



Analysis of enterprises in the wood, cork and paper sectors 2012-2016

12 January 2018

Banco de Portugal updates today the *Central Balance Sheet Study | 24 – Analysis of enterprises in the wood, cork and paper sectors* with information on the economic and financial situation of enterprises in the wood, cork and paper sectors¹ between 2012 and 2016.

This information is supplemented with data for the first half of 2017 on loans granted by the financial sector.

The results are broken down by size class – microenterprises, small and medium-sized enterprises (SMEs) and large enterprises – and economic activity segment (forestry, ‘wood and furniture’, ‘cork’ and ‘paper’), and compared with results for total enterprises. This study was published for the first time in 2016, featuring information for the 2010-15 period.

Structure and dynamics

In 2016, 81 per cent of enterprises in the wood, cork and paper sectors were microenterprises. SMEs accounted for the largest share of employees. Large enterprises were responsible for approximately half of turnover.

In 2016 the wood, cork and paper sectors comprised 7.6 thousand enterprises, i.e. 2 per cent of the total number of enterprises in Portugal. As a whole, they accounted for 3 per cent of turnover and the number of employees in total enterprises in Portugal. The weight of the wood, cork and paper sectors in total enterprises remained unchanged from 2012.

The number of active enterprises in the sectors under review decreased by 0.5 per cent in 2016 (0.6 per cent increase in total enterprises) (Chart 1). For every 10 enterprises that ceased activity, 9 new enterprises were created (11 in total enterprises). This contrasts

with that seen in the previous three years, when the birth/death ratio of the sectors under review was higher than 1.

The ‘wood and furniture’ segment had the largest share of enterprises and employees in the sectors under review (57 and 59 per cent respectively). The ‘paper’ segment (6 per cent of enterprises) accounted for the largest share of turnover (43 per cent) (Chart 2).

The wood, cork and paper sectors, as a whole, chiefly comprised microenterprises (81 per cent) (Chart 3). However, large enterprises (0.4 per cent) were responsible for the largest share of turnover (49 per cent), while SMEs were more significant taking into account the number of employees (58 per cent).

In 2016 more than half of turnover in the wood, cork and paper sectors was generated by enterprises having their head office in the Aveiro (23 per cent), Coimbra (16 per cent) and Porto (14 per cent) districts. These sectors, however, played a more important role in the Coimbra and Castelo Branco districts, where they accounted for 17 and 11 per cent of turnover of all enterprises having their head offices in these districts respectively.

Activity and profitability

In 2016, 11 per cent of enterprises were exporting enterprises; these enterprises generated half of the turnover generated by the wood, cork and paper sectors.

Turnover in the wood, cork and paper sectors increased by 0.6 per cent in 2016 compared with the previous year (2 per cent rise in total enterprises), below the increase posted in previous years.

Chart 1 • Demographic indicators

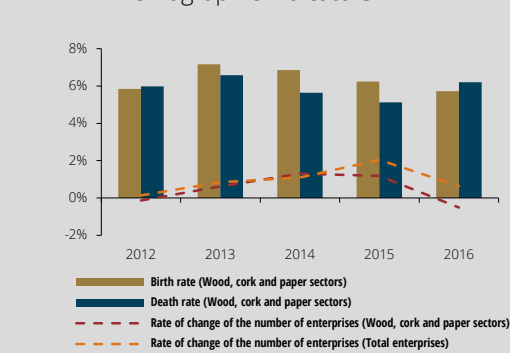
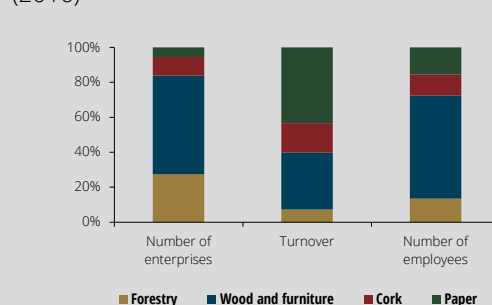


Chart 2 • Structure | By economic activity segment (2016)



The increase in turnover resulted from the positive contributions from 'wood and furniture' (0.8 p.p., associated with 2 per cent growth in this segment's turnover) and 'cork' (0.2 p.p., associated with 1 per cent growth in its turnover), given that the contribution made by the 'paper' segment was negative (0.5 per cent reduction in its turnover).

