# Questioni di Economia e Finanza 

(Occasional Papers)
The international crisis and the Italian productive system: an analysis of firm-level data
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# THE INTERNATIONAL CRISIS AND THE ITALIAN PRODUCTIVE SYSTEM: AN ANALYSIS OF FIRM-LEVEL DATA 

by M. Bugamelli*, R. Cristadoro ${ }^{*}$ and G. Zevi*


#### Abstract

This paper examines the impact on the Italian productive system of the international economic and financial crisis that began in 2007. The picture offered by aggregate national accounts data is supplemented with information at firm level drawn from the Bank of Italy's annual Survey of Industrial and Service Firms (also known as the Invind Survey) and with the accounts of in-depth interviews that a group of Bank of Italy economists conducted between the end of April and the first ten days of May 2009 with some 70 top managers and executives of Italian firms. The data confirm that in many respects the recession has been the deepest since the Second World War. An analysis of the international setting indicates that the recovery of the Italian economy will depend, more than in the past, on the growth of domestic demand as well as on the economy's ability to respond to the heightened competitive pressure. The rich and heterogeneous set of data and observations collected in this work make it possible, by distinguishing firms by size, sector and propensity to export, to sketch initial responses to the main questions posed by the current recession. The crisis caught the Italian productive system in a phase of deep-going albeit partial restructuring that was beginning to bear fruit. Against the background of the current generalized contraction in demand, it is therefore important to understand if some of the firms most deeply engaged in restructuring, precisely because of the processes thus triggered and the consequent increase in debt, are encountering difficulties in procuring external financing that could threaten their survival.


JEL classification: C21, E22, E23, L20.
Keywords: cyclical fluctuations, recessions, investment, business strategy, micro-data, restructuring.

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## 1. Introduction and main conclusions

The crisis that erupted in the subprime mortgage market in the United States in 2007 quickly acquired an international dimension. After the failure of Lehman Brothers in September 2008, its effects on the real economy grew worse, with a sharp drop in world trade and production (Figure 1).

Figure 1
The impact of the crisis on GDP, investment, exports and employment





Source: Thompson Reuters Datastream.
Like the other advanced countries, Italy was affected immediately and intensely by the collapse of world demand. The characteristics of the Italian productive system, its longstanding weaknesses and more recent efforts to modernize, have determined a specific path for Italy. In Italy the recession has been more severe in many respects and interrupted a long period of near stagnation (Faini and Sapir, 2005); it has hit businesses amidst a process of modernization and restructuring which they embarked on at the start of the decade in order to cope with the changes in technology and markets in the last twenty years (Brandolini and Bugamelli, 2009); it raises important questions about Italy's ability to react, regain the momentum for modernization and thereby create the conditions for a return to growth which, unlike in the past, can no longer depend solely or even mainly on the strength of global demand or, still less, on the depreciation of the currency. A first objective of this paper is to describe how the
recession has hit our economy: to quantify its impact both at aggregate level and according to sector and firm-level characteristics, and to discern its evolution in time and the mechanisms of its diffusion. A second objective is to verify whether the outbreak of the crisis has arrested the restructuring process that was under way and to assess the outlook for that process. To this end, it is decisive to find out if, other conditions being equal, restructured firms have reacted better than the others and the extent to which the brisk slump in demand and the strains in financial markets have weighed on companies which were carrying a larger debt burden because they had embarked on restructuring.

In order to respond to these questions, this study uses information from various sources. The macroeconomic statistical picture provided by the national accounts is supplemented with the data gathered by the Bank of Italy in its annual Survey of Industrial and Service Firms (also known as the Invind Survey), conducted on a sample of some 4,000 industrial and non-financial service companies with 20 or more workers. ${ }^{1}$ The survey makes it possible not only to supplement the analysis of aggregate national accounts data with assessments of the variability of performances across firms but also to enrich them with additional quantitative and qualitative information. An important contribution in this sense came from the inclusion in the Invind Survey questionnaire submitted to firms in the spring of 2009 of an ad hoc section intended to assess the severity of the crisis, its transmission mechanisms and firms' response strategies. In order to evaluate the extent to which the recent experience diverges from previous recessions, the data gathered were compared with those obtained in past years. Finally, with a view to completing the interpretative framework with information not easily obtained through a questionnaire, between late April and early May some Bank of Italy economists conducted a series of in-depth interview with about 70 top managers and executives of Italian firms. It was thought that this additional inquiry could be useful, in combination with the survey, by permitting initial "field testing" of some hypotheses and inferences on the one hand and providing further interpretative clues on the other. ${ }^{2}$

The main results are set out below.

1. During 2008 the cyclical situation turned bad rapidly for the vast majority of firms. According to our investigation, in the most acute phase of the crisis - between October 2008 and March 2009 -

[^1]the turnover of these firms dropped on average by nearly 20 per cent in industry and 14 per cent in services.
2. The real effects of the international crisis on the Italian economy made themselves felt first of all through a sharp drop in demand, especially in the more export-oriented branches of manufacturing and in capital goods industries. This slump was then transmitted to the rest of the economy owing to the intense subcontracting relations that distinguish the Italian productive system and the gradual tightening of lending conditions by banks.
3. Firms reacted to the crisis initially by curbing costs and compressing profit margins. In a significant number of cases, they also adopted strategies of diversification of the markets for their goods, seeking to concentrate on more stable market niches, characterized by a greater variety and higher quality of products.
4. The fall in demand and production compelled many firms in industry and services to cut back on labour input. In the second quarter of 2009 the loss of jobs, not counting the increase in foreign workers that could be attributed to the feeding through of previous Registry Office data, ${ }^{3}$ exceeded half a million compared with a year earlier, with fixed-term employees accounting for most of the loss. In the third quarter, employment in the private sector fell by an estimated 650,000 standard labour units compared with a year earlier.
5. Firms significantly stepped up their recourse to all available forms of flexibility both in labour management and in relations with suppliers.
a. The first aspect, which mainly concerned industrial firms, took the form of a reduction in hours worked, of a freeze on renewals of fixed-term contracts and, in the situations of greatest difficulty, of resort to the Wage Supplementation Fund (including benefits granted under a waver as well as ordinary and special benefits). The percentage of firms that had used individual or collective layoffs was negligible in the spring of 2009 and remained so even after the summer, according to the customary Business Outlook Survey conducted in September by the Bank of Italy's branches.
b. As regards the relations with suppliers, customer firms were able to cushion the impact of the recession on their workforces by internalizing previously outsourced phases of production, thereby shifting the cost of adjustment onto suppliers. The largest companies, wielding contractual power, succeeded in attenuating their liquidity problems by spreading out payments to suppliers and negotiating better terms.
6. Last spring both the Invind Survey data and the interviews pointed to a second half of 2009 dominated by uncertainty and deep concern. Manufacturing firms were planning a very substantial

[^2]cutback in investment, consistently with the expected slump in turnover. During the interviews, however, it was found that these plans, in many cases "prudential", would materialize only if the situation had not improved perceptibly by the autumn. In that case the consequences would be serious especially in terms of job losses; some of the smallest and most hard-pressed firms might even have to go out of business. The survey conducted in September confirmed these opinions, although it did present some signs of improvement in the business outlook.
7. All else being equal, the companies that in the period $2000-06$ had initiated a restructuring process withstood the impact of the crisis better, reporting less disappointing results in terms of turnover, employment and investment and offering a less pessimistic assessment of their activity in the immediate future.
8. Thanks to the combined use of Invind Survey and Company Accounts Data Service data, it is possible to check if the financial exposure of the firms undergoing restructuring represents a risk factor. Two polar cases emerge. The firms that are at an advanced stage of their strategic repositioning and therefore have a more balanced financial situation can exploit the margins of efficiency they had recouped in order to respond flexibly, in some cases aggressively, to the recession (by planning the takeover of struggling competitors and the internalization of phases of the production process). On the other hand, firms with a larger debt burden due to unsuccessful or still incomplete restructuring find themselves in greater difficulty. The ranks of the latter could include otherwise efficient companies that were made vulnerable by the tightening of overall lending conditions.

Before we describe the results of the analysis in greater detail, it is important to recall a limit of the microeconomic data available to us: the firms sampled in the Bank of Italy survey have 20 or more workers. This means that our field of investigation excludes family firms and very small businesses, which make up a large part of the Italian productive structure. Firms with less than 20 workers represent more than 90 per cent of the total number of firms in industry; they account for 30 per cent of the total number of payroll workers, 45 per cent of value added and 22 per cent of investment. ${ }^{4}$ The fact that the sample excludes these firms, presumably the most exposed to sharp curtailments of demand and credit rationing, may lead to an underestimation of the effects of the crisis. Nevertheless, we think that the interviews with businessmen, who were asked to describe the general situation of their firm's sector, their suppliers and their main competitors, partially filled this information gap.

[^3]
## 2. The numbers of the recession

The data on GDP, available up to the second quarter of 2009 at the time of writing, paint an exceptionally negative cyclical picture, unprecedented in recent history. ${ }^{5}$ Since the beginning of 2008, Italy's GDP has plunged by 6.5 per cent, much more than in the worst previous postwar recessions (1974-75 and 1992-93, Table 1), falling back to the level recorded at the start of the decade. The exceptionally sharp contraction in GDP mainly reflects the drop in value added for the industrial sector excluding construction (18.2 per cent); the declines in services and construction (2.9 and 6.9 per cent, respectively) are smaller but still remarkable over the span of the last sixty years.

Table 1

## GDP, investment and industrial production in the recent major recessions in Italy (1)

|  | Cumulative percentage contraction |  |  | Quarters of growth lost at the bottom of recession |  |  | Length of the contraction (in quarters) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1974-75 | 1992-93 | 2008-09 | 1974-75 | 1992-93 | 2008-09 | 1974-75 | 1992-93 | 2008-09 |
| GDP | 3.8\% | 1.9\% | 6.5\% | $\begin{gathered} 8 \\ (73 \mathrm{Q} 2) \end{gathered}$ | $\begin{gathered} 9 \\ (91 \mathrm{Q} 2) \end{gathered}$ | $\begin{gathered} 34 \\ (00 \mathrm{Q} 4) \end{gathered}$ | $\begin{gathered} 3 \\ (74 \mathrm{Q} 4-75 \mathrm{Q} 2) \end{gathered}$ | $\begin{gathered} 6 \\ \text { (92Q2-93Q3) } \end{gathered}$ | $\begin{gathered} 5 \\ \text { (08Q2-? ) } \end{gathered}$ |
| Gross fixed investment | 8.5\% | 16.0\% | 15.8\% | $\begin{gathered} 16 \\ (72 \mathrm{Q} 2) \end{gathered}$ | $\begin{gathered} 25 \\ (87 \mathrm{Q} 3) \end{gathered}$ | $\begin{gathered} 39 \\ (99 Q 3) \end{gathered}$ | $\begin{gathered} 10 \\ (74 \mathrm{Q} 1-76 \mathrm{Q} 2) \end{gathered}$ | $\begin{gathered} 7 \\ \text { (92Q2-93Q4) } \end{gathered}$ | $\begin{gathered} 6 \\ \text { (08Q1-? ) } \end{gathered}$ |
| of which: in machinery, equipment, transport equipment and intangible goods | 15.1\% | 22.1\% | 22.0\% | $\begin{gathered} 11 \\ (72 \mathrm{Q} 3) \end{gathered}$ | $\begin{gathered} 27 \\ (87 \mathrm{Q} 1) \end{gathered}$ | $\begin{gathered} 47 \\ (97 Q 3) \end{gathered}$ | $\begin{gathered} 6 \\ (74 \mathrm{Q} 1-75 \mathrm{Q} 2) \end{gathered}$ | $\begin{gathered} 7 \\ \text { (92Q2-93Q4) } \end{gathered}$ | $\begin{gathered} 6 \\ \text { (08Q1-? ) } \end{gathered}$ |
| Industrial production | 14.5\% | 4.8\% | 23.9\% | $\begin{gathered} 12 \\ (72 \mathrm{Q} 3) \end{gathered}$ | $\begin{gathered} 23 \\ (87 \mathrm{Q} 4) \end{gathered}$ | $\begin{gathered} 92 \\ (86 \mathrm{Q} 2) \end{gathered}$ | $\begin{gathered} 6 \\ \text { (74Q2-75Q3) } \end{gathered}$ | $\begin{gathered} 5 \\ \text { (92Q3-93Q3) } \end{gathered}$ | $\begin{gathered} 5 \\ \text { (08Q2-? ) } \end{gathered}$ |
| of which: investment goods | 11.2\% | 20.2\% | 28.4\% | $\begin{gathered} 9 \\ (73 \mathrm{Q} 1) \end{gathered}$ | $\begin{gathered} 32 \\ (85 \mathrm{Q} 4) \end{gathered}$ | $\begin{gathered} 96 \\ \text { (85Q2) } \end{gathered}$ | $\begin{gathered} 3 \\ (74 \mathrm{Q} 4-75 \mathrm{Q} 2) \end{gathered}$ | $\begin{gathered} 16 \\ \text { (90Q1-93Q4) } \end{gathered}$ | $\begin{gathered} 5 \\ \text { (08Q2-? ) } \end{gathered}$ |

Source: Based on Istat data.
(1) For the current recession, the length and intensity of the contractions are calculated up to the second quarter of 2009.

In the second quarter of 2009 the index of industrial production showed a cumulative reduction of nearly 25 per cent from the peak recorded at the start of 2008; the volume of goods produced had fallen back to its mid-1980s level. In the euro area as a whole and in the area's main countries the decline, though pronounced, was smaller. Measured by the number of quarters lost, that is to say by how far back in time production levels returned to, the greater severity of the Italian situation is evident: 38 quarters in Germany and 61 in France, compared with almost 100 in Italy (Bassanetti, Cristadoro and Zevi, 2009, and Table 2).

[^4]Table 2
The recent major recessions in the three largest euro-area economies (1)

|  | Cumulative percentage contraction |  |  | Quarters of growth lost at the bottom of recession |  |  | Length of the contraction (in quarters) |  |  | Quarters needed to return to pre-crisis levels |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1974-75 | 1992-93 | 2008-09 | 1974-75 | 1992-93 | 2008-09 | 1974-75 | 1992-93 | 2008-09 | 1974-75 | 1992-93 | 2008-09 |
| Italy GDP <br> Industrial Production | $\begin{gathered} 3.8 \% \\ 14.5 \% \end{gathered}$ | $\begin{aligned} & 1.9 \% \\ & 4.8 \% \end{aligned}$ | $\begin{gathered} 6.5 \% \\ 23.9 \% \end{gathered}$ | $\begin{gathered} 8 \\ (73 Q 2) \\ 12 \\ \text { (72Q3) } \end{gathered}$ | $\begin{gathered} 9 \\ (91 \mathrm{Q} 2) \\ 23 \\ (87 \mathrm{Q} 4) \end{gathered}$ | $\begin{gathered} 34 \\ (00 \mathrm{Q} 4) \\ 92 \\ (86 \mathrm{Q} 2) \end{gathered}$ | $\begin{gathered} 3 \\ (74 \mathrm{Q} 4-75 \mathrm{Q} 2) \\ 6 \\ (74 \mathrm{Q} 2-75 \mathrm{Q} 3) \end{gathered}$ | $\begin{gathered} 6 \\ (92 \mathrm{Q} 2-93 \mathrm{Q} 3) \\ 5 \\ \text { (92Q3-93Q3) } \end{gathered}$ | $\begin{gathered} 5 \\ (08 Q 2-?) \\ 5 \\ \text { (08Q2-?) } \end{gathered}$ | 6 $11$ | $9$ <br> 8 |  |
| Germany GDP <br> Industrial Production | 2.3\% | $\begin{gathered} 2.0 \% \\ 10.1 \% \end{gathered}$ | $\begin{gathered} 6.7 \% \\ 21.2 \% \end{gathered}$ | $\begin{gathered} 10 \\ (72 \mathrm{Q} 4) \\ \ldots . \end{gathered}$ | $\begin{gathered} 6 \\ \text { (91Q3) } \\ >12 \end{gathered}$ | $\begin{gathered} 13 \\ (05 Q 4) \\ 38 \\ (99 Q 4) \end{gathered}$ | $\begin{gathered} 3 \\ \text { (74Q4-75Q2) } \end{gathered}$ | $\begin{gathered} 4 \\ \text { (92Q2-93Q1) } \\ 6 \\ \text { (92Q1-93Q2) } \end{gathered}$ | $\begin{gathered} 4 \\ (08 Q 2-09 Q 1) \\ 5 \\ (08 Q 2-?) \end{gathered}$ |  | 8 $25$ |  |
| France <br> GDP <br> Industrial Production | $2.6 \%$ ... | $\begin{aligned} & 1.2 \% \\ & 6.6 \% \end{aligned}$ | $3.4 \%$ <br> 16.6\% | $\begin{gathered} 7 \\ (73 Q 4) \\ \ldots . \end{gathered}$ | $\begin{gathered} 6 \\ (91 \mathrm{Q} 3) \\ >12 \end{gathered}$ | $\begin{gathered} 12 \\ (06 Q 1) \\ 61 \\ (94 Q 1) \end{gathered}$ | $\begin{gathered} 4 \\ \text { (74Q4-75Q3) } \end{gathered}$ | $\begin{gathered} 2 \\ \text { (92Q4-93Q1) } \\ 5 \\ \text { (92Q2-93Q2) } \end{gathered}$ | $\begin{gathered} 4 \\ (08 Q 2-09 Q 1) \\ 5 \\ (08 Q 2-?) \end{gathered}$ | 7 $\ldots$ | 7 <br> 12 | - - |

Sources: Based on Istat, DEStatis and Insee data.
(1) For the current recession, the length and intensity of the contractions are calculated up to the second quarter of 2009 .

