Financial Crisis



# How Are Firms in Eastern and Central Europe Reacting to the Financial Crisis?

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**Since late 2008, countries around the world have been affected by the global economic slowdown. The Financial Crisis Survey measures the effects of this crisis on 1,686 firms in six countries in Eastern Europe and Central Asia: Bulgaria, Hungary, Latvia, Lithuania, Romania, and Turkey. Survey data show that in these countries, the major effect of the crisis is a drop in demand. It is not a *financial* crisis—it is a demand crisis. Sales and capacity utilization decreased in all six countries. Accompanying a drop in demand is a drop in employment, which affects mostly permanent employees. Permanent employment declined in five countries, while temporary employment declined in four. In all countries but Romania, firms are using more internal funds to finance their working capital. However, there is evidence that some firms are in extreme financial distress, especially in Romania. On a more positive note, in four out of the six countries sampled, the majority of firms do not expect sales to further decrease.**

The Financial Crisis Survey was developed with the objective of measuring the effects of the financial crisis on firms in select countries. From the information collected during short interviews, indicators were computed to measure the effects of the crisis on key elements of the private economy: sales, employment, finances, and expectations about the future. Indicators were generated for a subset-sample of firms drawn from the set of firms previously interviewed in the Enterprise Surveys (ES) implemented in 2008 (table 1). In all cases, participation in the Financial Crisis Survey was voluntary, and it included all sectors in the original sample (with the exception of Turkey, where only the original manufacturing subsample was targeted). In all countries, the original sample of the ES was representative of the private nonagricultural formal economy. The original ES data also serve as a baseline for comparisons because most of its questions referred to fiscal year 2007, thus measuring the precrisis scenario.

The Financial Crisis Survey was conducted in June and July 2009 in six countries: Bulgaria, Hungary, Latvia, Lithuania, Romania, and Turkey. In addition to a short survey administered to the subset of firms, the project included contacting the entire original sample of the ES, which covered 2,499 firms, to determine whether these firms were still in existence or if they had failed and/or became inactive. Using this information, firm exit rates from 2008 to 2009 were computed. Three types of exit rates are used: The first measures the percentage of firms in the baseline sample that discontinued business or are inactive. The second measure adds the number of firms that indicated during the survey that they had filed for insolvency or bankruptcy. This composite indicator provides a more realistic picture of the number of firms that closed, or are in the process of closing down, since the implementation of the baseline survey. The third measure includes, in addition to the first two components, the percentage of firms that were impossible to locate (figure 1). Since each firm's contact information was collected during the baseline survey, which was administered six months to a year before the Financial Crisis Survey, the assumption is that these firms could not be reached because they had closed down.

Turkey has the highest percentage of firms that closed down or filed for insolvency or bankruptcy (6.8 percent). However, this result is qualified by the fact that in Turkey, the target sample is restricted to the manufacturing sector. Among the rest of the countries, Romania and Latvia exhibit the highest percentage of firms closing down or filing for bankruptcy, at 4.9 percent and 4.7 percent,

**Table 1** **Sample Description**

| | | Sample composition by size (%) | | | Sample composition by industry (%) | | |
|---|---|---|---|---|---|---|---|
| Country | Number of observations | Small (5-19 employees) | Medium (20-99 employees) | Large (100+ employees) | Manufacturing | Retail | Other services |
| Bulgaria | 150 | 47 | 35 | 18 | 36 | 29 | 35 |
| Hungary | 187 | 34 | 30 | 36 | 38 | 19 | 43 |
| Latvia | 226 | 36 | 31 | 33 | 36 | 32 | 32 |
| Lithuania | 239 | 39 | 34 | 27 | 36 | 32 | 32 |
| Romania | 370 | 30 | 36 | 34 | 39 | 25 | 36 |
| Turkey | 514 | 25 | 42 | 33 | 93 | 2 | 5 |

*Sources:* Financial Crisis Survey/Enterprise Surveys.[1]

respectively. Lithuania has the third highest exit rate using this definition. It shows a considerable difference between the exit rate computed from the results of the initial screening process and the exit rate obtained by adding the firms that indicated that they had filed for insolvency or bankruptcy during the interview for the Financial Crisis Survey. This implies that in Lithuania, filings for insolvency and bankruptcy rose in the weeks before the survey. In Hungary, the screening of the baseline original sample displayed no evidence of firms closing down, but in the survey, 1.5 percent of the firms reported having filed for insolvency or bankruptcy.