By size class, turnover increased by 5 per cent in SMEs, but decreased in microenterprises and large enterprises (5 and 2 per cent respectively).

In 2016, 35 per cent of turnover in the sectors under review was determined by the external market (1 p.p. less than in 2015). The domestic and external markets contributed 1 and -0.7 p.p. respectively to developments in aggregate turnover, compared with 2015. For the first time since 2012, the external market made a negative contribution (Chart 4).

The differential between the export component of turnover and the import component of purchases and SES (supplies and external services) was positive in 2016, corresponding to 21 per cent of turnover in the sectors under review (1 per cent in total enterprises).

In 2016, 11 per cent of enterprises in the wood, cork and paper sectors were part of the export sector² (6 per cent in total enterprises) and were responsible for 51 per cent of turnover and 46 per cent of employees in the sectors under review (34 and 23 per cent, respectively, in total enterprises).

EBITDA in the wood, cork and paper sectors increased by 2 per cent in 2016 (7 per cent in total enterprises).

SMEs and the 'wood and furniture' segment contributed to an increase in EBITDA (4 and 3 p.p. respectively). In turn, microenterprises and 'paper' made a negative contribution to these developments (2 and 3 p.p. respectively).

In 2016, 51 per cent of enterprises in the sectors under review posted positive changes in EBITDA (54 per cent in total enterprises). This share was below that seen in 2015 (4 p.p.), although 5 p.p. above its 2012 levels (9 p.p. increase in total enterprises compared with 2012) (Chart 5).

In 2016 one-quarter of enterprises in this sector posted a negative EBITDA, a share that was, however, lower than that in total enterprises (32 per cent) and 10 p.p. below that seen in 2012.

Profitability increased in 2016. 'Paper' segment recorded the highest profitability.

Return on equity in the wood, cork and paper sectors amounted to 14 per cent in 2016, up by 1 p.p. from the previous year. This profitability was higher than the one observed in total enterprises (8 per cent), a situation which occurred over the whole period under review (Chart 6).

Profitability in the 'paper' segment continued to be the highest in 2016 (20 per cent), followed by the 'cork' (13 per cent), 'wood and furniture' (6 per cent) and 'forestry' (4 per cent) segments. By size class, profitability of large enterprises (20 per cent) exceeded that of SMEs and microenterprises (5 and 4 per cent respectively).

The operating margin (EBITDA/Revenue) in the wood, cork and paper sectors stood at 14 per cent in 2016, while the net margin (Net income/Revenue) amounted to 8 per cent, both exceeding that seen in total enterprises (10 and 4 per cent respectively) (Chart 7). The margins in the sectors under review posted consecutive increases throughout the 2012-16 period (by 3 and 4 p.p. respectively, when comparing the 2016 levels with those for 2012).

The 'paper' segment had the highest margins in 2016: a 20 per cent operating margin and a 13 per cent net margin, in contrast with that seen in the 'wood and furniture' segment (9 and 3 per cent respectively).

Financial situation

The capital ratio was higher than the one of total enterprises. Interest-bearing debt accounted for 56 per cent of liabilities.

The capital ratio in the wood, cork and paper sectors stood at 42 per cent in 2016 (32 per cent in total enterprises), i.e. 1 p.p. less than in 2012 (Chart 8).

However, the capital ratio of half of the enterprises in the sectors under review was equal to or below 28 per cent in 2016.

The average capital ratio was higher in larger enterprises: 46 per cent in large enterprises, 39 per cent in SMEs and 30 per cent in microenterprises.

By economic activity segment, 'forestry' had the highest capital ratio (52 per cent), with half of its enterprises posting a capital ratio equal to or above 39 per cent. 'Wood and furniture' recorded the greatest difference between the average (38 per cent) and the median values (23 per cent).