Figure 2
Investment, industrial production of capital goods, orders and stocks


Sources: Based on Istat data (investment and industrial production) and ISAE data (orders and stocks).
(1) Moving average of three terms ending in the reference month.

The hardest-hit branches of Italian manufacturing were capital goods, where the index of production fell by nearly 30 per cent from its pre-crisis level (Figure 2), and intermediate goods, where the fall was 34.5 per cent. Between the first quarter of 2008 and the second of 2009, the metal products, electrical apparatus, machinery and equipment, and transport equipment industries all suffered declines exceeding 35 per cent.

The collapse of industrial production was mainly the consequence of the abrupt contraction in foreign demand, which in turn throttled intra-industry demand. From the start of 2008 Italian exports of goods and services fell by almost 25 per cent in real terms, a larger decline than that in world trade and in the exports of the other major euro-area economies over the same period (Table 3).

Table 3
Main national accounts aggregates
(\% change 2009Q2 on 2008Q1)

|  | GDP | Imports | Investment | Investment <br> excluding <br> construction | Private <br> consumption | Exports |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Euro area | -5.1 | -15.4 | -12.5 | -16.5 | -1.3 | -18.1 |
| Germany | -6.4 | -12.3 | -10.5 | -16.1 | 0.6 | -18.5 |
| France | -3.2 | -11.9 | -8.2 | -7.0 | 0.8 | -15.0 |
| Italy | $\mathbf{- 6 . 5}$ | $\mathbf{- 1 9 . 3}$ | $\mathbf{- 1 5 . 5}$ | $-\mathbf{2 1 . 2}$ | $-\mathbf{- 2 . 6}$ | $\mathbf{- 2 4 . 8}$ |
| Spain | -4.2 | -24.7 | -18.5 | -24.5 | -6.5 | $\mathbf{- 1 7 . 0}$ |

Source: Based on Eurostat data.

As foreign demand sagged, domestic demand contracted, especially the investment component, which fell by 15.5 per cent from the start of 2008 (by nearly 22 per cent excluding construction). Consumption, for some time already depressed by the stagnation of disposable income, fell by 2.6 per cent, ${ }^{6}$ less than in Spain alone among the four largest euro-areas countries. During 2008, as economic activity and the situation in the labour market deteriorated, causing a sharp worsening in the climate of confidence, households cut down mainly on purchases of durable goods, which fell by 7.4 per cent, while cyclically less sensitive spending on services and non-durable goods (food products in particular) held up better. Indirect confirmation of this comes from the production of consumer goods, down by "only" 10.3 per cent; since the beginning of 2009 car purchases, which had collapsed in 2008, were supported by government incentives in Italy and the other main advanced countries.

The erosion of household spending was stemmed in part by the policies adopted by the Government and companies to buffer the impact of the recession on employment and labour incomes (extension of Wage Supplementation coverage and limited recourse to permanent staff reductions). Nevertheless, in the second quarter of 2009 employment (excluding the foreign component) fell by somewhat more than 2 per cent compared with a year earlier (by about 500,000 persons); ${ }^{7}$ the reduction was concentrated among workers on fixed-term or collaboration contracts and mainly involved

[^5]construction and industry. The unemployment rate rose from 6.7 to 7.4 per cent. In industry, there was massive recourse to the Wage Supplementation Fund: the number of benefit-hours rose from just over 30 million in the third quarter of 2008 to more than 210 million a year later. ${ }^{8}$ Employment, measured in terms of standard labour units, ${ }^{9}$ thus taking account of the number of hours actually worked (excluding, for example, hours of Wage Supplementation), fell by 620,000 labour units for the non-farm, nonenergy private sector in the second quarter of 2009 compared with the corresponding quarter of the previous year. An estimate based on the Bank of Italy's econometric model indicates that the year-onyear decline was even greater in the third quarter: 650,000 labour units.

The initial indications of an easing of the recession do not yet allow us to assess the persistency and strength of the revival in world demand (see, for example, the data on orders and demand in Figure 2). Unlike previous experiences, however, when exports had countered the downswing and supported recovery (in 1974-75 thanks to the rapid revival of world trade, in 1992-93 with help also from the devaluation of the lira), this time the boost from foreign demand could be considerably weaker. The forecasts of the main international organizations do not envision a prompt and vigorous recovery of world trade, which the IMF expects to follow an estimated 12 per cent contraction in 2009 with a weak increase (less than 3 per cent) in $2010 .{ }^{10}$ In addition, a depreciation of the euro - its nominal effective exchange rate was basically stable during the last year - is unlikely and in any case would not bring the same competitive advantage that Italy gained from the devaluation of the lira in the early 1990s.

In conclusion, the recovery will depend crucially on recouping efficiency and competitiveness in Italy's productive system, on which the microeconomic data shed some light and which we shall now turn to.

The results of the Invind Survey confirm the situation described by the national accounts. In addition, they allow us to observe how and when the crisis, as it developed, influenced decisions and strategies at firm level and to identify the specific characteristics associated with greater or lesser difficulty in responding to the recession.

[^6]Main results of the Invind Survey

|  | Percentage change 2008 / 2007 |  |  |  | Forecast percentage change 2009 / 2008 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average employment | Turnover (1) | Investment (1) | Investment realization rate | Average employment | Turnover (1) | Investment (1) |
| North-West | -1.2 | -2.7 | 3,2 | 92.5 | -3.3 | -6.5 | -17.7 |
| North-East | 0.1 | -1.1 | -3,2 | 93.8 | -3.0 | -7.5 | -21.2 |
| Centre | -0.4 | -5.3 | -0.6 | 97.4 | -3.2 | 4.7 | -14.9 |
| South and Islands | -1.6 | -2.0 | -1.1 | 97.1 | -4.9 | -3.1 | -20.2 |
| Exports |  |  |  |  |  |  |  |
| < 1/3 | -1.1 | -3.4 | 0.4 | 97.2 | -3.1 | -0.2 | -16.1 |
| 1/3-2/3 | -1.0 | -2.7 | 0.8 | 90.4 | -3.7 | -8.9 | -19.3 |
| > 2/3 | 0.5 | -0.8 | -0.2 | 91.2 | -3.4 | -11.5 | -23.7 |
| Size Class |  |  |  |  |  |  |  |
| 20-49 | -1.6 | -3.7 | -1.3 | 98.9 | -3.5 | -8.0 | -25.7 |
| 50-199 | -0.8 | -2.0 | -4.5 | 94.4 | -3.7 | -6.0 | -20.8 |
| 200-499 | 0.3 | -2.1 | 3.0 | 96.3 | -2.8 | -4.7 | -18.1 |
| $500+$ | -0.3 | -3.3 | 3.0 | 91.2 | -3.1 | -1.2 | -13.3 |
| Total industry | -0.7 | -2.8 | 0.4 | 94.2 | -3.3 | -4.5 | -18.2 |
| Services | 0.9 | -1.8 | -3.5 | 94.4 | -0.7 | -3.0 | -4.5 |
| Total | 0.1 | -2.3 | -1.5 | 94.3 | -2.1 | -3.8 | -11.7 |

Source: Banca d'Italia, Survey of Industrial and Service Firms.
(1) Robust means (winsorized) calculated at constant 2008 prices using deflators measured in the survey.

According to the Invind Survey, investment actually realized by firms was 1.5 per cent less in 2008 than in the previous year (Table 4). ${ }^{11}$ Compared with the investment plans drawn up and announced at the start of 2008, the percentage actually realized (realization rate) was 94.3 per cent, in line with the figure recorded during the crisis of 1993 ( 95.2 per cent) but higher than in more recent episodes of contraction in capital formation ( 91.4 per cent in 2003 and 93.9 per cent in 2005). By contrast, firms drastically cut back their plans for 2009: estimates they provided in the spring point to a very large reduction in investment in industry ( 18.2 per cent), far steeper than those predicted during the previous recessions (Table 5). An appreciable drop in investment for the current year, especially in industry, is also confirmed by the results of the survey conducted in September. These assessments are consistent with the picture furnished by the national accounts: if investment excluding construction investment held unchanged at its second-quarter level for the rest of this year, the fall with respect to 2008 would already come to about 19 per cent.

If the average decline in turnover ( 4.5 per cent) expected by industrial firms for 2009 does materialize, it would be the sharpest since 1985, when the Invind Survey was first conducted. The decline in turnover of almost 3 per cent reported for 2008 approaches the largest previous fall ( 3.4 per

[^7]cent in 1993). These figures compare with an annual decline of 4.3 per cent estimated by Istat for 2008 and an actual drop in 2009 (on the basis of the data for the first five months) of 15.6 per cent. ${ }^{12}$

In contrast with the findings for turnover and investment, the reduction in employment ( 0.7 per cent in 2008 and a forecast of 3.3 per cent for 2009) has not matched the intensity of that in the 199293 recession, when for four consecutive years (1991-94) firms reported workforce reductions averaging more than 3.5 per cent (with a peak of 6.2 per cent in 1992). The possibility of using new, more flexible instruments of labour management ${ }^{13}$ has helped so far to limit the release of permanent staff, even in the presence of exceptionally large declines in turnover and investment, as the more recent September survey data also confirm.

Table 5
Investment, turnover and employment in industry excluding construction
according to the Invind Survey (1)
(percentage changes on previous year; for realization rate, percentage ratios)

|  |  |  | 1985 |  |  |  | 2008 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 8}$ | Minimum | Maximum |  |  |
| Workforce in t |  | -1.2 | -0.7 | -6.2 | 1992 | 0.5 | 1995 |
| Forecast workforce in $\mathrm{t}+1$ |  | 0.2 | -3.3 | $\mathbf{- 3 . 3}$ | $\mathbf{2 0 0 8}$ | 0.5 | various |
| Investment in t | -9.0 | -2.0 | 0.4 | -16.1 | 2003 | 16.2 | 1995 |
| Realization rate | 96.6 | 103.3 | 94.2 | 91.4 | 2003 | 103.9 | 1995 |
| Forecast investment in $\mathrm{t}+1$ |  | -8.7 | -18.2 | $\mathbf{- 1 8 . 2}$ | $\mathbf{2 0 0 8}$ | 16.8 | 1997 |
| Turnover | 0.8 | 0.0 | -2.8 | -3.4 | 1993 | 6.2 | 1988 |
| Forecast turnover in $\mathrm{t}+1$ |  | 3.8 | -4.5 | $\mathbf{- 4 . 5}$ | $\mathbf{2 0 0 8}$ | 4.7 | 1997 |

Source: Banca d'Italia, Survey of Industrial and Service Firms.
(1) Forecasts for the following year only available for the period 1997-2008. Up to 2004, only firms with 50 or more workers; from 2005 onwards, firms with 20 or more workers.

Overall, firms are more pessimistic in all the main forecasting areas in this recession than in the previous ones ${ }^{14}$ (Table 5). In September some signs of improving expectations emerged, with firms, particularly export-oriented businesses, anticipating an abatement of the recessionary pressure and a slight upturn in orders over the next six months.

The results by firm size, outlet markets and branch of activity show that the recession has fallen most heavily both on the smallest firms (in the Invind Survey sample, those with between 20 and 49 workers), which have scant market power and limited margins of flexibility, and on export-oriented firms, which have had to cope with an exceptional decline in world demand. Investment plans for 2009

[^8]increase with firms' size and decrease with their dependence on exports, with an expected decrease of 23.7 per cent for exporting companies and of more than 25 per cent for firms with fewer than 50 workers (Figure 3).

Figure 3
Percentage change in investment in 2008 and forecast change in 2009 in industry excluding construction according to the Invind Survey


Source: Banca d'Italia, Survey of Industrial and Service Firms.

Industrial firms that export at least a third of their output expect turnover to fall by close to 10 per cent, while those that sell mainly on the domestic market expect it to be about the same as in 2008. The expected fall in employment is more evenly distributed: about 3 per cent or more for all types of industrial firm, and less than 1 per cent for service firms.

The Invind Survey conducted in the spring of 2009 devotes an ample section to the effects of the current recession on the productive system. Firms were asked if and how much they had been affected by the current crisis, how the latter compared with past recessions and when they had begun to feel the downturn. Nearly all the respondents reported that they had been affected by the recession, which they judged more serious than its predecessors, and indicated that the most acute phase had begun in autumn 2008. To gauge the effects more precisely, firms were also asked how much their turnover had fallen since then. Here, too, exporting firms indicated a decline of 25.4 per cent, considerably greater than the already large loss of 19.6 per cent reported by industry as a whole (Table 6). Small firms also suffered a greater-than-average drop in turnover.

Table 6
Impact of the economic and financial crisis and contraction in turnover

|  | The firm has been affected by the crisis |  |  |  | Average contraction in turnover (1) |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | not at all | a little | somewhat | a lot |  |
| Area |  |  |  |  |  |
| North-West | 8.7 | 18.7 | 42.6 | 30.0 | 19.6 |
| North-East | 9.5 | 20.7 | 43.1 | 26.7 | 19.6 |
| Centre | 8.7 | 25.3 | 35.9 | 30.0 | 20.3 |
| South and Islands | 10.4 | 22.7 | 43.8 | 23.1 | 19.4 |
| Exports |  |  |  |  |  |
| < 1/3 | 9.5 | 22.8 | 41.1 | 26.7 | 16.1 |
| 1/3-2/3 | 7.8 | 18.6 | 43.0 | 30.6 | 19.9 |
| > 2/3 | 10.4 | 17.9 | 42.7 | 29.0 | 25.4 |
| Size Class |  |  |  |  |  |
| 20-49 | 8.8 | 21.4 | 41.9 | 27.9 | 21 |
| 50-199 | 9.9 | 19.5 | 41.8 | 28.7 | 20.9 |
| 200-499 | 10.6 | 24.8 | 41.1 | 23.4 | 13.6 |
| $500+$ | 14.0 | 21.7 | 35.7 | 28.5 | 21.2 |
| Total industry | 9.2 | 21.0 | 41.8 | 28.0 | 19.6 |
| Services | 15.1 | 26.3 | 42.9 | 15.7 | 14.3 |
| Total | 11.8 | 23.4 | 42.3 | 22.5 | 17.3 |

Source: Bank of Italy, Survey of Industrial and Service Firms.
(1) From the onset of the recession; only firms that reported having been affected somewhat or a lot by the crisis; data weighted by firms' turnover.

In order to identify the channels through which the crisis had been felt, firms were asked to rate the importance of various factors, ${ }^{15}$ in particular the fall in demand for their products, payment difficulties of customers/clients, the difficulty in procuring credit, the difficulty in procuring raw materials or intermediate goods through the usual network of suppliers. The fall in demand was indicated as the main problem by about 80 per cent of industrial firms and 60 per cent of service firms (Table 7). A significant proportion of firms ( 63.9 per cent) encountered payment difficulties on the part of customers; in industry, the smallest firms reported the greatest difficulty in collecting payments from customers. While procuring intermediate goods through the network of suppliers was not a problem for nearly all the firms, about a quarter of them ( 22 per cent) reported difficulty in obtaining credit, especially in the South, where the share rises to about one third.

