ANALYSIS OF THE INFORMATION AND COMMUNICATION ACTIVITIES SECTOR

Central Balance Sheet Studies

April 2014

BANCO DE PORTUGAL
EUROSYSTEM

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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. For this analysis, *IES* data for 2012, the latest available, were used.

Data reported by enterprises through *IES* are subject to a quality control process by Banco de Portugal mainly to ensure the coherence and integrity of accounting information for the economic year and consistency in the main aggregates throughout the years. That analysis also involves matching the reported information with data obtained from other statistical systems available within Banco de Portugal.

In addition to information obtained through *IES*, this *Study* is complemented with data on the financial debt of Portuguese enterprises available in other databases of Banco de Portugal's Statistics Department, namely *Central de Responsabilidades de Crédito – CRC* (Central Credit Register) and *Sistema Integrado de Estatísticas de Títulos –* SIET (Securities Statistics Integrated System).

For purposes of comparison with other countries, data are taken from the European database Bank for the Accounts of Companies Harmonised (BACH), which is managed by the European Committee of Central Balance Sheet Data Offices (ECCBSO). This information makes it possible to compare the enterprises' situation in nine European countries: Germany, Austria, Belgium, Spain, France, Italy, Poland, Portugal and the Czech Republic.

Summary

According to data available in the Central Balance Sheet Database of Banco de Portugal, in 2012 the *Information and Communication Activities* sector accounted for around 2% of enterprises, 3% of the number of employees and 4% of turnover in the non-financial corporations (NFC) institutional sector.

With regard to activities comprising the *Information and Communication Activities* sector (*Media, Telecommunications and Information technologies*), *Telecommunications* were the most relevant in terms of turnover (55%) in 2012. Conversely, *Information technologies* were predominant in terms of number of enterprises (59%) and number of employees (56%). Turning to size classes, the *Information and Communication Activities* sector was mostly comprised of microenterprises (90%), although large enterprises made the largest contribution in terms of turnover (69%).

In 2012 turnover in *Information and Communication Activities* declined further (6%), but at a slower pace than in 2011 (11%). Operating costs declined in tandem with turnover, influenced by all of its components. Despite a fall in activity, the sector's return on equity grew by 2 p.p. in 2012, to 2%, thus exceeding profitability in the NFC aggregate (-0.5%). This improvement was broad-based across all economic activity segments comprising the *Information and Communication Activities* sector.

Turning to the financial component, the sector had average equity levels higher than those of NFCs during the entire period under review. In 2012 the average capital ratio was 45%, compared with 30% in NFCs. However, individual data show that this average indicator is highly influenced by a sub-set of enterprises with high equity levels. Overall, enterprises in this sector had a capital ratio in line with the remaining activities in Portugal, with the sector's median standing at 26% (24% in NFCs), which means that, at least in half of the sector's enterprises, 74% of assets were financed by debt.

Net borrowing of the sector's enterprises in 2012 was mostly met through financial debt and trade credits (68% and 13% respectively of the sector's liabilities). In terms of financial debt, bank loans had a low relative weight, accounting for only 8% of the aggregate (48% in NFCs). In turn, there is greater recourse to intra-group financing and debt securities issues (52% and 35% of financial debt respectively). Turning to financial pressure (as measured by the weight of interest in EBITDA), the sector compares favourably with the NFC aggregate, with the indicator for 2012 falling by 18 p.p. (19% and 37% respectively).

Concerning trade credits, in the *Information and Communication Activities* sector, average days sales outstanding (91) were lower than average days payable outstanding (106). However, in absolute terms (balance between suppliers and customers), trade credits were not a net source of financing for the sector.

With regard to data available for 2013, Banco de Portugal's Central Credit Register shows that funding granted to the *Information and Communication Activities* sector by resident credit institutions, despite their low weight, declined by 14% from 2012 (7% in NFCs). The sector's non-performing loans ratio increased by 2 p.p., to 7%, *i.e.* considerably below that in NFCs (13%), which was a constant throughout the entire 2009-13 period. Trade credit financing, which was over €4 billion at the end of 2013, declined by 3% from 2012. Debt securities issues were almost exclusively due to large enterprises and the *Telecommunications* segment. Holders of these securities are mostly non-resident entities.

The international comparison made on the basis of information available at the Bank for the Accounts of Companies Harmonised (BACH) database shows that the *Information and Communication Activities* sector has lower profitability levels than most of the remaining countries under review. In terms of financing structure, a specific feature of this sector in Portugal is the low weight of bank loans.

Contents

ANALYSIS OF THE INFORMATION AND COMMUNICATION ACTIVITIES SECTOR

1. Introduction

The Study "Analysis of the *Information and Communication Activities* sector" assesses the economic and financial situation of enterprises within the *Information and Communication Activities* sector (Section J of CAE–Rev.3), on the basis of information compiled by Banco de Portugal's Central Balance Sheet Database.[1] For the purposes of this analysis, the *Information and Communication Activities* sector includes activities related to *Media, Telecommunications* and *Information technologies*.

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 statistical publications by Banco de Portugal.[3] The analysis focuses mainly on 2008-12 period, on the basis of Simplified Corporate Information (*Informação Empresarial Simplificada – IES*) data, with 2013 being analysed where additional detail is available, more specifically as regards bank loans and debt securities issues.

This *Study* characterises the *Information and Communication Activities* sector, as regards the dispersion of results obtained by its enterprises,[4] for a number of selected indicators. For this purpose, results are shown on the distribution of aggregate enterprises' data (*i.e.* quartiles), which allow for an alternative analysis to that provided by the summary indicator on the sector's average and provide measures not biased by extreme values. Furthermore, the analysis covers the contributions from the various economic activity segments and enterprise size classes in order to determine the sector's aggregate results.

This publication also compares the situation in the *Information and Communication Activities* sector and the NFC aggregate in Portugal. For further details on the results for the NFC sector, please see Banco de Portugal's Central Balance Sheet Studies *Structure and dynamics of non-financial corporations* in Portugal 2006-2012 and *Sectoral analysis of non-financial corporations in Portugal 2012/2013* (numbers 12 and 13, both released in November 2013).

The analysis begins with a characterisation of the *Information and Communication Activities* sector, particularly as regards its composition in terms of economic activity, size, geographical location, maturity and legal nature 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 also aiming to provide some information on the sector's solvency standing.

Finally, for international comparison purposes, data from the international database Bank for the Accounts of Companies Harmonised (BACH) are used to compare the situation of *Information and Communication Activities* enterprises across nine European countries, namely in terms of profitability and indebtedness.

The Annex provides a summary table with the main indicators and a methodological summary, including 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

2.1. Structure

The *Information and Communication Activities* sector analysed in this Study corresponds to Section J – **Information and Communication Activities** of CAE-Rev.3, which includes the production and distribution of information and cultural products, the provision of the means to transmit or distribute these products, as well as data or communications, information technology activities and the processing of data and other information service activities.

The sector under review includes the following CAE-Rev.3 Divisions: 58–*Publishing activities*; 59–*Motion picture, video and television programme production, sound recording and music publishing activities*; 60–*Radio and television activities*; 61–*Telecommunications*; 62–*Computer programming, consultancy and related activities*; and 63–*Information service activities*.

For the sake of simplicity and clarity of data presented in this *Study*, Divisions 58, 59 and 60 are aggregated and shortened to **Media**, Division 61 is presented as **Telecommunications** and Divisions 62 and 63 are aggregated and shortened to **Information technologies**. This distribution takes into account the similarities in terms of economic activity between the various aggregated Divisions.

In 2012 the *Information and Communication Activities* sector comprised approximately 9,000 enterprises, accounting for over 2% of enterprises, 4% of turnover and 3% of the number of employees in NFCs (Table 1). Over

the past ten years, the weight of *Information and Communication Activities* in NFCs declined somewhat in terms of turnover (0.3 p.p.), albeit increasing in terms of number of enterprises (0.8 p.p.) and number of employees (0.6 p.p.).

By economic activity segment, and as regards the distribution of the sector's turnover, *Telecommunications* are particularly relevant (55% of the sector's total in 2012), despite their low weight in terms of number of enterprises (6%). *Information technologies* are more relevant in terms of number of employees and number of enterprises (56% and 59% respectively) (Chart 1).

By enterprise size class,[5] large enterprises had a greater relative weight in the *Information and Communication Activities* sector than in total NFCs, in all of the three indicators under review: number of enterprises (0.3 p.p.), turnover (24 p.p.) and number of employees (11 p.p.). In 2012 large enterprises aggregated 0.5% of the enterprises, 40% of the number of employees and 69% of turnover in the sector under review (Table 2). Although large enterprises accounted for the largest share of turnover, small and medium-sized enterprises (SMEs) were more relevant in terms of employment, while microenterprises were predominant as regards the number of enterprises.

Chart 2 shows the sectoral composition of each enterprise size class, based on turnover generated in 2012 by *Information and Communication Activities*.
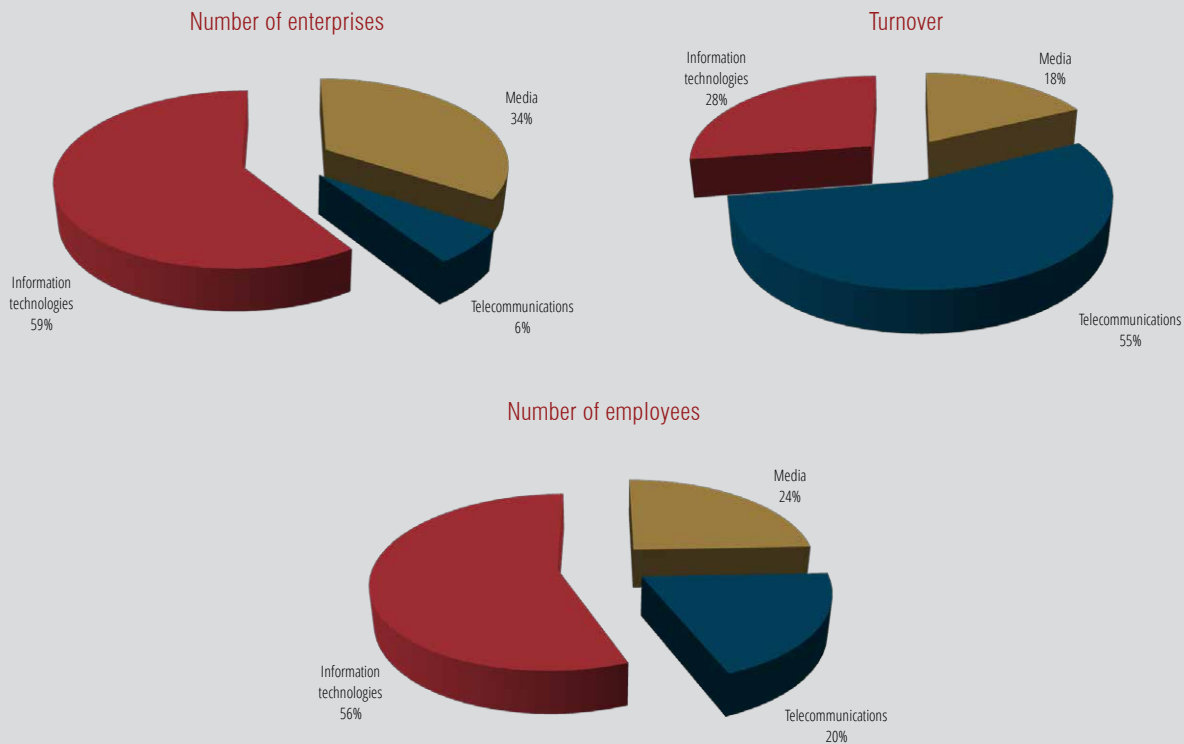
Table 1 • Weight of the Information and Communication Activities sector in NFCs (2012)

	Number of enterprises	Turnover	Number of employees
Information and Communication Activities	2.5%	3.9%	2.8%
Media	0.8%	0.7%	0.7%
Telecommunications	0.2%	2.1%	0.6%
Information technologies	1.5%	1.1%	1.6%

Table 2 • Structures | By enterprise size class (2012)

Indicator	Size class	NFCs	Information and Communication Activities
Number of enterprises	Microenterprises	**88.8%**	**89.8%**
	Small and medium-sized enterprises	10.9%	9.6%
	Large enterprises	0.3%	0.5%
Turnover	Microenterprises	14.4%	6.6%
	Small and medium-sized enterprises	40.6%	24.8%
	Large enterprises	**45.0%**	**68.6%**
Number of employees	Microenterprises	26.8%	19.5%
	Small and medium-sized enterprises	**43.9%**	**40.6%**
	Large enterprises	29.3%	39.9%

Note: Shaded cells identify the most relevant enterprise size class in each sector/indicator.