Chart 3 • Structure | By size class (2016)

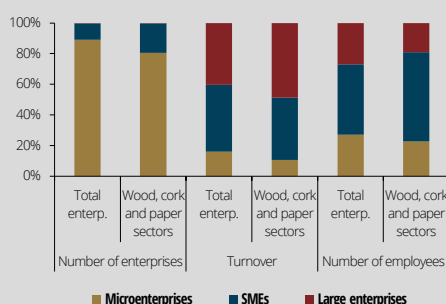
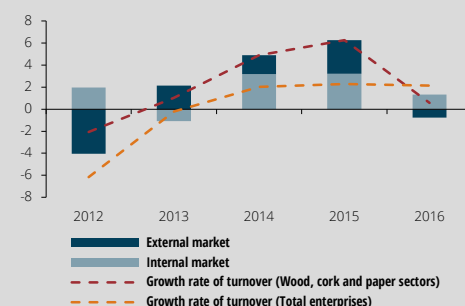


Chart 4 • Turnover | Contributions from the external and internal markets (p.p.) to the annual growth rate (%)



Liabilities in the wood, cork and paper sectors increased by 2 per cent in 2016 compared with 2015 (Chart 9). This change chiefly resulted from the positive contributions from debt securities (2 p.p.) and trade credits (1 p.p.), partly offset by the negative contribution from bank loans (1 p.p.).

Interest-bearing debt accounted for 56 per cent of liabilities in the wood, cork and paper sectors in 2016, i.e. 1 p.p. less than in total enterprises. Its weight in the 'paper' (65 per cent) and 'cork' (56 per cent) segments was higher, compared with the 'wood and furniture' (47 per cent) and 'forestry' (37 per cent) segments.

Financial pressure decreased, reflecting a reduction in interest expenses and an increase in EBITDA.

Interest expenses in the wood, cork and paper sectors declined, on average, by 29 per cent in 2016, which corresponds to a greater reduction than that seen in total enterprises (9 per cent).

Interest dropped by more than 20 per cent for half of the enterprises in these sectors (more than 23 per cent for the same share in total enterprises) (Chart 10).

This reduction was broadly based across size classes and economic activity segments. It was more substantial in large enterprises and in the 'paper' segment, following the restructuring in 2016 of several large enterprises in this segment (41 per cent decreases in both cases, with half of its enterprises posting falls of more than 21 per cent).

By contrast, in SMEs and in the 'wood and furniture' segment, the reduction in aggregate terms was 9 and 6 per cent respectively, although half of the enterprises posted falls in interest expenses of more than 15 per cent in SMEs and 18 per cent in 'wood and furniture'.

The increase in EBITDA and the decrease in interest expenses led to a reduction in financial pressure (3 p.p. from the previous year). In 2016 interest expenses consumed 7 per cent of EBITDA generated by enterprises in the sectors under review (Chart 11). This share was below that seen in total enterprises (17 per cent), similarly to the 2012-16 period.

The reduction in financial pressure in 2016 was broadly based across size classes and economic activity segments, except for microenterprises (where financial pressure rose marginally).