Romania is the country with the highest exit rate when the firms that were impossible to locate are included in the computation (17.6 percent). Using this expanded measure, Bulgaria jumps to second place. This measure provides the upper bound for the actual exit rate for the economy, while the second measure (firms that closed down plus insolvent firms) provides the lower bound, which ranges from 0.9 percent in Bulgaria to 6.8 percent in Turkey.

In Turkey, 6.8 percent of manufacturing firms closed down or filed for insolvency or bankruptcy.

## Main Effect of the Financial Crisis on Private Firms

The survey included a direct question on the main effect of the financial crisis. Firms were given a list of five options to choose from, including a residual option termed "other effect." More than 70 percent of firms in each of the countries covered chose "drop in demand for its products and services." This percentage varies from 70 percent in Hungary to 78 percent in Romania (figure 2).

Drop in demand was the main effect witnessed for all firm types across all countries covered. However, the intensity of the effect varied across countries and sectors. For example, in Bulgaria, only 52 percent of the retail firms reported drop in demand as the main effect, compared with 82 percent of other services sector firms and 86 percent of manufacturing firms. The opposite holds in Latvia, where retail firms claimed to have been affected by a reduction in the demand for their services in significantly higher numbers (89 percent) versus 68 percent of firms in manufacturing and 71 percent of firms in other services sectors of the economy.

Although the main effect of the financial crisis was clearly the same across all countries, this is not the case for the second most commonly selected main effect.[2] For example, in Lithuania and Romania, the second most important effect was an increase in the level of debt, whereas in Hungary, it was an increase in input costs. In Bulgaria, Latvia, and Turkey, the second most important effect of the crisis was an effect not explicitly mentioned in the questionnaire. The crisis seems to also have had differential effects depending on other characteristics of the firms. For instance, in Lithuania and Romania, a significantly higher proportion of domestically owned firms claimed to have experienced an increase in the level of debt as the second most important effect of the crisis, much more so than foreign-owned firms. In fact, foreign-owned firms seem to be immune to this effect.

## Effect on Sales and Production

Firms were asked if their sales had increased or decreased between June 2008 and June 2009 and by how much. The country average percentage change in sales is the net change computed by weighting the percentage change in sales by the sales that firms recorded in 2007 in the baseline Enterprise Surveys. On average, firms in all countries experienced a decrease in their sales, which mirrors the data on the main effect of the crisis (figure 3). However, not all firms experienced a decrease in sales. In Turkey, 15 percent of firms actually experienced an increase in sales from June 2008 to June 2009. Even in Latvia, where the average net change was minus 39 percent, 12 percent of large firms actually experienced an increase in sales. In this country, the share of firms that experienced a drop in sales was significantly lower in manufacturing (at 80 percent) than in retail, where 95 percent of firms reported a reduction in sales. In Turkey, the percentage of firms that experienced an increase in sales was significantly higher for female-run firms (37 percent) than for male-run firms (13 percent).

Across the six countries, the effect of the financial crisis, as measured by the percentage change in sales, exhibits an inverse relationship with the size of the firm: large firms experienced a lower percentage reduction than medium-size firms, and medium-size firms experienced a smaller reduction than small firms. This trend is broken only in Romania and Hungary, where medium-size firms experienced a slightly smaller drop in sales than large firms. In Romania, exporting firms experienced a significantly larger percentage reduction in sales (39 percent) than nonexporting firms (24 percent). Firms in the Romanian retail sector were more insulated against the financial crisis, as shown by their lower percentage reduction in sales (20 percent), compared with 27 percent for manufacturing firms and 29 percent for firms in other services sector. In Lithuania, the percentage drop in sales for exporting firms was significantly lower (27 percent) than for nonexporting firms (43 percent).