Number of enterprises

Media
34%

Information technologies
59%

Telecommunications
6%

Turnover

Information technologies
28%

Media
18%

Telecommunications
55%

Number of employees

Media
24%

Information technologies
56%

Telecommunications
20%

Chart 1 •
Structures | By economic activity segment (2012)

The weight of *Telecommunications* is more significant in larger size classes, as opposed to *Media*. In fact, *Telecommunications* were more relevant particularly for large enterprises, where they account for three quarters of total turnover. Conversely, *Information and Communication Activities* were particularly relevant for SMEs (60%) and microenterprises (54%). *Media* had a greater weight in the microenterprises class (39%), compared with SMEs (27%) and large enterprises (12%).

This difference in enterprise sizes is also noticeable when looking at employment and turnover generated by the average enterprise in each economic activity segment. The *Telecommunications* segment stands out amongst the remaining activities due to the greater average size of its enterprises. Indeed, in 2012, on average, *Telecommunications* enterprises generated 13.8 times more turnover and 3.5 times more employment than the average enterprise in Portugal. In *Media*, the opposite was true, with the average enterprise in this segment creating less jobs and generating lower turnover than the average NFC in Portugal. *Information technologies*, in turn, were in an intermediate position, comparing favourably in terms of employment and unfavourably in terms of turnover (Table 3).

Concerning **geographical location**[6] (Table 4), the country's main metropolitan areas, Lisbon and Porto, were predominant. Indeed, around 64% of enterprises, 90% of turnover and 83% of the number of employees in the sector were associated with enterprises with their head office in one of these two districts. However, although their weight has declined over the past decade as regards the three indicators, Lisbon was the district that made the largest contribution to the concentration observed (48% of the sector's number of enterprises, 77% of turnover and 69% of the number of employees).

This sector's concentration shown in the Lisbon and Porto districts considerably exceeds the NFC aggregate: +18 p.p. in the number of enterprises; +30 p.p. in the number of employees; and +31 p.p. in turnover.

Chart 2 • Sectoral composition of enterprise size classes (turnover - 2012)
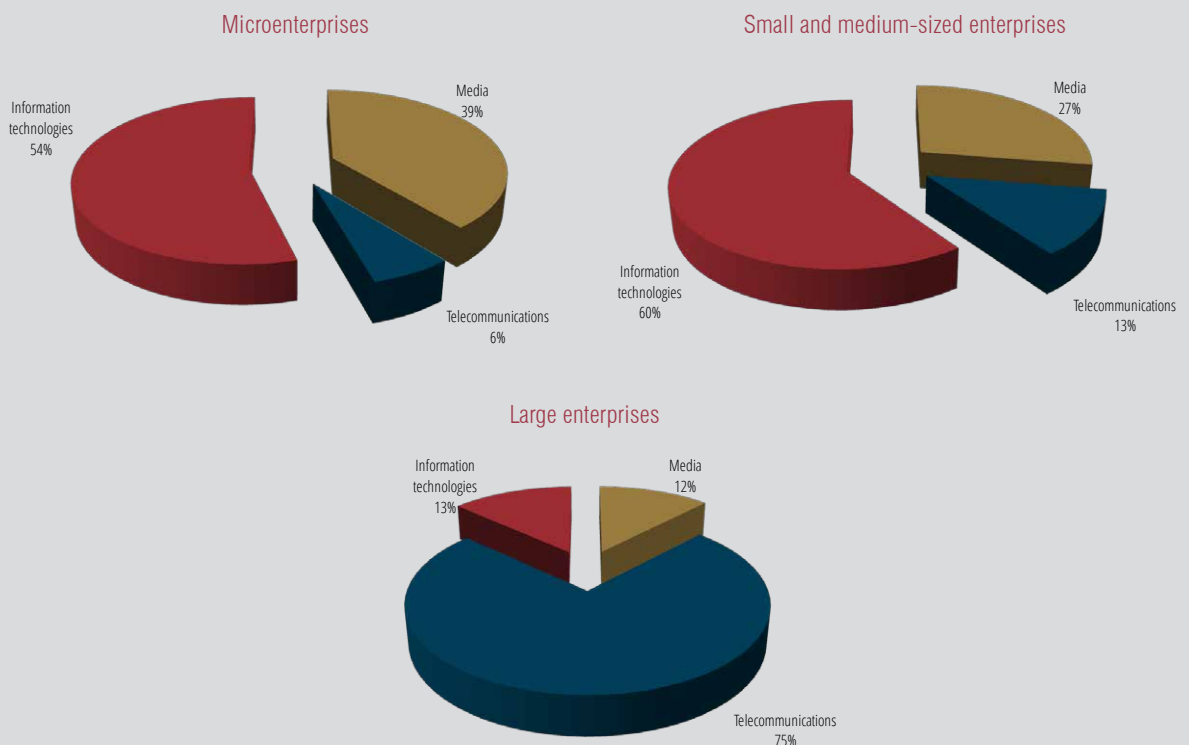
Table 3 • Average turnover and average number of employees (2012) | NFCs=1

	Information and Communication Activities	Media	Telecommunications	Information technologies
Average number of employees	1.14	0.81	3.54	1.08
Average turnover	1.60	0.83	13.77	0.74

Centralisation in *Information and Communication Activities* is also noticeable in all of the three economic activity segments that comprise it, with both districts always accounting for the largest share in all of the variables under review.

With regard to **enterprise maturity**,[7] 43% of turnover in 2012 in the *Information and Communication Activities* sector was generated by enterprises established for more than 20 years (47% in NFCs). The second most relevant category was that of enterprises established for ten to 20 years, which accounted for 39% of the sector's total turnover, *i.e.* 10 p.p. higher than in the NFC aggregate (Chart 3).

By economic activity segment, *Media* and *Telecommunications* had similar structures to those in *Information and Communication Activities* as a whole. In turn, in *Information technologies*, enterprises established for less than five years are more predominant, accounting for 14% of the corresponding turnover in 2012. Conversely, enterprises established for more than 20 years were responsible for 30% of this segment's turnover.

Turning to **legal nature**,[8] turnover in the sector under preview is dominated by public limited companies (77%), markedly exceeding the weight in NFCs (52%). The predominance of public limited companies is even more significant in *Telecommunications*, where they account for 92% in turnover, as opposed to private limited companies (8%). The remaining legal natures are less relevant, with private limited companies generating 20% of the sector's turnover, while in NFCs they accounted for a 41% share (Chart 4).

Table 4 • Geographical location | By economic activity segment (2012)

		Number of enterprises	Turnover	Number of employees
NFCs	Lisbon	28.2%	42.9%	35.1%
	Porto	17.6%	15.7%	18.5%
Information and Communication Activities	Lisbon	48.0%	76.5%	68.9%
	Porto	15.7%	13.4%	14.5%
Media	Lisbon	51.8%	78.2%	64.6%
	Porto	13.7%	13.6%	17.6%
Telecommunications	Lisbon	41.9%	77.1%	81.0%
	Porto	13.9%	13.3%	9.5%
Information technologies	Lisbon	46.4%	74.3%	66.5%
	Porto	17.1%	13.5%	14.9%

2.2. Concentration

To assess enterprise concentration in the *Information and Communication Activities* sector, the Herfindahl-Hirschman Index (HHI)[9] was used, weighing the market share of each enterprise in its economic activity segment.

In 2012 *Telecommunications* were the economic activity segment with the highest concentration indices (HHI of 0.16), which points to some concentration. The highest concentration in this economic activity segment can be explained by the small number of enterprises operating in this market. The results of the *Information and Communication Activities* sector do not show any evidence of concentration (HHI of 0.05) (Chart 5).

Indeed, the largest enterprises in terms of market shares (10% of enterprises) accounted for 99% of *Telecommunications*' turnover in 2012. Narrowing the analysis to 1% of enterprises with the largest market shares, this value falls to 87%, thus remaining rather high. In turn,

in the remaining economic activity segments, 10% of enterprises with the largest market shares were responsible for 91% and 88% of turnover in *Media* and *Information technologies* respectively. Looking to 1% of the largest enterprises, these values fall to 62% in *Media* and 54% in *Information technologies* (Table 5).
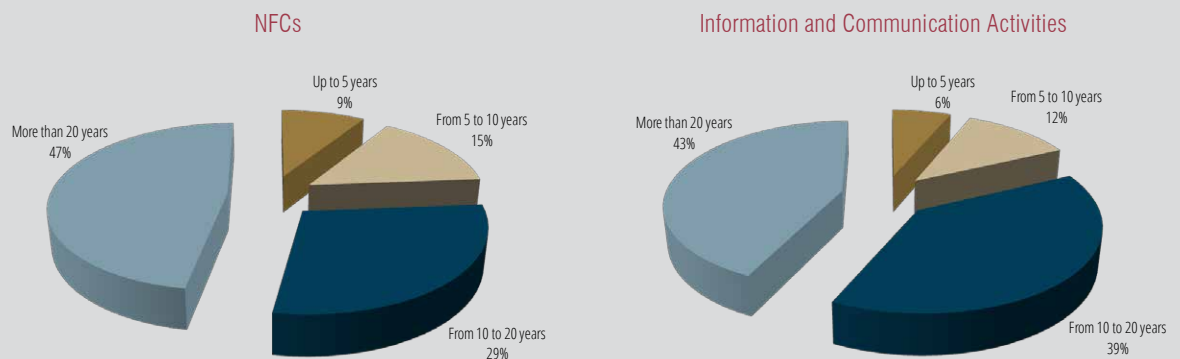
2.3. Dynamics

In 2012 the number of enterprises operating in the sector under review grew by 5%, increasing for the sixth consecutive year. In the NFC aggregate, in turn, the number of enterprises contracted by 0.2% (Chart 6).
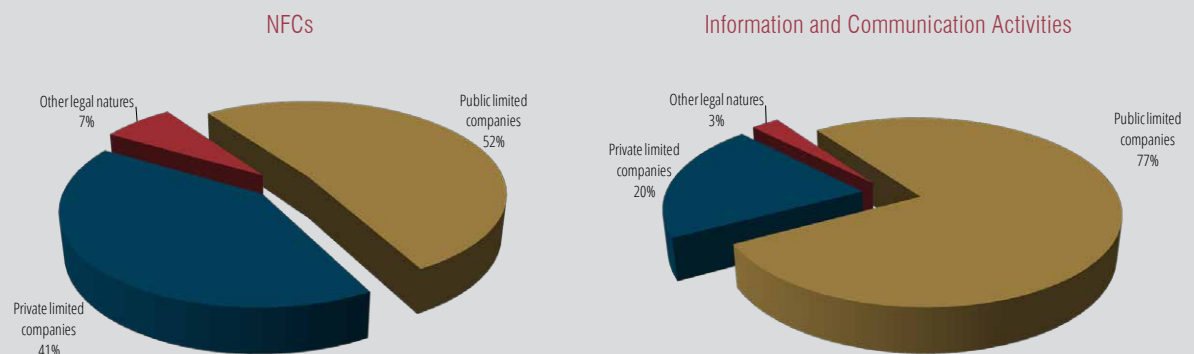
However, this sector's dynamics compare favourably with the NFC aggregate in Portugal in the period under review. As a consequence, the relative importance of the *Information and Communication Activities* sector in the NFC sectoral structure has increased.

