

Payment periods in 2009

One year on from the Economic Modernisation Act

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One year after the Economic Modernisation Act (LME) came into force in early 2009 and corporate trade credit was capped, payment periods shortened in 2009. Interpreting annual trends over the past two years has been complicated by a recessionary environment, with a steep fall in activity at end-2008, followed by a gradual recovery. But a number of indicators have confirmed the contraction in payment periods – which should, however, be considered over a two-year period.

Measured using the concept of “legal unit”, average payment periods declined from 54 days sales outstanding (DSO) to 52 days, and from 64 days payable outstanding (DPO) to 61 days in the space of one year. Measured using the concept of “enterprise” as defined in the LME enabling legislation, these periods fell from 51 to 49 DSO and from 59 to 56 DPO.

The contraction concerns all types of company and not just small and medium-sized enterprises (SMEs). However, some large companies seem to have bucked the overall trend, and this is particularly noticeable in manufacturing.

Most importantly, the decline in payment periods, which was moderate until 2007, has entered a period of sharp acceleration. As a result, the declines observed in 2008 and 2009 exceed those for the previous eight years. At the same time, SMEs are no longer shouldering most of the effort to shorten DPO, as was the case between 1999 and 2007. At present, mid-tier enterprises (MTEs) and large companies are also involved.

The business cycle is accelerating. In 2009 60% of companies were paid or settled their creditors within 60 days, between 10 to 15 points higher than in 1999. And the dispersion of behaviour between companies with shorter times and those with longer times is decreasing.

Based on a macroeconomic simulation of all companies moving to a maximum 60-day payment period, the total cash earnings generated by shorter payment periods can be estimated at no less than EUR 2 billion both in 2008 and in 2009. The main beneficiaries have been SMEs, which gained an estimated EUR 3 billion in 2009. As regards risk, the level of outstandings representing intercompany payables and receivables has fallen slightly.

Finally, as in previous years, reliance on bank debt seems to be characteristic either of companies that suffer long payment periods or of those that pay suppliers belatedly.

Keywords: payment periods, days sales outstanding, days payable outstanding, credit financing, trade credit balance, LME.
JEL codes: L14, L29.

Note: This study uses data from the FIBEN databases of the Banque de France, available in November 2010. The detailed findings are available in the statistical report, accessible at: <http://www.banque-france.fr/fr/statistiques/economie/economie-entreprises/delais-paiement.htm>.

I | Payment periods shortened in 2009

The measures introduced under the Economic Modernisation Act (LME) in order to cap corporate trade credit resulted in a sharp reduction in payment times in 2009 for almost all companies studied on the basis of accounting data available at early November 2010 (Appendix 1). This fall has been observed despite the 39 derogation agreements that are valid until end-2011 and concern nearly 20% of the French economy.

Average individual days sales outstanding (DSO) and days payable outstanding (DPO) fell by 2.5 days in 2009 to 52 days and 61 days, respectively (Table 1). Corporate trade credit remained stable.

Table 1 Days sales outstanding (DSO) and days payable outstanding (DPO) by size of legal unit (a) (1990 – 2009)

(unweighted averages of individual ratios, calculated on a legal unit basis)

| | Year | Total | SMEs | MTEs | Large units | Breakdown, SMEs: | | |
|---------------------------------------------------|-----------------|-------------|---------------|-------------------|---------------|------------------|---------------|----------------|
| | | | | | | o/w small: | | o/w midsize |
| | | | | | | VSBs | Non VSBs | |
| | | | Staff (0-249) | Staff (250-4,999) | Staff > 5,000 | Staff (10-19) | Staff (20-49) | Staff (50-249) |
| Number of legal units ('000) | 2009 | 230.6 | 221.2 | 9.2 | 0.3 | 82.8 | 35.0 | 30.5 |
| DSO (in days of sales) | 1990 | 64.0 | 63.6 | 72.3 | 56.6 | 61.1 | 70.2 | 70.5 |
| | 1999 | 59.2 | 58.8 | 69.3 | 63.3 | 59.6 | 66.4 | 65.5 |
| | 2007 | 56.5 | 56.0 | 67.4 | 58.0 | 56.6 | 64.0 | 64.0 |
| | 2008 | 54.3 | 53.8 | 64.9 | 58.7 | 54.7 | 61.9 | 61.2 |
| | 2009 | 51.8 | 51.4 | 61.3 | 61.1 | 52.2 | 58.8 | 57.6 |
| | s.d. (2009) | (0.10) | (0.10) | (0.56) | (3.53) | (0.16) | (0.22) | (0.27) |
| | Chg 2009 | -2.5 | -2.4 | -3.6 | 2.3 | -2.5 | -3.0 | -3.6 |
| DPO (in days of purchases) | 1990 | 74.6 | 74.8 | 70.7 | 66.9 | 73.6 | 77.8 | 73.3 |
| | 1999 | 70.3 | 70.1 | 75.3 | 67.7 | 70.1 | 73.0 | 70.8 |
| | 2007 | 66.5 | 66.2 | 74.4 | 70.5 | 65.6 | 67.9 | 69.1 |
| | 2008 | 63.8 | 63.4 | 71.6 | 68.6 | 62.8 | 64.4 | 66.0 |
| | 2009 | 61.2 | 60.9 | 69.0 | 70.0 | 60.3 | 60.2 | 63.3 |
| | s.d. (2009) | (0.10) | (0.10) | (0.50) | (2.91) | (0.16) | (0.18) | (0.25) |
| | Chg 2009 | -2.5 | -2.5 | -2.6 | 1.4 | -2.5 | -4.2 | -2.7 |
| Trade credit balance (in days of sales) | 1990 | 13.7 | 13.1 | 25.7 | 12.3 | 9.3 | 22.7 | 22.0 |
| | 1999 | 14.0 | 13.8 | 20.9 | 12.7 | 14.2 | 23.4 | 19.2 |
| | 2007 | 16.1 | 16.0 | 18.2 | 6.5 | 16.2 | 24.6 | 19.9 |
| | 2008 | 16.1 | 16.0 | 18.1 | 10.4 | 16.4 | 24.6 | 19.4 |
| | 2009 | 16.2 | 16.2 | 18.3 | 11.2 | 16.4 | 24.4 | 19.3 |
| | s.d. (2009) | (0.10) | (0.10) | (0.53) | (3.13) | (0.16) | (0.21) | (0.26) |
| | Chg 2009 | 0.2 | 0.2 | 0.2 | 0.8 | 0.1 | -0.2 | -0.1 |

(a) See Appendix 1 for the scope of the study and full definition of sizes.

Source: Banque de France – Payment Period database extracted from FIBEN – November 2010.

Payment periods for mid-tier enterprises (MTEs) fell even further. On the whole, in 2009, their customers paid them 4 days earlier than in the previous year – a payment period close to the legal 60-day maximum – and they paid their suppliers nearly 3 days earlier, bringing payment times down below the 70-day mark for the first time since 1998.

The decline for small and medium-sized enterprises (SMEs) ranged between 2.5 and 4 days, depending on company size and type of payment period. The largest reductions regarding DSO concerned midsize firms, and small firms employing between 20 and 49 employees in terms of DPO.¹ The smallest reduction was for very small businesses (VSBs).

Payment periods for large companies are highly sensitive to size definitions

Calculated on the basis of legal units, and applying the thresholds set forth in the LME enabling legislation, payment periods for large units employing more than 5,000 employees increased by between 1 and 2 days in 2009 (Table 1). However, this figure is based on individual findings for a category that is numerically small and hardly meaningful, comprising fewer than 300 legal units in 2009.

