, on the basis of *IES* data.[15]

In 2012 the external market accounted for 20% of the *Construction* sector's turnover. This reflects an increase from 2011 (14% weight of the external market), which resulted from both a fall in the domestic market and an acceleration in the external market. The weight of exports in *Construction* was similar to that in the non-financial corporations aggregate in Portugal: 21% in 2012.

In *Construction*, as in the Portuguese enterprise aggregate, the weight of exports in total turnover increased in tandem with the enterprise size class: in 2012, it stood at 4% for microenterprises, 12% for SMEs and 38% for large enterprises (Chart 1.1). Compared with 2011, this accounts for +1 p.p. for microenterprises, +5 p.p. for SMEs and +11 p.p. for large enterprises.

Chart 1.1

EXPORTS AND IMPORTS OF GOODS AND SERVICES (2012)



By economic activity segment, the external market was more predominant in terms of turnover in the *Civil engineering* segment: 28%, compared with 15% both in *Construction of buildings* and *Specialized activities*. It should be noted, however, that *Civil engineering* is chiefly comprised of large enterprises.

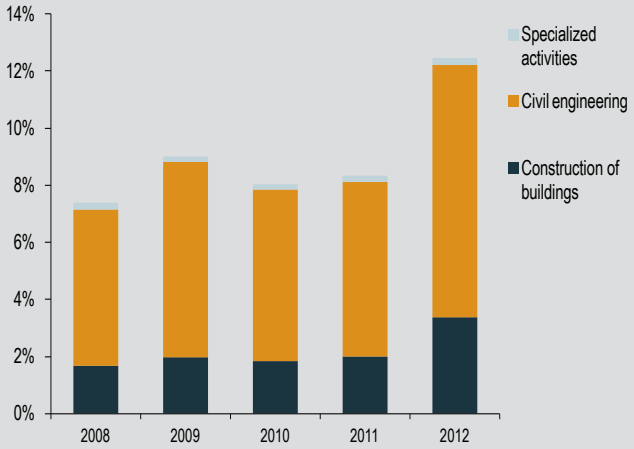
Given the specific nature of activities carried out in *Construction*, the importance of branches located abroad was assessed. Based on data available for 2008-12, the activity of branches of *Construction* enterprises located abroad accounts for over 50% of the sector's exports. In 2012, 12% of the *Construction* sector's turnover was generated by branches abroad (5 p.p. more than in 2008).

By enterprise size class, the vast bulk of turnover generated by branches abroad was associated with large enterprises (95% in 2012). By economic activity segment, 71% of that turnover came from *Civil engineering* (compared with 27% in *Construction of buildings* and 2% in *Specialized activities*). However, *Civil engineering* lost some relevance over the 2008-12 period (-3 p.p., compared with +4 p.p. in *Construction of buildings* and -1 p.p. in *Specialized activities*) (Chart 1.2).

15 Data reported by enterprises within the scope of *IES* submissions regarding exports and imports of goods and services are subject to quality control by Banco de Portugal, especially in comparison with balance of payments data. Nevertheless, this control does not guarantee that final data from each enterprise in *IES* are fully coincident with international trade statistics data. This is largely due to methodological differences between the enterprises' accounting records, which are on the basis of this analysis, and the classification of external transactions in balance of payments and international investment position statistics.

Chart 1.2

TURNOVER GENERATED BY BRANCHES ABROAD | *Weight in total turnover, and contributions by economic activity segment (2008 to 2012)*



With regard to imports, the importance of the external market for purchases of goods and services of the sector's enterprises was 16% in 2012 (13% in 2011). In the enterprise aggregate in Portugal, it stood at 27%. Also at this level, the larger the size class, the greater the relative weight of imports; in 2012, 30% of purchase and supplies and external services of the sector's large enterprises were made abroad (compared with 8% in SMEs and 3% in microenterprises). Similarly to exports, the importance of the external market for imports increased between 2011 and 2012 across all size classes.

By economic activity segment, *Civil engineering* depended more on imports in 2012: 24% weight in purchases and supplies and external services (compared with11% in *Specialized activities* and 9% in *Construction of buildings*).

Concerning the balance of goods and services transactions with the external market, *Construction* stood in positive territory over the entire time horizon under review (9% in 2012), in contrast to the enterprise aggregate in Portugal, which was always negative (-0.5% in 2012). Compared with 2008, the balance in *Construction* increased by 4 p.p. (Chart 1.3).

Chart 1.3

GOODS AND SERVICES TRANSACTIONS WITH EXTERNAL MARKETS (BALANCE 2008 TO 2012) | *Weight in turnover (%)*

In the 2008-12 period, all size classes in *Construction* also had a positive balance of goods and services transactions with the external market: 3% in microenterprises, 7% in SMEs and 14% in large enterprises.

All economic activity segments in the sector also had a positive balance of goods and services transactions with the external market in the period under review, amounting to 9% in *Civil engineering* and *Construction of buildings* and 7% in *Specialized activities* in 2012. Between 2008 and 2012 the largest positive change was recorded in the *Specialized activities* segment (6 p.p., compared with 5 p.p. in *Construction of buildings* and 1 p.p. in *Civil engineering*).

3.2.3 EBITDA[16]

Construction's EBITDA declined less than in the NFC aggregate (6% and 25% respectively)

Developments in *Construction*'s operating activity in 2012 were reflected in a 6% decline in EBITDA, compared with 2011. Such developments, albeit negative, compare favourably with the NFC aggregate, where EBITDA fell by 25% over the same period. However, in 2011, EBITDA in *Construction* had already contracted by 62%, compared with a 27% decline in NFCs.

In 2012 positive contributions to *Construction*'s EBITDA were due: in terms of size classes to large enterprises (36% growth) and, in terms of economic activity segments to *Civil engineering* (65% growth). Conversely, microenterprises and the *Construction of buildings* had a negative EBITDA, for the first time, in the period under review.

44% of enterprises in *Construction* recorded positive EBITDA developments in 2012...

Despite a fall, on average, in EBITDA in 2012, the share of enterprises in *Construction* whose indicator grew (44%) remained unchanged, which was in line with the NFC aggregate (Table 8).

By size class, SMEs had the lowest number of enterprises whose EBITDA had grown (37%, compared with 44% in microenterprises and 48% in large enterprises). Between 2011 and 2012 only microenterprises recorded an increase in the share of enterprises with EBITDA growth.

By economic activity segment, data show that *Construction of buildings* had the largest relative number of enterprises with EBITDA growth (45%, compared with 42% in *Civil engineering* and *Specialized activities*). Compared with the previous year, the largest change in this indicator was recorded in *Civil engineering*, with a decline of approximately 2 p.p..

Table 8

EBITDA | *Weight of enterprises with annual growth*

		2011	2012
	NFCs	45.4%	44.5%
	Construction	43.4%	43.5%
By size enterprise class	Microenterprises	43.9%	44.5%
	Small and medium-sized enterprises	40.8%	37.1%
	Large enterprises	49.4%	48.3%
By economic activity segment	Construction of buildings	44.5%	44.5%
	Civil engineering	44.1%	42.4%
	Specialized activities	41.2%	42.0%

In addition to EBITDA developments, it is also worth looking at the share of enterprises with negative values in this indicator. The aim is to identify the share of enterprises whose operating activity is not able to generate sufficient revenue to cover incurred costs.

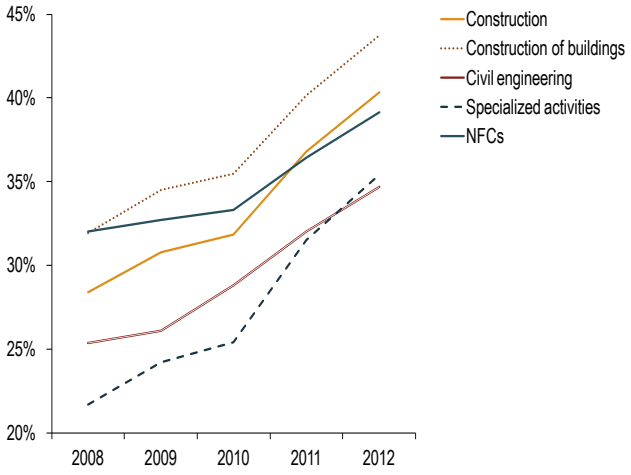
...however, 40% of the sector's enterprises had negative EBITDA levels

In 2012, 40% of the *Construction* sector's enterprises had a negative EBITDA, which corresponds to a 12 p.p. increase from 2008 (Chart 7). During this period, shares in *Construction* were lower than the NFC aggregate up to 2010. As of 2011 the share of enterprises with negative EBITDA has increased in *Construction*. The deterioration in this indicator was broad-based across all economic activity segments and size classes. However, *Construction of buildings* is noteworthy, as it had the largest share of enterprises with negative EBITDA over the entire period under review. By size class, microenterprises had the largest relative number of enterprises in this situation over the period under review.

16 EBITDA stands for earnings before interest, taxes, depreciation and amortisation. It corresponds to profit and loss for the year plus costs related to interest, taxes, depreciation and amortisation.