By economic activity segment, the number of enterprises associated with *Telecommu-*

Chart 3 •
Structure |
By maturity class
(turnover - 2012)

NFCs

Up to 5 years 9%
From 5 to 10 years 15%
More than 20 years 47%
From 10 to 20 years 29%

Information and Communication Activities

Up to 5 years 6%
From 5 to 10 years 12%
More than 20 years 43%
From 10 to 20 years 39%

Gráfico 4 •
Structure | By
legal nature
(turnover - 2012)

NFCs

Other legal natures 7%
Public limited companies 52%
Private limited companies 41%

Information and Communication Activities

Other legal natures 3%
Private limited companies 20%
Public limited companies 77%

nications and *Information technologies* has increased. Conversely, *Media* have lost some relative weight, with growth rates being recurrently lower than the remaining segments and only marginally positive. In 2012, for each enterprise that ceased its activities in the *Media* segment, only 1.11 new enterprises were created. In turn, in the remaining segments comprising the *Information and Communication Activities* sector, the number of enterprises established was more than twice the number of enterprises that ceased their activity (Chart 7).

Strong growth in a substantial share of *Information and Communication Activities* enterprises certainly helps to explain the increase in the number of enterprises operating in this sector. In 2012 approximately 11% of *Information and Communication Activities* enterprises were high-growth enterprises (HGEs), *i.e.* had average annual growth higher than 20% for a period of three consecutive years (Chart 8).
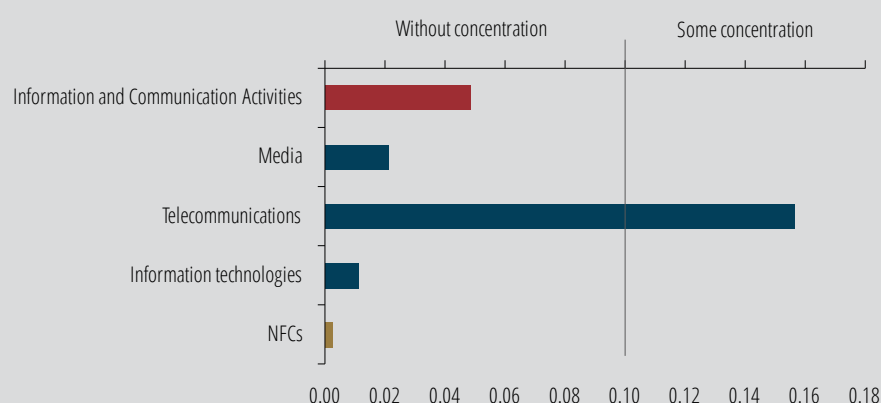
By comparison, in the NFC aggregate the share of HGEs was 7%.

By economic activity segment, in 2012 *Telecommunications* had the largest share of HGEs in the *Information and Communication Activities* sector (17%), compared with 14% in *Information technologies* and 6% in *Media*. The *Telecommunications* segment was amongst the ten activities (in terms of CAE-Rev.3 Divisions) with the largest share of HGEs in Portugal.[10]

In the period under review, in parallel to a deterioration in the economic situation in Portugal, the share of HGEs had clearly fallen across all economic activity segments. In 2008 this share accounted for 24% in *Telecommunications*, 18% in *Information technologies* and 8% in *Media*. However, in 2012 there was some evidence of a reversal in this trend, with an increase in the share of HGEs in *Telecommunications* (+7 p.p.) and *Information technologies* (+3 p.p.).
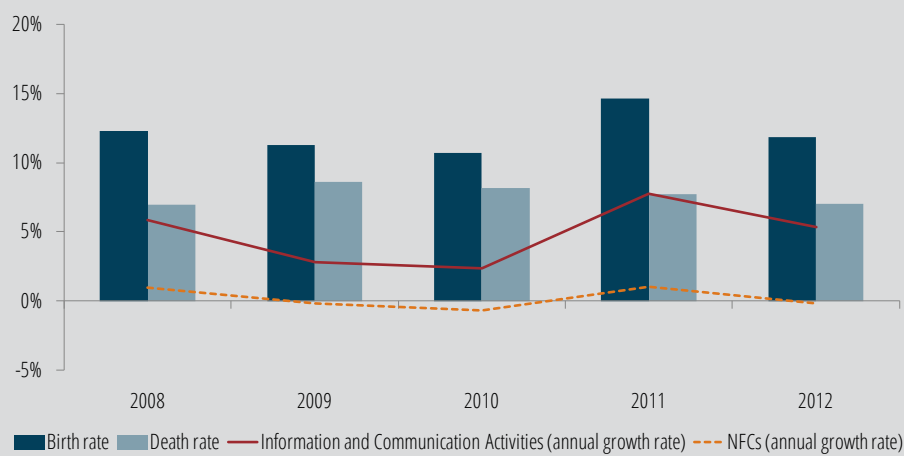
Table 5 • Distribution of turnover (2012)

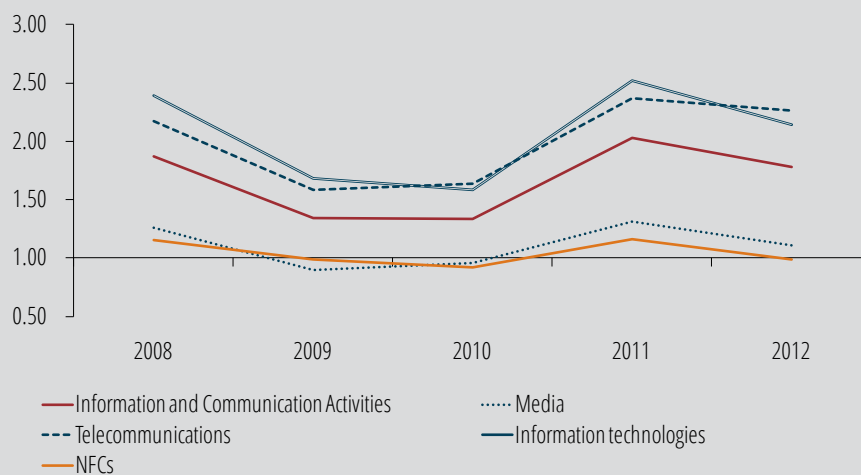|	Information and Communication Activities	Media	Telecommunications	Information technologies
Percentage of turnover held by 10% of enterprises	95%	91%	99%	88%
Percentage of turnover held by 1% of enterprises	78%	62%	87%	54%

Chart 5 • Herfindahl-Hirschman Index (2012)

Chart 6 •
Demographic
indicators

Legend: Birth rate | Death rate | Information and Communication Activities (annual growth rate) | NFCs (annual growth rate)

Chart 7 •
Birth/death ratio

Legend: Information and Communication Activities | Media | Telecommunications | Information technologies | NFCs

Chart 8 •
Weight of
high-growth
enterprises

Legend: Information and Communication Activities | Media | Telecommunications | Information technologies | NFCs
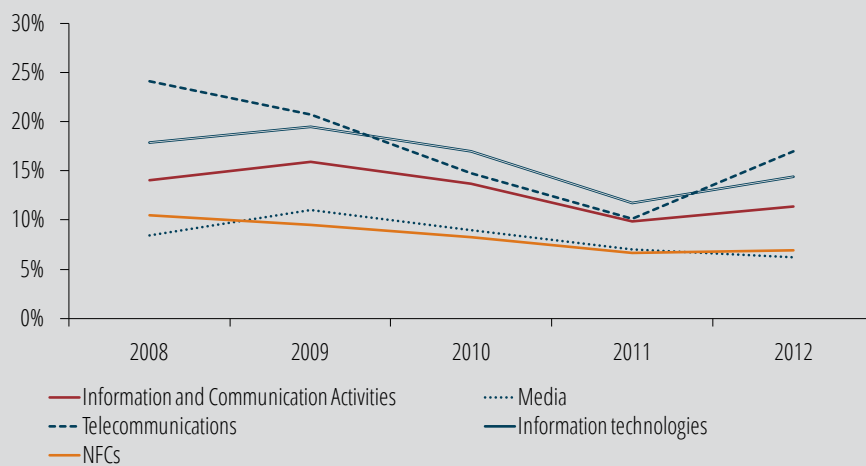
3. Economic and financial analysis

3.1. Economic environment

2012 was characterised by an unfavourable external environment, marked by a recession in the euro area and a slowdown in global economic growth. At domestic level, gross domestic product fell by 3.2%, after declining by 1.3% in 2011, while unemployment increased. Private consumption and investment fell more markedly, compared with 2011, while public consumption declined slightly less than in the same period one year earlier.

Although fiscal policy remained tight, restrictions were less marked in terms of monetary and financial conditions. Progress was made in terms of the adjustment process in the Portuguese economy, namely as regards rebalancing the combined current and capital account balance and reducing the primary and structural deficits. External trade transactions continued to make positive contributions to GDP developments, with exports growing, albeit at a slower pace than 2011, and imports declining more markedly (Table 6).

As regards 2013, the latest data released by *INE* point to a 1.4% fall in GDP. Exports grew more than in 2012, while public consumption, private consumption and investment recorded smaller declines.[11]
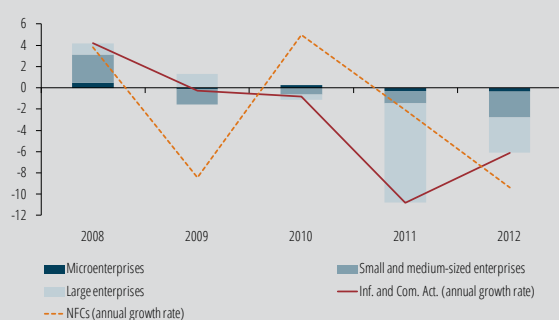
3.2. Activity and profitability

3.2.1. Turnover

Turnover in *Information and Communication Activities* decreased in 2012 (6%) for the fourth year in a row, albeit at a slower pace than in 2011 (11%). After two consecutive years with declines in activity higher than in the NFC aggregate, the sector under review had a less unfavourable performance in 2012 (9% contraction in NFCs) (Chart 9).

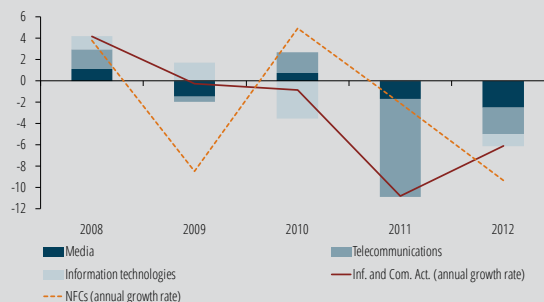**Table 6** • GDP and key components | Annual growth rate

	2009	2010	2011	2012	2013
GDP	-2.9%	1.9%	-1.3%	-3.2%	-1.4%
Private consumption	-2.3%	2.5%	-3.3%	-5.3%	-1.7%
Public consumption	4.7%	0.1%	-5.0%	-4.7%	-1.7%
Gross fixed capital formation	-8.6%	-3.1%	-10.5%	-14.4%	-6.6%
Exports	-10.9%	10.2%	6.9%	3.2%	6.1%
Imports	-10.0%	8.0%	-5.3%	-6.6%	2.8%

Sources: *INE* and Banco de Portugal.

By enterprise size class

Microenterprises
Large enterprises
NFCs (annual growth rate)
Small and medium-sized enterprises
Inf. and Com. Act. (annual growth rate)

By economic activity segment

Media
Information technologies
NFCs (annual growth rate)
Telecommunications
Inf. and Com. Act. (annual growth rate)

Chart 9 • Turnover | Annual growth rate (%) and contributions (p.p.)

Negative developments in the *Information and Communication Activities* sector's turnover were broad-based across all enterprise size classes. SMEs recorded the largest decline (9%), while large enterprises and microenterprises declined at a lower, similar level (5%). Growth rates in turnover had already been negative across all size classes in 2011 (particularly large enterprises, with a 13% contraction).