Actually, compared with previous studies, the new size classes based on LME statistical criteria have substantially altered the definition of large companies (see Box). Under this definition, the concept of “legal unit” is replaced by the notion of “enterprise”, which encompasses all legal units in the same group.

When used for large units with over 5,000 employees, this new approach can target the individual behaviour of large companies with greater accuracy by using more relevant accounting aggregates. A total of 180 large companies were identified in 2009, comprising 6,984 legal units compared with 300 legal units on initial examination. They account for 38% of sales and purchases for the study sample, compared with 28% for the legal-unit approach.

If the LME “enterprise” criterion is used, the situation is very different from that derived from a legal-unit based analysis. According to this aggregate, the average payment period for large enterprises (LEs) has contracted. In 2009 the average of these firms’ individual DSO and DPO ratios fell by 3 days of sales for DSO and 5 days of purchases for DPO (Table 2).

¹ This category corresponds more specifically to small companies not classified as other small enterprises (non-VSB SMEs). See Appendix I for more information on size categories.

Table 2 Days sales outstanding (DSO) and days payable outstanding (DPO) by size of enterprise (a) (1999 – 2009)

(unweighted averages of individual ratios, calculated on an enterprise basis)

| | Year | Total | SMEs Staff (0-249) | MTEs Staff (250-4,999) | LEs Staff > 5,000 |
|---------------------------------------------------|-----------------|-------------|--------------------------|------------------------------|-------------------------|
| Number of enterprises ('000) | 2009 | 171.6 | 167.2 | 4.2 | 0.2 |
| DSO (in days of sales) | 1999 | 57.2 | 56.8 | 71.9 | 64.7 |
| | 2007 | 53.5 | 53.2 | 66.2 | 59.0 |
| | 2008 | 51.2 | 50.9 | 62.5 | 57.7 |
| | 2009 | 49.0 | 48.7 | 59.4 | 54.6 |
| | Chg 2009 | -2.2 | -2.2 | -3.1 | -3.1 |
| DPO (in days of purchases) | 1999 | 67.8 | 67.6 | 74.2 | 76.2 |
| | 2007 | 61.9 | 61.7 | 70.5 | 73.0 |
| | 2008 | 58.7 | 58.5 | 66.6 | 70.6 |
| | 2009 | 55.8 | 55.6 | 63.6 | 66.0 |
| | Chg 2009 | -2.9 | -2.9 | -3.0 | -4.7 |
| Trade credit balance (in days of sales) | 1999 | 12.9 | 12.6 | 23.6 | 18.5 |
| | 2007 | 13.9 | 13.8 | 19.7 | 14.5 |
| | 2008 | 13.7 | 13.6 | 18.6 | 14.2 |
| | 2009 | 14.0 | 13.9 | 18.6 | 14.0 |
| | Chg 2009 | 0.3 | 0.3 | 0.0 | -0.2 |

(a) See Appendix 1 for the scope of the study and full definition of sizes.

Source: Banque de France – Payment Period database extracted from FIBEN – November 2010.

Box

The “enterprise” concept and its impact on individual trend patterns

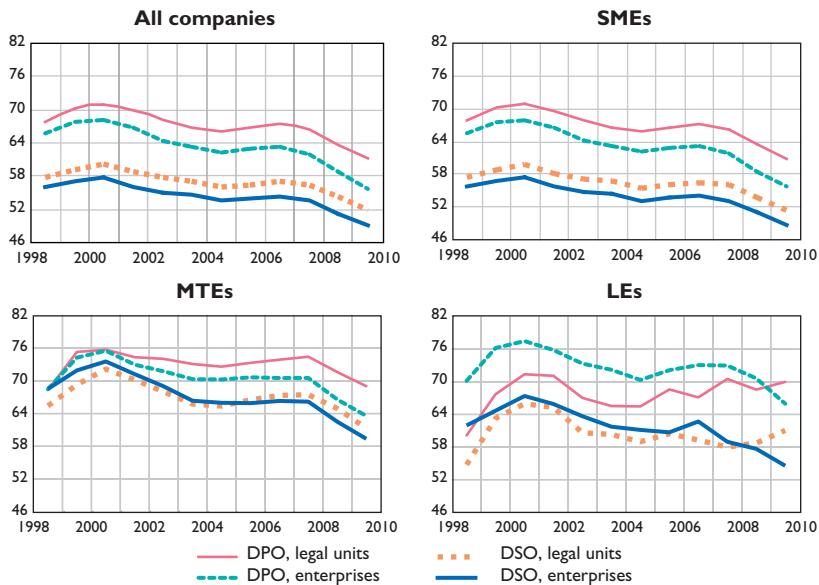
The enabling legislation for the LME defines “enterprise” in terms of economic criteria based on headcount, sales (turnover) and total assets (Appendix 1). Different thresholds are applied to each of these criteria once all the legal units related to the same enterprise have been amalgamated. Three broad categories are defined: SMEs, MTEs and large enterprises (LEs). This approach reduces the number of entities studied individually: the Payment Period database compiled for 2009 contains around 231,000 separate legal units but slightly fewer than 172,000 enterprises (Table A1, Appendix 1).

The microeconomic trends observed from individual ratio averages differ very little in the case of SMEs and MTEs, whichever calculation approach is used (Chart 1). By contrast, payment periods for large enterprises decline.

.../..

Chart 1 DSO and DPO – average of individual ratios for legal units compared with average of individual ratios for enterprises (1998 – 2009)

(DSO in days of sales, DPO in days of purchases)



Source: Banque de France – Payment Period database extracted from FIBEN – November 2010.

The average of individual ratios calculated using the “enterprise” approach is structurally lower than that derived from a legal unit segmentation. This is attributable to the dilution that occurs when entities – some of them potentially very small – associated with long payment times are incorporated into a uniform economic whole (a corporate group).

This difference in the level of average individual payment periods, which increases steadily over time, does not affect the validity of most of these results, with the singular exception of those for large units. Broadly, payment periods have been contracting for the past ten years, and more quickly since 2007, regardless of whether calculated on the basis of legal units or enterprises. Moreover, the difference is not symmetrical; it is generally larger for the DPO ratio, thus helping reduce the trade credit balance for all companies by between 1 and 2 days (Chart 2).

In sum, the new definition of “enterprise” overcomes the problem of organisation-based segmentations, for which the legal-unit approach is largely unsuitable.¹ Hence a subsidiary connected to the purchasing function on the organisation chart and financed by the group’s internal resources may be the only legal unit of that group to be considered as a large enterprise. By amalgamating all the group’s legal units (regardless of whether they are connected to production or marketing functions) into the “large enterprise” category, the new definition strengthens the consistency of the variables used to calculate payment period ratios (accounts receivable and sales for example).