Chart 7

ENTERPRISES WITH NEGATIVE EBITDA | *Weight in the total*



3.2.4 Return on equity[17]

Construction return on equity remained negative in 2012 (-8%)...

Return on equity in *Construction* remained in negative territory in 2012 (-8%), for the second year in a row (Chart 8). In fact, *Construction* had the lowest profitability among the main economic activity sectors in Portugal, standing 8 p.p. below the NFC average. According to preliminary Central Balance Sheet Database data up to the third quarter of 2013, year-on-year developments were positive for the profitability indicator in *Construction* calculated as the ratio of EBITDA to the sum of equity and debt.

Excluding large enterprises, all size classes in the sector under review had negative average profitability in 2012: 5% in large enterprises, compared with -9% in SMEs and -16% in microenterprises. Indeed, microenterprises had negative return on equity during the entire period under review.

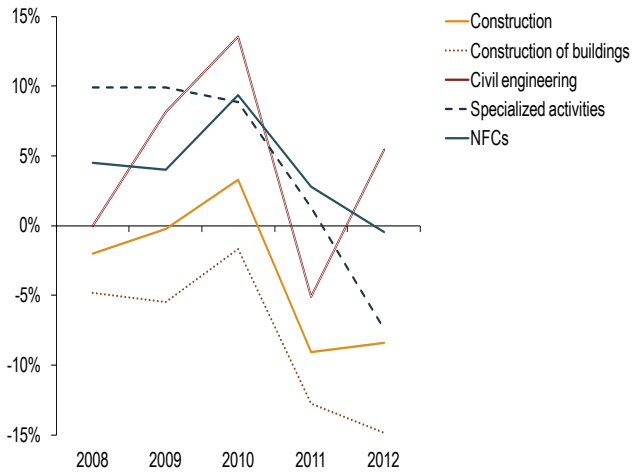
...with positive profitability levels only in the *Civil engineering* segment (5%)

By economic activity segment, only *Civil engineering* had positive return on equity in 2012 (5%), recovering from negative levels in 2011 (-5%). For the first time, in 2012 *Specialized activities* had negative profitability (-7%). *Construction of buildings*, in turn, always recorded negative profitability levels during the 2008-12 period, having deteriorated over the past year (-15% in 2012 and -13% in 2011).

17 Return on equity is calculated as the ratio of net profit for the year to equity and measures return from equity invested by shareholders. Return on equity is calculated, in individual terms, only for enterprises with positive equity, as described in *Central Balance Sheet Studies* | 6 – *New enterprise and sector tables: adjustment to the Accounting Normalisation System*, of December 2011.

Chart 8

RETURN ON EQUITY



In addition to the maintenance of negative average profitability levels, the share of enterprises in *Construction* with negative net results for the year increased in 2012, standing at 48% (44% in 2011) (Table 9). This increase extended to all size classes, excluding large enterprises: +3 p.p., to 50% in microenterprises; +4 p.p., to 35% in SMEs; and -8 p.p., to 23% in large enterprises. By economic activity segment, the increase was broad-based, with *Construction of buildings* maintaining the largest share of enterprises with negative net results for the year (52%, compared with 43% in *Civil engineering* and *Specialized activities*).

Table 9

ENTERPRISES WITH NEGATIVE RESULTS AND NEGATIVE EQUITY

				By enterprise size class			By economic activity segment		
		NFCs	Construction	Micro	SMEs	Large	Construction of buildings	Civil engineering	Specialized activities
Enterprises with negative results	2011	44.5%	44.3%	46.5%	30.9%	31.5%	47.8%	39.9%	38.5%
	2012	47.4%	48.2%	50.0%	34.9%	23.3%	51.8%	42.6%	42.8%
Enterprises with negative equity	2011	27.3%	22.5%	24.7%	9.4%	6.7%	22.8%	19.0%	22.7%
	2012	29.2%	24.7%	26.8%	9.4%	6.7%	24.8%	20.8%	25.3%

Given their consecutively negative net results, 25% of enterprises in *Construction* had negative equity levels in 2012, which corresponds to a 2 p.p. increase from 2011. Similarly to the previous year, this was particularly relevant in the *Construction of buildings* and *Specialized activities* segments, in which around 25% of enterprises had negative equity levels. By size class, the share of microenterprises with negative equity (27%) was greater than in SMEs (9%) and large enterprises (7%).

The share of enterprises with negative equity in *Construction* (25%) was more substantial for microenterprises (27%)

3.3 Financial situation

3.3.1 Financial structure

Construction had a capital ratio of 20% in 2012, *i.e.* 9 p.p. below that of NFCs. *Civil engineering* had the lowest capital ratio (17%)

The capital ratio in *Construction* stood at 20% in 2012, *i.e.* 9 p.p. below the NFC aggregate. During the entire 2008-12 period, the *Construction* sector had a lower capital ratio.

The weight of equity in assets was very similar across all enterprise size classes: 23% in large enterprises; 21% in SMEs and 19% in microenterprises. In terms of economic activity segments, *Specialized activities* (29%) had a greater capital ratio than *Construction of buildings* (21%) and Civil engineering (17%).

Microeconomic data show that, in 2012, albeit with a lower average capital ratio than NFCs, the indicator's median for *Construction* enterprises was in line with that of NFCs (23% and 24% respectively). Furthermore, the capital ratio dispersion in the sector under review was lower, with its first quartile being higher than for NFCs (0.3% and -8% respectively) and the third quartile being lower (55% and 60% respectively) (Chart 9). As such, the difference in average values was chiefly due to the fact that the capital ratio is biased in the NFC aggregate owing to a number of more capitalised enterprises.

Looking at the distribution of *Construction* enterprises data, the dispersion of capital ratio values increased in the period under review. In fact, in 2008 the interquartile range of the *Construction* capital ratio stood at 43 p.p., compared with 54 p.p. in 2012. This reflects a greater differentiation in the utilisation of equity as a source of financing, which is perceptible across all size classes and economic activity segments.

Chart 9

CAPITAL RATIO | *Quartile distribution and weighted average (2008 and 2012)*

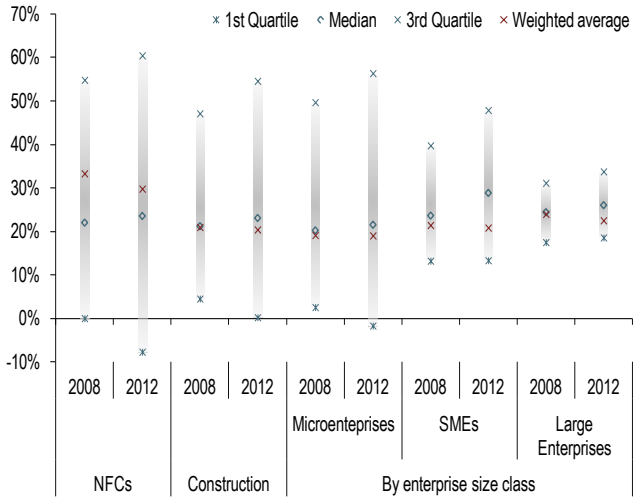
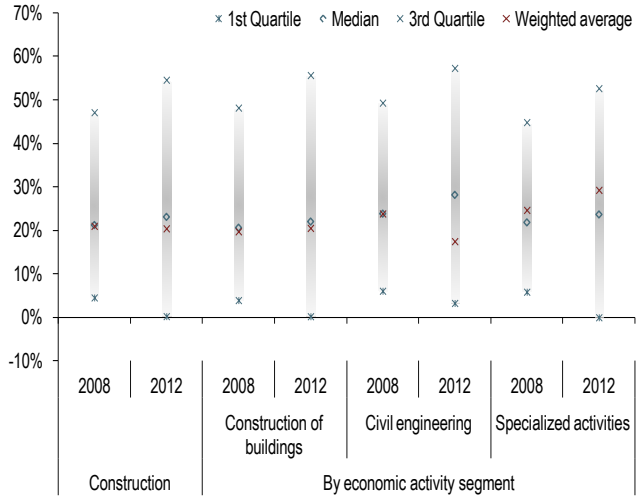


Chart 9

CAPITAL RATIO | *Quartile distribution and weighted average (2008 and 2012) (cont.)*



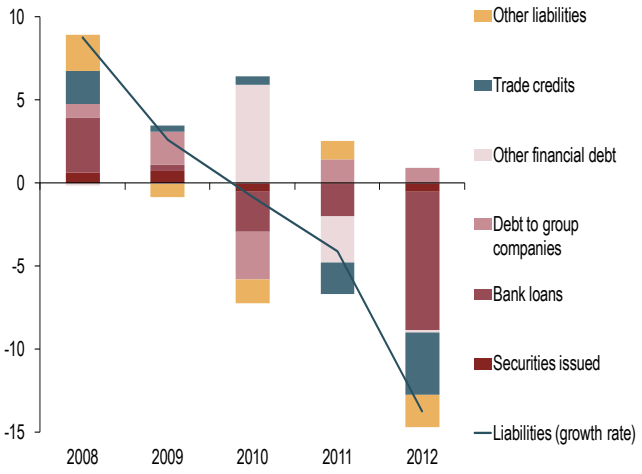
Results obtained for the capital ratio indicator show that debt had a very prominent role in *Construction* financing, which warrants a more detailed analysis of its characteristics and recent developments.