By economic activity segment, the largest fall in turnover compared with 2011 was recorded in *Media* (13%), but given its lower relative weight in *Information and Communication Activities*, its contribution to negative developments in the aggregate was only 2 p.p. *Telecommunications* and *Information technologies* declined by 5% and 4% respectively, with 3 p.p. and 1 p.p. contributions to a contraction in the sector's turnover.

The analysis of individual data for 2012 shows that the smaller decline in the *Information and Communication Activities* sector's turnover compared with 2011, as evidenced by the average indicator, was supported by most enterprises. In fact, albeit a slight deterioration in the value for the first quartile (1 p.p.) compared with 2011, the median (1 p.p.) and the third quartile (5 p.p.) increased in 2012, pointing to a less negative situation for most enterprises. Moreover, the average growth rate in turnover in *Information and Communication Activities* was only 1 p.p. below the distribution's median in 2012 (Chart 10).

The smaller decline in turnover compared with 2011 is also noticeable in the sector's economic activity segments. Nonetheless, more than half of the enterprises in each segment saw its turnover drop from 2011. Finally, results in *Telecommunications* were highly dispersed, with turnover in more than one-fourth of enterprises increasing over 50% in 2012, while a similar share of enterprises posted declines of more than 34%.

3.2.2. Operating costs[12]

Operating costs in the *Information and Communication Activities* sector followed the same path as turnover in 2012, with a similar decline (6%).

By cost component, albeit with varying intensity, negative developments were a common factor. The Cost of Goods Sold and Materials Consumed (CoGS) component recorded the highest fall (8%), followed by employee costs (7%). However, the behaviour of this sector's operating costs is chiefly determined by developments in Supplies and External Services (SES), which declined by 6% (Chart 11).

Breaking down operating costs in *Information and Communication Activities* shows the impact of SES on the aggregate's developments. In 2012 this component accounted for approximately 63% of the sector's operating costs, while employee costs represented 24% and CoGS only 13% (Table 7). Compared with NFCs, the sector under review had a considerably lower weight in terms of CoGS (-46 p.p.), offset by the greater relevance of both SES (+38 p.p.) and employee costs (+9 p.p.).

All enterprise size classes had a nearly identical operating cost structure, although smaller enterprises (microenterprises and SMEs) had allocated smaller shares to employee costs.

Concerning economic activity segments, the cost structure was also dominated by SES, followed by employee costs. However, SES are predominant in *Telecommunications* (77%), while employee costs had a greater relative weight in *Information technologies* (38%).

Turning to operating cost developments, all components declined across all size classes and economic activity segments. By enterprise size class, the fall in operating costs was more marked in SMEs (10%) than in microenterprises (7%) and large enterprises (4%). By economic activity segment, the greatest decline was recorded in *Media* (13%), compared with declines of more than 4% in *Telecommunications* and *Information technologies*.

Table 7 • Operating costs | Structure and annual growth rate (2012)

Analysis	Item	NFCs	Inf. and Com. Act.	By enterprise size class			By economic activity segment		
				Micro	SMEs	Large	Media	Telecom.	Inf. tech.
Structure	CoGS	58.8%	12.7%	14.5%	14.5%	11.7%	17.0%	9.2%	15.1%
	SES	25.7%	63.2%	56.2%	52.4%	69.1%	57.2%	77.3%	46.9%
	Employee costs	15.5%	24.0%	29.3%	33.1%	19.2%	25.8%	13.5%	38.0%
Annual growth rate	CoGS	-7.6%	-8.0%	-9.3%	-13.9%	-4.1%	-17.0%	-5.2%	-3.2%
	SES	-12.3%	-5.7%	-7.1%	-10.1%	-3.9%	-12.5%	-3.7%	-4.8%
	Employee costs	-8.6%	-6.7%	-3.8%	-8.3%	-6.0%	-10.0%	-7.8%	-4.6%
	Operating costs	**-9.0%**	**-6.2%**	**-6.5%**	**-10.1%**	**-4.3%**	**-12.6%**	**-4.4%**	**-4.5%**
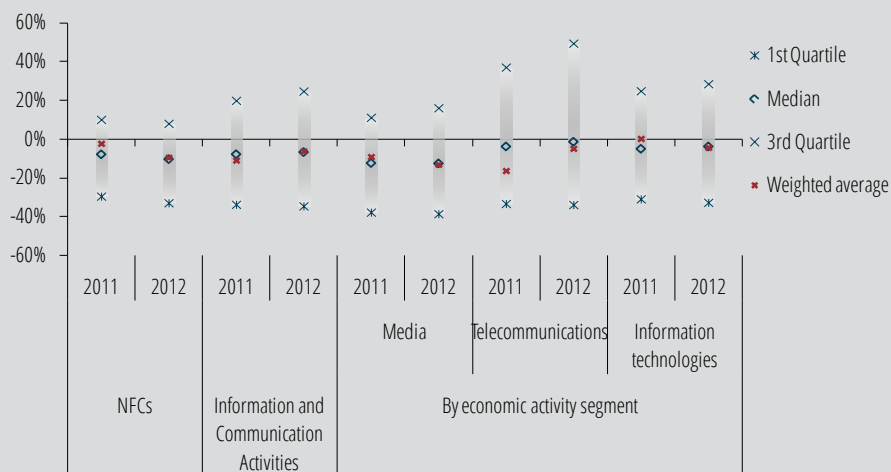
Chart 10 • Turnover | Quartile distribution and weighted average annual growth rate

Chart 11 • Operating costs | Annual growth rate

Box 1 | External market importance for the operating activity of Information and Communication Activities enterprises

This *Box* assesses the importance of the external market for the operating activity of *Information and Communication Activities* enterprises in Portugal, on the basis of *IES* data.[13]

In 2012 the external market accounted for 11% of the *Information and Communication Activities* sector's turnover (21% in NFCs). This reflects a 1 p.p. increase from 2011, which resulted from both a fall in the domestic market and an acceleration in the external market.

In this sector, as opposed to the aggregate of Portuguese enterprises, the large enterprises class had the lowest weight as regards exports in total turnover (7%). In SMEs and microenterprises, the weight of the external market in total turnover is close to 22% and 16% respectively (Chart 12). Compared with 2011, these figures correspond to 3 p.p. increases for SMEs, 2 p.p. for microenterprises and 1 p.p. for large enterprises.

By economic activity segment, *Information technologies* exported a more substantial share of the corresponding turnover (21%), compared with *Media* and *Telecommunications* (12% and 6% respectively).

Turning to imports, the weight of the external market in purchases of goods and services by *Information and Communication Activities* enterprises was 22% in 2012 (21% in 2011). In the aggregate of Portuguese enterprises, it stood at 27% (28% in 2011).

Large enterprises and SMEs obtained 24% and 21% respectively of their purchases and supplies and external services from non-resident entities. This share was smaller for microenterprises, given that only 11% of their purchases and SES came from abroad.

With regard to *Information and Communication Activities* segments, *Telecommunications* and *Information technologies* had the highest shares of purchases and SES associated with imports (24% and 23% respectively).

Both in 2011 and 2012 balances of transactions with the external market in the *Information and Communication Activities* sector were more negative, compared with the NFC aggregate. However, this indicator evolved favourably, both in this sector (albeit slightly) and in NFCs (Chart 13).

**Chart 12 •** Exports and imports of goods and services (2012)
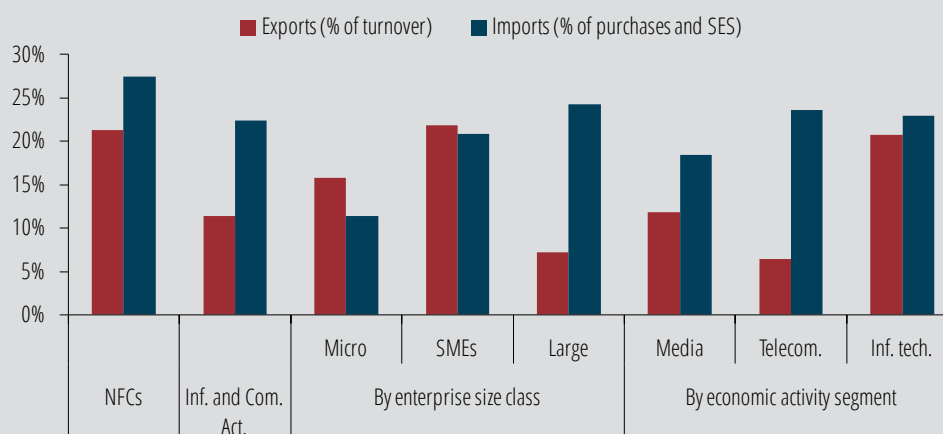
The balance of goods and services transactions with the external market, as a percentage of turnover, reflects the fact that, in 2012, exports in the *Information* and *Communication Activities* sector exceeded imports by 3% of turnover, compared with 1% in the NFC aggregate.

Microenterprises were particularly relevant in the sector under review, invariably posting positive balances in terms of transactions with the external market during the entire period under review. That was also the case of the sector's SMEs over the past three years, with exports exceeding imports by 9% in 2012, which corresponds to a 9 p.p. increase from 2009. In turn, large enterprises in the sector had a negative balance in their transactions with the external market during the period under review, with imports exceeding exports by 8% of their turnover in 2012 (3 p.p. increase from 2008).

By economic activity segment, activities associated with *Telecommunications* and *Media* had negative balances in their transactions of goods and services with the external market over the entire period under review, with the first segment accounting for the most negative balances (8% in *Telecommunications* and 1% in *Media* in 2012). In turn, *Information technologies*

were more open to trade, with growing positive balances since 2010 (8% balance in 2012, which corresponds to a 6 p.p. increase from 2009).

Chart 13 • Goods and services transactions with external markets (balance in 2011 and 2012)
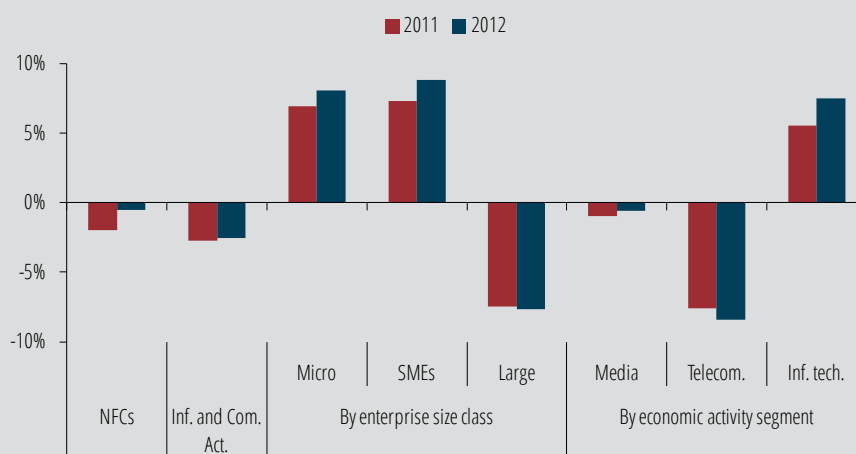
3.2.3. EBITDA[14]

Developments in the *Information and Commu-nication Activities* sector's operating activity in 2012 were reflected in a 1% decline in EBITDA, compared with 2011. Such developments, albeit negative, compare favourably with the NFC aggregate, whose EBITDA fell by 25% over the same period (Chart 14).

To developments in *Information and Commu-nication Activities*' EBITDA largely contributed the sector's large enterprises, with an annual growth rate of -4%. As regards economic activity segments in the sector under review, EBITDA developments were mixed. *Telecom-munications* declined by 2% (2 p.p. contribu-tion to the sector's EBITDA reduction), while in *Media* EBITDA increased by 3% (positive contribution of 0.2 p.p. to the sector's EBITDA developments). In turn, EBITDA in *Information technologies* remained unchanged.

Individual data show that 35% of *Information and Communication Activities* enterprises had a negative EBITDA in 2012, which compares with 39% in total NFCs. However, in the sector under review, this indicator remained at essen-tially the same level as in 2011, while growing by approximately 3 p.p. in NFCs (Table 8).