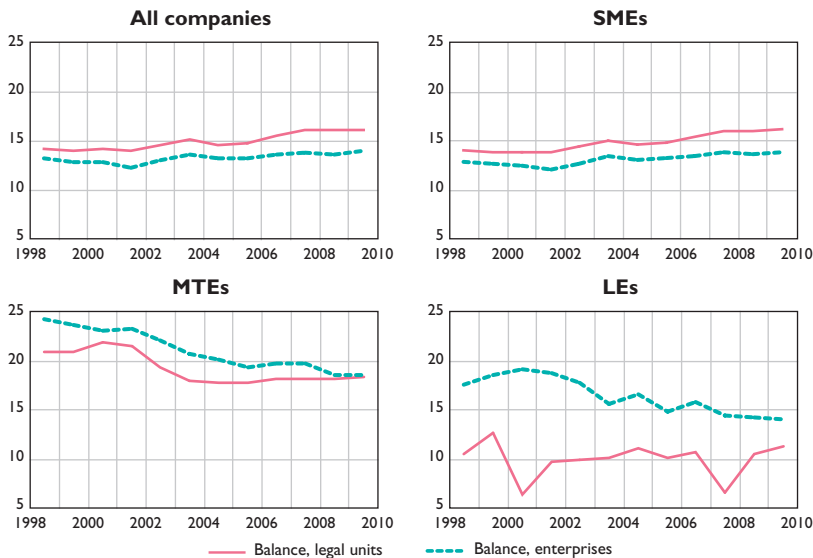
.../...

¹ Particularly when an increase in the criteria specific to the size definition reduces the number of units in a category.

Although the adoption of a group segmentation is not in question, it has one limitation. Sales and purchases increase as a result of dealings between subsidiaries. Logically, grouping them together artificially inflates the sales and accounts receivable of the new entity.

Chart 2 Trade credit balance – average of individual ratios for legal units compared with average of individual ratios for enterprises (1998 – 2009)

(trade credit in days of sales)



Source: Banque de France – Payment Period database extracted from FIBEN – November 2010.

Some large companies buck the general trend

The macroeconomic approach, i.e. the analysis of average payment periods, in which every company plays a part according to its economic weight, places greater emphasis on the behaviour of major customers (Table 3).² For this reason it supplements the microeconomic approach, based on simple unweighted averages and presented above.

The increase in weighted average payment periods for large companies and the limited decline in MTEs' periods point to a mismatch in individual behaviour within the two categories, whereby companies that are clearly beyond the average trend stand apart from other companies.

² Average payment periods for customers and suppliers are calculated by comparing the grand total of accounts payable and accounts receivable to total sales and purchases, respectively. These ratios are also defined as the average of individual ratios weighted by the economic significance of each company in total sales or purchases.

With regard to DSO, this difference can be explained by the fact that non-SMEs are now more heavily involved in international trade. Greater international exposure actually means that a company's DSO is less sensitive to the impact of the LME. Since its non-resident debtors may benefit from less stringent domestic legislation, the company will have difficulty bringing forward its outstanding receivables. Moreover, it may agree to longer payment terms, in order to enhance its competitiveness.

In terms of markets, geographical positioning is also key. Various studies by Altares and Atradius have regularly highlighted differences in payment periods and late payments worldwide, including within the European Union.

Lastly, exporters have recently been harder hit by variations in the business cycle.³ In some cases they have significantly adjusted their payment periods, to varying degrees according to the sector, thus reflecting a trend that does not stem solely from relations between "resident" customers and suppliers. Hence, in 2008 the level of DSO and DPO may have been understated because it was calculated on the basis of customer receivables that were much lower at the end of the year. (Further details about how this bias is estimated are given later on this paper.)

Table 3 Days sales outstanding (DSO) and days payable outstanding (DPO) by size (a) (1999 – 2009)

(weighted averages of individual ratios, calculated on an enterprise basis)

| | Year | Total | SMEs Staff (0-249) | MTEs Staff (250-4,999) | LEs Staff > 5,000 |
|---------------------------------------------------|-----------------|-------------|--------------------------|------------------------------|-------------------------|
| Number of enterprises ('000) | 2009 | 171.6 | 167.2 | 4.2 | 0.2 |
| DSO (in days of sales) | 1999 | 58.7 | 56.3 | 62.1 | 57.5 |
| | 2007 | 53.0 | 54.9 | 56.7 | 48.4 |
| | 2008 | 51.4 | 52.4 | 53.5 | 48.8 |
| | 2009 | 50.4 | 49.3 | 51.7 | 50.1 |
| | Chg 2009 | -1.0 | -3.1 | -1.8 | 1.3 |
| DPO (in days of purchases) | 1999 | 66.0 | 61.5 | 63.9 | 73.9 |
| | 2007 | 62.0 | 58.9 | 60.0 | 66.0 |
| | 2008 | 58.4 | 55.6 | 55.5 | 63.0 |
| | 2009 | 57.7 | 52.6 | 54.3 | 64.5 |
| | Chg 2009 | -0.8 | -3.0 | -1.2 | 1.5 |
| Trade credit balance (in days of sales) | 1999 | 10.9 | 10.5 | 13.4 | 8.7 |
| | 2007 | 6.4 | 11.7 | 9.7 | -0.4 |
| | 2008 | 6.9 | 11.6 | 10.0 | 0.7 |
| | 2009 | 7.5 | 11.5 | 10.2 | 2.2 |
| | Chg 2009 | 0.6 | -0.1 | 0.2 | 1.5 |

(a) See Appendix 1 for the scope of the study and full definition of sizes.

Source: Banque de France – Payment Period database extracted from FIBEN – November 2010.

³ In 2009 MTEs' export sales declined by 18%, compared with 15% for their total sales. For large companies, export sales fell 19% compared with 9.6% for total sales (Companies Observatory, "La situation des entreprises en 2009").

Industry is one of the sectors with the sharpest declines

In 2009 payment periods contracted in the main sectors of the economy (Table 4). The decline is particularly noticeable in manufacturing, where the majority of sub-sectors have recorded reductions of more than 10 days since 2007. Trade and construction have also seen significant improvements, with sharp reductions ranging from 4 to 7 days. By contrast, the downtrend has bypassed the real estate sector.

Table 4 Days sales outstanding (DSO) and days payable outstanding (DPO) by sector (2007 – 2009)

(unweighted averages of individual ratios, calculated on an enterprise basis)

| Sector | DSO (in days of sales) | | | DPO (in days of purchases) | | | Trade credit balance (in days of sales) | | |
|----------------------------------------------------------------------------------------------------------|-------------------------------------|-------------|-------------|-------------------------------|-------------|-------------|--------------------------------------------|-------------|-------------|
| | 2007 | 2008 | 2009 | 2007 | 2008 | 2009 | 2007 | 2008 | 2009 |
| | AZ – Agriculture, forestry, fishing | 60.1 | 57.2 | 56.1 | 80.2 | 76.3 | 73.9 | 10.5 | 8.7 |
| CI – Manufacture of food products, beverage and tobacco products | 43.6 | 41.8 | 39.6 | 58.2 | 55.1 | 51.4 | 2.5 | 2.6 | 3.6 |
| C2 – Manufacture of coke and refined petroleum products | 71.9 | 60.1 | 56.3 | 55.7 | 49.3 | 48.0 | 17.6 | 16.2 | 16.8 |
| C3 – Manufacture of computer, electronic and electrical products; manufacture of machinery and equipment | 82.0 | 78.4 | 70.9 | 77.6 | 73.7 | 64.4 | 31.4 | 30.3 | 30.6 |
| C4 – Manufacture of transport equipment | 67.3 | 63.4 | 59.1 | 77.1 | 70.3 | 64.3 | 12.1 | 13.8 | 15.9 |
| C5 – Other manufacturing | 75.0 | 71.6 | 64.3 | 73.1 | 68.3 | 61.0 | 29.7 | 29.3 | 27.2 |
| CI-C5 – Total manufacturing | 71.1 | 67.7 | 61.1 | 71.6 | 67.1 | 60.0 | 25.5 | 25.0 | 23.6 |
| DE – Extractive industries, energy, water, waste management, remediation | 72.2 | 67.9 | 67.5 | 71.2 | 67.4 | 66.7 | 27.4 | 24.9 | 25.3 |
| FZ – Construction | 73.7 | 71.2 | 70.1 | 69.9 | 65.6 | 62.9 | 30.2 | 30.2 | 31.3 |
| GZ – Wholesale and retail trade; repair of motor vehicles and motorcycles | 33.4 | 31.4 | 29.9 | 52.6 | 49.7 | 47.0 | -7.7 | -7.4 | -6.2 |
| HZ – Transportation and storage | 58.9 | 55.5 | 55.2 | 48.5 | 43.9 | 44.5 | 29.3 | 28.2 | 28.1 |
| IZ – Accommodation and food services | 8.8 | 8.3 | 8.1 | 51.6 | 49.3 | 49.0 | -16.2 | -15.9 | -16.2 |
| JZ – Information and communication | 89.0 | 86.1 | 82.5 | 80.3 | 79.0 | 75.5 | 47.1 | 45.8 | 44.1 |
| LZ – Real estate | 34.5 | 34.5 | 35.7 | 61.2 | 64.7 | 67.9 | 12.0 | 11.9 | 14.1 |
| MN – Scientific and technical activities, administrative and support services | 85.3 | 82.8 | 80.8 | 70.9 | 67.5 | 65.1 | 51.2 | 50.6 | 50.2 |
| RS – Services to households | 39.8 | 39.3 | 40.6 | 59.1 | 58.3 | 57.9 | 8.8 | 8.7 | 10.2 |