Liabilities in *Construction* contracted by 14% in 2012 (4% decline in 2011), with positive developments only in the debt to group companies (9% growth). Bank loans and trade credits fell markedly (-20% and -22% respectively), which was behind the overall decrease in *Construction* sector's liabilities (Chart 10).

Only the debt to group companies component dampened the 14% fall in *Construction*'s liabilities

Chart 10

LIABILITIES | *Annual growth rate (%) and contributions (p.p.)*



Note: The analysis does not include liabilities' components considered eminently related to accounting procedures, such as accruals and provisions. Thus, 'Other liabilities' includes debt to the Public Administration and other public entities, non-interest bearing debt to shareholders, other current liabilities and accounts payable.

Financial debt and trade credits accounted for over three-quarters of *Construction*'s liabilities

In the *Construction* sector, bank loans are very relevant (38% of liabilities)

Chart 11 shows in detail debt financing sources for the *Construction* sector in 2012, while financial debt and trade credits accounted, overall, for over three-quarters of the total. However, the relative importance of each source of financing diverges across economic activity segments and size classes.

Financial debt accounted for 60% of *Construction* liabilities, similarly to NFCs. However, in *Construction*, bank loans[18] were more relevant as a source of financing (38%, compared with a 29% average in the NFC aggregate). The greater weight in this component was offset by a smaller recourse to intra-group funding and debt securities issues.[19]

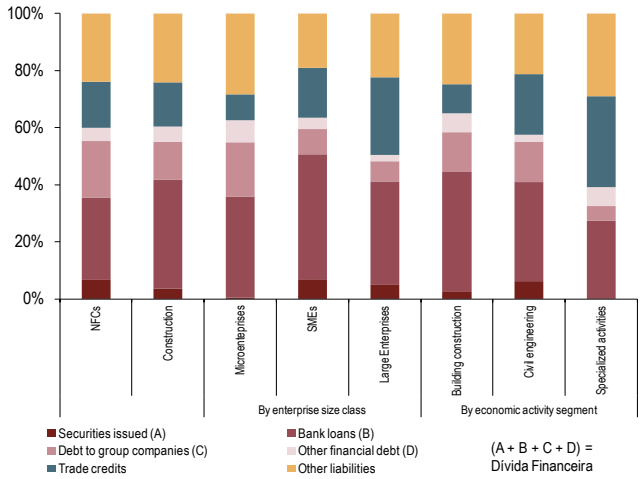
By size class, bank loans were more predominant in SMEs, accounting for 44% of total liabilities, compared with 36% in large enterprises and 35% in microenterprises. By economic activity segment, *Construction of buildings* was noteworthy, with 42% of their financing coming from bank loans, compared with 35% in *Civil engineering* and 27% in *Specialized activities*.

Debt securities issues were only somewhat relevant in SMEs and large enterprises (7% and 5% respectively). By economic activity segment, debt securities issues were only made in the *Civil engineering* (6%) and *Construction of buildings* (3%) segments. In *Specialized activities* recourse to debt securities was marginal (0.2%). In microenterprises, intra-group financing amounted to 19%, compared with 9% in SMEs and 7% in large enterprises.

Trade credits accounted for 15% of liabilities in *Construction* (16% in NFCs), and were more relevant in large enterprises (27%) and in the *Specialized activities* (32%) segment.

Chart 11

LIABILITIES STRUCTURE (2012)



Note: Financial debt refers to the set of interest-bearing debt obtained through issuing debt securities, debts from banks and other financial institutions , debt from group companies and other loans. The analysis excludes liability components considered eminently related to accounting procedures, such as deferrals and provisions. Thus, 'Other liabilities' includes debt to the Public Administration and other public entities, non-interest bearing debt to shareholders and other current liabilities and accounts payable.

18 Box 2 "Loans from credit institutions resident in Portugal – characterisation based on the Central Credit Register" provides further information on this source of financing.

19 Box 3 "Credit obtained through debt securities issues – characterisation based on the Securities Statistics Integrated System" provides further information on this source of financing.

BOX 2 | LOANS FROM CREDIT INSTITUTIONS RESIDENT IN PORTUGAL – CHARACTERISATION BASED ON THE CENTRAL CREDIT REGISTER[20]

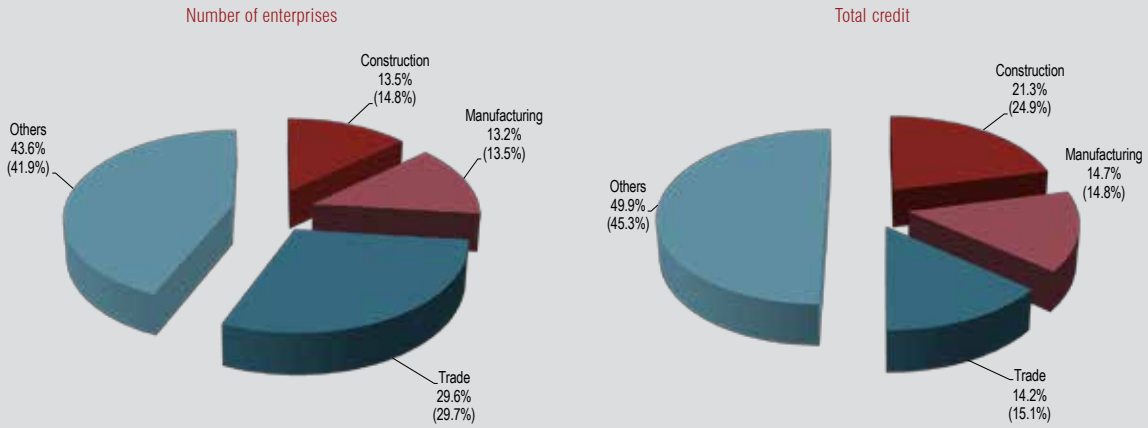
Loans from credit institutions (CIs) were the main financial debt component in *Construction* (in 2012 they accounted for 63% of financial debt and approximately 38% of total liabilities). On the basis of information available at Banco de Portugal's Central Credit Register, this Box analyses the component related to loans from resident CIs in Portugal.[21]

In 2012 the share of *Construction* enterprises that had been granted loans from resident CIs stood at 67%, above that of the NFC aggregate (61%). However, the number of *Construction* enterprises with bank loans has been decreasing since 2009.

Resident CIs are, traditionally, highly exposed to the *Construction* sector. Indeed, in 2012 approximately 13.5% of enterprises with loans from resident CIs were part of the sector under review (exceeded only by Trade, which comprised 29.6% of total enterprises). In terms of total credit, the relative weight of *Construction* exceeds that of all other economic activities, accounting for 21.3% of total credit granted by resident CIs to enterprises in Portugal in 2012. Nonetheless, the degree of exposure of resident CIs to the *Construction* sector declined, compared with 2009 (24.9%) (Chart 2.1).

Chart 2.1

NUMBER OF ENTERPRISES AND TOTAL CREDIT FROM RESIDENT CIs | *By economic activity sector (2012) (2009 in brackets)*



In fact, between 2009 and 2012, credit granted by resident CIs to the *Construction* sector decreased by 25.2%, *i.e.* nearly twice as much as in the NFC aggregate in Portugal (12.5%). This fall was not equally reflected across all economic activity segments in *Construction*. While credit declined in *Construction of buildings* and *Specialized activities*, by 33.1% and 18.1% respectively, in *Civil engineering* it increased, by 13.7%. As such, the weight of *Construction of buildings*, with the largest share of credit granted to the *Construction* sector, moved from 78.8% in 2009 to 70.5% in 2012.

Looking only at the most recent period, in 2012 credit granted to *Construction* contracted by 13.2%, compared with 2011. In 2013 negative trend developments in credit granted to the sector continued at the end of the third quarter, with a 9.5% decline. In total NFCs, credit fell, over that period, by 4.8%.

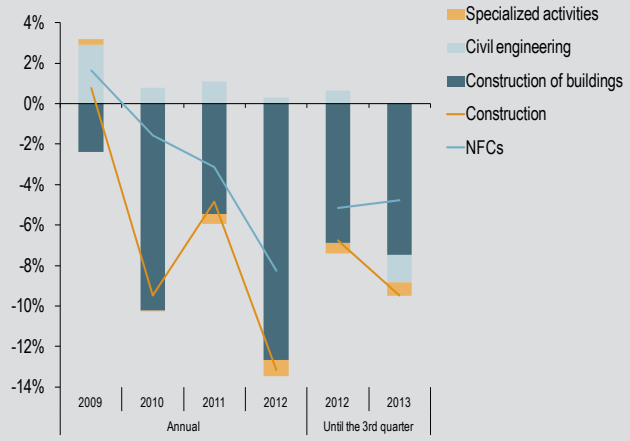
20 The Central Credit Register is a database managed by Banco de Portugal, which gathers information provided by participating entities (credit-granting resident institutions) regarding credit granted. For further information, see Banco de Portugal *Booklet No 5*, *Central Credit Register*.