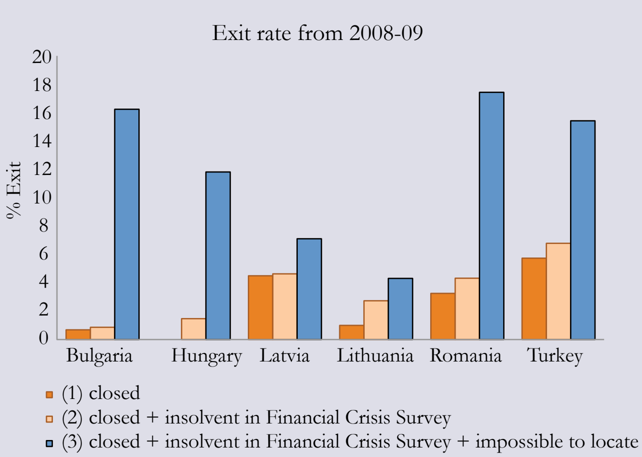
The Financial Crisis Survey also measured capacity utilization of manufacturing firms. This is defined as the "establishment's output in comparison with the maximum output possible using all resources available." The difference in capacity utilization measures the increase or decrease in firms' capacity utilization in 2009, compared with the baseline year 2007. Consistent with the reduction in sales, all countries experienced a reduction in capacity utilization in the manufacturing sector.[3] In all countries except for Hungary and Romania, capacity utilization contracted by more than 15 percentage points. The percentage of firms that experienced a reduction in capacity utilization was greater than 50 percent in all countries except Romania, where it was 36 percent. In Bulgaria, Latvia, and Lithuania, this percentage was greater than 70 percent.[4]

## Effect on Employment

The change in permanent employment measures the variation in employment from the end of fiscal year 2007 (data collected in 2008 by ES) to June 2009. Permanent employment is defined as including all paid employees contracted for a term of one or more fiscal years who have a guaranteed renewal of employment and who work eight or more hours per day.

Permanent employment, on average, decreased in all countries (except Romania) (figure 5). In addition, in all countries, more than half of the firms decreased their level of permanent employment (except in Bulgaria, where 48 percent of firms did so). Even in Romania, where there was an increase in the overall average number of permanent employees, 50 percent of the firms actually reduced permanent employment. In all six countries, even in Romania, large firms experienced a drop in permanent employment. In Hungary, large firms significantly reduced permanent employment, in contrast to small and medium-size firms, which actually increased their permanent employment. In Turkey, small, medium-size, and large firms reduced permanent employment. The reduction in permanent employment in Lithuania was significantly higher in large firms than in medium-size firms, and small firms actually exhibited a slight increase in permanent employment. Finally, Bulgarian firms reduced permanent employment across all firm sizes, but the changes were not significant.

**Figure 1** **Where Are Firms Disappearing?**

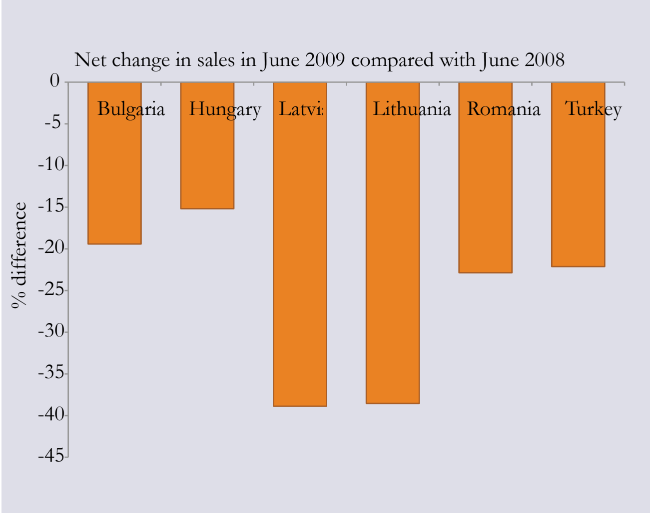



*Sources:* Financial Crisis Survey/Enterprise Surveys.

**Figure 2** **Drop in Demand Is the Main Effect of the Crisis**

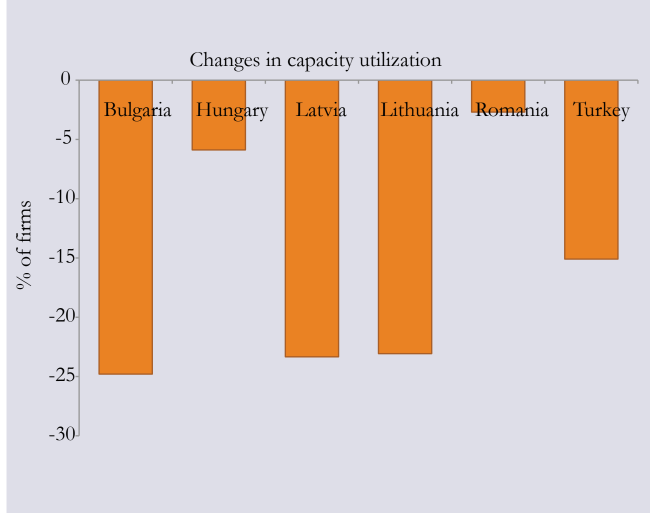

*Sources:* Financial Crisis Survey/Enterprise Surveys.