Source: Banque de France – Payment Period database extracted from FIBEN – November 2010. NAF version 2 (2008).

Several of the sectors that were among the latest payers in 2007 and 2008 significantly reduced their payment periods in 2009, and there were no increases. In terms of DSO, of the five sectors with periods in excess of 70 days of sales in 2008, two of them – both in manufacturing – saw a decline of more than 7 days in 2009, while a third (information and communication) reduced them by around 4 days. For DPO, four sectors had periods of more than 70 days of purchases in 2008, and two of them (also in manufacturing) shortened them by 6 and 9 days in 2009. In the three other manufacturing subsectors, the decline in the DPO ratio varied between 1 and 7 days.

However, several sectors did not avoid a larger contribution to trade credit financing. The increase reached 2 days for transport equipment manufacturing and property, and 1 day for agrifood, construction and trade.

By contrast, six sectors benefited from additional sources of financing in 2009, notably industrial product manufacturers, and the information and communication sector, where the debit balance contracted by 2 days' sales.

Factoring in the cycle, the real shift in practices occurred in 2009

Economic conditions during the period 2008-2009 were in many ways exceptional. In view of the sharp contraction in the business cycle from second-quarter 2008 and the recovery that began in second-quarter 2009, the over-time consistency of the inputs used to calculate the various indicators is debatable.

The question arises because a marked change in the growth rate within the year, especially a trend reversal such as the one in 2009, can reveal a bias in the measurement of payment periods, linked to the calculation method. These indicators are constructed with accounting data that relate to different time horizons and are collated once a year. Sales and total purchases, used in the denominators of the DSO and DPO ratios, respectively, reflect a company's business flows throughout the year. By contrast, outstanding accounts receivable and accounts payable, used in the ratios' numerators, give a snapshot of the year-end situation. In other words, accounts receivable and accounts payable do not directly match the volume of sales and purchases booked in the accounts. This discrepancy has little impact if patterns are regular, but can become problematic in the event of sharp swings during the course of the year.

For the sectors most exposed to cyclical variations, specifically industry and construction, the analysis of the cycle's impact suggests that the declines that apparently occurred in 2008 actually took place after 1 January 2009 (Appendix 2).⁴

The cancellation of the bias and the recalculation of the individual payment period averages suggest that:

- The decline in activity in second half 2008, and in particular the steep fall at year's end, introduces a significant bias. Calculated from a level of annual sales that only partially reflects the economic situation at the end of the year, the apparent payment periods for end-2008 are underestimated by 2 days.
- By contrast, the average of the recalculated individual payment periods for 2009 is close to the average apparent periods, with a discrepancy of less than 0.5 days. The reason for this modest impact is that activity was less variable from second quarter 2009 onwards.
- When measured over two years, the reduction in payment times is comparable. If the bias is factored in, the decline has to be time-shifted, since nearly three quarters of it occurred during 2009, i.e. after LME came into effect.

Cancelling out the impact of cyclical fluctuations – and eliminating the bias – confirms that the new statutory measures had a significant and swift impact.

2| The LME is changing payment behaviour

The share of payments under 60 days has risen 15 points in ten years...

In 2009 more than 60% of companies settled their invoices or were themselves paid at 60 days or less (Chart 3).

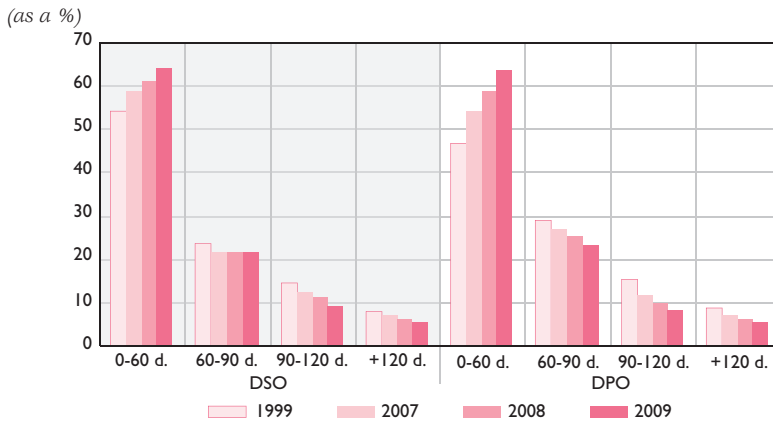
Ten years earlier this proportion was between 10 and 15 percentage points smaller. For DSO, the improvement mainly coincided with a contraction in the relative share of payments in the 90-120 day time segment.

Regarding DPO, – in addition to the greater number of companies paying at less than 60 days – the relative share of payments at between 60 and 90 days has also declined.

Moreover, the proportion of companies receiving payment at less than 60 days is more uniform from one size category to another (Chart 4).

⁴ Estimates of the measurement bias and its impact are confined to industry, energy and construction, where the INSEE's ICA sales index made it possible to calculate the drift. In 2008 and 2009 companies in these sectors experienced wider-than-average variations.