21 These include banks, savings banks and mutual agricultural credit banks (generically called 'banks' in this *Study*), as well as credit financial institutions, factoring enterprises, credit-purchase financing companies and leasing companies. Over 95% of credit granted by resident credit institutions to NFCs in 2012 came from banks.

Construction of buildings was the most relevant segment for the fall recorded in the first nine months of 2013 (-7.5 p.p. contribution, compared with -1.3 p.p. in *Civil engineering* and -0.7 p.p. in *Specialized activities*) (Chart 2.2). By enterprise size class, contraction in credit was greater in smaller enterprises: 13.3% in microenterprises, 8.9% in SMEs and 2.7% in large enterprises.

Chart 2.2

DEVELOPMENTS IN LOANS FROM RESIDENT CIs | *Growth rate (%) and contributions (p.p.) – end-of-period*

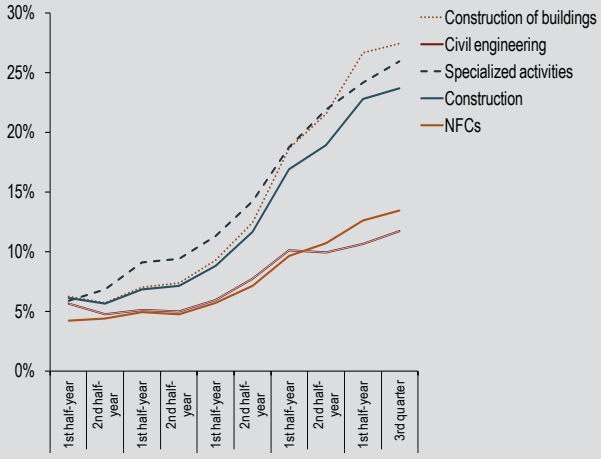


The non-performing loans ratio[22] of the *Construction* sector followed an upward path in the period under review (Chart 2.3). At the end of the third quarter of 2013 the non-performing loans ratio in *Construction* amounted to 23.7%, while in the NFC aggregate it stood at 13.4%. Compared with the end of 2009, this corresponds to a 18.0 p.p. increase in *Construction*, in contrast to 9.1 p.p. in NFCs.

By economic activity segment, only *Civil engineering* (11.7%) had higher non-performing levels than NFCs at the end of the third quarter of 2013. In *Construction of buildings* and *Specialized activities*, the non-performing loans ratio amounted to 27.4% and 25.9% respectively. By size class, the non-performing loans ratio amounted to 29.7% in microenterprises, 26.9% in SMEs and 6.1% in large enterprises.

Chart 2.3

NON-PERFORMING LOANS RATIO (END-OF-PERIOD)



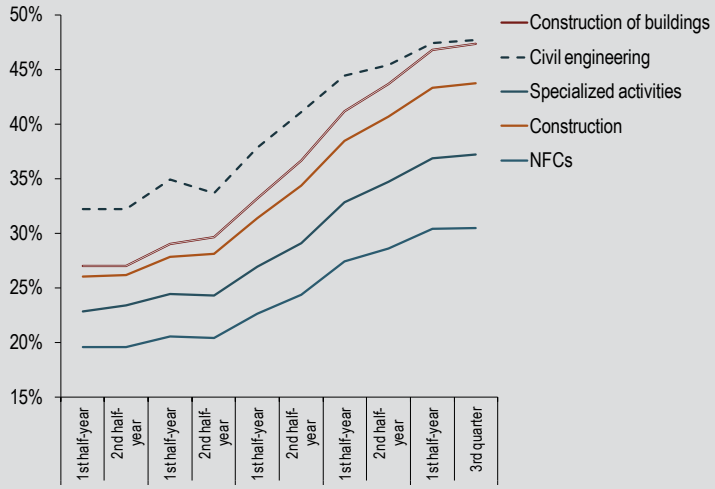
22 The non-performing loans ratio, on the basis of Central Credit Register data, is calculated as the share of non-performing loans in total credit obtained. Credit is deemed to be overdue, in the case of principal, once the maximum period of 30 days after maturity has elapsed without settlement; and, in the case of interest and other expenses, once the due date for settlement has passed.

At the end of the third quarter of 2013, approximately 43.8% of the *Construction* sector enterprises with obtained credit from resident CIs had non-performing credit, compared with 30.5% in the NFC aggregate (Chart 2.4).

By economic activity segment, *Civil engineering* and *Construction of buildings* posted the highest values (47.7% and 47.4% respectively), while *Specialized activities* had the lowest (37.2%). By size class, there were no great differences, with the share of non-performing enterprises varying from 43.0% in microenterprises to 46.0% in SMEs and 45.1% in large enterprises.

Chart 2.4

NON-PERFORMING ENTERPRISES (END-OF-PERIOD)



3.3.2 Financial costs and solvency

Interest paid by the *Construction* sector declined by 5% in 2012...

Similarly to total NFCs, interest paid by the *Construction* sector contracted in 2012 (by 5%, compared with 1% in NFCs), after increasing markedly in 2011, following an overall increase in financing costs for the Portuguese economy. Preliminary Central Balance Sheet Database data for 2013 indicate that the downward trend in interest paid by *Construction* continued up to September.

The fall in interest paid by the *Construction* sector in 2012 was due, in terms of size classes, to SMEs (-24% from 2011), given that in microenterprises and large enterprises interest paid grew by 10% and 11% respectively.

By economic activity segment, the decline in these financial costs in the *Construction* sector was largely due to *Construction of buildings* (-17%, which corresponds to a -11 p.p. contribution to the fall in the sector under review) (Chart 12). In *Specialized activities* the amount spent on interest also declined (-10%), while increasing in the *Civil engineering* segment (25%). However, the latter segment was the only one with an increase in financial debt in 2012 (4%).

Chart 12

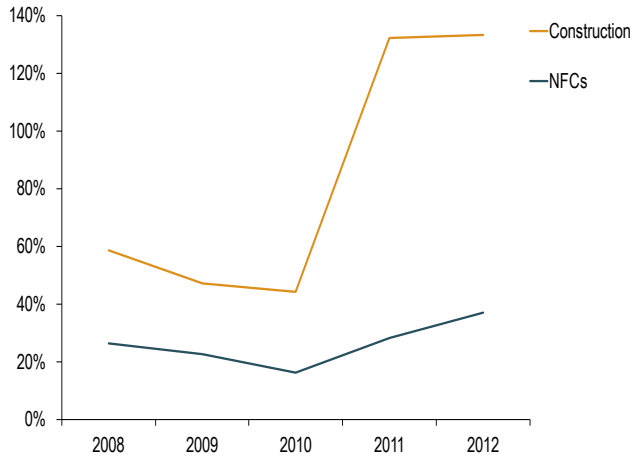
INTEREST PAID | *Annual growth rate (%) and contributions (p.p.)*

...however, financial pressure remained high (133%)

Financial pressure on the *Construction* sector, measured by the weight of interest paid in EBITDA, remained relatively unchanged in 2012 (133%), after growing by 88 p.p. in 2011, compared with 2010. In the period under review, financial pressure on *Construction* moved from 59% in 2008 to 133% in 2012, compared with 27% and 37% respectively in NFCs (Chart 13).

Chart 13

WEIGHT OF INTEREST PAID ON EBITDA



Concerning the results of financial pressure on *Construction* in 2008-12, it is clear that the sector did not generate enough revenue to meet its financing costs over the last two years.

In fact, in 2012, in 43% of *Construction* enterprises EBITDA was lower than interest paid, compared with 41% in the NFC aggregate (Table 10). The figure for 2012 corresponds to a 4 p.p. increase from 2011 and a 11 p.p. rise from 2008, which confirms a significant build-up in financial pressure on this sector.

In the *Construction* sector, in 2012, 43% of enterprises generated EBITDA lower than interest paid

The share of enterprises with EBITDA levels below those for interest in 2012 varied considerably across size classes: 45% in microenterprises, 27% in SMEs and 22% in large enterprises.

By economic activity segment, this was more marked in *Construction* of buildings, where the share of enterprises with EBITDA lower than interest amounted to 47%, compared with 38% in *Civil engineering* and 37% in *Specialized activities*.

Table 10

ENTERPRISES WITH EBITDA LOWER THAN INTEREST | % *of total*

	NFCs	Construction	By enterprise size class			By economic activity segment		
			Micro	SMEs	Large	Construction of buildings	Civil engineering	Specialized activities
2011	38.4%	39.8%	42.4%	24.1%	21.3%	44.0%	35.3%	33.1%
2012	41.0%	43.3%	45.5%	27.3%	21.7%	47.4%	37.7%	37.1%

In microenterprises and *Construction of buildings*, nearly half of the enterprises had EBITDA lower than interest

Taking into account the high financial pressure on *Construction*, enterprises' capacity to meet short-term obligations should be analysed. As such, Table 11 illustrates current ratio[23] and quick ratio[24] indicators.