**Figure 3** **Sales Decreased in All Countries**




*Sources:* Financial Crisis Survey/Enterprise Surveys.

**Figure 4** **Reduction in Capacity Utilization**




*Sources:* Financial Crisis Survey/Enterprise Surveys.

Firms can substitute permanent employees with temporary workers; therefore, to measure the full effect of the financial crisis on employment, it is also important to analyze changes in temporary employment. Temporary employment consists of all paid, short-term (that is, for less than a fiscal year) employees who have no guarantee of employment contract renewal and who work eight or more hours per day. Adjustments to levels of temporary employment were minor relative to adjustments in permanent employment, which may reveal the firms' perception of the crisis as a permanent change in the business environment, with long-term consequences. The data also indicate that there might have been some substitution of permanent with temporary employment in a few countries. This seems to be the case in Latvia and Turkey, where the average reduction in permanent employment is accompanied by an average increase in temporary employment. In Romania, the higher average permanent employment is matched with a reduction in average temporary employment, which may be the result of reallocating resources toward more productive activities. When the sample for each country is restricted to the set of firms that used temporary employment in either period, the substitution effect between permanent and temporary employment was witnessed in Hungary, Latvia, and Turkey, but not in Romania.

Large firms experienced a lower percentage reduction in sales than medium-size firms, and medium-size firms experienced a smaller reduction than small firms.

The results for Turkey show greater changes in both permanent and temporary employment than in any other country. This is partly the result of the fact that the sample in Turkey comprises of only manufacturing firms. In fact, when all samples are restricted to manufacturing firms, Latvia exhibits a much greater reduction in permanent employment than Turkey, 11.3 percent versus 9.4 percent, respectively. Turkey, along with Bulgaria and Latvia, showed a decrease in the average permanent employment in all firms, regardless of size. Exporting firms in Latvia, Romania, and Turkey showed a significantly higher average reduction in permanent employment than nonexporting firms. In fact, nonexporting firms in Romania exhibited an average increase in permanent employment.

## Effect on Firms' Financing

During difficult economic times, firms are more likely to use internal financing, become overdue in their obligations, restructure their liabilities, or even file for bankruptcy. The Financial Crisis Survey attempts to measure these four aspects. On average, firms in four countries—Hungary, Latvia, Lithuania, and Bulgaria—increased their use of internal funds or retained earnings to finance working capital. Firms in Hungary increased their use of internal funds by almost 4 percentage points, while in the other three countries, the increase was positive, but small (figure 6). In Hungary, the increase in internal financing spreads across all firm sizes and industries. The reduction in the use of internal funds by firms in Romania is driven by the considerable number of firms that claimed no internal funds were used to finance working capital in 2009. If this is a consequence of extreme liquidity problems, these firms constitute a category of their own. When these firms are excluded, the overall change in the percentage of internal funds for financing working capital for Romania is an increase of 4.4 percentage points.

The survey measures the percentage of firms overdue on obligations to any financial institution in the previous 12 months, and in this subset of firms, it captures the ones that were overdue for 90 days or more. More than a quarter of the firms in Latvia, Lithuania, and Romania have been overdue in the last year (figure 7). The data, again, seem to suggest that some firms have had extreme liquidity problems (especially in Romania, where nearly 33 percent of firms do not finance working capital with internal funds or retained earnings). Among these firms solely financed externally, almost 50 percent have been overdue on their financial obligations in the last 12 months. In fact, over a third of these firms were overdue for 90 days or more. In Bulgaria and Latvia, the share of small firms overdue on their obligations was significantly higher than the share of large firms with overdue obligations. In Lithuania, firms with foreign ownership and firms with female managers are less likely than domestic firms and firms with male managers to have overdue obligations to any financial institution.