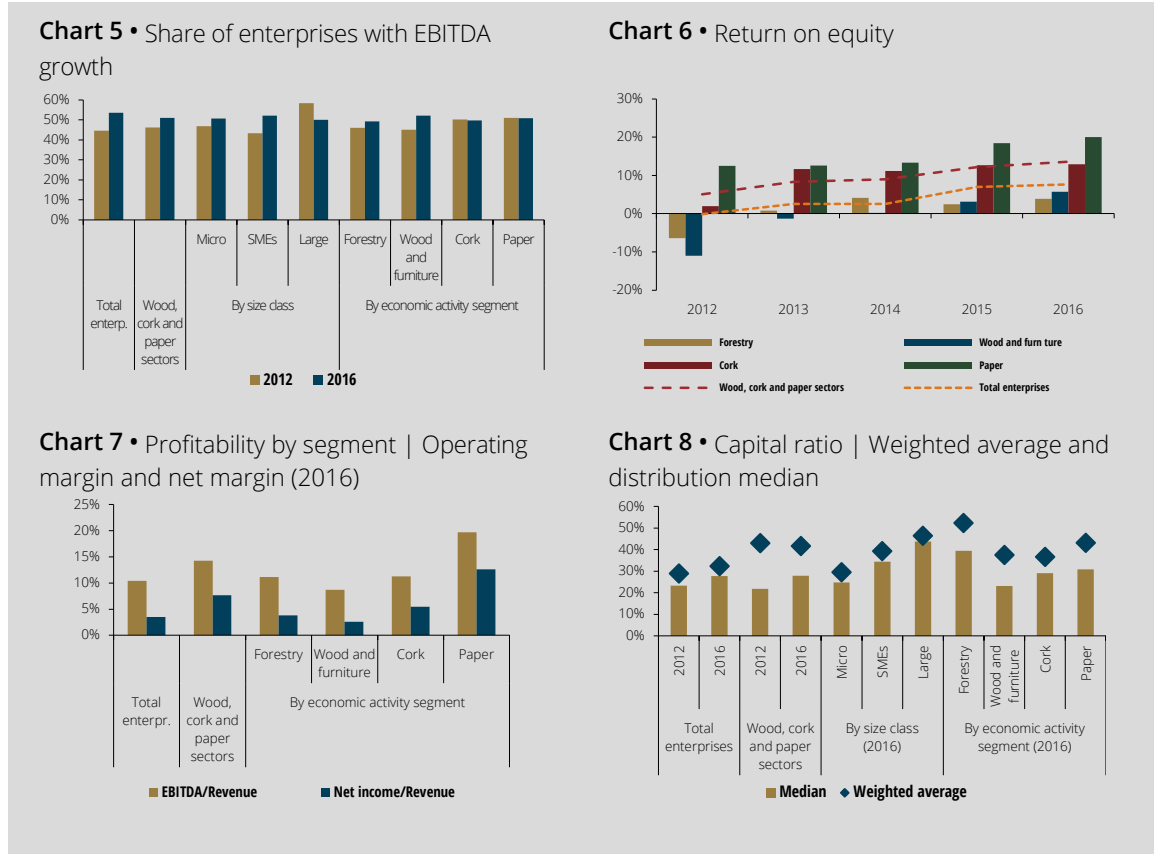
The weight of interest expenses in EBITDA was higher in SMEs and microenterprises (13 and 11 per cent respectively) than in large enterprises (5 per cent).

By economic activity segment, 'wood and furniture' had the highest financial pressure (12 per cent, compared with 8 per cent in 'forestry' and 'cork' and 6 per cent in 'paper').

According to information from Banco de Portugal's Central Credit Register, loans granted by the resident financial sector to the wood, cork and paper sectors declined by 5.7 per cent in 2016 (6.7 per cent fall in total enterprises).

Up to the end of the first half of 2017, loans granted to the sectors under review rose by 0.1 per cent from the end of 2016 (2.2 per cent decrease in total enterprises). At the end of the first half of 2017, 13.4 per cent of loans granted to the wood, cork and paper sectors were non-performing (15 per cent in total enterprises), i.e. 0.3 p.p. less than at the end of 2016 (Chart 12).

The reduction in non-performing loans was broadly based across economic activity segments, but more marked in 'forestry' (1.7 p.p., to 4.9 per cent in June 2017).



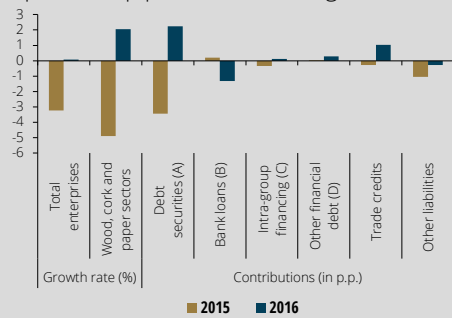
'Cork' had the highest non-performing loans ratio throughout the period under review (21.9 per cent at the end of the first half of 2017, compared with 15.3 per cent in 'wood and furniture', 4.9 per cent in 'forestry' and 4.8 per cent in 'paper').