23 Calculated as the ratio of current assets to current liabilities, this solvency indicator measures enterprises' capacity to meet their short-term obligations.

24 Calculated as the ratio of current assets net of inventories and consumable biological assets to current liabilities, this solvency indicator measures enterprises' capacity to meet their short-term obligations not taking into account inventories.

Table 11

SOLVENCY INDICATORS								
	NFCs	Construction	By enterprise size class			By economic activity segment		
			Micro	SMEs	Large	Construction of buildings	Civil engineering	Specialized activities
CURRENT RATIO								
2011	121.2%	141.6%	153.6%	135.0%	133.0%	150.0%	126.1%	139.7%
2012	116.3%	135.7%	153.0%	122.2%	125.5%	142.2%	123.5%	138.2%
QUICK RATIO								
2011	88.1%	77.3%	48.8%	76.1%	123.8%	53.4%	109.0%	117.4%
2012	84.1%	75.8%	50.7%	76.2%	119.6%	50.1%	107.6%	116.7%

On average, compared with the NFC aggregate, the sector had higher current ratio...

The *Construction* sector compares favourably with total non-financial corporations in Portugal as regards the current ratio indicator (136% and 116% respectively in 2012). In terms of size classes, the larger the enterprise, the lower the current ratio level. By economic activity segment, *Construction of buildings* posted the highest general liquidity levels (142%, compared with 124% in *Civil engineering* and 138% in *Specialized activities*).

...and lower quick ratio

On the basis of the quick ratio indicator, *i.e.* excluding inventories, the situation changes. In 2012 *Construction* had reduced liquidity levels below those of total non-financial corporations in Portugal (76% and 84% respectively). However, this is not broad-based across all size classes and economic activity segments. By size class, large enterprises in *Construction* had, in 2012, more favourable quick ratio levels (120%) than the NFC average. By economic activity segment, only enterprises in the *Construction of buildings* segment (50%) compared unfavourably with NFCs regarding the indicator under review.

BOX 3 | CREDIT OBTAINED THROUGH DEBT SECURITIES ISSUES – CHARACTERISATION BASED ON THE SECURITIES STATISTICS INTEGRATED SYSTEM[25]

In 2012 financing obtained through debt securities issues accounted for 6% of financial debt in *Construction* (4% of total liabilities). Based on information available at Banco de Portugal's Securities Statistics Integrated System, this *Box* presents a brief description of this source of financing.

At the end of the third quarter of 2013, 7% of debt obtained by NFCs through securities had been issued by *Construction* enterprises, which makes this CAE-Rev.3 Section the fifth most representative (in a total of 17 sections) in this type of financing.

This sector stands out amongst the remaining sectors owing to the importance of smaller enterprises in financing through debt securities issues. Indeed, while in the NFC aggregate large enterprises account for 83% of total amount of debt securities issues, in *Construction* they account for only 42%, and are even exceeded by SMEs (49%). Compared with 2008, the weight of large enterprises in this type of financing declined by 6 p.p., in contrast to an increase in microenterprises (+8 p.p.) (Table 3.1).

By economic activity segment, at the end of the third quarter of 2013, *Construction of buildings* and *Civil engineering* were responsible for nearly all debt securities issued by the *Construction sector* (47% and 51% respectively).

Table 3.1

STRUCTURE OF DEBT SECURITIES ISSUES (end-of-period position)

	2008	2013 (3rd quarter)	Differential
Microenterprises	0.7%	9.2%	8.4 p.p.
Small and medium-sized enterprises	50.9%	48.8%	-2.2 p.p.
Large enterprises	48.3%	42.0%	-6.3 p.p.

Looking at the maturity of debt securities, at the end of the third quarter of 2013, compared with the end of 2008, the weight of long-term securities increased in both *Construction* and total NFCs. Conversely, their weight in short-term securities declined, to 29 p.p. in *Construction*, and 14 p.p. in the NFC aggregate (Table 3.2). At the end of the third quarter of 2013, enterprises' securitised debt, both in the *Construction* sector and the NFC aggregate, was evenly distributed across both maturities (short-term and long-term).

This decline in short-term debt securities issues, in favour of long-term securities, was seen across all enterprise size classes (72 p.p. in microenterprises, 42 p.p. in SMEs and 9 p.p. in large enterprises).

Excluding *Specialized activities*, which during the period under review financed themselves exclusively through short-term debt securities, the weight of long-term issues increased in the remaining economic activity segments.

Table 3.2

WEIGHT OF SHORT-TERM DEBT SECURITIES (end-of-period position)

	2008	2013 (3rd quarter)	Differential
NFCs	64.0%	50.4%	-13.6 p.p.
Construction	78.7%	49.5%	-29.2 p.p.

25 The Securities Statistics Integrated System is an information system managed by Banco de Portugal relating to securities issues and portfolios, on a 'security-by-security' and 'investor-by-investor' basis. For further information, see *Supplement 2|2008* to Banco de Portugal's *Statistical Bulletin, Securities Statistics: Characterisation of the Integrated System and Main Results*.

3.3.3 Trade credit financing

Trade credits accounted for 15% of the sector's liabilities in 2012

Trade credit financing is a vital source of financing for the *Construction* sector. In 2012 this source of financing accounted for 15% of total liabilities in the sector (16% in NFCs).

In *Construction*, the relevance of trade credit financing grows in tandem with the enterprise size class. Indeed, this type of financing was particularly relevant in large enterprises, where it accounted for approximately one-fourth of total liabilities (27%). By economic activity segment, it was particularly significant in the *Specialized activities* (32% of total liabilities).

Turning to developments, trade credits granted to *Construction* grew between 2008 and 2010. However, in 2011 and 2012, probably following a fall in activity, trade credits decreased markedly (by 10% and 22% respectively). In 2012 this type of financing fell across all size classes: 29% in SMEs, 24% in large enterprises and 4% in microenterprises. By economic activity segment, the largest fall was recorded in *Construction of buildings* (26%, compared with 20% in *Civil engineering* and 18% in *Specialized activities*).

Construction stands out amongst the remaining economic activity sectors in Portugal by posting much higher average days sales outstanding and average days payable outstanding (161 and 170 respectively)

Concerning average maturities, in 2012 *Construction* had the highest average days sales outstanding (161) and days payable outstanding (170) among all the main economic activity sectors in Portugal. Following the trend that started in 2008, average maturities in this sector increased significantly between 2011 and 2012 (+16 days and +14 days respectively), which resulted in an increase in the differential between this sector and the remaining sectors. In the NFC aggregate, average days sales outstanding declined by 1 day, to 75, and average days payable outstanding declined by 2 days, to 82 (Charts 14 and 15).

The deterioration in average maturities in *Construction* was broad-based across all size classes and economic activity segments. By size class, in 2012 microenterprises had the highest average days sales outstanding (168, compared with 156 in SMEs and 165 in large enterprises). By economic activity segment, *Civil engineering* was particularly noteworthy, with 185 average days sales outstanding, compared with 178 in *Specialized activities* and 127 in *Construction of buildings*.

Turning to average days payable outstanding, by size class, microenterprises had the highest values (259), while SMEs (152) and large enterprises (149) posted closer figures. By economic activity segment, *Construction of buildings* had the highest average days payable outstanding (191), compared with *Civil engineering* (160) and *Specialized activities* (154).