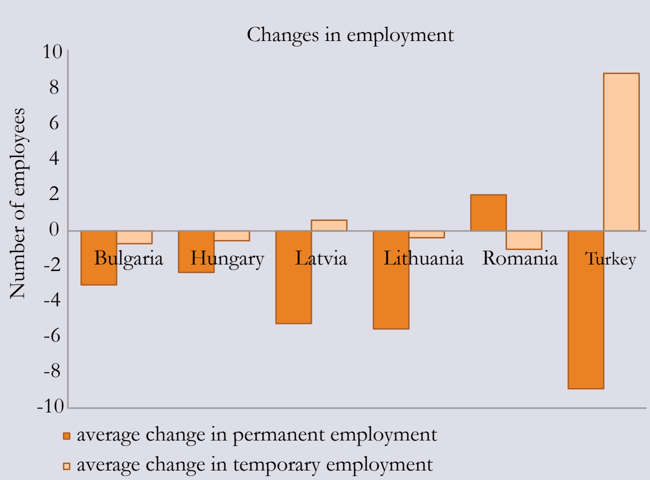
When firms have overdue payments or to avoid falling in arrears, they may restructure their liabilities. The Financial Crisis Survey measured the percentage of firms that restructured outstanding liabilities in the previous 12 months. More than one quarter of all firms interviewed in Latvia and Lithuania restructured their liabilities, while only 5 percent did so in Romania, even though firms in Romania were about as likely to have overdue financial obligations. In Bulgaria, Hungary, and Turkey, the proportion of firms restructuring liabilities was at least as high as the share of firms falling into arrears—which is an indication that some preventive measures had been taken by entrepreneurs in these countries.

## Firms' Expectations

To fully analyze the effects of the financial crisis, it is also important to assess firms' expectations of the future. Firms were asked to project sales, employment, and finances for a year from the date of survey. Overall, the proportion of firms that were optimistic or neutral about future sales was larger than the proportion of firms that were pessimistic (except in Latvia and Hungary) (figure 8). However, firms' optimism varied considerably across countries: from more than 50 percent of firms in Turkey having optimistic responses to only 10 percent in Hungary. Within countries, expectations about future sales vary by firm type (table 2). In Latvia, Lithuania, and Turkey, a significanlty smaller percentage of exporting firms compared to non-exporting firms expected sales to decrease a year from now. Other significant differences in future sales perceptions existed between Romanian manfacturing and service sector firms, as well as male versus female managed firms in Lithuania and Turkey.

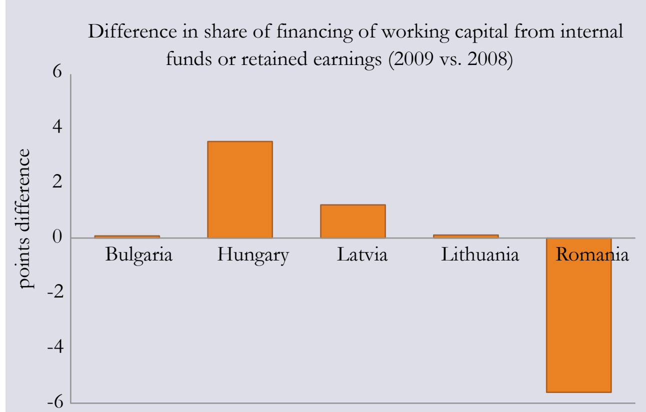
Firms' expectations about future employment levels were measured by asking firms about their hiring plans for the following six months. In Latvia and Lithuania, more than a third of the firms planned to reduce their permanent workforce in the six months following the survey, whereas 11 percent of firms planned to do so in Hungary (figure 9). In Latvia, exporting firms and firms with female managers were less likely to expect a decrease in their permanent workforce than nonexporting firms and firms with male managers. In Lithuania, on the contrary, firms with female managers expected to reduce their permanent employment in significantly higher shares (62 percent) than firms with male managers (38 percent). Foreign-owned firms in Lithuania were also more prone to expect a reduction in permanent employment than domestically owned firms. The opposite effect was observed in Hungary: domestic firms were more likely to expect reductions in permanent employment (12 percent) than foreign-owned firms (3 percent). In Romania, manufacturing firms and medium-size and large firms expect to reduce the size of their

**Figure 5** **Fewer Permanent Jobs**




*Sources:* Financial Crisis Survey/Enterprise Surveys.

**Figure 6** **More Internal Financing**




*Sources:* Financial Crisis Survey/Enterprise Surveys.[5]

## Table 2 Percent of Firms Expecting Future Sales to Decrease, by Firm Type

| Country | Manufacturing | Retail |
|---|---|---|
| Romania | 18 | 39 |
| | | |
| | Non-Exporting | Exporting |
| Latvia | 65 | 21 |
| Lithuania | 43 | 23 |
| Turkey | 26 | 12 |
| | | |
| | Male Managers | Female Managers |
| Lithuania | 35 | 67 |
| Turkey | 22 | 9 |

*Sources:* Financial Crisis Survey/Enterprise Surveys.[1]

permanent workforce in larger proportions than firms in other sectors of the economy or small firms.