[^9]Effects of the crisis on business activity (1)

|  | Main difficulties encountered (2) |  |  |  | Main steps taken to cope with the recession (3) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fall in demand | Customer payment problems | $\left\|\begin{array}{c}\text { Difficulty raising } \\ \text { funds }\end{array}\right\|$ | $\begin{gathered} \text { Difficulty } \\ \text { sourcing raw } \\ \text { materials } \\ \hline \end{gathered}$ | Curb production costs | Reduce profit margins | Diversify outlet markets | Improve products | Reduce scale of production |
| Area |  |  |  |  |  |  |  |  |  |
| North-West | 81.6 | 62.5 | 19.5 | 4.6 | 54.6 | 18.8 | 9.8 | 7.6 | 6.6 |
| North-East | 82.2 | 61.0 | 19.7 | 5.5 | 52.7 | 20.5 | 12.4 | 4.5 | 9.2 |
| Centre | 76.7 | 67.8 | 28.9 | 8.2 | 52.8 | 22.2 | 11.9 | 4.0 | 6.4 |
| South and Islands | 71.2 | 74.8 | 32.1 | 10.6 | 51.0 | 23.6 | 12.4 | 3.7 | 6.4 |
| Exports |  |  |  |  |  |  |  |  |  |
| < 1/3 | 76.5 | 71.4 | 25.4 | 8.0 | 51.2 | 24.0 | 12.1 | 3.4 | 7.1 |
| 1/3-2/3 | 83.2 | 55.2 | 19.4 | 3.7 | 57.6 | 16.0 | 11.1 | 5.9 | 7.9 |
| > 2/3 | 85.1 | 54.4 | 18.8 | 4.3 | 53.9 | 15.2 | 8.7 | 12.1 | 7.8 |
| Size Class |  |  |  |  |  |  |  |  |  |
| 20-49 | 79.0 | 66.1 | 22.7 | 6.9 | 51.0 | 20.8 | 12.3 | 6.6 | 7.1 |
| 50-199 | 80.1 | 62.2 | 23.5 | 5.2 | 57.5 | 21.1 | 10.2 | 2.7 | 7.4 |
| 200-499 | 84.9 | 58.6 | 19.7 | 2.9 | 60.6 | 15.0 | 5.0 | 4.6 | 10.7 |
| $500+$ | 85.5 | 51.8 | 20.4 | 6.9 | 64.9 | 11.9 | 2.7 | 6.2 | 10.4 |
| Total industry | 79.6 | 64.5 | 22.8 | 6.3 | 53.2 | 20.6 | 11.3 | 5.5 | 7.4 |
| Services | 60.3 | 62.8 | 20.8 | 3.8 | - | - | - | - | - |
| Total | 71.8 | 63.9 | 22.0 | 5.3 | 53.2 | 20.6 | 11.3 | 5.5 | 7.4 |

Source: Banca d'Italia, Survey of Industrial and Service Firms.
(1) Refers only to firms that reported they had been affected "somewhat" or "seriously" by the recession. - (2) Percentage of firms reporting that the factors in question had had a "strong" or "very strong" impact. - (3) Step reported as first choice; firms could report up to three main steps. "Relocation" and "Other main steps", not shown in the table, were the first choices of respectively $0.5 \%$ and $1.5 \%$ of the sample firms.

What strategies did businesses adopt to cope with the crisis? The questionnaire contained the following possible answers: reduce profit margins; curb production costs; diversify outlet markets; improve products; reduce scale of production; and, exclusively for industrial firms, relocate production abroad (some or all). The 50 per cent of firms surveyed that were affected significantly by the recession coped (or intended to cope) with the crisis primarily by curbing production costs, about one fifth by reducing profit margins and just under 15 per cent by diversifying their outlet markets (Table 7). Only some of the largest firms (more than 500 workers) considered the possibility of relocating production abroad, although virtually none of them reported this as their main strategy for coping with the recession.

The evidence put forward in this section, although broken down by corporate characteristic, shows only bivariate relationships. An attempt will now be made to go a step further and establish which of the above-mentioned characteristics is actually dominant in explaining the effects of the crisis and firms' ability to respond. Before doing this (in Section 4), it is worth adding information on the content of the interviews held with businessmen. In some cases it permits a better understanding of mechanisms referred to only briefly in the questionnaire, in others the formulation of new hypotheses to be empirically tested in the following section.

## 3. The interviews with businessmen

Between the end of April and the beginning of May Bank of Italy researchers held in-depth discussions with representatives of about 70 firms. ${ }^{16}$ Taken together with the traditional econometric analyses based on official statistical information, these interviews make it possible to produce clearer and more robust interpretations, suggest new hypotheses and alternative explanations, and draw attention to important questions that had previously been ignored. More specifically, they sought to: improve our knowledge of the situation of the productive system in the present economic and financial crisis; identify the main strategies followed by firms in response to the crisis; understand how the arrival of a severe and prolonged recession had influenced the restructuring of the productive system observed in the past; and learn the opinions of businessmen concerning the economic policy measures needed to limit the effects of the crisis.

The firms selected covered a broad range of both manufacturing and service sectors: engineering, chemicals, electronic equipment, utilities and large-scale retailing. Although the 70 businesses do not constitute a representative sample of the Italian productive system, the interviews nonetheless made it possible to obtain a sufficiently general view, not least owing to the extensive knowledge that the individual businessmen were found to possess regarding their sectors, suppliers and competitors. ${ }^{17}$ By carefully reading and cross-reading the interview reports, it was possible to obtain a summary picture of the opinions of Italian firms' top managers that is described below.

It was widely believed that the crisis had intensified from the autumn of 2008 on, after the liquidation of Lehman Brothers. As regards the timing of a possible recovery, in May 2009 there was still a great deal of uncertainty. In many cases there was considerable concern about the serious adverse consequences in terms of employment and the survival of firms if the crisis were to continue unabated in the second half of 2009 .

According to the businessmen, the crisis came primarily in the form of a large fall in demand on international markets, to which firms had reacted by sharply cutting back production, investment and purchasing. The fall in sales and orders was aggravated by additional problems linked to liquidity, which derived both from the tightness of credit, above all of a short-term nature for cash management, and from the payment difficulties of customers and contracting parties, especially if firms. By this means the

[^10]crisis was extended to firms less open to foreign trade. Managing firms was made even more complicated by competitors meeting their liquidity needs by discounting aggressively and selling their products and services below cost.

Among manufacturing sectors, especially the most export oriented, the most resilient firms have been those, especially if already highly internationalized, that have shifted their sales to the most dynamic emerging markets (e.g. China and the Arab countries) and those with a high degree of market power, often the fruit of a notable innovative ability. The crisis has had little or no effect on firms producing under public or multi-year contracts, those in protected sectors (such as utilities), or those of an acyclical nature with abundant cash flow (such as large-scale retailing firms ${ }^{18}$ ). Among the major public utilities it is necessary to distinguish between those that are financially sound, which are not in difficulty, owing in part to their still having a positive rating, and those that are highly indebted, which are affected by more burdensome refinancing conditions imposed by both markets and banks.

The firms hardest hit by the crisis include small ones, as the combined effect of three factors:

- in view of the high level of subcontracting in the Italian productive system, larger firms have been able to offload a (good) part of the non-diversifiable risk due to the fall in demand on to small suppliers. This effect was all the greater in the cases in which the contracting party decided to relocate production abroad or internalizing some phases of the production process so as to reduce production costs. In other words, subcontractors have provided a (first) level of production flexibility to mediumsized and large contracting firms. It was found, however, that such firms had been concerned about the survival of their subcontractors, especially the best, and in some cases that the need to safeguard important and firmly-established relationships had led cash-rich contracting firms to provide suppliers in difficulty with forms of financing (such as factoring);
- small subcontracting firms with limited negotiating power were forced to accept reduced profit margins or late payments (a second level of flexibility for contracting firms);
- banks tightened the terms on which they provided credit, especially to smaller firms, which were more difficult to monitor.

Turning to employment, recourse was made predominantly to instruments that did not involve termination of the employment of firms' stable workers. Use was made of non-voluntary holidays, of

[^11]hiring freezes, and in some cases of early retirement. ${ }^{19}$ The input of labour was reduced mainly by not renewing fixed-term contracts (a third level of flexibility), not replacing workers who left and reducing per capita hours worked. In order to maintain employment levels, some firms internalized phases of the production process. Recourse to the Wage Supplementation Fund, on which most owners and managers passed a positive judgment, was typically made by firms that, having suffered a large fall in demand, needed to reduce production rapidly and substantially. For firms that were already in difficulty before the crisis, wage supplementation was the antechamber of dismissal, for others it allowed them to keep their endowment of human capital intact.

The recent measures adopted by the Government to improve the working of the labour market were well received on the whole. As for the measures to support sectors in crisis, only the automobile industry explicitly expressed appreciation. Together with rare requests for state support, businessmen argued in favour of: i) the public sector settling its debts to firms and paying suppliers more promptly in future, a measure considered easy to implement and likely to be highly effective; ii) steps to tackle and overcome the structural problems of the economy, such as excessive bureaucracy, lack of adequate infrastructure, high levels of taxation and social security contributions that are a burden on the cost of labour, inadequate tax incentives for investment and $\mathrm{R} \& \mathrm{D}$, and a shortage of qualified professionals; the hostility of the bureaucracy towards business was perhaps the problem referred to most frequently and was seen as an important disadvantage on the international scene; and iii) steps to reduce the instability of the legislative framework, considered important especially by firms that have to plan huge long-term investments (as in the energy sector, for example).

## 4. The crisis and business characteristics

In Section 2 we reported some preliminary statistical evidence based on the Invind Survey. In particular, we identified simple correlations between some aspects of the crisis on the one hand and sectoral and corporate characteristics on the other. In this section we present an economic analysis that allows account to be taken of the interrelationships between the characteristics. To this end we estimate the following equation on cross-section firm-level (i) data:

$$
\begin{equation*}
y_{i}=\alpha+\beta^{*} \operatorname{size}_{i}+\gamma^{*} \text { eff }_{i}+\delta^{*} \text { xshare }_{i}+\vartheta * \text { deb }_{i}+\mu_{a}+\xi_{s}+\varepsilon_{i} \tag{1}
\end{equation*}
$$

where $y$ is the variable of interest that we will describe each time. The regressors at firm level are: the $\log$ of the number of workers (size); the ratio of turnover to workers (eff), a measure of the firm's efficiency; the ratio of exports to total turnover (xshare); and a dummy equal to 1 (0) if the ratio of the

[^12]stock of debt to (shareholders' equity + the stock of debt) is higher (lower) than 80 per cent (deb). $\mu_{a}$ is a set of firms' geographical location dummies that distinguish between the North-West (a category omitted from the regression), the North-East, the Centre, and the South and Islands. $\xi_{s}$ is a set of sectoral dummies that we propose in two versions. The first, more parsimonious, distinguishes between manufacturing and services (isolating, within manufacturing, the "food products, beverages and tobacco products" sector, which, as will be seen, is characterized by conduct all its own) and breaks goods and services down by economic purpose (investment goods, intermediate goods, consumer goods, business services, and household services). By contrast, the second version excludes the breakdown by economic purpose and includes dummies for the subsections of the Ateco 91 classification. The results of the regressions are reported after the text in Tables A1-A10.

Table A1 shows the results of the econometric analysis for turnover: in columns [1] and [2] the dependent variable is the percentage change in turnover in 2008, in columns [3] and [4] it is the fall in turnover ${ }^{20}$ recorded at the height of the crisis, between the autumn of 2008 and April 2009.

In 2008 the performance of turnover compared with the previous year was worst for firms in the North-West, for those in the textiles, clothing, leather products and footwear sectors, those manufacturing non-metallic mineral products and other manufacturing industries, which in Italy's case are dominated by the production of furniture. It is important to remember that sales of tiles - included in manufacturing non-metallic mineral products - and furniture were affected by the exceptional contraction of the building industry at international level. The food products and beverages sector, notoriously acyclical, even recorded an increase in turnover. In the service sectors, the firms that recorded a significantly worse-than-average performance were those in the hotels and restaurants sector and, to a lesser extent, those in the transport sector. As can be seen from column [2], which, unlike column [1] includes dummy variables for macro-sectors, firm size was not a decisive determinant of the performance of turnover on average in 2008, in contrast with more recent developments and the outlook for 2009.

After the liquidation of Lehman Brothers in September 2008, the nature of the economic crisis changed. With reference only to firms that suffered significantly from the recession, the fall in turnover was much greater for exporters and among firms producing metal products, machinery and transport equipment (columns [3] and [4]), owing to the sudden sharp fall in world demand and trade. Another important difference concerns firm size, which now, despite the sectoral dummies, is always statistically significant. Other things being equal, the crisis affected smallest firms the most.

[^13]Firms were asked what was the importance (negligible, modest, great, very great) of some potential transmission channels of the crisis. ${ }^{21}$ A dummy variable with values from 0 (negligible) to 3 (very great) was then regressed on the sectoral and firm characteristics. The results are reported in Table A2. ${ }^{22}$ Exporters and firms in the machinery and transport equipment, textiles, clothing, footwear, tiles and furniture sectors were hit by the crisis primarily as a consequence of the large fall in demand. In line with what emerged in the interviews, the firms that suffered from the payment difficulties of customers and contracting parties were the smallest and those located in the southern regions. At sectoral level, this phenomenon was most pronounced where production was least vertically integrated and therefore highly fragmented (textiles, clothing, footwear, machinery and transport equipment and tiles); it was least pronounced for retail and wholesale trade, hotels, restaurants and transport. Firms in the South and Islands, together with those most heavily indebted, saw a significant increase in their difficulty in raising funds, which does not appear to have occurred for the most efficient firms.

Tables A3 and A4 report the results of the econometric analysis of the strategic responses to the crisis. ${ }^{23}$ The dependent variable is a dummy equal to 1 when the option at the head of the column is the firm's first or second choice. The results show that the smallest firms were those most often forced to reduce their profit margins and look for new markets and customers. Not surprisingly, larger firms were found to be more willing to relocate production abroad. Exporters had more recourse than other firms to reductions in the scale of production, probably as a consequence of the transfer abroad of part of their activity. The most highly indebted firms were forced above all to curb their production costs. At the sectoral level, in addition to widespread efforts to curb production costs ${ }^{24}$ and reduce the scale of production in the hardest hit manufacturing sectors, there was a notable effort on the part of firms in the traditional sectors to reduce profit margins and improve product quality. All other things being equal, there were no significant differences between the various macro-areas, except that firms in the South and Islands were unable to internationalize their production.

Turning to forecasts, on average extremely pessimistic by historical standards, of total turnover, export revenue and employment in 2009 compared with 2008, the results of the regressions are reported in Table A5. The high level of significance of the coefficients estimated points to considerable

[^14]forecast heterogeneity. Compared with the expected performance of total and export turnover, greater-than-average optimism was shown by large firms, firms in the food products and beverages sector, and those located in the South and Islands. By contrast, the forecasts were worse-than-average for exporters and highly indebted firms. The coefficients, significantly negative for all the manufacturing sectors, indicate considerable concern for traditional manufacturing firms and those in the hotels and restaurants sector. On the employment front the largest cuts are expected in the traditional sectors hardest hit by the crisis and among highly indebted firms; better employment results are expected among the most efficient firms.

## 5. The crisis and the restructuring of the productive system

From the mid-1990s the Italian economy has marked time, both by historical standards and in comparison with the other main European countries. It is widely believed that this performance reflected unresolved structural problems. ${ }^{25}$ This question and the signs of recovery observed in the two years 2006-07, before the international financial crisis brought a sharp fall in world demand, were addressed by the Bank of Italy in a report (Brandolini and Bugamelli, 2009). The starting point of the report was the identification of the changes that had taken place in the external context and influenced the recent performance of the Italian economy and the other advanced economies: the change in the technological paradigm brought about by the new information and communication technologies; "globalization", or in other words the worldwide integration of real and financial markets; and European integration, culminating in the introduction of the single currency. These three changes had a common consequence: a sudden large increase in competition. This was due not only to the massive entry on to world markets of low-cost goods and services coming from emerging countries, above all in the most unskilled-labour-intensive traditional sectors, but also to the need to keep up with the firms most willing to exploit the efficiency gains made possible by the technological revolution and, lastly, to the enlargement of the single European market and the impossibility of recovering competitiveness by devaluating the currency. While the aggregate data show a long period of worrying growth backwardness, attributable to the low efficiency of the productive system and poor competitiveness of Italian products, those at firm level reveal a more varied statistical picture and show, within the individual sectors, the presence of dynamic situations marked by restructuring that had already produced its first fruits. With the arrival of the crisis, there are good grounds for wondering whether these early signs of corporate restructuring provided a defence against its adverse effects and whether the restructuring process is threatened by the fall in world demand and the credit and liquidity problems discussed earlier.

[^15]In response to the first question we introduced two variables into the regressions of Tables A1A5 serving to identify the firms that began to restructure in the decade under way. The first variable is constructed using information gathered by the 2007 Invind Survey in a special section called "Corporate strategies", in which firms established before 2000 were asked to respond to a series of questions aimed at determining whether they had changed their strategies.