Chart 14

AVERAGE DAYS SALES OUTSTANDING | *In days*

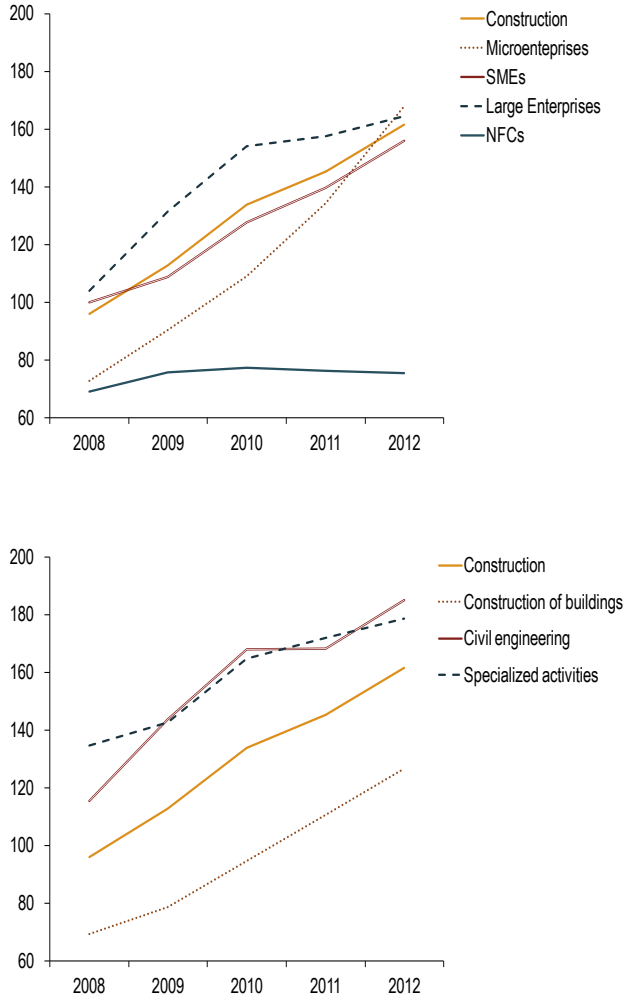
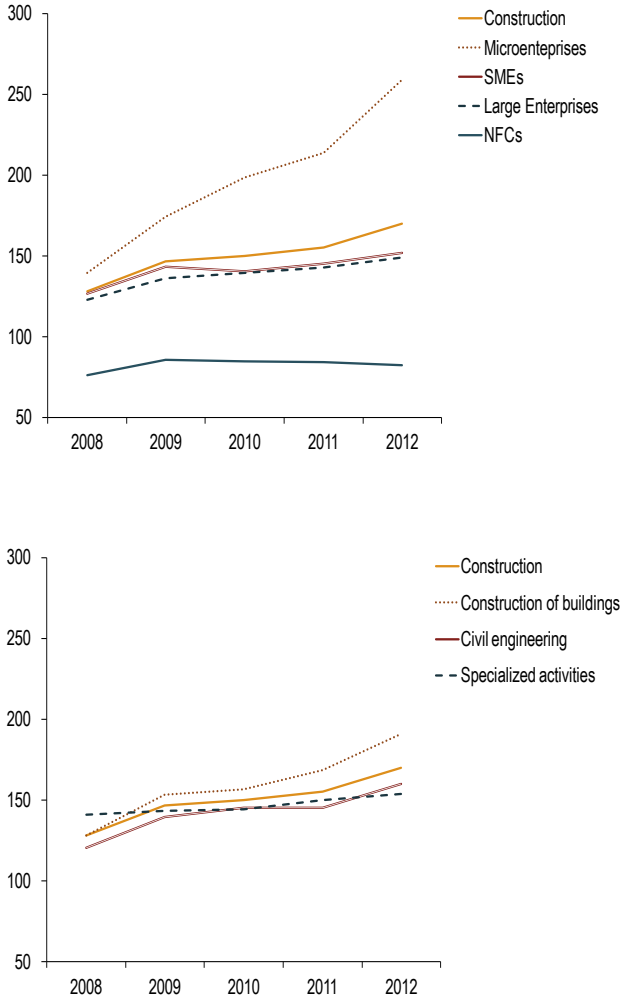


Chart 15

AVERAGE DAYS PAYABLE OUTSTANDING | *In days*



Average maturities provide an indication of time lags associated with debt receipts and payments resulting from enterprises' operating activity. However, they do not make it possible to gauge the enterprises' degree of indebtedness in this way. A net trade credit financing indicator must be used to supplement that analysis. The selected indicator relates the balances of suppliers and customers to turnover (Chart 16). A negative value implies the existence of a balance of customers higher than that of suppliers, which means that overall the enterprise is financing its customers; a positive value implies that the sector has a balance of suppliers higher than that of customers, *i.e.* it is funding itself through its suppliers.

Between 2009 and 2012, *Construction* was not able to obtain net trade credit financing…

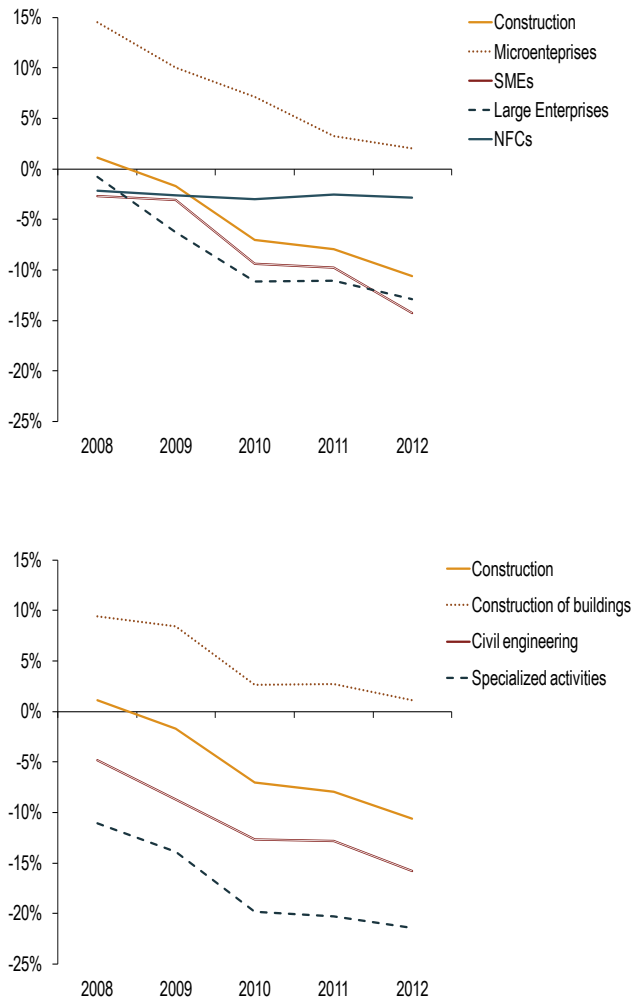
In *Construction*, for the entire time horizon under review, excluding 2008, this indicator was negative, which means that the sector did not obtain funding, in net terms, through trade credits. In 2012 the indicator stood at -11%, reflecting a 12 p.p. decrease from 2008. Negative developments in this indicator in the time horizon under review were substantial across all size classes and economic activity segments.

…except for microenterprises and *Construction of buildings*

By size class, microenterprises were the only class with net lending through trade credits (2% in 2012, compared with -13% in large enterprises and -14% in SMEs). By economic activity segment, only *Construction of buildings* obtained net funding in this way (1% in 2012, compared with -16% in *Civil engineering* and -21% in *Specialized activities*).

Chart 16

NET TRADE CREDIT FINANCING |% *of turnover*



Note: Net trade credit financing was calculated as the difference between accounts payable (net of prepayments) and accounts receivable (net of prepayments and adjustments).

4 LARGE ENTERPRISES INTERNATIONAL COMPARISON FROM THE BACH DATABASE[26]

Based on the BACH database, a comparison is drawn of the situation in *Construction*'s enterprises in a number of European countries

In Portugal, large enterprises accounted for only 0.1% of the number of enterprises, but were responsible for 37% of turnover and 18% of the number of employees in the *Construction* sector in 2012.

Based on information available at the Bank for the Accounts of Companies Harmonized (BACH) database, this Section presents a comparative analysis of large enterprises[27] in the *Construction* sector in Portugal and other European countries (Austria, Germany, Belgium, Spain, France, Italy, Poland and Czech Republic), in most cases for 2012.

This comparison is made on the basis of five vectors: activity, profitability, financing structure, financing/solvency costs and trade credit financing.

4.1 Activity

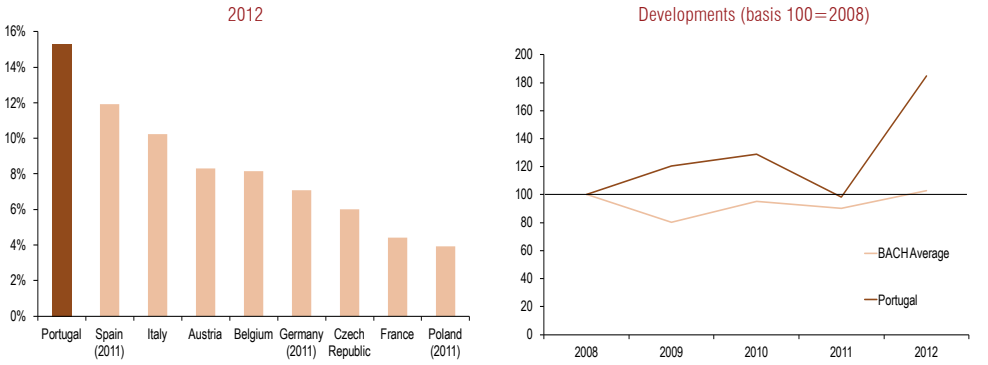
Large enterprises in the *Portuguese Construction* sector had higher EBITDA per turnover unit than in the remaining countries

To gauge the operating efficiency of larger enterprises in the *Construction sector*, an indicator on EBITDA generated per turnover unit was analysed. In this indicator, Portuguese enterprises had the best performance amongst the selected countries: per each euro of turnover €0.15 were generated in EBITDA (Chart 17). Poland posted the worst result in this indicator (per each euro of turnover €0.04 were generated in EBITDA).

In 2012 large enterprises in the Portuguese *Construction* sector generated much higher EBITDA per turnover unit than in 2008 (+7 cents in EBITDA per each euro in turnover generated). By comparison, between 2009 and 2011 the average of analysed countries had a worse performance than in 2008. In 2012 this indicator was slightly above that seen in 2008.

Chart 17

EBITDA AS A % OF TURNOVER IN CONSTRUCTION LARGE ENTERPRISES



26 All information provided in this section is available at: http://www.bachesd.banque-france.fr/?lang=en. Access to the BACH database is free of charge. The Central Balance Sheet Database of Banco de Portugal reports information on Portuguese non-financial corporations and manages the BACH database, together with the other participating entities.