To measure firms' expectations about their future finances, the survey first assessed whether firms anticipate that they would fall in arrears in any of their outstanding liabilities over the course of the following six months. Those firms that expected to fall in arrears were also asked whether they anticipated not being able to repay the outstanding liabilities due in the following six months. Romanian firms presented the largest indicators of potential financial distress: around 70 percent of firms anticipated falling in arrears, and among that subset, 31 percent expected that they will not be able to repay their liabilities sometime in the following six months (figure 10). Romanian firms in manufacturing (56 percent) were more likely to expect not to be able to repay their debts in the next six months than firms in retail (26 percent). In Lithuania, firms in retail were more likely to expect financial difficulties: 67 percent, compared with 28 percent in manufacturing and 31 percent in other services. Small firms in Lithuania, compared with medium-size and large firms, were also more likely to expect being unable to repay their debts in the projected six-month period. In Latvia, exporting firms were more likely than nonexporting firms to expect to be unable to repay their debts in the next six months. In Bulgaria, large firms were less likely than medium-size and small firms to also expect to be unable to pay their debts due in the next six months. Finally, in Turkey, domestically owned firms were more likely to expect to be unable to repay debts than foreign-owned firms.

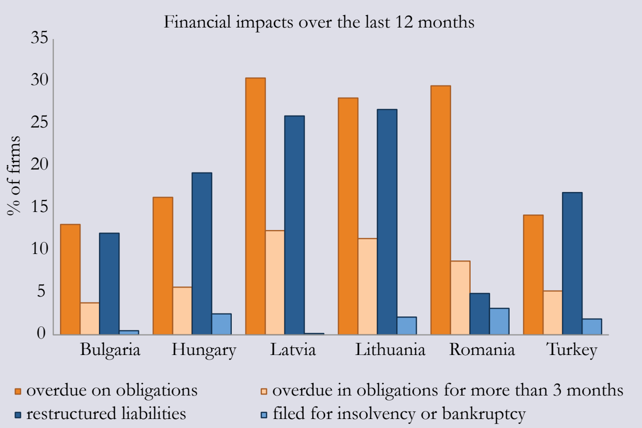
## Every Country a Different Story

Overall, firms have experienced the effects of the financial crisis mainly through a drop in demand. However, the impact of the crisis and firms' reactions to the crisis vary across the six countries covered.

In Bulgaria, firms reduced capacity utilization, as well as permanent and temporary employment. About 0.9 percent of the firms have closed down or are in the process of closing down. However, additional information collected during the screening process of the survey suggests that the real exit rate of the economy could be much higher: The third alternative measure of the exit rate, which incorporates firms impossible to locate, indicates that Bulgaria has the second-highest exit rate of the group. However, a fair number of Bulgarian firms view the crisis as temporary (as indicated by their optimistic sales expectations); still, more than 15 percent of firms expect to reduce their employment in the next six months.

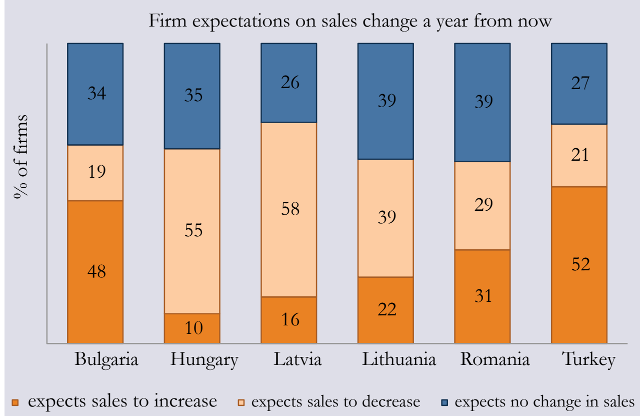
Compared with those of the other five countries, Hungarian firms seem to be among the least affected by the financial crisis. Not only is the exit rate for Hungarian firms the second lowest of the six countries (not including firms that were impossible to locate), but they

### Figure 7 Indicators of Financial Distress




*Sources:* Financial Crisis Survey/Enterprise Surveys.