In 2016 trade credits accounted for 21 per cent of liabilities in the wood, cork and paper sectors (16 per cent in total enterprises). Trade credit financing was more substantial in the 'cork' and 'wood and furniture' segments (27 and 26 per cent of liabilities respectively) than in 'paper' and 'forestry' (18 and 16 per cent of

liabilities respectively).

However, the negative differential between accounts payable and accounts receivable in sectors the under review (corresponding to 6 per cent of their turnover in 2016) showed that these sectors were not receiving net trade credit financing. This was broadly based across size classes and economic activity segments, although more substantially in SMEs (9 per cent) and in the 'forestry' and 'wood and furniture' segments (7 per cent in both cases).

Chart 9 • Liabilities | Contributions from components (p.p.) to the annual growth rate (%)



Interest-bearing debt = A + B + C + D

Chart 10 • Interest expenses | Weighted average and median of the annual growth rate

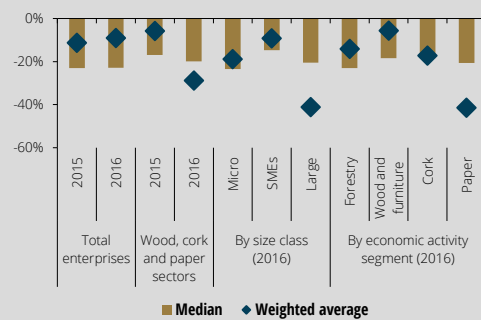


Chart 11 • Weight of interest expenses in EBITDA

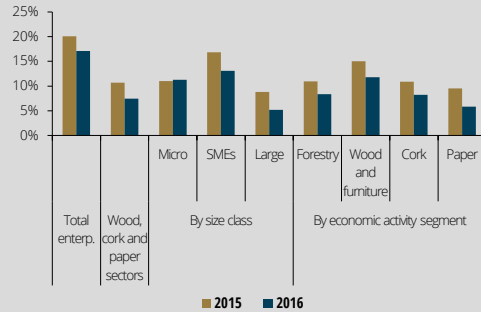
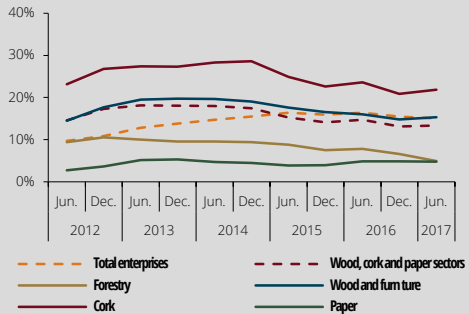


Chart 12 • Non-performing loans ratios (end-of-period figures)



¹ The wood, cork and paper sectors comprise enterprises operating in forestry and the manufacture of wood (including the manufacture of wood furniture), and the manufacture of cork and paper, grouped into four economic activity segments, according to the classification of enterprises on the basis of the Portuguese Classification of Economic Activities (CAE-Rev. 3): forestry (Division 02), 'wood and furniture' (Sub-classes 16101, 16102, 16211, 16212, 16213, 16220, 16230, 16240, 16291, 16292, 31010, 31020, 31091 and 31094), 'cork' (Sub-classes 16293, 16294 and 16295) and 'paper' (Division 17).

² The definition of export sector is presented in more detail in *Central Balance Sheet Study | 22 – Analysis of enterprises in the export sector in Portugal*, June 2015.