**Chart 3 Payment periods per time segment
(calculated on an enterprise basis, 1999-2009)**



**Chart 4 Payment periods per time segment,
calculated on an enterprise basis for each size category (1999 – 2009)**

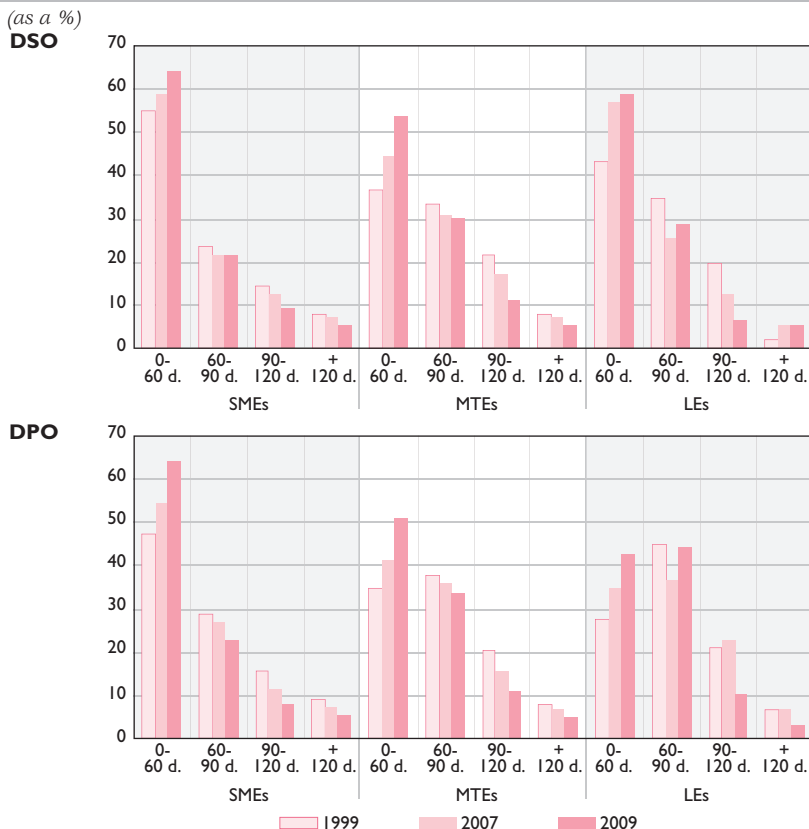
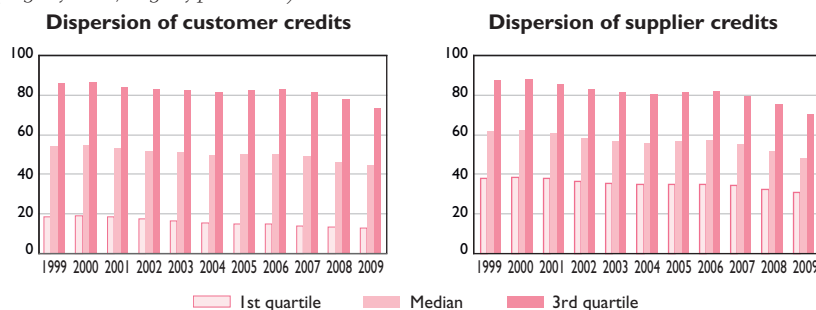


Chart 5 Dispersion of supplier and customer credits, measured on an enterprise basis (1999 – 2009)

(days of sales; days of purchases)



Source: Banque de France – Payment Period database extracted from FIBEN – November 2010.

Since 1999, all categories of companies have made progress in terms of DSO, especially as regards the 90-120 day time segment.

Regarding DPO, SMEs account for the majority of companies that settle their trade debts within 60 days (nearly 65% in 2009, compared with 55% in 2007). As in 1999, nearly one large company in two continues to initiate payment of its expenses at between 60 and 90 days, although the recent increase for this time segment also results from a steep fall in late payments. Likewise, one MTE in two was still paying suppliers after 60 days in 2009. That said, the figure was more than 65% ten years earlier.

... and the dispersion between “good” and “bad” payers has decreased

Between 2007 and 2009 the average period exceeded by the 25% of companies practising the longest payment times went from 84 to 73 days of sales for DSO, and from 86 to 72 days of purchases for DPO (Chart 5). This metric had changed only slightly since 1999.

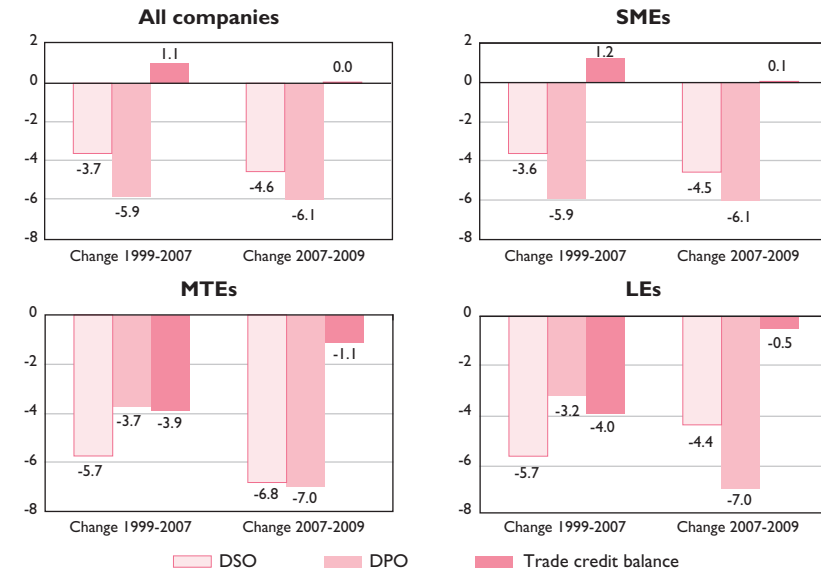
At the same time, behavioural differences also became less marked. The differential between the 25% of fastest and slowest payers, both for DSO and DPO, narrowed by between 6 and 7 days on average from 2007 to 2009. The companies that imposed the longest payment times on their suppliers, and hence are the most exposed by definition to statutory penalties, are those that have made the largest contribution to reducing payment times.

The contraction in payment periods has accelerated sharply since 2007...

Compared with the trends underway since 1999, the extent of the reduction in companies' payment periods between 2007 and 2009 is unprecedented

Chart 6 Payment periods and trade credit balance, 1999-2007 and 2007-2009

(change in no. of days, calculated on an enterprise basis)



Source: Banque de France – Payment Period database extracted from FIBEN – November 2010.

(Chart 6). For all companies taken together, payment times declined more in two years than during the previous eight. The average length of customer credit contracted by 5 days over a two-year period, having fallen by 4 days between 1999 and 2007 (i.e. an average of 0.5 days per year). The same applies to supplier credit, with a substantial saving of 6 days between 2007 and 2009, equivalent to all the savings made during the period 1999-2007.

...and the largest firms are changing their practices

The faster decrease in payment periods clearly highlights the sharp impact of the LME on the payment practices of most companies. In particular, there has been a radical change of behaviour among non-SMEs.

Until 2007 the bulk of French companies' efforts to manage their payment periods more efficiently was made by the SME sector. Because the reductions they obtained from customers were slightly shorter than those they were granting, SMEs had been unable to prevent their working capital requirement from growing; they thus shouldered a greater part of the trade credit financing burden (in all, one additional day of sales between 1999 and 2007). From 2007 to 2009 the time gap between customer and supplier credit narrowed by 30% for SMEs, allowing them to rein in this upward trend in their trade credit balance.

Since 2007, for MTEs and large enterprises, the reductions are more evenly balanced between customer and supplier credits; they are also unprecedented in scale. These companies have reduced their DPO much more significantly than in prior periods, with declines identical to or greater than those achieved for DSO. In the previous period between 1999 and 2007, the situation was the reverse: the decline in MTEs' accounts payable remained 2 days less than the decline in accounts receivable. As for large companies, they stepped up their efforts to reduce accounts payable, with a remarkable gain of 7 days of purchases between 2007 and 2009. Because this decline was larger than that for accounts receivable, it affected the companies' cash-flow benefit.

Broadly, the reduction in payment periods generates cash earnings

By simulating, between 1990 and 2009, the possible impact of all companies adopting a 60-day maximum payment period, it is possible to put a figure for each year on the potential amount of financial transfers. The findings confirm the extent of the gradual financial shifts stemming from the decline in payment periods (Appendix 3 for the method, and Table 5).