The share of enterprises with negative EBITDA levels in the sector under review is lower amongst larger enterprises. In 2012 approxi-mately 37% of microenterprises had a negative EBITDA, while in large enterprises this share was a little under 11%. Furthermore, the share of enterprises with negative EBITDA levels declined for SMEs and large enterprises, compared with 2011 (0.4 p.p. and 1.9 p.p. respectively), while increasing for microenterprises (0.6 p.p.).

Considering the various economic activity segments, over 42% of *Telecommunications* enterprises had a negative EBITDA, a share

Table 8 • EBITDA | Weight of enterprises with negative EBITDA

	NFCs	Information and Communication Activities	By enterprise size class			By economic activity segment		
			Micro	SMEs	Large	Media	Telecom.	Inf. tech.
2011	36.4%	34.8%	36.3%	22.2%	12.8%	38.4%	39.5%	32.0%
2012	39.1%	35.3%	36.9%	21.8%	10.9%	38.2%	42.5%	32.9%

Chart 14 • EBITDA| Annual growth rate (2012)
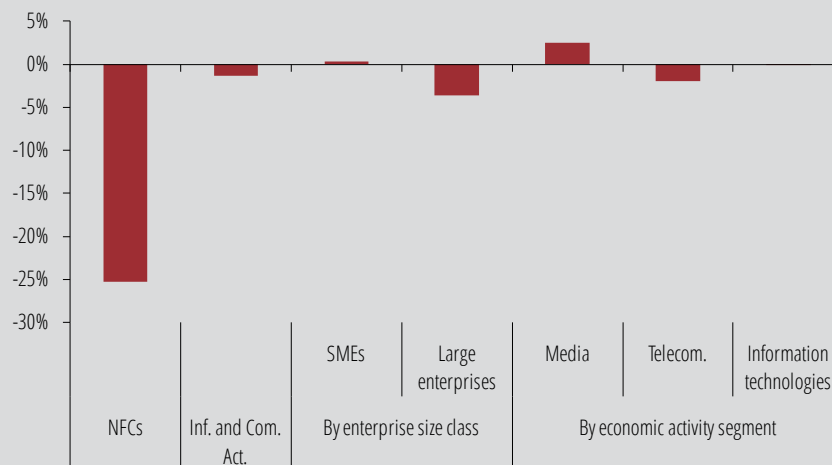
Note: This indicator was not shown for the microenterprises aggregate in 2012, given that this class had negative EBITDA in 2011.

that amounted to 38% in *Media* and 33% in *Information technologies*. *Telecommunications* recorded the highest increase in the share of enterprises with negative EBITDA compared with 2011 (3 p.p.).

3.2.4. Return on equity[15]

Return on equity in the *Information and Communication Activities* sector in 2012 stood at 2 %, which corresponds to a 2 p.p. increase from the previous year. Such positive developments contrast with the NFC aggregate, which saw a 3 p.p. decline (-0.5% in 2012).

The improvement in this profitability indicator in the sector under review was broad-based across all economic activity segments. In 2012 return on equity in *Telecommunications* stood at 2% (2 p.p. increase from 2011) while amounting to 9% in *Information technologies* (1 p.p. increase from 2011). Only *Media* had negative return on equity (-1%), but still 3 p.p. above the 2011 level (Chart 15).

By enterprise size class, in 2012 average profitability of microenterprises was negative, at 9%, while in SMEs and large enterprises this indicator was positive, amounting to 4% and 2% respectively. Negative profitability in microenterprises was a constant throughout the entire period under review.

The quartile distribution of return on equity[16] of the sector under review shows the sector's favourable standing compared with the NFC aggregate (better standing of the various distribution points, both in 2011 and 2012). The difference between the distribution's central value (median) (4%) and the average (2%) dropped to 2 p.p. in 2012, after standing above 5 p.p. in 2011 (Chart 16). This shows that in 2012 the sector's average profitability was less biased by extreme values, which makes it more representative of the situation in most of the sector's enterprises.

Regardless of the enterprise size class, in the sector under review, more than half of the enterprises had positive profitability levels, although average profitability in microenterprises stood in negative territory (9%). In large enterprises, average profitability (2%) resulted from the impact of a small group of enterprises, given that half of the enterprises in this size class had profitability levels of over 11%.

By economic activity segment, more than half of the enterprises in *Telecommunications* and *Information technologies* had profitability levels higher than 5% in 2012, while the median in *Media* stood at 2%. One-fourth of *Telecommunications* enterprises had return on equity levels above 33% (26% in *Information technologies* and 19% in *Media*).
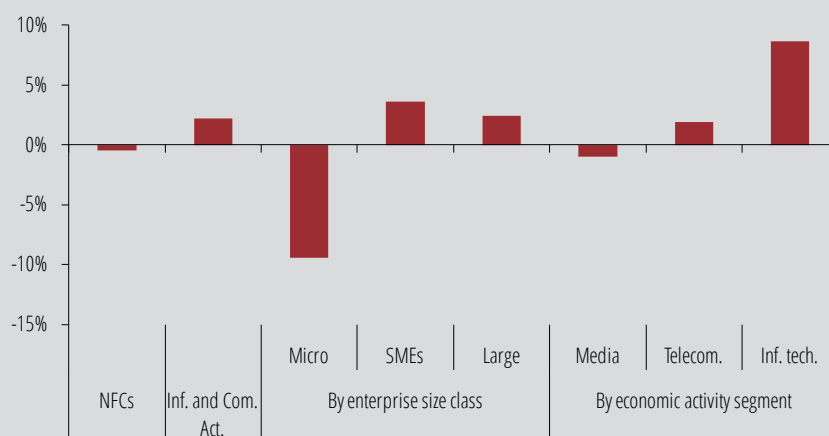
Chart 15 •
Return on equity (2012)

3.3. Financial situation

3.3.1. Financial structure

According to Central Balance Sheet Database data, the *Information and Communication Activities* sector's capital ratio stood at 45% in 2012, *i.e.* higher than 30% in the NFC aggregate. Compared with 2008, the capital ratio of the sector under review grew by 12 p.p., while in NFCs it declined by approximately 4 p.p..

Individual data show that the differential between both aggregates, in terms of the average capital ratio, does not reflect the overall

situation in their corresponding enterprises. The quartile distribution shown in Chart 17 illustrates this situation, while both distributions are rather similar. The relatively higher average indicator in *Information and Communication Activities* is very influenced by a sub-set of highly capitalised enterprises, with a greater weight in the sector. As such, this indicator's average in 2012 was nearly 20 p.p. above the median, while in NFCs the differential was only 6 p.p. In that year, the median in *Information and Communication Activities* was 26%, which shows that, in at least half of the enterprises, 74% of assets were financed by debt.

Chart 16 •
Return on equity | Quartile distribution and weighted average
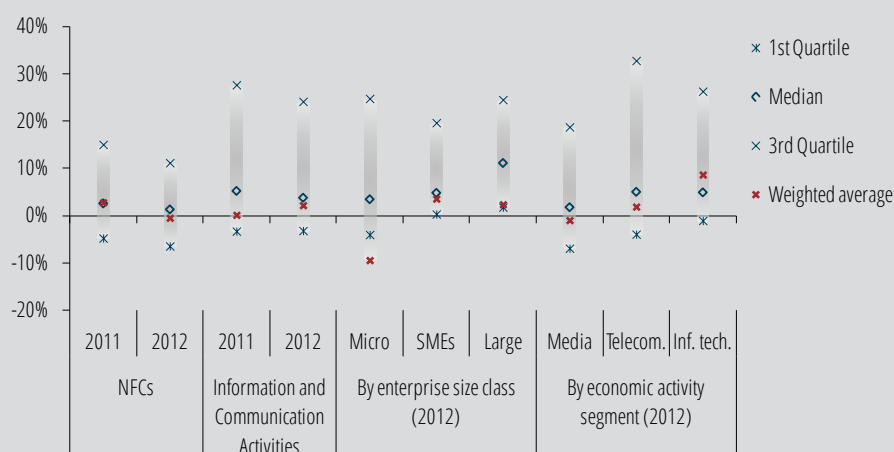
Chart 17 •
Capital ratio | Quartile distribution and weighted average
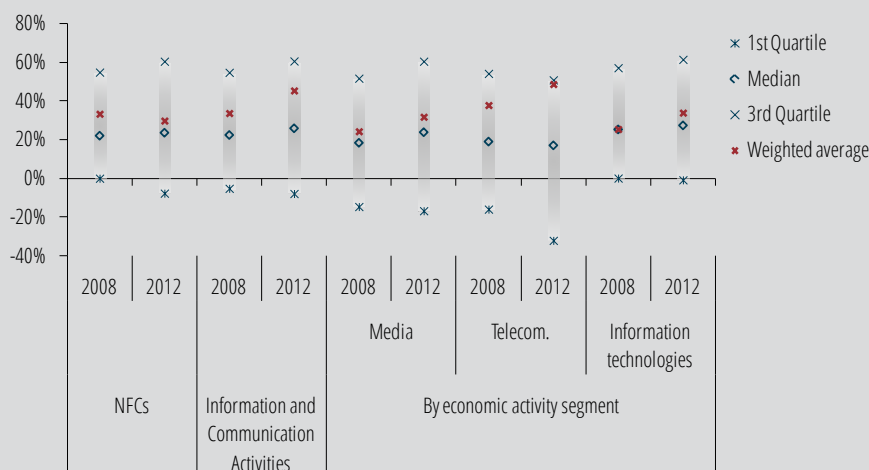
Comparing 2012 with 2008, the capital ratio of *Information and Communication Activities* enterprises was more heterogeneous. This was reflected by both an increase of this value for the third quartile (6 p.p.) and a decline in the value for the first quartile (3 p.p.). As such, the interquartile range moved from 60 p.p. in 2008 to 68 p.p. in 2012.

The analysis by economic activity segment shows that the positive bias of the average indicator in *Information and Communication Activities* mainly arose from *Telecommunications*, where the average of the capital ratio (49%) was 32 p.p. above the median. Furthermore, although in average terms this activity recorded the highest values, all of its quartiles were lower than those in *Media* and *Information technologies*.

Among enterprises with a low capital ratio, those with a negative capital ratio are particularly vulnerable (negative equity), as is the case of over 28% of *Information and Communication Activities* enterprises (approximately the same share as in NFCs). This indicator increased by 1 p.p. from 2011 (2 p.p. in NFCs) (Table 9).

Turning to the economic activity segment, 38% of enterprises in *Telecommunications* and 31% of those associated with *Media* had negative equity in 2012, while in *Information technolo-*

gies it stood at 26%. Compared with 2011, this share increased by 3 p.p. in *Telecommunications*, 1 p.p. in *Information technologies* and 0.3 p.p. in *Media*.

Similarly to most economic activity segments in Portugal, recourse to debt is how the sector under review chiefly obtains funding, which warrants a more detailed analysis of the sources of financing used.

Liabilities in *Information and Communication Activities* contracted by approximately 5% in 2012, following a 8% fall in 2011 (Table 10). Excluding debt securities, which grew by 39% (6 p.p. contribution to the aggregate), and trade credits, which remained unchanged, the remaining liabilities' components declined in 2012, compared with the previous year.

In terms of structure, in 2012 the combined weight of financial debt and trade credits in *Information and Communication Activities* was 5 p.p. higher than in the NFC aggregate (Chart 18). These components accounted for 81% and 76% respectively of total liabilities in the sector and NFCs.