27 For further information on the BACH database, see *Central Balance Sheet Studies 13| Sectoral analysis of non-financial corporations in Portugal 2012/13*, of November 2013.

4.2 Profitability

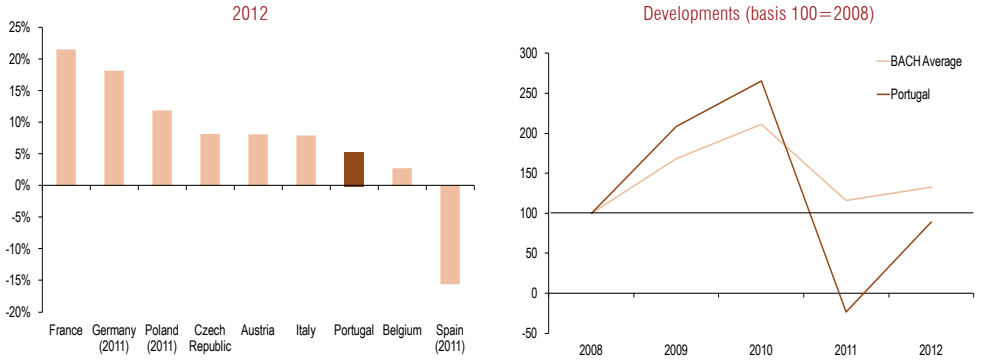
Return on equity for large enterprises in *Construction* is lowest in Spain, Belgium and Portugal; in turn, it is highest in France

France was the country where investors in large enterprises in the *Construction* sector were better remunerated (22% return on equity). Conversely, Spain, Belgium and Portugal posted the worst results (-16%, 3% and 5% respectively) (Chart 18).

In terms of developments, after a marked increase in profitability for large enterprises in the Portuguese *Construction* sector in 2009 and 2010, there was a substantial fall in 2011. In 2012 profitability improved again, coming closer to 2008 figures. In turn, the average for European countries, albeit decreasing markedly in 2011, always remained above the 2008 values.

Chart 18

RETURN ON EQUITY IN CONSTRUCTION LARGE ENTERPRISES



4.3 Financing structure

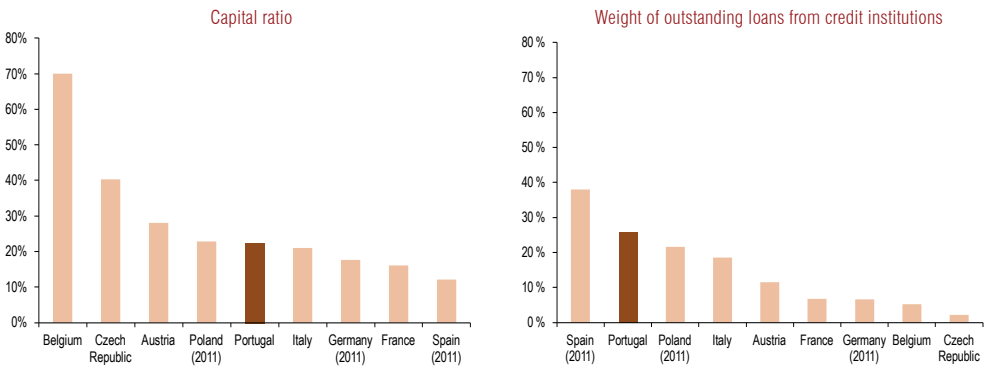
Bank loans financing was more relevant for large enterprises in the Spanish and Portuguese *Construction* sector

With regard to the financing structure, large enterprises in the Belgian *Construction* sector stood out amongst their counterparts owing to their high capital ratio in 2012 (70% of assets were funded by equity). Portugal was fifth among its European counterparts, with a 22% capital ratio. Spain was more dependent on debt, with only 12% of its enterprises' assets being funded by equity (Chart 19).

Concerning debt financing, loans from credit institutions were particularly relevant in Spain (38%) and Portugal (26%).

Chart 19

FINANCING INDICATORS IN CONSTRUCTION LARGE ENTERPRISES (2012)



4.4 Financing and solvency

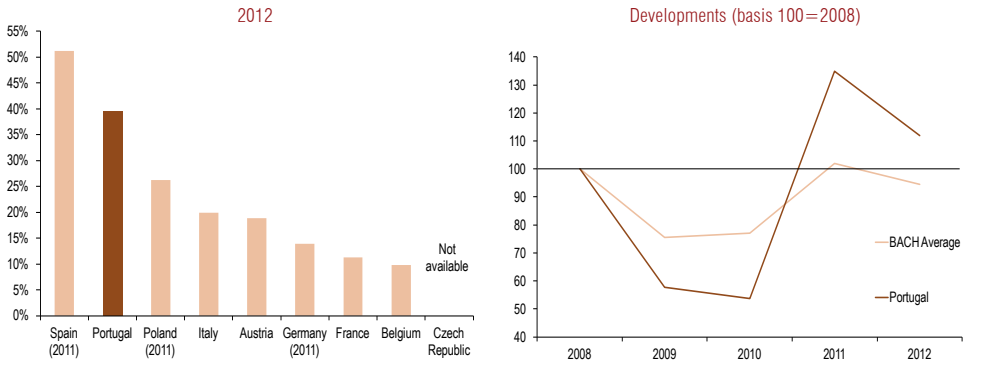
Large enterprises in the Spanish and Portuguese *Construction* sector were also under the highest financial pressure

In terms of financial pressure, assessed by the weight of interest paid in EBITDA, enterprises in the *Construction* sector in Spain and Portugal posted the highest values (51% and 40% respectively). By contrast, the lowest financial pressure was observed in Belgium (10%), where the sector's large enterprises, as previously mentioned, mostly financed themselves through equity (Chart 20).

Compared with 2008, financial pressure on large enterprises in the *Portuguese Construction* sector evolved in line with the average in countries under review, although growth was robust in 2011, which clearly exceeded that for the remaining countries. In 2012 financial pressure on Portuguese enterprises was higher than in 2008, while, on average, the value for 2012 was lower for European countries.

Chart 20

FINANCIAL PRESSURE IN CONSTRUCTION LARGE ENTERPRISES



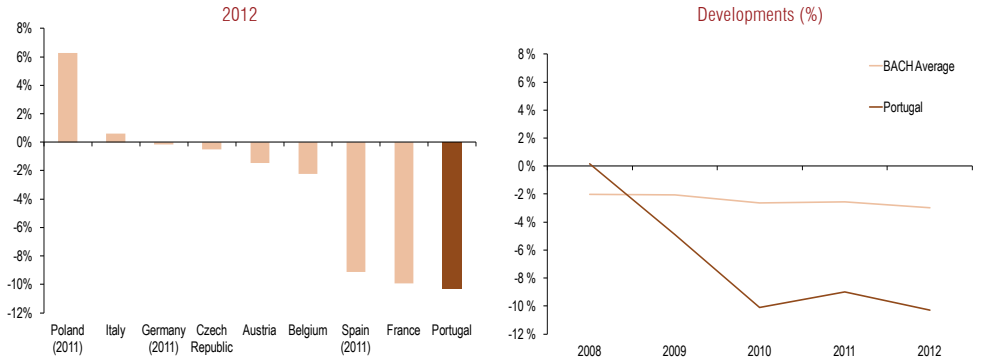
4.5 Net trade credit financing

Only in Poland and Italy did large enterprises in *Construction* manage to obtain net trade credit financing. In Portugal, such enterprises are not able to finance themselves in this way, in net terms

Except for Poland and Italy (6% and 1% of turnover respectively), no other country was able to finance itself, in net terms, through trade credits. In this context, Portugal posted the worst results among all countries under review (-10%). This indicator shows that, as regards trade credits, large enterprises in the Portuguese *Construction* sector provided more financing to their customers than that which they obtained from their suppliers (Chart 21).

Chart 21

NET TRADE CREDIT FINANCING IN CONSTRUCTION LARGE ENTERPRISES | *As a % of turnover*



As regards developments, between 2008 and 2012 net trade credit financing of large enterprises in the Portuguese *Construction* sector fell markedly, which compares very unfavourably with the average of European countries under review (-10 p.p., compared with -1 p.p. respectively).

Overall, large enterprises in the Portuguese *Construction* sector compare favourably with their European counterparts, as regards their operating margin (as measured by the share of EBITDA in turnover). However, return on equity was lower than in most other countries, which is largely due to its financing structure, characterised by a high dependency on debt, particularly loans from credit institutions. Finally, the difference between debt to suppliers and credit to customers was substantial, but did not make it possible for large enterprises in the Portuguese *Construction* sector to obtain net financing in this way.