In what follows we construct a dummy variable that is equal to 0 for firms that declared they had not changed strategy between 2000 and 2006 and to 1 for those that declared they had. ${ }^{26}$ According to our survey, nearly half the firms in industry and non-financial private services ${ }^{27}$ were involved in a significant change in strategy between 2000 and 2006 (Table 8). Of the total sample of firms, 28.1 per cent made the change by altering the product range, 15.3 per cent by investing in the trademark and 5 per cent by internationalizing part of their production. Within the industrial sector, where the percentage of firms that began some form of restructuring was higher than in the service sector, the changes in strategy were more common among firms in the North, among medium-sized and large firms, and in the traditional sectors most exposed to the competition of the emerging countries. ${ }^{28}$

A second measure of restructuring is based on the work of Bugamelli, Schivardi e Zizza (2008), who show that the restructuring of Italian firms, triggered by the adoption of the euro and the consequent awareness of no longer being able to rely on devaluation to recover competitiveness in international markets, implied a large reduction in the proportion of blue-collar workers in total employment. The authors associate the change in the composition of the labour force with the need to recover competitiveness by shifting the focus of attention from production in the narrow sense of the term to the activities upstream and downstream from production, such as R\&D, marketing, distribution and after-sales assistance. Confirmation of this hypothesis is found in the econometric analysis that shows a fall in the proportion of blue-collar works from the beginning of the decade, a fall all the more marked in the sectors with a low technological content. We therefore constructed a second variable, the ratio of blue-collar workers to total employees, linked by an inverse relationship to corporate restructuring.

With reference to the relationship between restructuring and crisis, the results of the regressions are reported in Tables A6-A10. While on average in 2008 restructured firms did not record a turnover performance statistically different from that of the other firms (columns [1] and [2] of Table A6), from

[^16]the time the crisis began to worsen in the autumn, their turnover fell less sharply. ${ }^{29}$ This is shown both by the "change-of-strategy" dummy variable and by the proportion of blue-collar workers (columns [3] and [4]). Turning to the responses to the crisis (Table A7), firms that restructured by reducing the proportion of blue-collar workers suffered less, all other things being equal, from the fall in demand and probably benefited from paying greater attention to customers and product quality.

The restructuring activity undertaken in earlier years allowed these firms to respond to the crisis by adopting less penalizing strategies (Tables A8 and A9). ${ }^{30}$ While firms that did not restructure had to lower their profit margins (columns [1] e [2] of Table A8) and reduce the scale of production (columns [3] and [4] of Table A9) more than the average, those that restructured succeeded in pursuing market/customer diversification strategies (columns [5] and [6] of Table A8) or production relocation strategies (columns [5] and [6] of Table A9). Firms that had changed strategy at the beginning of the decade or had a larger proportion of white-collar workers also expected a better-than-average salesrevenue performance in 2009, overall and for exports (Table A10).

The fact that restructured firms held up better in the face of the crisis, both in terms of sales and turnover and with regard to future plans does not exclude the possibility that some of them may be in serious difficulty. According to the Invind sample, about 6,000 of the 65,000 Italian firms in industry and non-financial private services with more than 20 workers began some form of corporate restructuring between 2000 and 2006 and now find themselves heavily indebted. In addition to firms that, despite changing strategy, did not succeed in achieving real increases in efficiency and competitiveness, there may be others that, having begun an effective restructuring (aimed at increasing the scale of production, technological content or international openness), were caught by the crisis before the changes brought significant benefits. The drying up of cash flows, the more rigid conditions of the supply of bank credit, the difficulty of accessing the capital market may have rendered these firms, albeit competitive from an industrial point of view, especially vulnerable to the crisis. Their failure would entail the loss of an important part of the Italian productive system, not least because it had proved innovatory and competitive.

[^17]Table. 8
Changes in corporate strategy between 2000 and 2006

|  | Same strategy | Change in product range | Different strategy Investment in trademark | Internationalization | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Industry |  |  |  |  |  |
| Geographical area |  |  |  |  |  |
| North-West | 41.7 | 36.3 | 13.0 | 9.0 | 100.0 |
| North-East | 46.3 | 27.9 | 17.8 | 8.0 | 100.0 |
| Centre | 52.9 | 27.3 | 15.1 | 4.7 | 100.0 |
| South and Islands | 52.8 | 27.7 | 16.0 | 3.4 | 100.0 |
| Number of workers |  |  |  |  |  |
| 20-49 | 49.2 | 29.4 | 16.0 | 5.4 | 100.0 |
| 50-199 | 41.3 | 34.6 | 14.5 | 9.6 | 100.0 |
| 200-499 | 41.8 | 27.0 | 15.4 | 15.8 | 100.0 |
| 500 and more | 43.1 | 26.4 | 7.6 | 22.9 | 100.0 |
| Economic activity |  |  |  |  |  |
| Total manufacturing firms | 46.3 | 31.1 | 15.4 | 7.2 | 100.0 |
| Textiles, clothing, leather, shoes | 40.9 | 36.1 | 12.8 | 10.2 | 100.0 |
| Chemicals, rubber and plastics | 46.7 | 29.9 | 14.5 | 8.8 | 100.0 |
| Metal products, machinery and transport equipment | 46.6 | 30.4 | 15.3 | 7.8 | 100.0 |
| Other manufactures | 48.6 | 30.0 | 17.1 | 4.2 | 100.0 |
| Energy and mining | 71.0 | 7.2 | 20.2 | 1.6 | 100.0 |
| Share of exports |  |  |  |  |  |
| Less than 1/3 | 49.7 | 30.2 | 16.2 | 3.9 | 100.0 |
| Between 1/3 and 2/3 | 37.1 | 32.3 | 16.0 | 14.6 | 100.0 |
| More than 2/3 | 48.6 | 30.2 | 11.9 | 9.3 | 100.0 |
| Total industrial firms | 46.8 | 30.7 | 15.4 | 7.1 | 100.0 |
| Services |  |  |  |  |  |
| Geographical area |  |  |  |  |  |
| North-West | 53.0 | 30.2 | 14.6 | 2.2 | 100.0 |
| North-East | 59.5 | 20.7 | 17.2 | 2.6 | 100.0 |
| Centre | 58.6 | 23.0 | 15.1 | 3.4 | 100.0 |
| South and Islands | 60.2 | 24.9 | 12.9 | 1.9 | 100.0 |
| Number of workers |  |  |  |  |  |
| 20-49 | 56.4 | 25.5 | 16.4 | 1.6 | 100.0 |
| 50-199 | 60.3 | 23.6 | 12.1 | 4.1 | 100.0 |
| 200-499 | 61.4 | 25.8 | 7.1 | 5.7 | 100.0 |
| 500 and more | 42.9 | 29.6 | 20.8 | 6.7 | 100.0 |
| Economic activity |  |  |  |  |  |
| Services | 57.3 | 25.1 | 15.0 | 2.5 | 100.0 |
| Wholesale and retail trade | 65.5 | 15.9 | 17.5 | 1.1 | 100.0 |
| Hotels and restaurants | 46.1 | 19.4 | 30.6 | 4.0 | 100.0 |
| Transport and communications | 62.9 | 26.1 | 6.5 | 4.6 | 100.0 |
| Real estate, IT, etc. | 48.3 | 39.0 | 10.4 | 2.2 | 100.0 |
| Share of exports |  |  |  |  |  |
| Less than $1 / 3$ | 57.8 | 25.1 | 15.1 | 2.0 | 100.0 |
| Between 1/3 and 2/3 | 47.7 | 25.9 | 17.6 | 8.8 | 100.0 |
| More than 2/3 | 65.8 | 23.4 | 7.4 | 3.4 | 100.0 |
| Total service firms | 57.3 | 25.1 | 15.0 | 2.5 | 100.0 |
| TOTAL | 51.6 | 28.1 | 15.3 | 5.0 | 100.0 |

Source: Banca d'Italia, Invind Survey

On the other hand there are firms that had restructured and which, thanks to that choice, are now financially more solid. We estimate that there are more than 5,000 such firms in the sample universe of 65,000 , with nearly one million workers. These firms succeeded in softening the impact of the adverse economic conditions by reinforcing their technological lead and diversifying their outlet markets. But this is not all: some appear set to profit from the crisis, in terms of repositioning themselves on the market and guiding the process of consolidation within the various sectors of production, deemed by the businessmen interviewed to be one of the possible effects of the crisis in the medium and long-term.

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## STATISTICAL TABLES

Table A1
Percentage change in turnover

|  | in 2008 | $8^{(2)}$ | (3) <br> fall from the | (4) <br> the crisis (a) |
| :---: | :---: | :---: | :---: | :---: |
| size | 0.54** | -0.04 | -1.16*** | -1.25*** |
|  | (0.26) | (0.44) | (0.24) | (0.23) |
| eff | -0.44 | -1.23 | 0.04 | -0.08 |
|  | (0.49) | (1.13) | (0.33) | (0.37) |
| xshare | -0.62 | 0.88 | 6.80*** | 5.47*** |
|  | (1.78) | (1.85) | (1.16) | (1.14) |
| North-East | 2.39** | 2.07** | -1.62* | -1.85** |
|  | (0.93) | (0.89) | (0.84) | (0.79) |
| Centre | 1.87* | 1.56 | -1.62* | -1.71** |
|  | (1.08) | (1.03) | (0.84) | (0.81) |
| South and Islands | 2.46** | 2.67** | -2.23*** | -1.63** |
|  | (1.01) | (1.12) | (0.83) | (0.79) |
| textiles, clothing, leather and footwear |  | -12.94*** |  | 7.61*** |
|  |  | (1.56) |  | (1.13) |
| coke, chemicals, rubber and plastic |  | -5.29*** |  | 8.54*** |
|  |  | (1.34) |  | (1.17) |
| non-metallic minerals |  | -10.02*** |  | 11.56*** |
|  |  | (2.07) |  | (1.17) |
| metal products, machinery and transport equipment |  | -2.83** |  | 12.25*** |
|  |  | (1.27) |  | (0.95) |
| other manufacturing products |  | -8.89*** |  | 7.04*** |
|  |  | (1.31) |  | (1.00) |
| energy and extraction |  | 13.32 |  | 0.51 |
|  |  | (14.50) |  | (1.51) |
| wholesale and retail trade |  | -4.26*** |  | 3.92*** |
|  |  | (1.37) |  | (0.87) |
| hotels and restaurants |  | -7.80*** |  | 4.23** |
|  |  | (2.40) |  | (1.76) |
| transport and communications |  | -4.08** |  | 5.84*** |
|  |  | (1.73) |  | (1.27) |
| real estate and IT |  | -1.37 |  | 1.31 |
|  |  | (1.94) |  | (1.26) |
| manufacturing | -6.14*** |  | 6.22*** |  |
|  | (2.24) |  | (1.70) |  |
| food products, beverages and tobacco | 8.15*** |  | -6.40*** |  |
|  | (1.21) |  | (0.82) |  |
| investment goods | 9.11** |  | 0.36 |  |
|  | (3.83) |  | (2.95) |  |
| intermediate goods | 3.20 |  | 3.49 |  |
|  | (3.47) |  | (2.78) |  |
| consumer goods | 1.42 |  | -2.95 |  |
|  | (3.44) |  | (2.76) |  |
| services provided to enterprises | 0.39 |  | 1.11 |  |
|  | (2.80) |  | (2.30) |  |
| services provided to households | -1.78 |  | 0.11 |  |
|  | (2.97) |  | (2.30) |  |
| constant | 1.78 | 11.77 | 14.67*** | 12.91*** |
|  | (3.68) | (7.57) | (3.18) | (2.73) |
| Number of observations | 3184 | 3630 | 2440 | 2767 |
| R-squared | 0.02 | 0.03 | 0.13 | 0.12 |

Footnotes: OLS estimates; robust standard errors in brackets. (a) Only firms that recorded a negative change.

Table A2

## The responses to the crisis

|  | (1) (2) fall in demand |  | (3) <br> (4) customer payment problems |  | $(5)$difficulty raising funds |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| size | -0.02 | -0.02 | -0.09*** | -0.12*** | -0.02 | -0.03* |
|  | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) |
| eff | -0.02 | -0.02 | -0.02 | -0.01 | -0.10*** | -0.06** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| xshare | 0.39*** | 0.37*** | -0.34*** | -0.23*** | 0.04 | 0.07 |
|  | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) |
| deb | -0.03 | -0.02 | 0.15** | 0.17*** | 0.39*** | 0.39*** |
|  | (0.06) | (0.06) | (0.06) | (0.06) | (0.07) | (0.06) |
| North East |  | 0.03 |  |  |  |  |
|  | (0.06) | (0.05) | (0.06) | (0.06) | (0.06) | (0.06) |
| Centre | -0.09* | -0.10* | 0.00 | -0.01 | 0.03 | 0.02 |
|  | (0.05) | (0.05) | (0.06) | (0.06) | (0.06) | (0.06) |
| South and Islands | -0.13** | -0.14** | 0.13** | 0.12** | 0.12** | 0.11* |
|  | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) |
| textiles, clothing, leather and footwear |  | $0.43 * * *$ |  | 0.33*** |  | 0.19* |
|  |  | (0.10) |  | (0.09) |  | (0.10) |
| coke, chemicals, rubber and plastic |  | $0.42 * * *$ |  | 0.11 |  | -0.04 |
|  |  | (0.09) |  | (0.09) |  | (0.09) |
| non-metallic minerals |  | 0.77*** |  | 0.45*** |  | 0.29** |
|  |  | (0.10) |  | (0.10) |  | (0.11) |
| metal products, machinery and transport equipment |  | 0.64*** |  | 0.17** |  | 0.13* |
|  |  | (0.08) |  | (0.07) |  | (0.08) |
| other manufacturing products |  | 0.53*** |  | 0.09 |  | 0.14 |
|  |  | (0.09) |  | (0.09) |  | (0.09) |
| energy and extraction |  | 0.09 |  | 0.10 |  | 0.23 |
|  |  | (0.16) |  | (0.16) |  | (0.17) |
| wholesale and retail trade |  | 0.22*** |  | -0.29*** |  | -0.13 |
|  |  | (0.08) |  | (0.08) |  | (0.08) |
| hotels and restaurants |  | 0.24 |  | -0.52** |  | -0.30 |
|  |  | (0.22) |  | (0.25) |  | (0.19) |
| transport and communications |  |  |  | $-0.29 * * *$ |  | 0.01 |
|  |  | (0.10) |  | (0.11) |  | (0.11) |
| real estate and IT |  | $\begin{gathered} -0.09 \\ (0.13) \end{gathered}$ |  | $\begin{aligned} & 0.11 \\ & (0.12) \end{aligned}$ |  | $\begin{gathered} 0.06 \\ (0.13) \end{gathered}$ |
| manufacturing | 0.39*** |  | 0.07 |  | -0.12 |  |
|  | (0.14) |  | (0.15) |  | (0.15) |  |
| food products, beverages and tobacco | -0.34*** |  | -0.16* |  | -0.08 |  |
|  | (0.08) |  | (0.08) |  | (0.08) |  |
| investment goods | 0.54* |  | 0.22 |  | 0.44* |  |
|  | (0.29) |  | (0.25) |  | (0.26) |  |
| intermediate goods | 0.72** |  | 0.10 |  | 0.29 |  |
|  | (0.28) |  | (0.25) |  | (0.25) |  |
| consumer goods |  |  |  |  |  |  |
|  | (0.28) |  | (0.25) |  | (0.25) |  |
| services provided to enterprises | $0.52^{* *}$ |  | -0.06 |  |  |  |
|  | (0.25) |  | (0.21) |  | (0.21) |  |
| services provided to households | 0.65** |  | -0.68*** |  | -0.01 |  |
|  | ${ }_{(0.25)}$ |  | ${ }^{(0.22)}$ |  | (0.21) |  |
| constant | 1.07*** | 1.45*** | 2.17*** | 2.18*** | 1.08*** | $1.01 * * *$ |
|  | (0.29) | (0.20) | (0.26) | (0.20) | (0.26) | (0.21) |
| Number of observations | 1859 | 2030 | 1845 | 2016 | 1782 | 1950 |
| R-squared | 0.13 | 0.12 | 0.09 | 0.08 | 0.05 | 0.05 |

Footnotes: OLS estimates, robust standard errors in brackets. The dependent variable is a dummy that can take 4 values: 0 if the firm judges the intensity (of the fall in demand, the customer payment problems or the difficulty in raising funds) to be negligible, 1 if modest, 2 if great, 3 if very great.