The composition of financial debt also shows some significant differences between both aggregates. The sector under review stands out given that bank loans are less relevant as its source of financing: in 2012 they accounted

Table 9 • Capital ratio | Weight of enterprises with negative results

Year	NFCs	Information and Communication Activities	By economic activity segment		
			Media	Telecommunications	Information technologies
2011	27.3%	27.5%	31.0%	34.8%	24.5%
2012	29.2%	28.5%	31.3%	37.5%	26.0%

**Table 10** • Liabilities | Annual growth rate (%) and contributions from components (p.p.)

	NFCs	Inf. and Com. Act.	Components (contributions in p.p.)					
			Debt securities	Bank loans	Intra-group loans	Other financing	Trade credits	Other liabilities
2011	-0.4%	-8.0%	-2.5	-0.7	-2.5	-0.9	-1.6	0.1
2012	-7.2%	-4.5%	6.3	-1.7	-1.4	-2.0	0.0	-5.8

for only 8% of financial debt (48% in NFCs). This has been a growing trend, given that in 2008 and 2010 the weight of bank loans in the sector's financial debt was 18% and 11% respectively. The lower recourse to bank loans is offset by a greater volume of debt securities issues and intra-group financing. These two instruments accounted for 35% and 52% respectively of the *Information and Communication Activities* sector's financial debt in 2012 (11% and 33% respectively in NFCs).

The relative importance of the different sources of financing in total liabilities also varies across enterprise size classes and economic activity segments. Bank loans17 were more relevant for smaller enterprises (12% in micro-enterprises and 17% in SMEs), given that in large enterprises as a whole this component accounted for only 3% of liabilities, being substantially exceeded by the share associated with intra-group financing (40%).

Turning to trade credits, the weight of this component in *Information technologies* (27 %) was particularly relevant and exceeded that associated with the corresponding bank loans (18%) in the debt financing structure. Finally, debt securities issues18 were particularly relevant in *Telecommunications* (32%) and in the sector's large enterprises (30%).

Chart 18 •
Liabilities structure (2012)
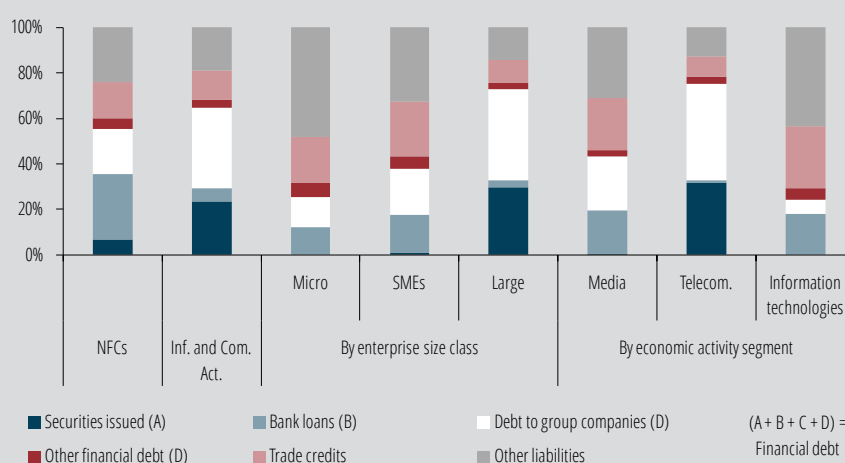
Note: Financial debt refers to the set of interest-bearing debt obtained through issuing debt securities, loans from credit institutions and financial corporations and intra-group loans, as well as other financing. The analysis excludes liabilities' components considered eminently related to accounting procedures, such as deferrals and provisions. Thus, 'Other liabilities' includes debt to the Public Administration and other public entities, debt to shareholders and other current liabilities and accounts payable.

Box 2 | Loans from credit institutions resident in Portugal – characterisation based on the Central Credit Register[19]

In 2012 bank loans from resident credit institutions (CIs)[20] accounted for 8% of financial debt and 6% of total liabilities in *Information and Communication Activities*, *i.e.* substantially lower than in the NFC aggregate (48% and 29% respectively).

In the *Information and Communication Activities* sector, bank loan financing was almost exclusively obtained from the financial sector resident in Portugal. The share of enterprises in the sector under review that had been granted loans by resident CIs was 52% in 2012 (56% in 2011), *i.e.* below that of the NFC aggregate (61%).

On the basis of information available at Banco de Portugal's Central Credit Register (CCR), this *Box* provides a more detailed analysis of the financial debt component related to loans from resident CIs in Portugal, focusing on the latest information, for the end of 2013.

In total bank loans granted by resident CIs to enterprises in Portugal, credit granted to *Information and Communication Activities* accounted for around 1%. This weight remained relatively constant over the past five years.

By enterprise size class, at the end of 2013 SMEs and large enterprises were responsible for 48% and 36% respectively of total credit granted to the *Information and Communication Activities* sector, while microenterprises accounted for the remaining 16% (Chart 19). By economi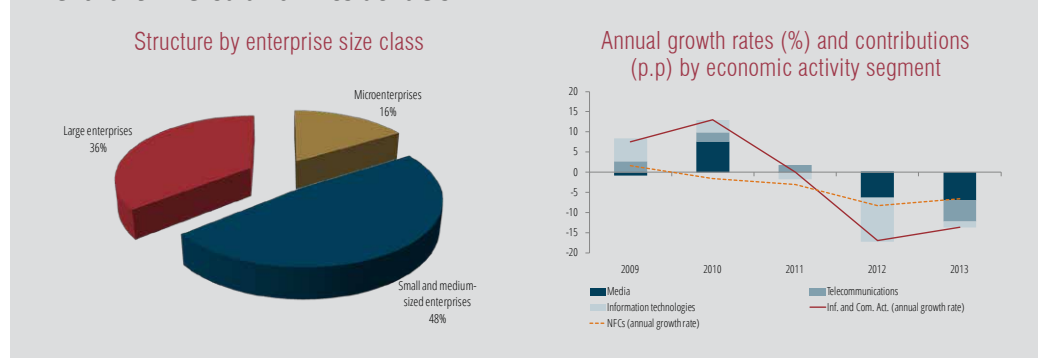c activity, the *Media* segment was responsible for the largest share (46%) of credit granted to the sector, followed by *Information technologies* (41%) and *Telecommunications* (13%).

Developments in credit to the *Information and Communication Activities* sector have compared unfavourably with those in the NFC aggregate since 2012. Following a 17% decline in 2012 (8 % decline in NFCs), credit granted to the sector under review fell by 14% over the past year (7 % decline in NFCs).

In 2013 credit granted to all economic activity segments in the sector under review recorded negative developments. *Telecommunications* saw the greatest contraction (33%, which corresponds to a -5 p.p. contribution to the aggregate rate of change). Nonetheless, *Media* made the greatest contribution to negative developments in credit to the sector under review, owing to the fact that this activity holds 46% of credit granted to *Information and Communication Activities* and its bank loans contracted by 15%, resulting in a -7 p.p. contribution to a 14 p.p. decline in credit granted to the sector.

With regard to default indicators, the non-performing loans ratio[21] of the *Information and Communication Activities* sector stood at 7% at the end of 2013, which is substantially below the NFC aggregate in Portugal (13%) (Chart 20). In terms of developments, default in the sector has been increasing, albeit at a slower pace than in NFCs. In 2009 the differential between

Chart 19 • Credit from resident CIs

Structure by enterprise size class

Annual growth rates (%) and contributions (p.p) by economic activity segment

Large enterprises 36%

Microenterprises 16%

Small and medium-sized enterprises 48%

■ Media
■ Information technologies
--- NFCs (annual growth rate)
■ Telecommunications
— Inf. and Com. Act. (annual growth rate)

the two aggregates was 2 p.p., increasing to 7 p.p. in 2013.

The non-performing loans ratio varies substantially across enterprise size classes, being greater for smaller enterprises. As such, at the end of 2013 this indicator reached 16% in microenterprises, 8% in SMEs and 0.8% in large enterprises. In terms of developments, although all segments have revealed some growth in this indicator since 2010, it was more substantial for microenterprises (11 p.p. increase between 2010 and 2013).

By economic activity segment, the non-performing loans ratio in *Media* and *Information technologies* stood at 8% and 6% respectively, while standing at 3% in *Telecommunications*. Similarly to the sector as a whole, all activity segments had consecutive increases in this indicator since the end of 2010 (5 p.p. in *Media*, 2 p.p. in *Telecommunications* and 4 p.p. in *Information technologies*).

By the end of 2013, 24% of enterprises with loans from resident CIs had contributed to the non-performing loans ratio of the *Information and Communication Activities* sector, compared with 23% at the end of 2012 and 17% at the end of 2010 (Chart 21). In NFCs as a whole, this share stood at 30% at the end of 2013 (29% at the end of 2012 and 20% at the end of 2010).

During the period under review, the microenterprises class always had the largest share of non-performing enterprises (25% at the end of 2013), followed by SMEs and large enterprises (18% and 11% respectively at the end of 2013). The share of non-performing enterprises among microenterprises and SMEs has grown gradually since the end of 2010, while among large enterprises this trend has been less significant.

By economic activity segment, 40% of *Telecommunications* enterprises had credit overdue at the end of 2013. In turn, in *Media* and *Information technologies* this share was 29% and 19% respectively. Developments in this ratio have been similar across activities, while *Telecommunications* were the only economic activity whose values ranked higher than those in the NFC aggregate throughout the entire period under review.

Chart 20 • Non-performing loans ratios (end-of-period figures)
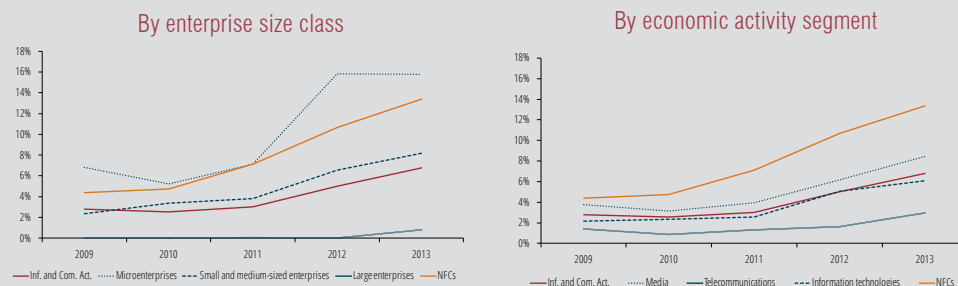
Chart 21 • Non-performing enterprises (end-of-period figures)
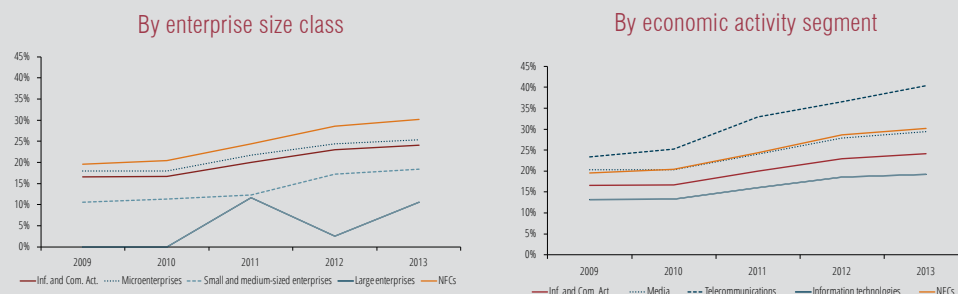
3.3.2. Financial costs and solvency

In 2012 interest paid by *Information and Communication Activities* increased by 2% from 2011, which compares with a 1% decline in the NFC aggregate (Chart 22). The increase was particularly marked for SMEs (10%). In large enterprises, growth was lower (4%), while interest paid by microenterprises decreased significantly (47%), owing to the substantial decline in bank loan financing. By economic activity segment, the increase in interest paid was only recorded in *Telecommunications* (4%). In turn, the interest burden decreased in *Information technologies* (16%) and *Media* (4%).

However, individual data show that, similarly to the NFC aggregate, the average interest growth rate in interest paid by the *Information and Communication Activities* sector in 2012 (2%) is not representative of the situation in most of the sector's enterprises. Indeed, the average value is considerably higher than the median (-22%), which reflects a biased result caused

by one-fourth of the sector's enterprises with increases in interest paid of more than 36%.