### Figure 8 Most Firms Are Optimistic about Future Sales




*Sources:* Financial Crisis Survey/Enterprise Surveys.

also experienced the smallest average reduction in sales and the second-smallest reduction in capacity utilization. Firms in Hungary seem to have weathered the financial crisis by reducing their permanent and temporary employment; Hungarian firms also reacted by turning inward and independently financing their needs from their own funds. Not surprisingly, the percentage of firms that expect to be in financial distress over the next six months is lowest in Hungary. The same holds for the proportion of firms expecting to reduce their permanent employment in the next six months.

Latvia, on the other hand, seems to be among the most affected by the financial crisis. Latvia exhibited the second-highest exit rate of all countries (not including firms that were impossible to locate) and the third-highest reduction in permanent employment and capacity utilization. Latvian firms seem to have reacted by replacing permanent employees with temporary workers and by financing their operations through an increasing reliance on their own funds. Not surprisingly, more than 50 percent of Latvian firms expected a reduction in sales over the next six months, and almost 35 percent of Latvian firms expected to further reduce their permanent employment. Internally, retail and nonexporting firms seem to be the most affected types of firms in this country.

> In Latvia and Lithuania, more than a third of the firms planned to reduce their workforce in the six months following the survey.

Lithuania, along with Romania, trail Latvia and Turkey in the impact of the financial crisis on firms. Both countries have a lower exit rate than Latvia and Turkey (although Lithuania, compared with Romania, experienced a much higher average drop in sales and capacity utilization). Lithuanian firms have reacted by reducing both permanent and temporary employment, whereas Romanian firms have actually increased permanent employment and reduced temporary employment (in Romania, there is evidence of reallocation of resources across firms). In both countries, the majority of firms have reacted by increasing their use of their internal funds to finance their operations; however, the data indicate that some firms have faced serious liquidity problems. This is confirmed by firms' expectations about finance: Romania has the highest percentage of firms expecting to fall in arrears with a financial institution, as well as the highest percentage of firms expecting an inability to repay their outstanding debt in the next six months.

Finally, among all countries, Turkey exhibited the highest exit rates and the most drastic changes in employment. Turkey also showed a considerable drop in average capacity utilization and sales. However, despite the considerable negative impact of the crisis, expectations in Turkey were relatively optimistic. More than 50 percent of the firms expected their sales to increase in the next six months, and the number of firms expecting to reduce their permanent employment in the next six months is the second lowest among all countries sampled.

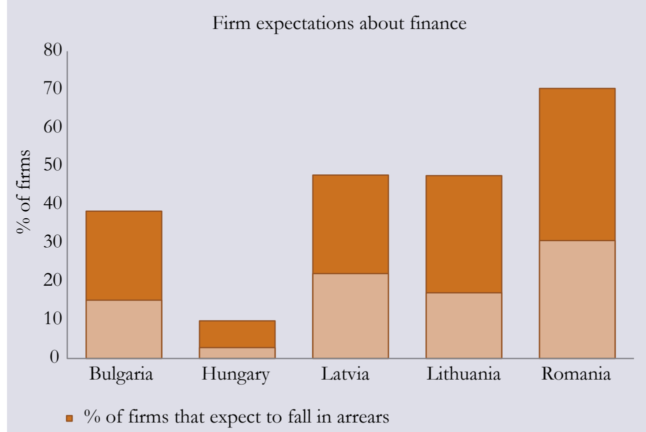
## Notes

1. Other services include wholesale, construction, hotel and restaurants, transport, storage and communications, and computer-related activities.
2. The survey did not ask directly for the second-most-important effect; instead, the analysis presented here is based on the frequency that each option was chosen as the main effect.
3. This variable is available only for manufacturing firms.
4. The change in capacity utilization was not weighted by any measure of firm size, while the change in sales was weighted by total sales in the initial period.
5. Turkey is not included in this graph because the question was not asked in the Turkey survey.

**Figure 9** Will Future Employment Rise?


*Sources:* Financial Crisis Survey/Enterprise Surveys.

**Figure 10** Grim View about Meeting Future Payments




*Sources:* Financial Crisis Survey/Enterprise Surveys.[5]

The Enterprise Surveys measure the business environment in more than 100 countries. A standardized questionnaire, universe under study, and implementation methodology are used to make sure that information is comparable across countries and time. The full data and documentation explaining the methodology are available at www.enterprisesurveys.org.



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