The simulation underscores the potentially positive impact of normalised payment periods on companies' net cash expenses, with gains of some EUR 2 billion already recorded in 2008 and in 2009. The outstanding receivables and payables associated with payment periods in excess of 60 days are still substantial – an estimated EUR 97 billion and EUR 89 billion respectively at end-2009 – but their levels have declined in the space of a year.

Thus the entry into force of LME has not had an adverse effect on companies. It has actually generated additional cash resources by reducing trade credit. Another of the law's positive and expected outcomes has been a decline in the level of commercial risk within the French economy.

These transfers have been assessed on the basis of each company's balance sheet, in particular to ensure that the data are comparable with the results already obtained. That said, a substantial portion of these transfers take place between subsidiaries of the same company, and would not therefore show up in a measurement based on each company's aggregate accounts.⁵ Nonetheless, these transfers are macroeconomically meaningful because they reflect very real movements in financing resources and requirements, as recorded in the parent company accounts.

⁵ *The artificial increase in sales resulting from the organisation of production at group level is part of the reason why this estimate of transfers is much lower for enterprises than for legal units.*

Table 5 Accounts receivable and payable beyond 60 days, analysed by class of DSO and DPO associated with each legal unit*(EUR billions)*

| Outstanding accounts receivable | | | | | | |
|---------------------------------|-------------------|-------------|-------------|--------------|--------------|-------------|
| ... by DPO | ...and DSO | 1990 | 1999 | 2007 | 2008 | 2009 |
| Less than 60 days | 60 - 90 days | 5.1 | 5.2 | 9.5 | 7.7 | 7.8 |
| | More than 90 days | 9.0 | 11.1 | 15.1 | 14.9 | 14.2 |
| 60 - 90 days | 60 - 90 days | 7.3 | 8.8 | 10.7 | 11.0 | 8.0 |
| | More than 90 days | 15.4 | 17.8 | 22.5 | 23.3 | 19.3 |
| More than 90 days | 60 - 90 days | 3.9 | 6.0 | 7.3 | 6.5 | 6.2 |
| | More than 90 days | 25.6 | 45.0 | 55.9 | 55.9 | 41.5 |
| Total | | 66.2 | 93.9 | 121.0 | 119.3 | 97.0 |

| Outstanding accounts payable | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|----------------------------|----------------------------|--------------|-------------|
| ... by DSO | ...and DPO | 1990 | 1999 | 2007 | 2008 | 2009 |
| Less than 60 days | 60 - 90 days | 6.0 | 7.3 | 11.6 | 11.8 | 8.5 |
| | More than 90 days | 10.8 | 15.1 | 26.4 | 25.8 | 23.1 |
| 60 - 90 days | 60 - 90 days | 4.3 | 6.1 | 9.7 | 7.6 | 5.4 |
| | More than 90 days | 8.5 | 13.5 | 18.0 | 18.3 | 17.9 |
| More than 90 days | 60 - 90 days | 3.2 | 4.0 | 4.5 | 4.0 | 3.4 |
| | More than 90 days | 18.7 | 34.0 | 39.3 | 42.4 | 31.3 |
| Total | | 51.4 | 80.0 | 109.5 | 109.9 | 89.7 |
| Potential cash earnings in the event of a return to 60 days (outstanding accounts receivable – outstanding accounts payable) | | 14.8 | 13.9 | 11.6 | 9.4 | 7.4 |
| Actual period-on-period cash earnings | | | -0.8 (1990-1999) | -2.3 (1999-2007) | -2.2 | -2.0 |

Source: Banque de France – Payment Period database extracted from FIBEN – November 2010.

SMEs account for a substantial portion of financial transfers

Estimates have confirmed that SMEs stand to gain most from a reduction in payment periods and were indeed the main beneficiaries in 2009 (Table 6). At end-2009, simply by simulating a return to statutory payment times, they gained an estimated EUR 12 billion, compared with EUR 15.2 billion in 2008. The overall cash funds actually received are valued at EUR 3.2 billion. Comparing the simulations from one year to the next, large companies appear to have incurred a net cash expense of EUR 2.7 billion. Overall, the financial shifts resulting from the further reduction in payment periods that was still feasible at end-2009 are substantial, amounting to EUR 7.4 billion.

In terms of sectors, manufacturers of industrial products and transport equipment benefited from the largest reductions in 2009, with EUR 2.2 billion and EUR 1.1 billion respectively. The support sector (scientific and technical

activities, administrative and support services), which has by far the largest amount of net outstanding trade credit in value terms (EUR 10.1 billion in 2008), saw a relatively moderate impact of EUR 0.7 billion in 2009.

Lastly, the transport sector appears to have been hurt by trends in its payment periods, incurring a net cash expense of EUR 2 billion in 2009.

Table 6 Cash impact (a) of a return to statutory payment times for all legal units (situation at end-2009)

(EUR billions)

| Sector | Cash flow gains (+) or losses (-) according to company size and sector if payment periods currently beyond 60 days return to the statutory period | | | | | | | |
|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------|-------------|-------------|------------|-------------|-------------|
| | End-2008 | | | | End-2009 | | | |
| | SMEs | MTEs | LEs | Total | SMEs | MTEs | LEs | Total |
| AZ – Agriculture, forestry, fishing | 0.0 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 |
| C1 – Manufacture of food products, beverage and tobacco products | -0.3 | -0.6 | -0.1 | -1.0 | -0.3 | -0.7 | -0.1 | -1.1 |
| C2 – Manufacture of coke and refined petroleum products | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C3 – Manufacture of computer, electronic and electrical products; manufacture of machinery and equipment | 0.8 | 1.2 | 0.2 | 2.3 | 0.6 | 1.1 | 0.5 | 2.3 |
| C4 – Manufacture of transport equipment | 0.0 | -0.7 | -2.1 | -2.7 | 0.0 | -0.3 | -3.4 | -3.8 |
| C5 – Other manufacturing | 3.3 | 1.9 | -0.1 | 5.0 | 1.9 | 1.2 | -0.3 | 2.8 |
| DE – Extractive industries, energy, water, waste management, remediation | 0.4 | 0.6 | -1.1 | -0.1 | 0.4 | 0.4 | -1.2 | -0.3 |
| FZ – Construction | 3.7 | -0.6 | 1.1 | 4.2 | 3.6 | 0.2 | 0.8 | 4.6 |
| GZ – Wholesale and retail trade; repair of motor vehicles and motorcycles | -0.6 | -1.1 | -2.1 | -3.8 | -1.0 | -1.8 | -0.7 | -3.5 |
| HZ – Transportation and storage | 0.6 | 0.2 | -4.2 | -3.4 | 0.4 | 0.3 | -2.1 | -1.5 |
| IZ – Accommodation and food services | -0.4 | 0.0 | 0.0 | -0.4 | -0.3 | 0.0 | 0.0 | -0.4 |
| JZ – Information and communication | 1.8 | 1.5 | -6.4 | -3.0 | 1.5 | 1.1 | -6.0 | -3.4 |
| KZ – Financial and insurance activities | 1.1 | 0.6 | 0.2 | 1.9 | 1.0 | 0.5 | 0.6 | 2.2 |
| LZ – Real estate | 0.1 | 0.0 | 0.0 | 0.2 | 0.1 | -0.1 | 0.0 | 0.0 |
| MN – Scientific and technical activities, administrative and support services | 4.6 | 3.5 | 2.0 | 10.1 | 4.1 | 3.2 | 2.1 | 9.4 |
| RS – Services to households | 0.0 | -0.1 | 0.0 | -0.1 | 0.0 | -0.1 | 0.0 | -0.1 |
| Total | 15.2 | 6.6 | -12.4 | 9.4 | 12.0 | 5.1 | -9.7 | 7.4 |

(a) See Appendix 3 for an explanation of how the impact was determined.