The strategies for coping with the crisis

|  | (1) (2) reduce profit margins |  | (3) (4) curb production costs |  | (5) <br> diversify outlet markets/customers |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| size | -0.02*** | -0.02** | 0.00 | 0.00 | -0.04*** | -0.04*** |
|  | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| eff | 0.01 | 0.01 | 0.01 | 0.01 | -0.00 | -0.00 |
|  | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| xshare | -0.07** | -0.05 | 0.03 | 0.04 | 0.04 | 0.04 |
|  | (0.04) | (0.03) | (0.04) | (0.04) | (0.03) | (0.03) |
| deb | -0.04 | -0.03 | 0.06** | 0.07*** | -0.01 | 0.01 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.02) |
| North East | 0.02 | 0.03 | 0.02 | 0.03 | 0.00 | 0.02 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.02) | (0.02) |
| Centre | -0.02 | -0.02 | 0.02 | 0.02 | 0.07*** | 0.07*** |
|  | (0.03) | (0.02) | (0.03) | (0.03) | (0.02) | (0.02) |
| South and Islands | -0.00 | 0.01 | -0.00 | -0.00 | 0.03 | 0.03 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.02) | (0.02) |
| textiles, clothing, leather and footwear |  | 0.10** |  | 0.10** |  | -0.03 |
|  |  | (0.05) |  | (0.05) |  | (0.04) |
| coke, chemicals, rubber and plastic |  | -0.04 |  | 0.09** |  | 0.00 |
|  |  | (0.04) |  | (0.04) |  | (0.04) |
| non-metallic minerals |  | 0.02 |  | 0.19*** |  | -0.04 |
|  |  | (0.05) |  | (0.05) |  | (0.05) |
| metal products, machinery and transport equipment. |  | 0.00 |  | 0.11*** |  | -0.03 |
|  |  | (0.03) |  | (0.04) |  | (0.03) |
| other manufacturing products |  | -0.00 |  | 0.10** |  | 0.03 |
|  |  | (0.04) |  | (0.04) |  | (0.04) |
| energy and extraction |  | -0.13** |  | -0.07 |  | -0.15*** |
|  |  | (0.05) |  | (0.07) |  | (0.05) |
| wholesale and retail trade |  | 0.01 |  | 0.14*** |  | -0.10*** |
|  |  | (0.04) |  | (0.04) |  | (0.03) |
| hotels and restaurants |  | 0.05 |  | 0.15 |  | -0.07 |
|  |  | (0.11) |  | (0.10) |  | (0.09) |
| transport and communications |  | -0.10** |  | 0.03 |  | -0.13*** |
|  |  | (0.04) |  | (0.05) |  | (0.04) |
| real estate and IT |  | -0.12** |  | 0.02 |  | -0.06 |
|  |  | (0.05) |  | (0.06) |  | (0.05) |
| manufacturing | 0.15*** |  | 0.16** |  | 0.14*** |  |
|  | (0.05) |  | (0.07) |  | (0.04) |  |
| food products, beverages and tobacco | -0.02 |  | -0.10** |  | -0.02 |  |
|  | (0.04) |  | (0.04) |  | (0.03) |  |
| investment goods | 0.03 |  | 0.01 |  | -0.05 |  |
|  | (0.08) |  | (0.12) |  | (0.08) |  |
| intermediate goods | 0.03 |  | 0.05 |  | -0.06 |  |
|  | (0.08) |  | (0.12) |  | (0.07) |  |
| consumer goods | 0.02 |  | -0.01 |  | -0.01 |  |
|  | (0.08) |  | (0.12) |  | (0.07) |  |
| services provided to enterprises | 0.11* |  | 0.19* |  | 0.05 |  |
|  | (0.07) |  | (0.10) |  | (0.06) |  |
| services provided to households | 0.16** |  | 0.13 |  | -0.06 |  |
|  | (0.07) |  | (0.10) |  | (0.06) |  |
| Constant | 0.18* |  | $0.41^{* * *}$ | 0.48*** | 0.35*** | 0.43*** |
|  | (0.09) | (0.09) | (0.13) | (0.10) | (0.09) | (0.08) |
| Number of observations | 2262 | 2480 | 2262 | 2480 | 2262 | 2480 |
| R-squared | 0.01 | 0.02 | 0.02 | 0.02 | 0.05 | 0.04 |

Footnotes: OLS estimates, robust standard errors in brackets. The dependent variable is a dummy equal to 1 when the option at the head of the column is the firm's first or second choice.

The strategies for coping with the crisis

|  | (1)improveproduct quality |  | (3) (4) reduce scale of production |  | (5) (6) relocate (only for industrial firms) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| size | $\begin{gathered} -0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} -0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} \hline 0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} \hline-0.00 \\ (0.01) \end{gathered}$ | $\begin{gathered} \hline 0.08 * * * \\ (0.01) \end{gathered}$ | $\begin{gathered} \hline 0.07 * * * \\ (0.01) \end{gathered}$ |
| eff | $\begin{aligned} & -0.01 \\ & (0.01) \end{aligned}$ | $\begin{aligned} & -0.01 \\ & (0.01) \end{aligned}$ | $\begin{gathered} 0.01 \\ (0.01) \end{gathered}$ | $\begin{aligned} & 0.02^{*} \\ & (0.01) \end{aligned}$ | $\begin{gathered} 0.03^{* * *} \\ (0.01) \end{gathered}$ | $\begin{gathered} 0.04 * * * \\ (0.01) \end{gathered}$ |
| xshare | $\begin{gathered} 0.00 \\ (0.03) \end{gathered}$ | $\begin{aligned} & -0.00 \\ & (0.03) \end{aligned}$ | $\begin{gathered} 0.08 * * * \\ (0.03) \end{gathered}$ | $\begin{gathered} 0.07 * * * \\ (0.02) \end{gathered}$ | $\begin{gathered} 0.18^{* * *} \\ (0.03) \end{gathered}$ | $\begin{gathered} 0.17 * * * \\ (0.03) \end{gathered}$ |
| deb | $\begin{aligned} & 0.01 \\ & (0.02) \end{aligned}$ | $\begin{gathered} 0.00 \\ (0.02) \end{gathered}$ | $\begin{gathered} 0.01 \\ (0.02) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.02) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.02) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.02) \end{gathered}$ |
| North East | $\begin{gathered} 0.03 \\ (0.02) \end{gathered}$ | $\begin{gathered} 0.04 \\ (0.02) \end{gathered}$ | $\begin{aligned} & -0.01 \\ & (0.02) \end{aligned}$ | $\begin{aligned} & -0.02 \\ & (0.02) \end{aligned}$ | $\begin{aligned} & -0.03 \\ & (0.03) \end{aligned}$ | $\begin{aligned} & -0.02 \\ & (0.02) \end{aligned}$ |
| Centre | $\begin{aligned} & -0.03 \\ & (0.02) \end{aligned}$ | $\begin{aligned} & -0.02 \\ & (0.02) \end{aligned}$ | $\begin{aligned} & -0.01 \\ & (0.02) \end{aligned}$ | $\begin{aligned} & -0.01 \\ & (0.02) \end{aligned}$ | $\begin{gathered} -0.03 \\ (0.02) \end{gathered}$ | $\begin{gathered} -0.03 \\ (0.02) \end{gathered}$ |
| South and Islands | $\begin{gathered} 0.00 \\ (0.02) \end{gathered}$ | $\begin{aligned} & -0.00 \\ & (0.02) \end{aligned}$ | $\begin{gathered} -0.00 \\ (0.02) \end{gathered}$ | $\begin{aligned} & -0.01 \\ & (0.02) \end{aligned}$ | $\begin{gathered} -0.05^{* * *} \\ (0.02) \end{gathered}$ | $\begin{gathered} -0.05 * * * \\ (0.02) \end{gathered}$ |
| textiles, clothing, leather and footwear |  | $\begin{gathered} 0.10 * * * \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.06^{* *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.13 * * * \\ (0.04) \end{gathered}$ |
| coke, chemicals, rubber and plastic |  | $\begin{gathered} 0.02 \\ (0.03) \end{gathered}$ |  | $\begin{aligned} & 0.06^{* *} \\ & (0.03) \end{aligned}$ |  | $\begin{gathered} 0.08^{* * *} \\ (0.03) \end{gathered}$ |
| non-metallic minerals |  | $\begin{gathered} 0.03 \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.11^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.07 * * * \\ (0.03) \end{gathered}$ |
| metal products, machinery and transport equipment |  | 0.02 |  | 0.08*** |  | 0.08*** |
|  |  | (0.03) |  | (0.02) |  | (0.02) |
| other manufacturing products |  | $\begin{aligned} & 0.06^{*} \\ & (0.03) \end{aligned}$ |  | $\begin{gathered} 0.04 \\ (0.03) \end{gathered}$ |  | $\begin{aligned} & 0.06 * * \\ & (0.03) \end{aligned}$ |
| energy and extraction |  | $\begin{aligned} & -0.05 \\ & (0.04) \end{aligned}$ |  | $\begin{aligned} & -0.02 \\ & (0.03) \end{aligned}$ |  | $\begin{gathered} 0.02 \\ (0.03) \end{gathered}$ |
| wholesale and retail trade |  | $\begin{aligned} & 0.08^{* *} \\ & (0.03) \end{aligned}$ |  | $\begin{gathered} 0.08^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 0.00 \\ (0.02) \end{gathered}$ |
| hotels and restaurants |  | $\begin{gathered} 0.09 \\ (0.09) \end{gathered}$ |  | $\begin{gathered} 0.01 \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.08 \\ (0.06) \end{gathered}$ |
| transport and communications |  | $\begin{aligned} & -0.01 \\ & (0.04) \end{aligned}$ |  | $\begin{gathered} 0.08^{* *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.10^{* * *} \\ (0.04) \end{gathered}$ |
| real estate and IT |  | $\begin{aligned} & 0.08^{*} \\ & (0.04) \end{aligned}$ |  | $\begin{aligned} & 0.06^{*} \\ & (0.03) \end{aligned}$ |  | $\begin{gathered} 0.03 \\ (0.03) \end{gathered}$ |
| manufacturing | $\begin{gathered} 0.11 * * * \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.066^{* *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.06^{* *} \\ (0.03) \end{gathered}$ |  |
| food products, beverages and tobacco | $\begin{gathered} -0.07^{* *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} -0.04 * \\ (0.02) \end{gathered}$ |  | $\begin{gathered} -0.08^{* * *} \\ (0.02) \end{gathered}$ |  |
| investment goods | $\begin{aligned} & -0.16^{*} \\ & (0.09) \end{aligned}$ |  | $\begin{gathered} -0.02 \\ (0.06) \end{gathered}$ |  | $\begin{gathered} 0.11^{* * *} \\ (0.04) \end{gathered}$ |  |
| intermediate goods | $\begin{aligned} & -0.15^{*} \\ & (0.08) \end{aligned}$ |  | $\begin{gathered} 0.00 \\ (0.06) \end{gathered}$ |  | $\begin{gathered} 0.05 \\ (0.03) \end{gathered}$ |  |
| consumer goods | $\begin{aligned} & -0.09 \\ & (0.08) \end{aligned}$ |  | $\begin{aligned} & -0.06 \\ & (0.06) \end{aligned}$ |  | $\begin{gathered} 0.07 * * \\ (0.03) \end{gathered}$ |  |
| services provided to enterprises | $\begin{aligned} & -0.00 \\ & (0.08) \end{aligned}$ |  | $\begin{gathered} 0.05 \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.13^{* * *} \\ (0.03) \end{gathered}$ |  |
| services provided to households | $\begin{gathered} 0.01 \\ (0.08) \end{gathered}$ |  | $\begin{gathered} 0.02 \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.03 \\ (0.02) \end{gathered}$ |  |
| Constant | $\begin{gathered} 0.28^{* * *} \\ (0.10) \\ \hline \end{gathered}$ | $\begin{gathered} 0.22 * * * \\ (0.07) \\ \hline \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.07) \\ \hline \end{gathered}$ | $\begin{array}{r} -0.03 \\ (0.07) \\ \hline \end{array}$ | $\begin{gathered} -0.54^{* * *} \\ (0.07) \\ \hline \end{gathered}$ | $\begin{gathered} -0.54 * * * \\ (0.07) \\ \hline \end{gathered}$ |
| Number of observations | 2262 | 2480 | 2262 | 2480 | 1836 | 1976 |
| R-squared | 0.01 | 0.01 | 0.02 | 0.02 | 0.16 | 0.16 |

Footnotes: OLS estimates, robust standard errors in brackets. The dependent variable is a dummy equal to 1 when the option at the head of the column is the firm's first or second choice.

Table A5
The forecasts for 2009

|  | $\%$ change in total turnover |  | \% change in export turnover |  | \% change in employment |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| size | $\begin{gathered} \hline 0.65 * * * \\ (0.24) \end{gathered}$ | $\begin{gathered} \hline 0.87 * * * \\ (0.22) \end{gathered}$ | $\begin{aligned} & 1.06^{* *} \\ & (0.53) \end{aligned}$ | $\begin{gathered} \hline 1.29 * * * \\ (0.49) \end{gathered}$ | $\begin{gathered} \hline 0.31^{* *} \\ (0.13) \end{gathered}$ | $\begin{gathered} \hline 0.19 \\ (0.13) \end{gathered}$ |
| eff | $\begin{gathered} -1.58^{* * *} \\ (0.34) \end{gathered}$ | $\begin{gathered} -1.85 * * * \\ (0.38) \end{gathered}$ | $\begin{gathered} -3.39 * * * \\ (1.06) \end{gathered}$ | $\begin{gathered} -3.81^{* * *} \\ (1.02) \end{gathered}$ | $\begin{gathered} 0.99 * * * \\ (0.21) \end{gathered}$ | $\begin{gathered} 0.96 * * * \\ (0.23) \end{gathered}$ |
| xshare | $\begin{gathered} -5.81 * * * \\ (1.17) \end{gathered}$ | $\begin{gathered} -4.78 * * * \\ (1.12) \end{gathered}$ | $\begin{gathered} -7.76^{* * *} \\ (2.91) \end{gathered}$ | $\begin{gathered} -6.31^{* *} \\ (2.68) \end{gathered}$ | $\begin{aligned} & -1.03 \\ & (0.66) \end{aligned}$ | $\begin{aligned} & -0.88 \\ & (0.65) \end{aligned}$ |
| deb | $\begin{aligned} & 1.44^{*} \\ & (0.79) \end{aligned}$ | $\begin{aligned} & 1.63^{* *} \\ & (0.76) \end{aligned}$ | $\begin{gathered} 1.57 \\ (2.21) \end{gathered}$ | $\begin{gathered} 0.58 \\ (2.13) \end{gathered}$ | $\begin{gathered} -1.08 * * \\ (0.52) \end{gathered}$ | $\begin{gathered} -1.12^{* *} \\ (0.48) \end{gathered}$ |
| North East | $\begin{gathered} 1.07 \\ (0.79) \end{gathered}$ | $\begin{gathered} 0.55 \\ (0.75) \end{gathered}$ | $\begin{gathered} 1.67 \\ (1.69) \end{gathered}$ | $\begin{gathered} 0.78 \\ (1.62) \end{gathered}$ | $\begin{gathered} 0.56 \\ (0.44) \end{gathered}$ | $\begin{gathered} 0.42 \\ (0.43) \end{gathered}$ |
| Centre | $\begin{aligned} & 1.85^{* *} \\ & (0.78) \end{aligned}$ | $\begin{aligned} & 1.86^{* *} \\ & (0.77) \end{aligned}$ | $\begin{gathered} 0.72 \\ (1.82) \end{gathered}$ | $\begin{gathered} 1.25 \\ (1.81) \end{gathered}$ | $\begin{gathered} 0.41 \\ (0.43) \end{gathered}$ | $\begin{gathered} 0.54 \\ (0.42) \end{gathered}$ |
| South and Islands | $\begin{gathered} 3.71 * * * \\ (0.80) \end{gathered}$ | $\begin{gathered} 3.45^{* * *} \\ (0.78) \end{gathered}$ | $\begin{gathered} 5.71 * * * \\ (2.09) \end{gathered}$ | $\begin{gathered} 4.99^{* *} \\ (1.97) \end{gathered}$ | $\begin{gathered} -0.07 \\ (0.47) \end{gathered}$ | $\begin{gathered} 0.14 \\ (0.45) \end{gathered}$ |
| textiles, clothing, leather and footwear |  | -8.31 *** |  | -14.02*** |  | -3.01*** |
|  |  | (1.12) |  | (2.55) |  | (0.83) |
| coke, chemicals, rubber and plastic |  | -6.38*** |  | $-8.10^{* * *}$ |  | -1.54** |
|  |  | (1.10) |  | (2.38) |  | (0.71) |
| non-metallic minerals |  | $\begin{gathered} -9.35 * * * \\ (1.27) \end{gathered}$ |  | $\begin{gathered} -18.61^{* * *} \\ (3.57) \end{gathered}$ |  | $\begin{gathered} -3.35 * * * \\ (0.89) \end{gathered}$ |
| metal products, machinery and transport equipment |  | -11.49*** |  | -15.84*** |  | -0.89 |
|  |  | ${ }_{(0.95)}$ |  | ${ }_{(2.32)}$ |  | ${ }^{(0.55)}$ |
| other manufacturing products |  | $\begin{gathered} -6.15 * * * \\ (0.94) \end{gathered}$ |  | $\begin{gathered} -9.35^{* * *} \\ (2.60) \end{gathered}$ |  | $\begin{gathered} -2.24^{* * *} \\ (0.71) \end{gathered}$ |
| energy and extraction |  | $\begin{aligned} & -2.81^{*} \\ & (1.68) \end{aligned}$ |  | $\begin{aligned} & -28.18^{*} \\ & (14.64) \end{aligned}$ |  | $\begin{gathered} 0.53 \\ (1.27) \end{gathered}$ |
| wholesale and retail trade |  | $\begin{gathered} -3.02^{* * *} \\ (0.88) \end{gathered}$ |  | $\begin{gathered} -7.79 * * \\ (3.66) \end{gathered}$ |  | $\begin{aligned} & -0.12 \\ & (0.62) \end{aligned}$ |
| hotels and restaurants |  | $\begin{aligned} & -3.25 \\ & (2.40) \end{aligned}$ |  | $\begin{gathered} -19.10^{* * *} \\ (6.93) \end{gathered}$ |  | $\begin{aligned} & -0.44 \\ & (1.54) \end{aligned}$ |
| transport and communications |  | $\begin{gathered} -5.54 * * * \\ (1.14) \end{gathered}$ |  | $\begin{gathered} -9.89 * * \\ (4.16) \end{gathered}$ |  | $\begin{gathered} 0.53 \\ (0.71) \end{gathered}$ |
| real estate and IT |  | $\begin{gathered} -3.36 * * * \\ (1.26) \end{gathered}$ |  | $\begin{aligned} & -7.26 \\ & (4.92) \end{aligned}$ |  | $\begin{gathered} 2.44^{* * *} \\ (0.82) \end{gathered}$ |
| manufacturing | $\begin{gathered} -4.77 * * * \\ (1.50) \end{gathered}$ |  | $\begin{gathered} 5.09 \\ (11.90) \end{gathered}$ |  | $\begin{aligned} & -1.80 \\ & (1.27) \end{aligned}$ |  |
| food products, beverages and tobacco | 5.58*** |  | 9.21*** |  | 1.67*** |  |
|  | (0.86) |  | (2.31) |  | (0.58) |  |
| investment goods | $\begin{aligned} & -3.21 \\ & (2.50) \end{aligned}$ |  | $\begin{gathered} 9.68 \\ (21.90) \end{gathered}$ |  | $\begin{aligned} & -1.54 \\ & (1.92) \end{aligned}$ |  |
| intermediate goods | $\begin{gathered} -6.74 * * * \\ (2.37) \end{gathered}$ |  | $\begin{gathered} 4.42 \\ (21.78) \end{gathered}$ |  | $\begin{gathered} -3.86^{* *} \\ (1.84) \end{gathered}$ |  |
| consumer goods | $\begin{aligned} & -0.22 \\ & (2.32) \end{aligned}$ |  | $\begin{gathered} 12.19 \\ (21.88) \end{gathered}$ |  | $\begin{gathered} -3.34^{*} \\ (1.78) \end{gathered}$ |  |
| services provided to enterprises | $\begin{gathered} -4.46^{* *} \\ (1.99) \end{gathered}$ |  | $\begin{gathered} 17.44 \\ (18.50) \end{gathered}$ |  | $\begin{gathered} -3.12 * * \\ (1.39) \end{gathered}$ |  |
| services provided to households | $\begin{aligned} & -1.92 \\ & (1.94) \end{aligned}$ |  | $\begin{gathered} 17.92 \\ (18.80) \end{gathered}$ |  | $\begin{gathered} -2.94^{* *} \\ (1.43) \end{gathered}$ |  |
| Constant | $\begin{aligned} & 4.98^{*} \\ & (3.01) \\ & \hline \end{aligned}$ | $\begin{aligned} & 5.92 * * \\ & (2.70) \\ & \hline \end{aligned}$ | $\begin{gathered} -9.19 \\ (18.56) \\ \hline \end{gathered}$ | $\begin{gathered} 18.45^{* * *} \\ (6.64) \\ \hline \end{gathered}$ | $\begin{gathered} -5.23 * * * \\ (1.87) \\ \hline \end{gathered}$ | $\begin{gathered} -8.00^{* * *} \\ (1.60) \\ \hline \end{gathered}$ |
| Number of observations | 2227 | 2440 | 1579 | 1725 | 2222 | 2434 |
| R-squared | 0.15 | 0.14 | 0.06 | 0.06 | 0.04 | 0.04 |