The biased average growth rate in interest paid was broad-based across the three economic activity segments in the sector under review. Quartile distributions for this indicator show that, in 2012, one-fourth of enterprises in each economic activity segment saw declines higher than 60% in interest paid (77% in *Media*, 61% in *Telecommunications* and 78% in *Information technologies*). Furthermore, interest paid by half of the enterprises declined by more than 23% in *Media* (compared with an average of 4%), 14% in *Telecommunications* (compared with average growth of 4%), and 22% in *Information technologies* (compared with an average fall of 16%).

Throughout the period under review, financial pressure associated with the *Information and Communication Activities* sector was below that in the NFC aggregate. In 2012 approximately 19% of EBITDA generated by the sector was

Table 11 • Weight of interest paid in EBITDA | By enterprise size class and economic activity segment

	NFCs	Inf. and Com. Act.	By enterprise size class		By economic activity segment		
			SMEs	Large	Media	Telecom.	Inf. tech.
2011	28.2%	18.6%	18.3%	17.4%	24.2%	19.1%	10.2%
2012	37.2%	19.2%	20.2%	18.8%	22.5%	20.3%	8.6%

Note: This indicator was not calculated for the microenterprises aggregate for 2011 and 2012, given that this class had negative EBITDA.
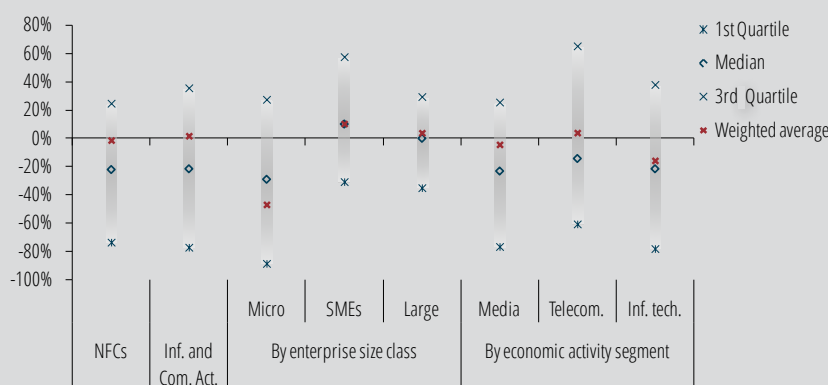
Chart 22 •

Interest paid | Quartile distribution and weighted average annual growth rate (2012)

used to pay interest, while in the NFC aggregate that share stood at 37% (Table 11). This reflects an increase of 9 p.p. from 2011 in the NFC aggregate and 0.6 p.p. in *Information and Communication Activities*, to which the increase in interest paid and the decline in EBITDA made a similar contribution.

By enterprise size class, the level of financial pressure on SMEs and large enterprises was similar to that of the sector as a whole (20% in SMEs and 19% in large enterprises, compared with 19% in the sector). By economic activity segment, only the *Information technologies* segment was under lower financial pressure than the *Information and Communication Activities* sector (9%). In *Media* and *Telecommunications*, financial pressure amounted to 23% and 20% respectively, decreasing by 2 p.p. in the first segment and increasing by 1 p.p. in the latter, compared with 2011 (-2 p.p. in the case of *Information technologies*).

Box 3 | Credit obtained through debt securities issues – characterisation based on the Securities Statistics Integrated System[22]

Debt securities issues are a particularly relevant source of financing for *Information and Communication Activities*. In 2012 this type of financing accounted for 35% of financial debt and 24% of total liabilities of the *Information and Communication Activities* sector (compared with 11% and 7% respectively in the NFC aggregate). Based on information available at Banco de Portugal's Securities Statistics Integrated System, this Box presents a brief description of this source of financing, focusing on the latest information, as at the date of publication, regarding December 2013.

The total amount of debt securities financing obtained by enterprises in the *Information and Communication Activities* sector amounted to more than €4 billion at the end of 2013, declining by 3% from the end of 2012. The reduction in 2013 was due to large enterprises, which accounted for over 99% of securities issued by the sector's enterprises, and *Telecommunications*, with more than 77% of the sector's securities stock (32% of liabilities associated with debt securities in 2012).
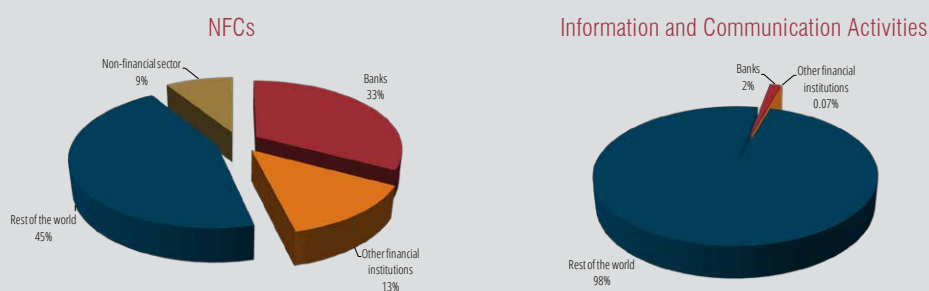
In terms of maturity of debt securities issued by *Information and Communication Activities* enterprises, short-term issues were predominant (86% in 2013). In smaller size classes (microenterprises and SMEs) the entire debt securities stock comprised short-term securities, and in large enterprises its weight was 86%. Turning to economic activity segments in the *Information and Communication Activities* sector, issues made by enterprises in the *Telecommunications* and *Information technologies* segments were fully associated with short-term securities, while long-term issues were only made in *Media* (59% of total issues within the segment).

The analysis of debt securities holders, which offers an insight into the sectors that granted this type of financing to *Information and Communication Activities* enterprises, shows that, at the end of 2013, 98% of securities issued by the sector's enterprises were held by non-residents, while resident banking institutions held a share of 2% (Chart 23). In total NFCs, non-resident institutions had a lower weight (45%), which was offset by resident banks (33%).

In the 2008-11 period the resident banking system's exposure to issues by *Information and Communication Activities* enterprises increased. As at the end of 2011, 20% of debt securities issues by these enterprises were held by the resident banking system, compared with 1% in 2008.

Chart 23 • Debt securities holders (2013)

NFCs

- Non-financial sector 9%
- Banks 33%
- Rest of the world 45%
- Other financial institutions 13%

Information and Communication Activities

- Banks 2%
- Other financial institutions 0.07%
- Rest of the world 98%

3.3.3. Trade credit financing

Trade credit financing accounted for 13% of the *Information and Communication Activities* sector's liabilities in 2012 (12% in 2011). Also in 2012, in the NFC aggregate, trade credits accounted for 16% of the corresponding liabilities (17% in 2011).

In 2012 average days sales outstanding increased in *Information and Communication Activities* while decreasing in the NFC aggregate (Chart 24). The sector's average days sales outstanding amounted to 91 (+1 from 2011), while in the NFC aggregate they stood at 75 (-1 from 2011). Average days payable outstanding, in turn, stood at 106 in *Information and Communication Activities* in 2012 (8 more than in 2011) and 82 in NFCs (2 less than in 2011) (Chart 25). Therefore, the sector under review has longer maturities than NFCs, particularly as regards payments.

Microenterprises in *Information and Communication Activities* maintained the highest average days sales outstanding (152 in 2012), followed by SMEs (128), although, compared with 2011, the latter had grown more (+6 days, compared with +2 days in microenterprises). In turn, over the entire period under review large enterprises had low average days sales outstanding (72 in 2011 and 2012).

Turning to average days payable outstanding, large enterprises also recorded lower values compared with the remaining size classes (98 days in 2012, 87 days in 2011), and was even the only class where average days payable outstanding were consistently higher than the corresponding average days sales outstanding (a differential that amounted to 25 days in 2012). In microenterprises and SMEs, average days payable outstanding amounted to 141 and 117 respectively in 2012. Compared with 2011, there was a 5-day increase in SMEs and a 5-day decrease in microenterprises.

By economic activity segment, in 2012 *Media* and *Information technologies* had the highest average days sales outstanding (116 and 120 respectively), while *Telecommunications* had the lowest value (68 days). Turning to average days payable outstanding, compared with the *Information and Communication Activities* sector as

a whole, *Media* recorded higher values (131 days in 2012, compared with 106 days in the sector). In *Telecommunications* and *Information technologies* average days payable outstanding were closer to the aggregate (98 and 103 respectively).

Days sales and payable outstanding indicators shed light on the time delay associated with receivables and payables in the enterprises' trade credits y. 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 differential between accounts payable and accounts receivable with turnover (Chart 26). A negative value in this indicator reflects the fact that accounts receivable are higher than accounts payable, which means that overall the enterprise is financing its clients; by contrast, a positive value implies that accounts payable are higher than accounts receivable, *i.e.* the enterprise is being funded by its suppliers.

In *Information and Communication Activities*, for the entire time horizon under review and in line with the NFC aggregate, 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 -7% (-3% in NFCs), reflecting, however, an improvement for the second consecutive year (2 p.p. increase from 2010).

By enterprise size class, in 2012 the balance was more negative for microenterprises and SMEs (-15% in both classes). Large enterprises had net lending of -3%, as a percentage of turnover, being the only size class with favourable developments in this indicator over the past year (2 p.p.).

By economic activity segment, *Information technologies* systematically recorded the most negative values in this indicator (-17% in 2012). At the other end of the spectrum was the *Telecommunications* segment, with net lending, still negative, but closer to balance (-2% in 2012). However, all economic activity segments have been improving since 2010.
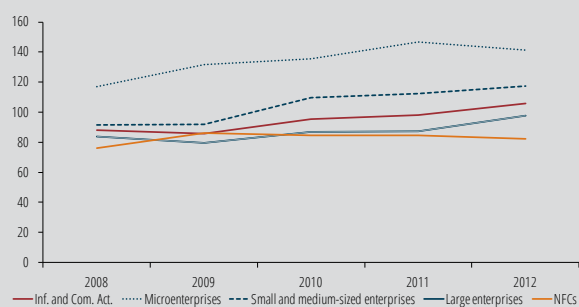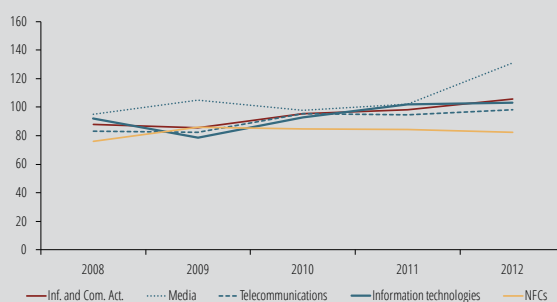
By enterprise size class
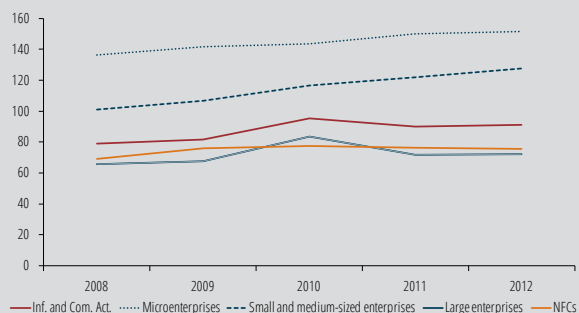
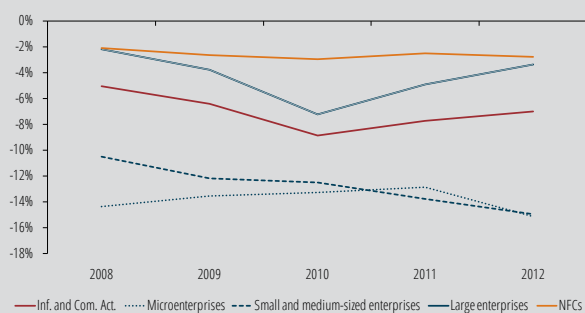**By economic activity segment**
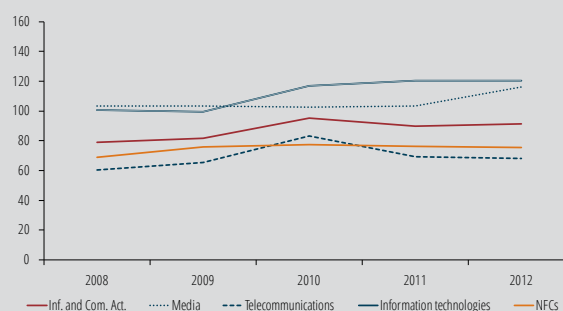
Chart 24 •
Days sales outstanding
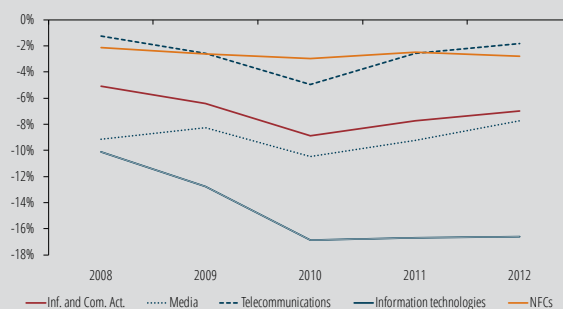
By enterprise size class

By economic activity segment

Chart 25 •
Days payable outstanding

By enterprise size class

By economic activity segment

Chart 26 •
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. International comparison from the BACH database[23]

This Section presents a comparative analysis of the situation in *Information and Communication Activities* enterprises in nine European countries, on the basis of data for 2012, available at the Bank for the Accounts of Companies Harmonised (BACH) database.[24]

This comparison is made for the sector's enterprises operating in Germany, Austria, Belgium, Spain, France, Italy, Poland, Portugal and the Czech Republic, on the basis of profitability and financing structure indicators.