Source: Banque de France – Payment Period database extracted from FIBEN – November 2010. NAF version 2 (2008).

Bank debt remains a characteristic of long payment periods

After growing more than 15% in 2008, the bank debt of the companies in the sample contracted by 4% in 2009 to EUR 527 billion. However, the share of total debt borne by companies with payment periods in excess of 60 days is still substantial and almost unchanged from 2008.

In 2009, as in 2008, companies with a DSO of more than 60 days accounted for 40% of total bank debt. There are two possible reasons for this. First, the companies that reduced their DSO are not those carrying a substantial amount of bank debt. Second, the economic problems encountered in 2009 by companies paid belatedly by customers forced them to continue relying heavily on bank borrowing, including in cases where cash was freed up by a reduction in payment periods. In terms of DPO, the concentration of bank debt on companies with payment periods in excess of 60 days is even more noticeable and still stands at more than 60%.

With payment periods shortening, the nexus between accounts receivable (or accounts payable) and substantial bank debt can be seen as a sign that the firms concerned may have weaknesses in their financial structure.⁶ However, the link between the level of bank debt and the length of payment periods may also be due to other factors such as investment, profitability or inventories.

⁶ Postponing payments beyond the initial settlement date results in a substantial risk of default. According to Altarex, the probability of default doubles as from the 15th day of late payment and is multiplied by 6 after the 30th day.

Appendix I

Definitions and methodology

Sources

The Banque de France Companies Observatory analyses trends in payment periods and corporate trade credit using the FIBEN database (*Fichier Bancaire des ENTreprises*), created and administered by the Banque de France.

Populated with this information, the Payment Periods database is confined to companies reporting positive turnover. It does not cover the following sectors of activity: “OQ Public administration, education, human health and social work” and “KZ Financial and insurance activities” (except for the sub-category that includes holding companies).¹ Compared with previous years, the data extraction criteria have been broadened, and the survey sample now includes companies with no employees and those that close their annual accounts six months before or after 31 December. At the beginning of November 2010, the Payment Period database for 2009 comprised some 231,000 annual financial statements of companies with revenues in excess of EUR 0.75 million.

Accounting data are used to measure apparent payment periods at year-end, but not payment delinquencies on commercial transactions. The analysed variables do not include advances and down-payments paid to suppliers or those received by customers. These amounts are small in most sectors, although advances from customers play an important role in sectors with a long operating cycle, such as capital goods and construction.

Accounts payable and accounts receivable record not only business-to-business transactions but also transactions between companies and general government, local authorities, households and non-residents. Moreover, the indicators have been cleaned to discard extreme values (i.e. data not falling in the interval [Q1 - 3 standard deviations; Q3 + 3 standard deviations] have been excluded).

Ratios

“Days sales outstanding” (DSO) is the ratio of accounts receivable (including unmatured discounted bills) to sales including taxes (multiplied by 360 to be expressed in days of sales).

¹ Sectors defined in version 2 of the INSEE's NAF nomenclature (2008).

“Days payable outstanding” (DPO) is the ratio of accounts payable to purchases and other external expenses including taxes (multiplied by 360 to be expressed in days of purchases).

The **trade credit balance** is the balance of accounts receivable and accounts payable expressed in days of sales (or the difference between the DSO and DPO ratios adjusted for the purchases/sales ratio). It indicates whether the company is a lender or a borrower.

The **average of individual ratios** (or unweighted average) gives every company the same weighting. This microeconomic approach takes better account of the heterogeneity of individual observations.

The **average ratio of payment periods** (or weighted average of individual ratios) takes into account the relative economic weight of each company. It is the ratio of total accounts receivable or accounts payable for all companies divided by total sales and purchases (multiplied by 360 to be expressed in days of sales or purchases).

Size definitions

The LME enabling legislation published on 20 December 2008, which defined the statistical concept of “enterprise”,² uses European Commission definitions to establish company sizes and the four criteria for classifying them, i.e. headcount, sales (turnover), the total assets of legal units and the financial links between these units.

The first three criteria are assessed for each individual enterprise, defined as the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making (defined on the basis of financial links). A financial link is taken into account where it constitutes a holding of at least 50% of the capital of a legal unit.

If an enterprise comprises several legal units (a “multi-legal unit” enterprise as opposed to a “mono-legal unit” enterprise), the parent company accounts of the component legal units are aggregated to define the “enterprise”. This approach avoids double counting of units belonging to the same enterprise.

The size categories are as follows:

- **Small and medium-sized enterprises:** fewer than 250 employees and annual turnover less than EUR 50 million or total assets of less than EUR 43 million.

² http://www.legifrance.gouv.fr/affichTexte.do?jsessionid=AE22AD6AA9827C20CEBCA70F67427237.tpdjo01_v_3!cidTexte=JORFTEX T000019961059&categorieLien=id

- **Mid-tier enterprises (MTEs)**: companies not included in the SME category that employ fewer than 5,000 people and that have annual turnover of less than EUR 1.5 billion or total assets of less than EUR 2 billion.
- **Large enterprises**: other large companies.

SMEs and MTEs can be mono-legal unit companies or comprise a number of legal units that depend on a French or foreign lead company.

The SME category has been broken out into “small enterprises” and “medium-sized enterprises” using the thresholds recommended by the French national statistical council, CNIS. “Small enterprises” are also subdivided into “very small businesses” (“VSB SEs”) and “other small enterprises (“non-VSB SEs”):

- **Very small businesses (VSB SEs)**: between 10 and 19 employees, with annual turnover or total assets between EUR 2 million and EUR 10 million.
- **Other small enterprises (non-VSB SEs)**: between 20 and 49 employees, with annual turnover or total assets between EUR 2 million and EUR 10 million.
- **Medium-sized enterprises (MEs)**: between 50 and 249 employees, with annual turnover between EUR 10 million and EUR 50 million or total assets between EUR 10 million and EUR 43 million.
- **Details of the micro-enterprise category** (fewer than 10 employees, turnover and total assets below EUR 2 million) have not been presented because these companies are not fully represented in the FIBEN database.

Table A1 Number of legal units compared with number of enterprises, as defined in the LME

(sample population in '000 units)

| | Size | 1999 | 2007 | 2008 | 2009 |
|-------------|--------------|-------|-------|-------|-------|
| Legal units | Small/medium | 179.5 | 235.5 | 238.8 | 221.2 |
| | Mid-tier | 7.3 | 9.7 | 9.9 | 9.2 |
| | Large | 0.2 | 0.3 | 0.3 | 0.3 |
| Enterprises | Small/medium | 147.6 | 181.8 | 182.8 | 167.2 |
| | Mid-tier | 3.7 | 4.5 | 4.5 | 4.2 |
| | Large | 0.1 | 0.2 | 0.2 | 0.2 |

Source: Banque de France – Payment Period database extracted from FIBEN – November 2010.

Statistical indicators

The median is the value that divides the survey population into two equal parts. The first quartile is the value below which 25% of the survey population lies. The third quartile is the value above which 25% of the survey population lies.