Additional information available at:

[Domain: Central Balance Sheet Database statistics in BPstat | Statistics online](#)

[Supplement No 2/2013 to the Statistical Bulletin on statistics on non-financial corporations of the Central Balance Sheet Database](#)

[Central Balance Sheet Study No 30 on non-financial corporations \(Portuguese version only\)](#)

[Central Balance Sheet Study No 24 on enterprises in the wood, cork and paper sectors](#)

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Annex – Main indicators in the wood, cork and paper sectors

Chart	Series	2012	2013	2014	2015	2016	2017
1 Demographic indicators	Wood, cork and paper sectors						
	Birth rate	5.9	7.2	6.9	6.2	5.7	
	Death rate	6.0	6.6	5.6	5.1	6.2	
	Rate of change in the number of enterprises	-0.1	0.6	1.3	1.2	-0.5	
	Rate of change in the number of enterprises / Total enterprises	0.1	0.8	1.1	2.0	0.6	
2 Structure By economic activity segment	Forestry						
	Number of enterprises	20.1	22.4	24.7	26.2	27.3	
	Turnover	6.5	7.1	7.8	7.6	7.3	
	Number of employees	9.2	11.1	11.9	13.1	13.4	
	Wood and furniture						
	Number of enterprises	63.2	61.0	58.8	57.2	56.5	
	Turnover	31.2	31.6	32.2	32.0	32.6	
	Number of employees	61.6	59.6	59.4	58.6	58.9	
	Cork						
	Number of enterprises	10.7	10.9	10.9	10.9	10.6	
	Turnover	16.9	16.5	16.5	16.6	16.7	
	Number of employees	13.3	13.3	12.7	12.4	12.1	
	Paper						
	Number of enterprises	6.0	5.8	5.7	5.6	5.6	
	Turnover	45.5	44.9	43.4	43.8	43.4	
Number of employees	15.8	16.0	16.1	15.9	15.6		
3 Structure By size class	Share of microenterprises in the number of enterprises in the aggregate						
	Total enterprises	88.9	89.4	89.4	89.2	89.0	
	Wood, cork and paper sectors	79.2	80.7	80.9	80.9	80.5	
	Share of microenterprises in the aggregate's turnover						
	Total enterprises	15.5	15.6	15.7	15.9	15.9	
	Wood, cork and paper sectors	10.4	11.1	11.4	11.1	10.6	
	Share of microenterprises in the number of employees in the aggregate						
	Total enterprises	28.2	28.1	27.9	27.3	27.0	
	Wood, cork and paper sectors	23.7	24.3	23.5	23.2	22.8	
	Share of SMEs in the number of enterprises in the aggregate						
	Total enterprises	10.9	10.4	10.3	10.6	10.8	
	Wood, cork and paper sectors	20.5	18.9	18.7	18.7	19.1	
	Share of SMEs in the aggregate's turnover						
	Total enterprises	42.2	42.1	42.2	42.8	43.6	
	Wood, cork and paper sectors	40.3	39.5	39.7	39.2	40.7	
	Share of SMEs in the number of employees in the aggregate						
	Total enterprises	46.1	45.6	45.4	45.4	46.1	
	Wood, cork and paper sectors	60.5	58.5	58.2	56.8	58.1	
	Share of large enterprises in the number of enterprises in the aggregate						
	Total enterprises	0.2	0.2	0.2	0.2	0.3	
	Wood, cork and paper sectors	0.3	0.3	0.4	0.4	0.4	
	Share of large enterprises in the aggregate's turnover						
	Total enterprises	42.4	42.3	42.1	41.3	40.4	
	Wood, cork and paper sectors	49.2	49.5	48.9	49.7	48.7	
Share of large enterprises in the number of employees in the aggregate							
Total enterprises	25.7	26.3	26.7	27.3	27.0		
Wood, cork and paper sectors	15.8	17.3	18.3	20.0	19.2		
4 Turnover Contributions from the external and internal markets (p.p.) to the annual growth rate (%)	Growth rate of turnover / Wood, cork and paper sectors	-2.1	1.1	4.9	6.3	0.6	
	Contribution from the external market	-4.0	2.1	1.7	3.0	-0.7	
	Contribution from the internal market	2.0	-1.1	3.2	3.3	1.3	
	Growth rate of turnover / Total enterprises	-6.2	-0.2	2.0	2.3	2.1	
	5 Share of enterprises with EBITDA growth	Total enterprises	44.6	53.7	54.2	54.6	53.7
Wood, cork and paper sectors		46.2	56.6	54.1	55.2	51.0	
Microenterprises		47.0	56.8	54.2	54.8	50.7	
Small and medium-sized enterprises		43.4	56.3	53.6	56.2	52.2	
Large enterprises		58.3	52.0	63.0	63.3	50.0	
Forestry		46.0	62.4	55.5	50.5	49.3	
Wood and furniture		45.2	55.4	53.5	57.6	52.1	
Cork		50.2	52.7	52.3	53.9	49.8	
Paper		51.0	57.0	57.7	53.9	50.8	
6 Return on equity		Total enterprises	-0.2	2.6	2.6	6.9	7.7
	Wood, cork and paper sectors	5.0	8.3	9.0	12.1	13.5	
	Forestry	-6.4	0.8	4.1	2.5	3.9	
	Wood and furniture	-11.0	-1.3	0.2	3.1	5.7	
	Cork	2.0	11.7	11.1	12.6	12.9	
	Paper	12.5	12.6	13.3	18.4	20.0	