4.1. Profitability

Austria and the Czech Republic had the highest return on equity in the *Information and Communication Activities* sector (17% in both cases). Conversely, Italy had negative profitability of approximately 5%. Portugal had the second worst profitability within the sector (3%), *i.e.* 6 p.p. below the average of the countries under review.

By breaking down return on equity into three explanatory factors, according to the Dupont method (return on sales, asset turnover and financial leverage), it is possible to analyse the various structures and specific features of all the European countries under review (Figure 1).

As such, the higher relative profitability levels in the Czech Republic and Austria have different origins. Therefore, while in the first case the high return on equity largely results from return on sales (10%), with the Czech Republic recording the highest value; in the latter case, high leveraging amongst enterprises is the main explanatory factor (390%), with Austria hosting the sector's enterprises that most depend on debt financing. Also, both countries have the most positive indicators as regards asset turnover (Table 12).

Return on equity of *Information and Communication Activities* enterprises in Portugal is hampered compared with most other European countries, as regards all factors, particularly asset turnover, which is the lowest amongst the countries under review. Unlike many other activities in Portugal, this sector has higher relative equity levels than most other European countries.

Figure 1 •
Breakdown of return on equity (Dupont method)
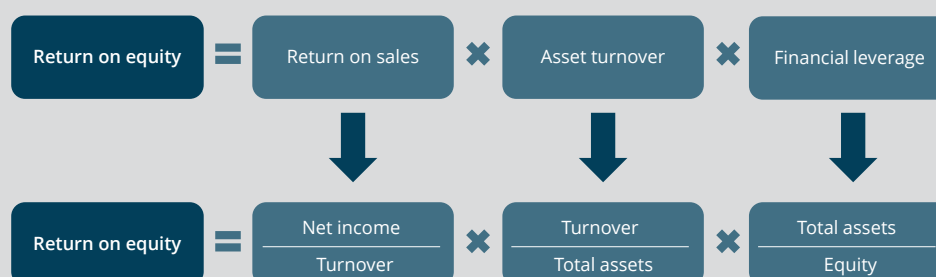
**Table 12** • Breakdown of return on equity (2012)

Countries	Return on equity	Return on sales	Asset turnover	Financial leverage
Austria (2011)	17.2%	3.7%	118.8%	389.6%
Czech Republic (2011)	16.7%	9.7%	95.7%	179.9%
Belgium	11.1%	8.1%	54.4%	253.2%
Spain (2011)	10.8%	4.8%	80.1%	278.0%
Poland	10.6%	7.5%	70.3%	200.9%
France	10.2%	4.7%	82.9%	260.0%
Germany (2011)	8.8%	8.2%	47.5%	228.0%
Portugal	3.3%	4.3%	34.7%	219.6%
Italy	-4.5%	-2.5%	51.2%	354.0%

4.2. Financing structure and solvency

Given the importance of debt to finance European enterprises, Chart 27 illustrates the liabilities structure in *Information and Communication Activities* enterprises in 2012. On the basis of this information, bank loans were particularly relevant in Belgium and Poland, accounting for 39% and 34% respectively of liabilities in this sector's enterprises, compared with 16%, on average, in the countries under review. By contrast, Portugal was the country where bank loans accounted for the lowest share of liabilities in the sector's enterprises (5%).

Excluding Belgium, Poland and the Czech Republic, the largest source of financing for the sector's enterprises was financial debt not associated with bank loans, *i.e.* debt associated with other financial credits. In this respect,
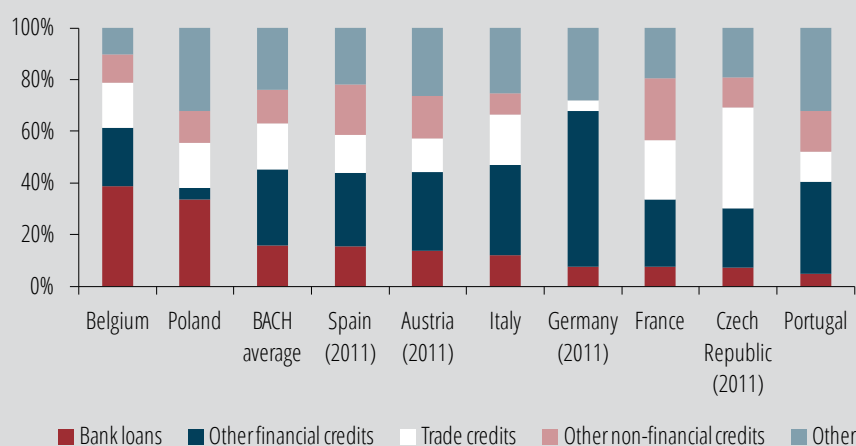
**Chart 27** • Liabilities structure (2012)

Note: For the complete analysis of data and differences in funding across countries, see the BACH Userguide. In the case of Austria and the Czech Republic, other financial claims and other non-financial claims were estimated.

Germany was particularly relevant, as this type of financing accounted for 60% of liabilities. In Portugal, financial debt, excluding bank loans, funded 35% of liabilities, which is higher than the average in the countries under review (29%).

Trade credit financing was more relevant amongst Czech enterprises, accounting for 39% of liabilities, and, as such, representing the largest source of financing for enterprises in that country. The weight of trade credits in Portugal (12%) was below average amongst BACH countries (18%). Only Germany had lower values than Portugal, with trade credits funding 4% of enterprises' liabilities.

The analysis of financial pressure, as measured by the weight of interest paid in EBITDA, shows that enterprises in Italy, Portugal and Poland had the highest values in this indicator (Chart 28). Conversely, the lowest financial pressure was seen in the Czech Republic, where the share of EBITDA used to pay interest was only 3%, owing to the low weight of financial debt in this country's enterprises.

Chart 28 •
Weight of interest paid in EBITDA (2012)
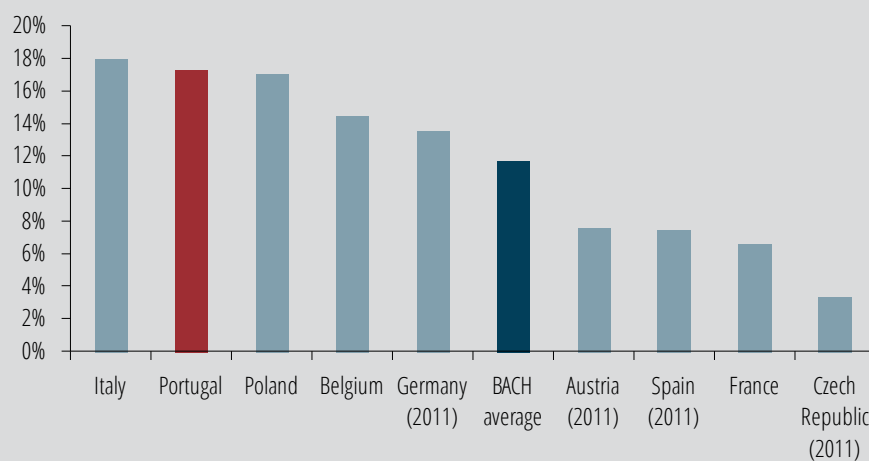
Notes

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).

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.

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

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

7. 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).

8. Considering the numerous categories included in national regulations for the classification of enterprises by legal nature, this study highlights only public limited companies and private limited companies, whereas the remaining legal natures were aggregated under 'other legal natures'.

9. 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. The value 1 corresponds to a monopoly situation, in which one enterprise holds the entire market share.

10. For more details on HGEs in Portugal, see *Central Balance Sheet Studies | 12 – Structure and dynamics of non-financial corporations in Portugal, 2006-2012*, November 2013.

11. For more information on economic activity developments in Portugal, see *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.

12. 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 Employee Costs, largely corresponds to the concept of "operating costs" of the Official Chart of Accounts (base accounting standard for corporate accounts up to 2009).

13. Data reported by enterprises within the scope of *IES* submissions regarding exports and imports of goods and services are subject to a quality control by Banco de Portugal, especially through 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.

14. 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.

15. Return on equity is calculated as the year's total profit to equity ratio and measures return on equity invested by shareholders and /partners.

16. 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.

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

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

19. 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*.

20. 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 2013 came from banks.

21. 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.

22. 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: Integrated System Features and Main Results*.

23. 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. The values of indicators for Portugal presented in this Section may diverge slightly from the rest of the Study, due to different data update periods and methodological questions associated with the need to ensure harmonisation within BACH countries.

24. Nine European countries participate in the BACH database. In the near future, it shall include data from Slovakia, the Netherlands, Luxembourg and Romania.

ANNEX

	Characterisation of the sector		Activity			Financing							Profitability
			Growth rates		Capital ratio	Growth rates				Loans obtained from resident CIs (Dec. 2013)			
	Turnover held by large enterprises	Turnover held by the largest enterprises (Top 10%)	Turnover	EBITDA		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%	87%	-9%	-25%	30%	-12%	-13%	-3%	37%	30%	13%		-0.5%
Information and Communication Activities sector	69%	95%	-6%	-1%	45%	0%	-23%	-7%	19%	24%	7%		2%
Media	47%	91%	-13%	3%	32%	10%	-18%	-8%	23%	29%	8%		-1%
Telecommunications	94%	99%	-5%	-2%	49%	-2%	-4%	-2%	20%	40%	3%		2%
Information technologies	33%	88%	-4%	-0.04%	34%	-3%	-34%	-17%	9%	19%	6%		9%

Weight of the Information and Communication Activities sector

	Number of enterprises		Turnover		Number of employees	
	2002	2012	2002	2012	2002	2012
NFCs	2%	2%	4%	4%	2%	3%

Methodological summary

Capital ratio: Ratio of equity to total assets.

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.

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*.

Return on equity: Ratio of net income for the year to equity. As both items (numerator and denominator) may be positive or negative, the indicator is only calculated at individual level 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 EUR 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 EUR 2 million and EUR 50 million and/or an annual balance sheet total between EUR 2 million and EUR 43 million. Large enterprises are any enterprises which are not classified above.

Acronyms

BACH	Bank for the Accounts of Companies Harmonised
CAE	Portuguese classification of economic activities
CIs	Credit institutions
CoGS	Cost of Goods Sold and Materials Consumed
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortisation
ESA 95	European System of National and Regional Accounts 1995
GDP	Gross domestic product
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*)
NFCs	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*)

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BACH Userguide

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Central Balance Sheet Studies