Footnotes: OLS estimates; robust standard errors in brackets.

Table A6
Percentage change in turnover
$\left.\begin{array}{lcc|cc|}\hline & (1) & & (2) & (3) \\ \text { in } 2008\end{array}\right)$

Footnotes: OLS estimates; robust standard errors in brackets. (a) Only firms that recorded a negative change.

The responses to the crisis

|  | fall in demand |  | (3) <br> customer <br> payment problems |  | (5) difficulty raising funds |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| size | -0.01 | -0.00 | -0.12*** | -0.12*** | -0.04* | -0.04* |
|  | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) |
| eff | 0.00 | 0.04 | 0.01 | 0.03 | -0.04 | -0.05 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| xshare | 0.32*** | 0.32*** | -0.26*** | -0.26*** | 0.08 | 0.08 |
|  | (0.09) | (0.09) | (0.09) | (0.09) | (0.10) | (0.10) |
| deb | -0.05 | -0.07 | 0.12* | 0.12* | 0.38*** | 0.38*** |
|  | (0.07) | (0.07) | (0.07) | (0.07) | (0.08) | (0.08) |
| North East | 0.03 | 0.03 | -0.03 | -0.03 | 0.05 | 0.05 |
|  | (0.06) | (0.06) | (0.07) | (0.07) | (0.06) | (0.06) |
| Centre | -0.08 | -0.09 | -0.08 | -0.09 | 0.01 | 0.01 |
|  | (0.06) | (0.06) | (0.07) | (0.07) | (0.07) | (0.06) |
| South and Islands | -0.17** | -0.19*** | 0.08 | 0.07 | 0.12* | 0.13* |
|  | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) |
| textiles, clothing, leather and footwear | 0.44*** | 0.45*** | 0.33*** | 0.34*** | 0.20* | 0.19* |
|  | (0.11) | (0.11) | (0.10) | (0.10) | (0.11) | (0.11) |
| coke, chemicals, rubber and plastic | 0.36*** | 0.37*** | 0.16 | 0.16 | -0.08 | -0.09 |
|  | (0.10) | (0.10) | (0.10) | (0.10) | (0.10) | (0.10) |
| non-metallic minerals | 0.69*** | 0.69*** | 0.42*** | 0.42*** | 0.27** | 0.27** |
|  | (0.11) | (0.11) | (0.11) | (0.11) | (0.13) | (0.13) |
| metal products, machinery and transport equipment | 0.59*** | 0.60*** | 0.17** | 0.18** | 0.17* | 0.16* |
|  | (0.09) | (0.09) | (0.08) | (0.08) | (0.08) | (0.08) |
| other manufacturing products | 0.47*** | 0.48*** | 0.12 | 0.13 | 0.23** | 0.23** |
|  | (0.10) | (0.10) | (0.10) | (0.10) | (0.11) | (0.11) |
| energy and extraction | -0.07 | -0.03 | 0.29 | 0.31 | 0.38 | 0.37 |
|  | (0.21) | (0.21) | (0.21) | (0.21) | (0.24) | (0.24) |
| wholesale and retail trade | 0.11 | 0.16 | -0.32*** | -0.30*** | -0.10 | -0.11 |
|  | (0.10) | (0.10) | (0.10) | (0.10) | (0.09) | (0.09) |
| hotels and restaurants | 0.02 | 0.04 | -0.50* | -0.49* | -0.32* | -0.33* |
|  | (0.21) | (0.21) | (0.26) | (0.26) | (0.18) | (0.18) |
| transport and communications | 0.11 | 0.18 | -0.26** | -0.23* | 0.02 | 0.00 |
|  | (0.12) | (0.12) | (0.12) | (0.12) | (0.12) | (0.12) |
| real estate and IT | -0.16 | -0.07 | 0.16 | 0.19 | 0.07 | 0.05 |
|  | (0.15) | (0.15) | (0.14) | (0.14) | (0.15) | (0.16) |
| change in strategy | -0.05 | -0.03 | 0.08* | 0.09* | -0.00 | -0.01 |
|  | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) |
| proportion of blue-collar workers |  | 0.31*** |  | 0.12 |  | -0.06 |
|  |  | (0.11) |  | (0.11) |  | (0.10) |
| constant | $1.37 * * *$ | 0.95*** | 2.09*** | $1.92{ }^{* * *}$ | 0.91*** | 1.00*** |
|  | (0.22) | (0.26) | (0.23) | (0.27) | (0.24) | (0.27) |
| Number of observations | 1547 | 1547 | 1530 | 1530 | 1487 | 1487 |
| R-squared | 0.12 | 0.13 | 0.09 | 0.09 | 0.05 | 0.05 |

Footnotes: OLS estimates, robust standard errors in brackets. The dependent variable is a dummy that can take 4 values: 0 if the firm judges the intensity (of the fall in demand, the customer payment problems or the difficulty in raising funds) to be negligible, 1 if modest, 2 if great, 3 if very great.

## The strategies for coping with the crisis

|  | (1) (2) reduce profit margins |  | (3) (4) curb production costs |  | (5) (6) diversify outlet markets/customers |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| size | -0.01 | -0.01 | 0.02** | 0.02** | -0.04*** | -0.04*** |
|  | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| eff | -0.01 | -0.01 | 0.00 | 0.00 | -0.01 | -0.01 |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.01) | (0.01) |
| xshare | -0.01 | -0.01 | 0.03 | 0.03 | 0.01 | 0.01 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| deb | -0.00 | -0.00 | 0.07** | 0.07** | 0.02 | 0.02 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| North East | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Centre | -0.01 | -0.01 | 0.01 | 0.01 | 0.07** | 0.07** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| South and Islands | 0.02 | 0.02 | -0.02 | -0.02 | 0.03 | 0.03 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| textiles, clothing, leather and footwear | 0.07 | 0.07 | 0.10* | 0.10* | -0.01 | -0.01 |
|  | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) |
| coke, chemicals, rubber and plastic | -0.01 | -0.01 | 0.09* | 0.09* | 0.02 | 0.02 |
|  | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) |
| non-metallic minerals | 0.01 | 0.01 | 0.19*** | 0.19*** | -0.06 | -0.06 |
|  | (0.06) | (0.06) | (0.05) | (0.05) | (0.05) | (0.05) |
| metal products, machinery and transport equipment | -0.02 | -0.02 | 0.10** | 0.10** | -0.03 | -0.04 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| other manufacturing products | -0.03 | -0.03 | 0.10** | 0.10** | 0.04 | 0.04 |
|  | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) |
| energy and extraction | -0.14* | -0.14* | -0.06 | -0.05 | -0.20*** | $-0.21 * * *$ |
|  | (0.07) | (0.07) | (0.09) | (0.09) | (0.05) | (0.05) |
| wholesale and retail trade | 0.01 | 0.01 | 0.15*** | 0.16*** | -0.12*** | -0.13*** |
|  | (0.04) | (0.05) | (0.05) | (0.05) | (0.04) | (0.04) |
| hotels and restaurants | $\begin{gathered} -0.02 \\ (0.11) \end{gathered}$ | $\begin{gathered} -0.02 \\ (0.11) \end{gathered}$ | $\begin{gathered} 0.17 \\ (0.11) \end{gathered}$ | $\begin{gathered} 0.17 \\ (0.11) \end{gathered}$ | $\begin{gathered} -0.06 \\ (0.11) \end{gathered}$ | $\begin{gathered} -0.06 \\ (0.11) \end{gathered}$ |
| transport and communications | -0.14*** | -0.14*** | 0.02 | 0.03 | -0.12*** | -0.13*** |
|  | (0.05) | (0.05) | (0.06) | (0.06) | (0.05) | (0.05) |
| real estate and IT | -0.13** | -0.13** | 0.01 | 0.02 | -0.08 | -0.10* |
|  | (0.05) | (0.06) | (0.06) | (0.07) | (0.05) | ${ }^{(0.06)}$ |
| change in strategy | -0.04* | -0.04* | -0.01 | -0.01 | 0.06*** | 0.06*** |
|  | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) |
| proportion of blue-collar workers |  | 0.00 |  | 0.04 |  | -0.06 |
|  |  | (0.05) |  | (0.05) |  | (0.04) |
| constant |  | 0.41*** | 0.50*** | 0.45*** | 0.44*** | 0.52*** |
|  | (0.10) | (0.12) | (0.11) | (0.13) | (0.09) | (0.11) |
| Number of observations | 1841 | 1841 | 1841 | 1841 | 1841 | 1841 |
| R-squared | 0.02 | 0.02 | 0.02 | 0.02 | 0.04 | 0.05 |

Footnotes: OLS estimates, robust standard errors in brackets. The dependent variable is a dummy equal to 1 when the option at the head of the column is the firm's first or second choice.

The strategies for coping with the crisis

|  | (1) improve product quality |  | (3) reduce scale of production |  | (5) (6) relocate (only for industrial firms) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size | -0.01 | -0.01 | 0.00 | 0.00 | 0.07*** | 0.07*** |
|  | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| Eff | -0.02 | -0.02 | 0.02 | 0.02** | 0.04*** | 0.04*** |
|  | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| Xshare | -0.02 | -0.03 | 0.06** | 0.06** | 0.16*** | 0.16*** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Deb | -0.01 | -0.01 | -0.01 | -0.01 | 0.02 | 0.03 |
|  | (0.03) | (0.03) | (0.02) | (0.02) | (0.02) | (0.02) |
| North East | 0.03 | 0.03 | -0.02 | -0.02 | -0.01 | -0.01 |
|  | (0.03) | (0.03) | (0.02) | (0.02) | (0.02) | (0.02) |
| Centre | -0.02 | -0.02 | -0.01 | -0.02 | -0.03 | -0.03 |
|  | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) |
| South and Islands | -0.00 | -0.00 | -0.00 | -0.01 | -0.05*** | -0.05** |
|  | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) |
| textiles, clothing, leather and footwear | 0.12*** | 0.12*** | 0.07** | 0.07** | 0.12*** | 0.12*** |
|  | (0.04) | (0.04) | (0.03) | (0.03) | (0.04) | (0.04) |
| coke, chemicals, rubber and plastic | 0.02 | 0.02 | 0.04 | 0.05 | 0.07** | 0.07** |
|  | (0.04) | (0.04) | (0.03) | (0.03) | (0.03) | (0.03) |
| non-metallic minerals | 0.04 | 0.04 | 0.13*** | 0.13*** | 0.06* | 0.06** |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.03) | (0.03) |
| metal products, machinery and transport equipment | 0.03 | 0.03 | 0.10*** | 0.11*** | 0.08*** | 0.07*** |
|  | (0.03) | (0.03) | (0.02) | (0.02) | (0.02) | (0.02) |
| other manufacturing products | 0.09** | 0.09** | 0.07** | 0.07** | 0.05* | 0.05* |
|  | (0.04) | (0.04) | (0.03) | (0.03) | (0.03) | (0.03) |
| energy and extraction | -0.05 | -0.06 | -0.02 | -0.01 | 0.05 | 0.05 |
|  | (0.05) | (0.05) | (0.03) | (0.03) | (0.03) | (0.03) |
| wholesale and retail trade | 0.10*** | 0.10*** | 0.09*** | 0.10 *** | 0.00 | -0.01 |
|  | (0.04) | (0.04) | (0.03) | (0.03) | (0.02) | (0.02) |
| hotels and restaurants | 0.14 | 0.14 | 0.03 | 0.03 | 0.07 | 0.07 |
|  | (0.11) | (0.11) | (0.06) | (0.06) | (0.06) | (0.06) |
| transport and communications | 0.01 | 0.00 | 0.10** | 0.11*** | 0.12*** | 0.11*** |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| real estate and IT | 0.11** | 0.10* | 0.10** | 0.12*** | 0.04 | 0.02 |
|  | (0.05) | (0.05) | (0.04) | (0.04) | (0.04) | (0.04) |
| change in strategy | 0.03 | 0.03 | -0.01 | -0.01 | 0.10*** | 0.10*** |
|  | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) |
| proportion of blue-collar workers |  | -0.02 |  | 0.07** |  | -0.06** |
|  |  | (0.04) |  | (0.03) |  | (0.03) |
| Constant | 0.23*** | 0.25** | -0.06 | -0.15* | -0.57*** | -0.49*** |
|  | (0.08) | (0.10) | (0.08) | (0.09) | (0.07) | (0.08) |
| Number of observations | 1841 | 1841 | 1841 | 1841 | 1813 | 1813 |
| R-squared | 0.02 | 0.02 | 0.02 | 0.02 | 0.18 | 0.18 |

Footnotes: OLS estimates, robust standard errors in brackets. The dependent variable is a dummy equal to 1 when the option at the head of the column is the firm's first or second choice.