Chart	Series	2012	2013	2014	2015	2016	2017
7 Profitability by segment Operating margin and net margin	EBITDA / Revenue						
	Total enterprises	7.5	8.4	8.2	10.0	10.4	
	Wood, cork and paper sectors	11.5	11.8	11.9	13.8	14.3	
	Forestry	0.5	7.7	10.4	9.7	11.1	
	Wood and furniture	2.9	6.3	6.3	7.4	8.7	
	Cork	7.5	7.9	10.4	10.2	11.3	
	Paper	19.6	17.4	16.6	20.0	19.7	
	Net income / Revenue						
	Total enterprises	-0.1	1.2	1.1	3.1	3.5	
	Wood, cork and paper sectors	3.3	5.3	5.2	6.4	7.7	
	Forestry	-6.8	0.9	3.6	2.3	3.8	
	Wood and furniture	-4.6	-0.6	0.1	1.3	2.6	
	Cork	0.8	5.7	4.9	5.1	5.5	
	Paper	10.4	9.5	9.1	10.9	12.6	
8 Capital ratio Weighted average and distribution median	Capital ratio (weighted average)						
	Total enterprises	29.0	29.6	29.3	31.4	32.3	
	Wood, cork and paper sectors	43.1	42.0	39.6	40.8	41.7	
	Microenterprises	22.6	31.7	27.4	34.8	29.6	
	Small and medium-sized enterprises	34.3	37.7	37.8	38.9	39.2	
	Large enterprises	53.6	47.6	43.7	43.7	46.4	
	Forestry	51.3	55.0	50.0	51.5	52.3	
	Wood and furniture	30.5	31.6	33.0	35.0	37.6	
	Cork	31.5	37.6	36.5	36.4	36.6	
	Paper	51.5	46.3	42.0	43.0	43.2	
	Capital ratio (median)						
	Total enterprises	23.3	23.6	24.9	26.5	27.8	
	Wood, cork and paper sectors	21.8	22.5	24.5	26.9	27.9	
	Microenterprises	18.0	18.3	20.8	23.5	24.8	
	Small and medium-sized enterprises	30.4	31.2	32.7	33.4	34.5	
	Large enterprises	52.4	50.1	42.7	48.4	43.8	
	Forestry	33.4	32.5	36.7	39.7	39.5	
	Wood and furniture	18.0	18.1	19.6	22.4	23.2	
	Cork	21.9	23.7	24.8	26.4	29.1	
	Paper	25.4	25.4	27.6	30.0	30.8	
9 Liabilities Contributions from components (p.p.) to the annual growth rate (%)	Growth rate of liabilities / Total enterprises	-1.7	-1.8	-0.9	-3.2	0.1	
	Growth rate of liabilities / Wood, cork and paper sectors	-3.9	0.5	5.1	-4.9	2.0	
	Contribution from debt securities	1.6	3.1	1.0	-3.4	2.2	
	Contribution from bank loans	-1.9	-0.4	0.4	0.2	-1.3	
	Contribution from intra-group financing	0.9	-0.9	1.7	-0.3	0.1	
	Contribution from other financial debt	-1.3	-0.8	0.0	0.0	0.3	
	Contribution from trade credits	-0.1	-0.5	0.0	-0.3	1.0	
	Contribution from other liabilities	-3.0	0.1	2.0	-1.1	-0.3	
10 Interest expenses Weighted average and median of the annual growth rate	Growth rate of interest expenses (weighted average)						