Appendix 2

Method for calculating the bias affecting the measurement of payment periods

This calculation estimates the extent to which the annual flow of sales or purchases used in the DSO and DPO ratios is biased upwards or downwards by specific cyclical or interannual phenomena. It relies on a methodology used in 1995 and based on quarterly statistical indicators of activity, on which the structure of the balance sheet data in FIBEN is replicated.¹

Two parameters are taken into consideration: the level of the bias, which illustrates whether or not it is meaningful, and the direction in which it affects the level of payment periods calculated year on year, thereby increasing or decreasing the amplitude of the observed trend.

Assuming that annual sales Q_A for year A correspond to the sum of quarterly sales for quarters Q_{T1} to Q_{T4} , the amounts of which are linked by quarterly growth rates r_1 to r_4 , respectively, it is possible to write:

$$Q_A = Q_{T1} + Q_{T2} + Q_{T3} + Q_{T4} = Q_{T4} \left(\frac{1}{(1+r_2)(1+r_3)(1+r_4)} + \frac{1}{(1+r_3)(1+r_4)} + \frac{1}{(1+r_4)} + 1 \right)$$

For a company closing its accounts in the fourth quarter, the bias is estimated by comparing the value of sales divided by 4, $\frac{Q_A}{4}$, to the value of fourth-quarter sales, " Q_{T4} ".

Since the growth rates of quarterly sales r_1 to r_4 are not known, they are estimated using a benchmark statistical indicator, namely the sales (turnover) index, or ICA, calculated by INSEE.

The bias is therefore equal to:

$$\frac{Q_A}{4} / Q_{T4} = \frac{1}{4} \left(\frac{1}{(1+r_2)(1+r_3)(1+r_4)} + \frac{1}{(1+r_3)(1+r_4)} + \frac{1}{(1+r_4)} + 1 \right)$$

¹ "Délais de paiement et solde du crédit interentreprises en 1994", E. Kremp, Bulletin de la Banque de France, October 1995.

and the results are interpreted according to the following key:

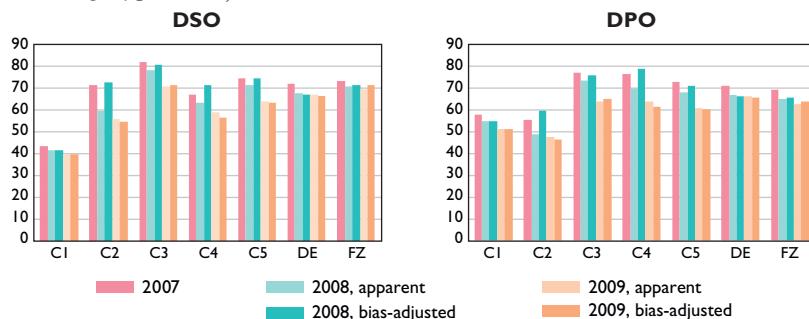
- If $\frac{Q_A}{Q_{T4}} = 1$, there is no bias.
- If $\frac{Q_A}{Q_{T4}} > 1$, sales are overestimated and payment periods underestimated.
- If $\frac{Q_A}{Q_{T4}} < 1$, sales are underestimated and payment periods overestimated.

Key findings

The bias estimate suggests that apparent payment periods were underestimated in 2008 and overestimated in 2009. When this dual impact is taken into consideration, the declines initially observed in 2008 actually occurred in 2009 (Chart A1).

Chart A1 Apparent payment periods/Bias-adjusted payment periods (2008 – 2009).

(unweighted averages of individual ratios, calculated on an enterprise basis; DSO in days of sales, DPO in days of purchases)

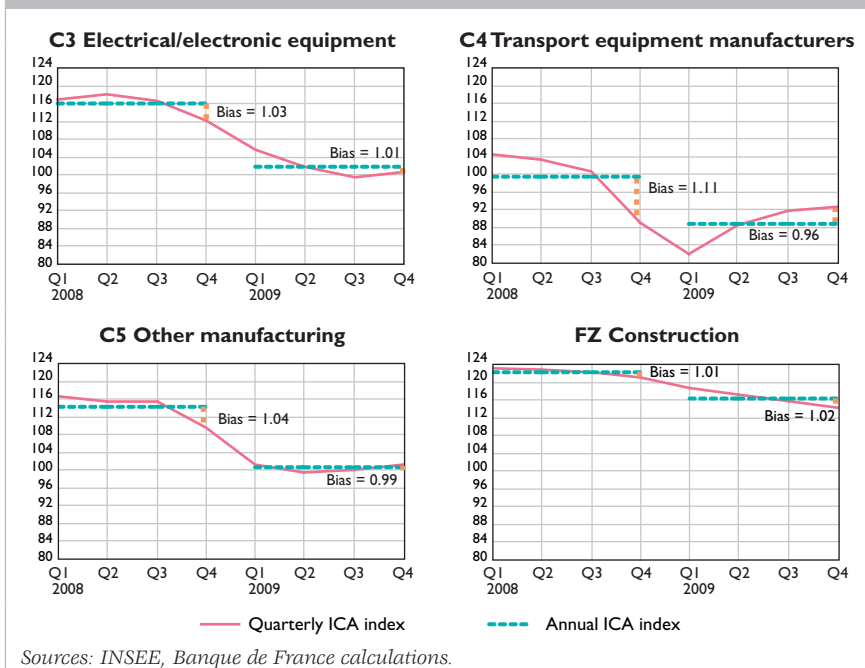


Key – sectors (NAF 2008): C1 – Manufacture of food products, beverage and tobacco products.
 C2 – Manufacture of coke and refined petroleum products.
 C3 – Manufacture of computer, electronic and electrical products, manufacture of machinery and equipment.
 C4 – Manufacture of transport equipment.
 C5 – Other manufacturing.
 DE – Extractive industries, energy, water, waste management, remediation.
 FZ – Construction.

Sources: Banque de France – Payment Period database extracted from FIBEN – November 2010; INSEE (ICA index); Banque de France calculations.

The impact of the bias varies depending on the sector (Chart A2). It is comparatively weak in the construction sector but more pronounced in industry, particularly for transport equipment manufacturers.

Chart A2 Quarterly and annual sales indices, bias estimated for selected representative sectors (2008 – 2009)



Appendix 3

Impact measurement methodology

Days sales outstanding (DSO) and days payable outstanding (DPO) are calculated respectively in days of sales and days of purchases using company balance sheet data. All payment periods above 60 days are then brought down to this limit. We then calculate, for each company, the shares of accounts receivable and accounts payable that need to be settled in order to reach the ceiling of 60 days. These data are then cumulated by sector and by size.

This methodology assesses the macroeconomic importance of legislation on the reduction of payment periods. It also allows us to identify in detail, by sector and company size, the companies most affected, both positively and negatively, by the new law.

We obtain an estimate of real payment periods by considering that accounts receivable and accounts payable at year-end are a proxy for the amounts renewed from period to period during the year. The renewal periods are estimated by comparing the amounts to sales (DSO) or purchases (DPO).

Provided that the year-end amounts do indeed reflect the regular amounts of accounts receivable and payable during the year, this period measurement is a proxy for the periods as they would be measured in net days by analysing the dates on which invoices were actually paid. This measurement is close to the notion of the payment of the invoice 60 days after receipt. In practice, however, using balance sheet data to measure payment periods overestimates payment periods calculated in net days.

Companies with zero sales or purchases and those with payment periods in excess of 1,000 days are deleted from the sample. The fact that the sample has been cleaned does not make it less representative. By contrast, data excluded from the database during the cleaning phase before the calculation of individual statistical indicators are reincorporated.

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