## The forecasts for 2009

|  | (1) <br> \% change in total turnover |  | (3) <br> $\%$ change in export turnover |  | (5) <br> \% change in employment |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| size | 0.77*** | 0.71*** | 1.15* | 0.96 | 0.25 | 0.24 |
|  | (0.28) | (0.28) | (0.61) | (0.59) | (0.15) | (0.15) |
| eff | -1.99*** | -2.70 *** | -3.95*** | -5.23*** | 1.08*** | 0.97*** |
|  | (0.42) | (0.46) | (1.16) | (1.17) | (0.28) | (0.28) |
| xshare | $-5.67 * * *$ | -5.67*** | -8.59*** | -8.19** | -1.73** | -1.73** |
|  | (1.30) | (1.29) | (3.27) | (3.25) | (0.79) | (0.79) |
| deb | 2.09** | 2.36*** |  | 2.30 | -1.26** | -1.23 ** |
|  | (0.87) | (0.87) | (2.34) | (2.35) | (0.57) | (0.57) |
| North East | 1.26 | 1.25 | 0.68 | 0.49 | 0.62 | 0.62 |
|  | (0.88) | (0.88) | (1.93) | (1.90) | (0.52) | (0.52) |
| Centre | 2.86 *** | 3.05*** | 2.66 | 2.95 | 0.57 | 0.60 |
|  | (0.93) | (0.93) | (2.08) | (2.07) | (0.49) | (0.49) |
| South and Islands | 3.77*** | 4.16*** | 3.93* | 4.63** | 0.10 | 0.17 |
|  | (0.89) | (0.90) | (2.30) | (2.31) | (0.54) | (0.54) |
| textiles, clothing, leather and footwear | $-8.56 * * *$ | -8.79*** | -13.88*** | -14.34*** | $-2.59 * * *$ | $-2.62^{* * *}$ |
|  | (1.32) | (1.32) | (2.93) | (2.90) | (0.94) | (0.95) |
| coke, chemicals, rubber and plastic | -5.60*** | -6.01*** | -7.17*** | -8.34*** | -1.04 | -1.10 |
|  | (1.29) | (1.29) | (2.71) | (2.71) | (0.81) | (0.82) |
| non-metallic minerals | -10.09*** | -10.03*** | -19.80*** | -19.26*** | -3.52*** | -3.51*** |
|  | (1.39) | (1.40) | (3.90) | (3.93) | (1.08) | (1.08) |
| metal products, machinery and transport equipment | $-10.67 * * *$ | -11.05*** | $-16.03^{* * *}$ | $-16.88 * * *$ | -0.54 | -0.60 |
|  | (1.09) | (1.09) | (2.66) | (2.68) | (0.66) | (0.66) |
| other manufacturing products | -5.72*** | -5.97*** | -9.15*** | -9.31*** | -1.52* | -1.55* |
|  | (1.07) | (1.07) | (2.94) | (2.93) | (0.84) | (0.84) |
| energy and extraction | -4.45** | -5.35** | -39.30*** | -40.93*** | 0.44 | 0.31 |
|  | (2.19) | (2.22) | (12.20) | (12.06) | (1.75) | (1.76) |
| wholesale and retail trade | -3.01 *** | -4.21*** | -5.54 | -9.45** | -0.26 | -0.45 |
|  | (1.02) | (1.07) | (4.05) | (4.09) | (0.75) | (0.80) |
| hotels and restaurants | -2.78 | -3.26 | -13.02*** | -14.03*** | 0.38 | 0.31 |
|  | (2.80) | (2.89) | (4.74) | (4.79) | (1.71) | (1.72) |
| transport and communications | -5.48*** | -6.47*** | -11.12** | -14.69*** | 0.45 | 0.29 |
|  | (1.40) | (1.42) | (5.24) | (5.26) | (0.89) | (0.91) |
| real estate and IT | -3.79*** | -5.99*** |  |  | 2.81*** | 2.48** |
|  | (1.37) | (1.49) | (6.17) | (6.35) | (0.99) | (1.05) |
| change in strategy | $2.13^{* * *}$ | 1.85*** |  | 0.46 |  | 0.30 |
|  | (0.62) | ${ }_{(0.62)}$ | (1.54) | ${ }^{(1.55)}$ | (0.38) | (0.38) |
| proportion of blue-collar workers |  | $\begin{gathered} -6.47 * * * \\ (1.35) \end{gathered}$ |  | $\begin{gathered} -17.06^{* * *} \\ (3.62) \end{gathered}$ |  | -0.97 $(0.79)$ |
| constant | 5.48* | 14.21*** | 20.45*** | 40.16*** | -9.24*** | -7.93*** |
|  | (3.08) | (3.75) | (7.42) | (8.39) | (1.93) | (2.18) |
| Number of observations | 1806 | 1806 | 1298 | 1298 | 1807 | 1807 |
| R-squared | 0.14 | 0.15 | 0.07 | 0.08 | 0.05 | 0.05 |

Footnotes: OLS estimates; robust standard errors in brackets.

## APPENDIX

## I ndagine sulle imprese industriali - 2008

Codice in materia di protezione dei dati personali (D. Igs. 196/2003) - Informativa. La presente indagine è finalizzata a raccogliere informazioni sull'andamento delle principali variabili economiche e finanziarie nel settore industriale. La collaborazione richiesta è preziosa ma non obbligatoria e l'eventuale rifiuto non ha conseguenze. Le informazioni fornite verranno utilizzate esclusivamente a fini di ricerca e non verranno diffuse all'esterno della Banca se non in forma aggregata. Le imprese che partecipano riceveranno un estratto dei principali risultati dell'indagine. Il trattamento dei dati si svolgerà interamente all'interno della Banca con modalità atte a garantirne la sicurezza e la riservatezza. Possono venire a conoscenza dei dati individuali solo il responsabile del loro trattamento e gli addetti incaricati della loro elaborazione e analisi. Le imprese godono dei diritti di cui all'articolo 7 del Codice tra cui figura, tra l'altro, la rettifica e l'integrazione delle informazioni che le riguardano. Responsabile del trattamento dei dati: titolare del Servizio Statistiche Economiche e Finanziarie della Banca d'Italia, Via Nazionale 91,00184 ROMA. Titolare del trattamento dei dati: Banca d'Italia (Servizio Organizzazione) Via Nazionale 91, 00184 ROMA

## PARTE A - Informazioni generali


solo per le SPA: L'impresa ha adottato un modello di amministrazione e controllo alternativo a quello tradizionale?

(1) Cfr. Centrale dei Rischi. Nuova classificazione della clientela bancaria, 1991. - (2) Cfr. ISTAT. Classificazione delle attività economiche. Metodi e norme, 2002 e 2007.

La Vostra azienda fa capo (direttamente o indirettamente) a una persona fisica o a una famiglia proprietaria o controllante?

Se sì, il "capo dell'azienda" (colui che ne esercita la gestione) è:
( $1=$ il fondatore dell'azienda; $2=$ un suo erede ( $1^{\circ}-2^{\circ}$ generazione); $3=$ un manager assunto all'esterno dell'azienda o selezionato all'interno dell'azienda)

## I mpresa appartenente ad un gruppo

Se l'impresa appartiene ad un gruppo (per gruppo si intende un insieme di più imprese controllate direttamente o indirettamente - attraverso una o più catene di controllo - dalle medesime persone fisiche o dal medesimo ente pubblico):
L'impresa è la capogruppo?


Nome del gruppo di appartenenza



$3^{\circ}|\% \%|$

(1) $1=$ persona fisica; $2=$ holding o sub holding, finanziaria di gruppo; 3=banca; 4=finanziaria indipendente (non di gruppo), assicurazioni; 5=non finanziaria. - (2) 1=italiana; $2=$ estera. - (3) $1=$ pubblica; $2=$ privata.

Tra i controllanti esistono patti parasociali di voto, o relativi alla cessione di partecipazioni? no
Lo Statuto prevede vincoli al trasferimento quote, azioni (es.: clausola gradimento, prelazione,...) no sì

Nel 2008 è avvenuto un trasferimento di controllo
diretto dell'impresa (o di una sua parte prevalente)?
$\square$
Se sì: Il trasferimento indicato sopra è avvenuto:

- all'interno dello stesso gruppo? no si
- fra soggetti legati da relazioni di parentela?
no


Modifiche intervenute nel corso del 2008:
Scorporo
no


Incorporo
no



> | Si è in grado di fornire dati omogenei per il 2007 e |
| :--- |
| per il 2008? (vedi istruzioni) |
| no |
| no |

## PARTE B - Occupazione, retribuzioni, Tfr e contrattazione integrativa (vedi istruzioni)

| (esprimere gli ammontari in unità) | Totale occupati | di cui: |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | totale a tempo determinato | totale comunitari (esclusa Italia) | totale extra comunitari |
| 2007 Occupazione media . |  |  |  |  |
| - di cui: operai e apprendisti. |  |  |  |  |
| Occupazione a fine anno............... |  |  |  |  |
| Assunzioni .. |  |  |  |  |
| Cessazioni.................................... |  |  |  |  |
| $\underline{2008}$ Occupazione media ..................... |  |  |  |  |
| - di cui: operai e apprendisti.............. |  |  |  |  |
| - di cui: \% di lavoratori che hanno usufruito della detassazione per straordinari e/o "salario di produttività" | \\| \% |  |  |  |
| Occupazione a fine anno................ |  |  |  |  |
| Assunzioni ..................... |  |  |  |  |
| Cessazioni.................................... |  |  |  |  |
| $\underline{2009}$ Occupazione media (previsione) ...... |  |  |  |  |

Solo se l'occupazione prevista per il 2009 è inferiore a quella del 2008: quali delle seguenti modalità prevedete
principalmente di usare per la riduzione di personale (max 2 scelte):........prima scelta| $\quad$ seconda scelta $\qquad$ ( $1=$ blocco del turnover (mancata sostituzione di personale in uscita volontaria, ad esempio pensionamento, cambi di occupazione scelti dal lavoratore); $2=$ incentivi all'uscita volontaria; 3=licenziamenti individuali e collettivi; $4=\mathrm{NON}$ USARE; $5=$ mancati rinnovi di contratti a termine)

(1) Include le ritenute previdenziali e fiscali a carico dei lavoratori; esclude i pagamenti effettuati dalle imprese per conto dell'INPS e degli altri Istituti di previdenza. - (2) La parte derivante dal contratto nazionale include: minimi tabellari, contingenza, tredicesima e mensilità aggiuntive, scatti di anzianità, indennità di mensa, straordinari e indennità di turno.

Saremmo interessati a conoscere il grado di diffusione delle forme di previdenza complementare presso gli occupati della Vostra impresa (cioè di schemi pensionistici aggiuntivi alla pensione pubblica, attuati mediante fondi pensione negoziali, fondi pensione aperti o polizze previdenziali)
(riferirsi ai dati di fine anno)
Numero di dipendenti aderenti a forme di previdenza complementare (unità)
Flusso di Tfr destinato a previdenza complementare (migliaia di euro)

| 2006 | 2007 | 2008 |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |

La legge prevede forme di compensazione alle imprese (riduzione contributi sociali, maggiori deducibilità fiscali) per il flusso di Tfr destinato a previdenza complementare o all'apposito fondo presso l'INPS (Fondo tesoreria): come giudicate i loro effetti sulle condizioni economico-finanziarie della Vostra impresa? (1=adeguati; $2=$ inadeguati; 3=altro)
(eventuali commenti)
(riferirsi ai dati di fine anno)
Numero di dipendenti iscritti ad un sindacato (unità)

| $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ |
| :---: | :---: | :---: |
|  |  |  | | dall'anno $2000 ?$ |
| :--- |
| nde successive: |

 (1=predeterminato; 2=parzialmente variabile in funzione della performance dell'impresa; 3=totalmente variabile in funzione della performance dell'impresa; 4=altro (ad esempio in funzione di specifico cambiamento organizzativo))

| (esprimere gli importi in migliaia di euro; $\mathbf{0}$ se nessun investimento;vedi istruzioni) |  |  |  |
| :---: | :---: | :---: | :---: |
| Spesa per beni materiali | 2007 | 2008 | Previsione 2009 |
| - immobili ... |  |  |  |
| - impianti, macchinari e attrezzature |  |  |  |
| - di cui: per beni materiali usati |  |  |  |
| - mezzi di trasporto ....................... |  |  |  |
| Totale spesa per beni materiali |  |  |  |
| Totale spesa per software e basi di dati ${ }^{(1)}$..... |  |  |  |
| Spesa per ricerca e sviluppo e analisi di mercato; p produzione di prova | ne e |  |  |


|  | 2008/2007 |  | Previsione 2009/ 2008 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Variazione percentuale media annua dei prezzi per beni materiali acquistati |  | \% |  |  |  |  | \% |
| Variazione percentuale media annua dei prezzi per software, basi di dati acquistati ${ }^{(1)}$ |  | \% |  |  |  |  | \% |

(1) Includere spesa per prospezioni minerarie, originali di opere d'intrattenimento, letterarie o artistiche.

Solo per le imprese che hanno partecipato anche alla precedente rilevazione: nel caso in cui le spese per investimenti sostenute nel 2008 siano significativamente diverse (di oltre il $5 \%$, con segno positivo o negativo) dalla previsione fornita nella precedente indagine (cfr. scheda allegata), ciò è dipeso:

- esclusivamente da prezzi di acquisto diversi da quelli previst


Nel secondo caso indicare se la revisione in quantità degli acquisti (di segno positivo o negativo) sia dipesa da: (possibili una o più risposte affermative, indicare "no" per le altre)

| - variazione dei costi di produzione attesi: | ivello |
| :---: | :---: |
|  | grado di incertezza |


| no | sì |
| :---: | :---: |
| no | sì |
| no | sì |
| no | sì |
| no | sì |
| no | sì |
| no | sì |
| no | sì |
| no | sì |
| no | sì |
| no | sì |
| no | sì |

Ripartizione percentuale geografica degli occupati e del totale investimenti fissi negli anni 2007, 2008 e 2009 (prevista):

|  | Occupati medi |  |  | Totale investimenti fissi lordi |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2007 | 2008 | Prev. 2009 | 2007 | 2008 |  | Prev. 2009 |
| Nord Ovest ${ }^{(1)}$ | \\| \% | - \% | ل | - \% |  | \% | \% |
| North East ${ }^{(2)}$ | \\|\% | \\| \% | - \% | - \% |  | \% | \% |
| Centre ${ }^{(3)}$ | \\|\% | - \% | - \% | - \% |  | - \% | - \% |
| Sud-Isole ${ }^{(4)}$ | \\|\% | - \% | - \% | - \% |  | \% | \% |
| Totale | 100 \% | 100 \% | 100 \% | 100 \% | 100 | \% | 100 \% |
| nella stessa regione ${ }^{(5)}$..... | لـ | \% | \% | - \% |  | - \% | \% |

(1) Nord Ovest=Piemonte, Valle d'Aosta, Lombardia e Liguria. - (2) Nord Est=Veneto, Trentino-Alto Adige, Friuli Venezia Giulia e Emilia Romagna. - (3) Centre=Toscana, Umbria, Marche e Lazio. - (4) Sud-Isole=Abruzzo, Molise, Campania, Puglia, Basilicata, Calabria, Sicilia e Sardegna. - (5) Stessa regione in cui è situata la sede amministrativa.