	Total enterprises	4.7	-6.4	-6.0	-11.4	-9.1	
	Wood, cork and paper sectors	12.1	-4.8	8.0	-5.9	-28.8	
	Microenterprises	54.9	-29.0	-2.3	-17.4	-18.9	
	Small and medium-sized enterprises	-12.8	-22.2	-6.3	-9.3	-9.2	
	Large enterprises	51.5	26.0	21.3	-1.9	-41.1	
	Forestry	-3.1	-12.3	-2.2	19.4	-14.2	
	Wood and furniture	-6.8	-22.8	-2.9	-12.9	-5.6	
	Cork	1.2	-28.4	-8.4	-15.6	-17.2	
	Paper	49.2	23.9	19.7	-2.4	-41.4	
	Growth rate of interest expenses (median)						
	Total enterprises	-22.4	-31.6	-20.3	-23.0	-22.8	
	Wood, cork and paper sectors	-14.1	-25.7	-14.1	-17.0	-19.9	
	Microenterprises	-23.5	-31.8	-19.5	-20.6	-23.5	
	Small and medium-sized enterprises	-1.0	-14.0	-6.3	-10.0	-14.7	
	Large enterprises	11.9	-28.4	-15.9	-18.6	-20.5	
	Forestry	-17.7	-23.1	-8.9	-16.3	-23.1	
	Wood and furniture	-15.8	-29.7	-17.6	-17.3	-18.4	
Cork	-4.8	-6.5	-9.4	-19.3	-18.5		
Paper	-8.4	-14.2	-3.1	-13.1	-20.7		
11 Weight of interest expenses in EBITDA	Total enterprises	35.7	30.1	28.3	20.1	17.1	
	Wood, cork and paper sectors	15.1	13.9	14.2	10.7	7.4	
	Microenterprises	N.A.	32.8	13.9	11.0	11.3	
	Small and medium-sized enterprises	42.4	23.4	20.8	16.8	13.1	
	Large enterprises	6.8	9.7	12.0	8.8	5.2	
	Forestry	291.4	13.5	8.5	10.9	8.3	
	Wood and furniture	68.4	24.2	21.4	15.0	11.8	
	Cork	29.7	20.1	13.5	10.9	8.2	
	Paper	7.4	10.6	13.1	9.6	5.8	
12 Non-performing loans ratios (end-of-period figures)	Total enterprises	10.8	13.8	15.4	15.9	15.5	15.0
	Wood, cork and paper sectors	17.3	18.0	17.5	14.1	13.1	13.4
	Forestry	10.5	9.6	9.4	7.5	6.6	4.9
	Wood and furniture	17.7	19.7	19.1	16.6	14.8	15.3
	Cork	26.8	27.3	28.6	22.6	20.9	21.9
	Paper	3.6	5.3	4.5	3.9	4.8	4.8

NOTES: The aggregates 'Microenterprises', 'Small and medium-sized enterprises', 'Large enterprises', 'Forestry', 'Wood and furniture', 'Cork' and 'Paper' refer to components of the wood, cork and paper sectors, except where otherwise indicated. Similarly, contributions shown always refer to contributions to the total of the sector under review. All figures are shown as a percentage, except where the indicator refers to contributions (p.p.). Shaded cells are not represented in the charts. Non-calculated indicators are signalled with 'N.A.'. Figures for Chart 12 refer to December in each period, except for the last, which refers to June.