The good relative performance of large enterprises in the Portuguese *Construction* sector in terms of operating activity was hampered by a high dependency on debt

Annex

MAIN INDICATORS OF THE CONSTRUCTION SECTOR (2012)

	Characterisation of the sector		Activity			Financing				Credits from resident CIs (3rd quarter 2013)		Profitability
			Growth rates			Growth rates						
	Turnover held by large enterprises	Herfindahl--Hirschman Index	Turnover	EBITDA	Capital ratio	Trade credits	Bank loans	Net trade credit financing (% of turnover)	Weight of interest paid in EBITDA	% of non--performing enterprises	Non-performing loans ratio	Return on equity
NFCs	45%	0.002	-9%	-25%	30%	-12%	-13%	-3%	37%	30%	13%	-0.5%
Construction sector	37%	0.006	-26%	-6%	20%	-22%	-20%	-11%	133%	44%	24%	-8%
Construction of buildings	20%	0.006	-32%	-164%	21%	-26%	-28%	1%	-	47%	27%	-15%
Civil engineering	67%	0.030	-23%	65%	17%	-20%	4%	-16%	54%	48%	12%	5%
Specialized activities	14%	0.003	-20%	-55%	29%	-18%	-14%	-21%	50%	37%	26%	-7%

	Weight of the construction sector					
	Number of enterprises		Turnover		Number of employees	
	2002	2012	2002	2012	2002	2012
NFCs	14%	12%	10 %	7 %	13 %	11 %

METHODOLOGICAL SUMMARY

Birth/death ratio: Corresponds to the quotient of the number of enterprises established and enterprises that ceased their activity.

Capital ratio: Ratio of equity to total assets.

Construction sector: For the purposes of this *Study*, the definition of the *Construction* sector includes enterprises in Section F of CAE-Rev.3.

EBITDA (Earnings before interest, taxes, depreciation and amortisation): The new accounting standard (SNC – *Sistema de Normalização Contabilística* – Accounting Normalisation System) ended the concept of extraordinary expenses and revenues, and also stopped allowing unambiguous identification of financial components. Thus the decision was taken to use the EBITDA definition as under the Accounting Normalisation System, adjusting the data reported under the old standard (*POC – Plano Oficial de Contabilidade* – Official Chart of Accounts) where possible, for the 2006-09 period.

Economic activity sector: The enterprises classified in Sections O – *Public administration and defence; Compulsory social security*, T – *Activities of households as employers; Undifferentiated goods- and services-producing activities of households for own use* and U – *Activities of extraterritorial organisations and bodies* in CAE-Rev.3, were excluded from this analysis as they do not fall within the NFC institutional sector. Also excluded were enterprises in Section K – *Financial and insurance activities* that groups together non-financial holding enterprises (with the SGPS denomination) not involved in subsidiary management, which, despite still belonging to the NFC sector (as regulated under ESA 95), were not analysed in this *Study* due to their very specific characteristics that set them apart from other NFCs.

Current ratio: Corresponds to the ratio of current assets to current liabilities.

Quartile distribution: 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 interquartile 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* | 6, December 2011 – *New Enterprise and Sector Tables: Adjustment to the Accounting Normalisation System*.

Quick ratio: Corresponds to the ratio of current assets net of inventories and consumable biological assets to current liabilities.

Return on equity: Ratio of net income for the year to equity. As both items (numerator and denominator) may be positive or negative, at individual level, the indicator is only calculated in situations where equity is positive.

Size of the enterprise: Enterprises were grouped into three classes: microenterprises, small and medium-sized enterprises and large enterprises. The criteria for this classification were taken from the European Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises. According to this Recommendation, microenterprises are defined as enterprises which employ fewer than ten persons and whose annual turnover and/or balance sheet total does not exceed €2 million. For the purpose of this *Study*, small and medium-sized enterprises (SMEs) exclude microenterprises, employ fewer than 250 and more than ten people and have an annual turnover between €2 million and €50 million and/or an annual balance sheet total between €2 million and €43 million. Large enterprises are any enterprises which are not classified above.

REFERENCES

[1] Banco de Portugal (2008), *Simplified reporting: inclusion of the Simplified Corporate Information in the statistics on non-financial corporations from the Central Balance Sheet Database*, Supplement 1/2008 to the Statistical Bulletin, May 2008

http://www.bportugal.pt/en-US/Estatisticas/PublicacoesEstatisticas/Tumbnails%20List%20Template/sup-be-1-2008-en.pdf

[2] Banco de Portugal (2008), *Securities Statistics: Integrated System Features and Main Results*, Supplement 2/2008 to the Statistical Bulletin, June 2008

http://www.bportugal.pt/en-US/Estatisticas/PublicacoesEstatisticas/Tumbnails%20List%20Template/Sup-be-2-2008-en.pdf

[3] Banco de Portugal (2011), *Central Credit Register*, Banco de Portugal Booklet No 5, May 2011

http://www.bportugal.pt/pt-PT/PublicacoeseIntervencoes/Banco/CadernosdoBanco/Paginas/CadernosdoBanco.aspx

[4] Banco de Portugal (2011), *New Enterprise and Sector Tables: Adjustment to the Accounting Standards System*, Central Balance Sheet Studies | 6, December 2011

http://www.bportugal.pt/en-US/ServicosaoPublico/CentraldeBalancos/Tumbnails%20List%20Template/Study%20CB%206_2011_EN.pdf

[5] Banco de Portugal (2013), *Statistics on non-financial corporations of the Central Balance Sheet Database: Methodological notes*, Supplement 2/2013 to the Statistical Bulletin, October 2013

https://www.bportugal.pt/en-US/Estatisticas/PublicacoesEstatisticas/Tumbnails%20List%20Template/Suplemento-2-2013-en.pdf

[6] Banco de Portugal (2013), *Structure and dynamics of non-financial corporations in Portugal 2006/12*, Central Balance Sheet Studies | 12, November 2013

http://www.bportugal.pt/pt-PT/ServicosaoPublico/CentraldeBalancos/Biblioteca%20de%20Tumbnails/Estudos%20da%20CB %2012_2013.pdf

[7] Banco de Portugal (2012), *Sectoral Analysis of non-financial corporations in 2012/13*, Central Balance Sheet Studies | 13, November 2013

http://www.bportugal.pt/pt-PT/ServicosaoPublico/CentraldeBalancos/Biblioteca%20de%20Tumbnails/Estudos%20da%20CB%2013_2013.pdf

[8] Banco de Portugal (2013), *Financial Stability Report*, November 2013

https://www.bportugal.pt/en-US/EstabilidadeFinanceira/Publicacoes/RelatoriodeEstabilidadeFinanceira/REFAnteriores/Documents/REF_Nov_e.pdf

[9] Banco de Portugal (2013), *Annual Report – The Portuguese economy in 2012*, May 2013

http://www.bportugal.pt/en-US/EstudosEconomicos/Publicacoes/RelatorioAnual/RelAnuaisAnteriores/Documents/ra_12_e.pdf

[10] Banco de Portugal (2013), *Economic Bulletin* – Winter | 2013, December 2013

https://www.bportugal.pt/en-US/EstudosEconomicos/Publicacoes/BoletimEconomico/BEAnteriores/Documents/ECONBULwinter_2013_e.pdf

[11] BACH Userguide

http://www.bachesd.banque-france.fr/index.php?page=telechargementFile&file=Summary_Userguide.pdf

[12] Decree-Law No 381/2007 of 14 November

[13] Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (2003/361/EC)

[14] Council Regulation (EC) No 2223/96 of 25 June 1996 on the European system of national and regional accounts in the Community

CENTRAL BALANCE SHEET STUDIES

1 | ENTERPRISE AND SECTOR TABLES, November 2010

2 | STRUCTURE AND DYNAMICS OF NON-FINANCIAL CORPORATIONS IN PORTUGAL, December 2010

3 | SECTORAL ANALYSIS OF NON-FINANCIAL CORPORATIONS IN PORTUGAL, September 2011

4 | SECTORAL ANALYSIS OF MANUFACTURE OF FOOD PRODUCTS, November 2011

5 | SECTORAL ANALYSIS OF ACCOMMODATION AND FOOD SERVICE ACTIVITIES, November 2011

6 | NEW ENTERPRISE AND SECTOR TABLES: ADJUSTMENT TO THE ACCOUNTING STANDARDS SYSTEM, December 2011

7 | SECTORAL ANALYSIS OF NON-FINANCIAL CORPORATIONS IN PORTUGAL 2010/2011, April 2012

8 | SECTORAL ANALYSIS OF NON-FINANCIAL CORPORATIONS IN PORTUGAL 2011/2012, November 2012

9 | SECTORAL ANALYSIS OF THE MANUFACTURE OF TEXTILES AND WEARING APPAREL, November 2012

10 | SECTORAL ANALYSIS OF THE MANUFACTURE OF FOOTWEAR, November 2012

11 | ANALYSIS OF THE AGRICULTURAL SECTOR, December 2012

12 | STRUCTURE AND DYNAMICS OF NON-FINANCIAL CORPORATIONS IN PORTUGAL 2006/12, November 2013

13 | SECTORAL ANALYSIS OF NON-FINANCIAL CORPORATIONS IN PORTUGAL 2012/13, November 2013

14 | ANALYSIS OF THE AUTOMOBILE INDUSTRY, December 2013

15 | SECTORAL ANALYSIS OF THE CONSTRUCTION SECTOR, January 2014