## PARTE D - Capacità produttiva tecnica


(la capacità produttiva tecnica viene definita come la produzione massima ottenibile utilizzando a pieno regime gli impianti, senza modificare l'organizzazione dei turni di lavoro)


## PARTE E - Fatturato, prezzi e risultato di esercizio

 di cui: per esportazione.
(a) Calcolare come: (fatturato 2009/2008-1)* 100
Solo per chi esporta: fatto 100 il valore complessivo delle esportazioni, indicare la quota venduta su ciascuno dei seguenti mercati negli anni 2007, 2008 e 2009 (prevista):


Variazione percentuale media annua dei prezzi dei beni e servizi da Voi fatturati mercato interno ed estero ..........

$$
\begin{aligned}
& \text { solo mercato interno.................. } \\
& \text { solo mercato estero (in euro)...... }
\end{aligned}
$$



In termini di variazioni percentuali 2009/ 2008 Voi avete già fornito una previsione di fatturato, al netto delle variazioni percentuali dei prezzi, approssimativamente pari al (segno e variazione percentuale)
$\square \quad|\quad| \quad$ \% (calcolare come (a) - (b))

Sapreste ora prevedere un intervallo intorno a questo valore, cioè fornire una previsione di fatturato minimo e massimo sempre al netto delle variazioni dei prezzi?
Minimo (segno e var. \%) $\quad \square \quad \square \quad \square \quad$ Massimo (segno e var. \%) $\quad \square \quad \square \quad \mid \quad$ \%
Potreste indicare il risultato di esercizio per il 2008?
3 sostanziale pareggio

forte utile
modesta perdita


## PARTE F - Finanziamento dell'impresa

I ndicare se in complesso, alle condizioni di costo e garanzia attualmente praticate all'impresa, si vorrebbe un maggiore indebitamento con il sistema creditizio o con altri intermediari finanziari

In caso di risposta affermativa alla domanda precedente indicare:
(ponendo pari a 100 il livello attuale di indebitamento) il livello desiderato dell'indebitamento:


- se si sarebbe correntemente disposti a pagare un tasso d'interesse anche appena superiore o, comunque, ad accettare un qualche aggravio delle condizioni dei prestiti (ad es. maggiori garanzie) pur di ottenere finanziamenti complessivi di maggior importo.
- perché, a giudizio del rispondente, non è stato finora possibile raggiungere il valore dell'indebitamento desiderato: (massimo un sì)
- non sono stati avviati contatti in tal senso con banche o altri intermediari nella convinzione che risponderebbero negativamente ad una richiesta di un aumento del volume dei finanziamenti
- non sono stati ancora avviati contatti in tal senso con banche o altri intermediari per altri motivi

| no | sì |
| :---: | :---: |
| no | sì |

- gli intermediari finanziari contattati non si sono dimostrati disponibili ad incrementare il volume dei finanziamenti


## Fonti di finanziamento dell'impresa

Autofinanziamento ${ }^{(1)}(+/-)$ (migliaia di euro) .

(1) Usare il segno meno in caso di autofinanziamento negativo. Per la definizione di autofinanziamento, vedi istruzioni.

Per ognuna delle seguenti voci si indichi se è intercorsa una variazione nell'anno rispetto alla consistenza in essere alla fine dell'anno precedente e se ne indichi l'entità (per la variazione negativa si utilizzi: 1=oltre -20 \%; 2=tra -20 e-10,1\%; $3=\operatorname{tra}-10$ e-5,1 \%; $4=\operatorname{tra}-5$ e-0,1 \%; per la variazione positiva si utilizzi: $5=\operatorname{tra} 0,1$ e $5 \% ; 6=\operatorname{tra} 5,1$ e 10 \%; 7=tra
10,1 e $20 \% ; 8=$ superiore a $20 \%$ ).
Capitale proprio ${ }^{(1)}$
Obbligazioni e altri titoli a medio/lungo termine ${ }^{(2)}$
Altri titoli ${ }^{(2)}$ $\qquad$
Indebitamento bancario $\qquad$

(1) Sí considerino esclusivamente le variazioni dovute a emissioni o rimborsi di capitale. La variazioni sono negative nel caso di rimborsi. - (2) Variazione negativa per l'impresa che complessivamente effettua rimborsi di obbligazioni e/o titoli.

## PARTE G - Private equity (vedi istruzioni)

Dal 2003 ad oggi l'impresa ha ricevuto proposte di acquisizione di quote di capitale di rischio da parte di fondi di private equity o venture capital?

Se sì, è stata accettata almeno una di queste proposte? no
Se non è stata accettata nessuna proposta, indicare l'anno della proposta e la motivazione principale del rifiuto (in caso di più di un'offerta, riferirsi alla prima in ordine cronologico) $|\quad| \quad|\quad|$ motivazione principale del rifiuto $\qquad$ ( $1=$ desiderio di mantenere il pieno controllo delle scelte strategiche dell'impresa; $2=$ non si è percepito alcun vantaggio rispetto alle usuali fonti di finanziamento; $3=$ altro (specificare sotto))
$\sigma$

## PARTE H - La crisi economico-finanziaria

In che misura la Vostra azienda ha risentito degli effetti della crisi economico-finanziaria?


## Solo se avete risentito della crisi economico-finanziaria (risposte $2,3,4$, alla domanda precedente):

Da quanti mesi?
 (indicare con 0 se non c'è stata contrazione del fatturato)
Con quale intensità si è manifestata la crisi per la Vostra azienda nei seguenti aspetti? ( $0=$ trascurabile; $1=$ modesta; $2=$ forte; $3=$ molto forte)

Fall in demand di prodotti dell'azienda $\qquad$
Difficoltà di pagamento da parte dei committenti/clienti $\square$
Difficoltà di reperimento di fondi attraverso gli usuali strumenti utilizzati dall'azienda
Difficoltà di reperimento di materie prime e/o intermediate goods attraverso l'usuale rete di fornitori
Rispetto a precedenti crisi, come valutate l'impatto di quella attuale per la Vostra azienda ?.................................
(1=di gravità inferiore; 2=di gravità simile; 3=di gravità maggiore)
Per quanti mesi ritenete che si protrarrà I'attuale situazione negativa per la Vostra azienda?
(fornire un minimo e un massimo per la previsione precedente)
minimo
massimo
Quali delle seguenti iniziative avete finora adottato/intendete adottare per far fronte alla crisi? (max 3 scelte)
(1=contrazione dei margini; $2=$ contenimento dei costi produttivi; $3=$ diversificazione dei mercati di vendita;
$4=$ miglioramento qualitativo della gamma dei prodotti/servizi; $5=$ riduzione della scala produttiva; $6=$ delocalizzazione
anche parziale dell'attività produttiva all'estero; 7=altro)

A partire da ottobre 2008, qual è stato l'andamento della Vostra domanda di linee di credito e prestiti bancari, escludendo le normali oscillazioni stagionali?
( $1=$ notevole contrazione; $2=$ moderata contrazione; $3=$ sostanziale invarianza; $4=$ moderato aumento; $5=$ notevole aumento; $8=$ non applicabile; $9=$ non so, non intendo rispondere)

Solo per chi ha risposto che la domanda di credito si è modificata (risposte $1,2,4$ e 5 ):
A partire da ottobre 2008, quali sono stati i due fattori più importanti che hanno indotto una modifica nella Vostra domanda di prestiti e linee di credito? primo fattore $\qquad$ secondo fattore $\qquad$
( $1=$ variazione esigenze fondi per investimenti fissi; $2=$ variazione esigenze fondi per scorte e capitale circolante; $3=$ variazione esigenze fondi per ristrutturazione debito; $4=$ variazione del ricorso all'autofinanziamento; $5=$ variazione di altri fattori)
Sempre a partire da ottobre 2008, avete rilevato un inasprimento delle condizioni complessive di indebitamento riscontrate dalla Vostra impresa?
Se sì,

1) avete ricevuto da parte dei vostri finanziatori richieste di rientro, anche parziale, da posizioni debitorie già in essere?
2) quali delle seguenti misure avete utilizzato specificamente in risposta al peggioramento delle condizioni di indebitamento (prescindendo dall'eventuale rallentamento dell'attività produttiva)? (indicarne l'intensità di utilizzo; $1=$ per niente utilizzata, $2=$ poco utilizzata; 3=abbastanza utilizzata; 4=molto utilizzata; 5=assai utilizzata) - utilizzo di attività liquide (es. riduzione depositi bancari, vendita di titoli pubblici)


- cessione di altre attività finanziarie (es. partecipazioni, crediti)
- modifiche delle politiche di credito commerciale (praticate verso la clientela, vedi istruzioni) ..
- riduzione del livello del debito.
- conferimenti di capitale di rischio
- riduzione degli investimenti programmati
- contenimento di costi del personale o di altri costi operativi.
- altro (specificare) $\qquad$

3) l'eventuale riduzione del valore dei beni o delle attività utilizzabili a garanzia dei vostri debiti ha influito negativamente sulla Vostra capacità di indebitamento? $\square$
( $1=$ no; $2=$ poco; $3=$ molto; $8=$ non è stata percepita alcuna riduzione di valore)

## PARTE I - Giustizia civile (vedi istruzioni)

Si fa riferimento ora alle cause civili promosse dall'impresa per inadempimento contrattuale della controparte. Quante ne sono state iniziate nel corso del 2008? (numero) $\qquad$
Tra quelle che si sono concluse negli ultimi 3 anni, in quanti casi (in percentuale del numero di cause) l'impresa ha preferito accordarsi con la controparte piuttosto che attendere l'esito del giudizio?
 \%
In questi casi, a quale percentuale media della somma dovuta l'impresa ha rinunciato per giungere all'accordo?


Qual è stato nel 2008 il costo dei servizi legali per le controversie civili? (migliaia di euro) (riferirsi esclusivamente ai costi per servizi legali acquisiti esternamente all'impresa).

## PARTE J - Iniziative a favore dell'efficienza energetica e della tutela ambientale (vedi istruzioni)

Quale è stata la spesa sostenuta nel 2008 per:
(importi in migliaia di euro; 0 se nessuna spesa)

| Spesa sostenuta nel corso <br> del 2008 | Per questa attività <br> era stata sostenuta <br> una spesa <br> nel 2007? |
| :---: | :---: |


| - migliorare l'efficienza energetica nella produzione (motori elettrici, lampade fluorescenti, ecc.) $\qquad$ | N. A. | no | sì |
| :---: | :---: | :---: | :---: |
| - trattamento dei residui della produzione (riduzione - riciclaggio smaltimento) $\qquad$ |  | no | sì |
| - limitare le emissioni nocive dei processi produttivi (per norma di legge attuale o futura) (barrare la casella laterale se non applicabile) $\qquad$ |  | no | sì |
| - modificare le caratteristiche dei prodotti per limitarne l'impatto ambientale (packaging, riciclabilità dei materiali, ecc.) $\qquad$ |  | no | sì |

## Se si è sostenuta almeno una delle spese sopra elencate nel 2007 o nel 2008:

utilizzando una scala da 0 a 10 , in che misura ciascuna delle seguenti finalità ha influenzato l'adozione di misure di gestione di impatto ambientale dell'attività della Vostra impresa? ( $0=$ del tutto ininfluente; usare i codici: 88=non applicabile; 99=non so, non intendo rispondere)

Punteggio (scala da 0 a 10)



[^0]:    * Bank of Italy, Economic Research and International Relations Area. The authors wish to thank Giuseppe Parigi and Roberto Sabbatini for comments on an earlier version of this work. They are also indebted grateful to Emanuela Ciapanna, Leandro D’Aurizio, Guido de Blasio, Francesca Lotti, Raffaele Tartaglia Polcini and Roberto Torrini for assistance in interpreting the accounts of the interviews conducted in the spring of 2009 with owners and managers of some Italian firms.

[^1]:    ${ }^{1}$ A detailed description of the Invind Survey is given in Appendix A of the Supplement to the Statistical Bulletin, "Indagine sulle imprese industriali e dei servizi" (July 2009; English version forthcoming). The extensive bibliography of studies based on Invind Survey data is available at http://www.bancaditalia.it/statistiche/indcamp/indimpser.
    ${ }^{2}$ There is an extensive literature on the use of interviews, developed mainly as part of case studies at business schools. The method is also employed in economic studies proper, usually in tandem with traditional quantitative analyses. In the 1990s the NBER promoted a major research project on the American productive system that envisaged visits to factories and conversations with company managers (Dertouzos et al., 1989; Borenstein et al., 1998; NBER/Sloan Project Report, 2000; Berger, 2005).

[^2]:    ${ }^{3}$ For a description of how the regularization of the status of immigrant workers produced a statistical effect that helped to limit the fall in employment, see Banca d'Italia (2009).

[^3]:    ${ }^{4}$ See Istat, Conti economici delle imprese, anno 2005, at http://www.istat.it/dati/dataset/20090206_00/.

[^4]:    ${ }^{5}$ I. Visco (2009) discusses the origins of the crisis and the diagnoses offered by economists; A. Bassanetti, M. Cecioni, A. Nobili and G. Zevi (2009) offer a detailed comparison between the current recession (with data up to the first quarter of 2009) and previous recessions.

[^5]:    ${ }^{6}$ Italian household consumption had begun to contract as early as the third quarter of 2007 ; the decline measured from then amounts to about 3 per cent.
    ${ }^{7}$ In the 1992-93 recession employment fell far more steeply, by 5 per cent.

[^6]:    ${ }^{8}$ Some of these benefits were granted under a waiver, a procedure made possible by the anti-crisis economic policy measures introduced in the Finance Law for 2009. Measured in terms of hours actually worked (i.e. excluding recourse to Wage Supplementation), the reduction in labour input compared with the second quarter of 2008 was even greater: 8.1 per cent in industry and 2.9 per cent in the entire economy.
    ${ }^{9}$ For the definition of standard labour unit or full-time equivalent worker, see the glossary in the Bank of Italy's Annual Report in Italian.
    ${ }^{10}$ IMF, October 2009, World Economic Outlook, Table 1.1.A.

[^7]:    ${ }^{11}$ For 2008, Istat estimates a much larger drop in investment for industrial firms ( 5.7 per cent) but a smaller one for nonfinancial service firms ( 1.5 per cent). In this regard, it should be recalled that in some cases the survey data made it possible to anticipate the direction of the revisions that Istat makes to its investment time series by branch of economic activity. This did not happen in the years in which government investment incentives were introduced, when the difference between the final data released by Istat and the Invind Survey data on industrial firms was particularly large.

[^8]:    ${ }^{12}$ Nominal turnover, for which data are available up to July 2009 , holding unchanged the following five months, would decline by 19.8 per cent in 2009 .
    ${ }^{13}$ For an analysis of the changes in the labour market in Italy, see Brandolini et al. (2006).
    ${ }^{14}$ Data from previous surveys are available in concomitance with the recessions of 1992-93 and 2001-03 and refer only to industrial firms with 50 or more workers.

[^9]:    15 These questions were only addressed to firms that reported they had been adversely affected by the economic and financial crisis ( 64.8 per cent of the sample). The sum of the responses is not equal to 100 per cent because firms could select up to three responses.

[^10]:    ${ }^{16}$ In the spring of 2007 the Bank of Italy held similar discussions with the aim of identifying and describing a possible restructuring of the Italian productive system. Omiccioli and Schivardi (2007) provide a summary of the results.
    17 The welcome businessmen gave the Bank's researchers was aptly described by Martin Feldstein when presenting the NBER/Sloan Project on Productivity Change to the American Economic Association: "We found that the management at the companies we visited were generally eager to show their facilities, to tell us about their management practices, and to explain why they did certain things and how their practices have changed over time. They were also generally open about answering our questions".

[^11]:    18 Large-scale retailing firms are marked by possessing substantial liquidity, which renders them immune from credit tightening by banks. In some cases these firms have themselves acted as banks, both in consumer credit to sustain the demand of their customers and in factoring to support their suppliers.

[^12]:    19 These strategies enabled firms to limit the arrival of negative signals among workers and at banks and to maintain the know-how acquired by the firm intact.

[^13]:    ${ }^{20}$ This implies that the signs of the coefficients in columns [1] and [2] are the opposite of those in columns [3] and [4].

[^14]:    21 As seen in Section 2.2, these were: (1) the fall in demand for firms' products; (2) payment difficulties faced by customers/contracting parties; (3) difficulty in raising funds; (4) difficulty in sourcing raw materials and/or intermediate goods via the usual network of suppliers.
    ${ }^{22}$ The table does not include the regressions for the difficulty in sourcing raw materials and/or intermediate goods via the usual network of suppliers since they did not give significant results.
    23 The possible responses were to: reduce profit margins; curb production costs; diversify markets/customers; improve the quality of the range of products/services; reduce the scale of production; and, exclusively for industrial firms, relocate all or some production abroad.
    24 Curbing costs was the response indicated by far the most often by firms, both in industry ( 84 per cent of firms indicate this as their first, second or third choice) and in services ( 90 per cent).

[^15]:    25 See, among others, Faini and Sapir (2005), Visco (2003a and 2003b); Onida (2004) and Rossi (2004).

[^16]:    26 The following strategy changes were considered: (1) major changes in the product range; (2) greater investment in the trademark; and (3) internationalization of production.
    27 The reference universe consists of about 65,000 firms.
    28 For more details on the results of the 2006 observations, see Banca d'Italia (2007) and Brandolini and Bugamelli (2009).

[^17]:    29 Bugamelli, Schivardi and Zizza (2008) show that the restructured firms recorded higher rates of growth of value added and productivity between 2000 and 2006 as well.
    30 It is reasonable to believe that among the firms that did not begin to restructure there were some that did not need any change to their industrial and marketing strategies because they were already highly efficient. Nonetheless, in the econometric analysis the variable turnover per worker (eff) should already capture the differences between firms' efficiency.

