Boarding a Sinking Ship? An Investigation of Job Applications to Distressed Firms

Jen Brown
Northwestern & NBER

David Matsa
Northwestern
A firm’s financial condition has far-reaching effects on the firm, including on its workers.

Firm’s financial struggles hurt workers

- Strains firm’s reputation for treating employees fairly (Maksimovic and Titman 1991)
- Substantially reduces job security (Hotchkiss 1995; Agrawal and Matsa 2012)
Such “indirect” costs of financial distress form basis for theories of financing choices.

Familiar theory, but empirical relevance of financial distress’ impact on worker behavior is unknown.

Firm’s financial struggles hurt workers.

Employees and jobseekers avoid distressed firms (Titman 1984).
Firms’ distress affects both supply and demand in the market for labor

MEASUREMENT CHALLENGE

- Challenging to separate the effect of distress on supply and demand with only data on employment or wages
  - Firms’ demand: Distress reduces scale of firm
  - Workers’ supply: Distressed firms less attractive to workers

- **Our approach**: Analyze novel datasets from a large online job search platform
  - With micro job application data, we hold demand fixed and examine the supply of workers to specific jobs at individual firms
Does a firm’s financial health really affect its ability to attract workers?

RESEARCH QUESTIONS

1. How accurate are jobseekers’ perceptions of firms’ financial health?

2. How does a firm’s financial health affect jobseekers’ application behavior? Is it supply or demand?

3. What are the implications for firms’ accumulation of human capital?
Jobseekers were surveyed about their perceptions of firms’ financial health

**SURVEYS: DATA**

- The job search platform conducted surveys between October 2008 and March 2010 (85 surveys, 145 unique firms)

- Survey asked respondents to rate companies’ financial strength on a five-point scale (1=very weak, 5=very strong)
  - Mean = 3.3; Std. dev = 0.4
  - Based on about 150 respondents per survey

- We matched survey responses with companies’ actual performance using daily CDS prices (5-year, senior bonds)
When a firm is at higher risk of defaulting, jobseekers perceive the firm’s weak financials.
RESEARCH QUESTIONS

1. How accurate are jobseekers’ perceptions of firms’ financial health?

2. How does a firm’s financial health affect jobseekers’ application behavior? Is it supply or demand?

3. What are the implications for firms’ accumulation of human capital?
How do firms’ financial health affect jobseekers’ application behavior?

APPLICATION ANALYSIS

- Proprietary data on 96,065 jobs at 40 large financial firms
  - Firms averaged 26 postings per week (Apr 08–Dec 09)
  - Average job posting received 58 applications

- We examine the relationship between firms’ financial health and the volume of applications to open positions
  - Jobseekers submit applications to specific jobs
  - # Applications = Measure workers’ interest in these jobs
Job postings are distributed geographically, roughly in proportion to state population.
We exploit substantial variation in financial health of financial firms during recent recession.
Distressed firms receive fewer applications for posted positions

APPLICATIONS RECEIVED, OCT. 2008
A 1,000 bp increase in CDS price is associated with 20% fewer job applications

RESULTS: TOTAL APPLICATIONS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-1.937 **</td>
<td>-1.784 **</td>
<td>-1.745 ***</td>
<td>-1.733 ***</td>
<td>-1.337 ***</td>
<td>-2.372 ***</td>
</tr>
<tr>
<td></td>
<td>(0.833)</td>
<td>(0.720)</td>
<td>(0.655)</td>
<td>(0.646)</td>
<td>(0.466)</td>
<td>(0.833)</td>
</tr>
</tbody>
</table>

**Fixed effects**

- Firm
- Month
- State
- State-Month
- Job type
- Detailed job type
- Detailed job type-State-Month

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

- R-squared: 0.18, 0.26, 0.27, 0.35, 0.40, 0.63
- # of observations: 96,065
Do changes in firms’ demand for labor explain the effect?

LABOR DEMAND (TABLE 7)

- Can effects be explained by firms’ hiring needs becoming more specialized during periods of distress?
  - No—fixed effects for specific job titles being advertised mute the effect but do not explain much of the differences

- Given their distress, do financially constrained firms offer unattractive salaries?
  - No—distressed firms do not offer unattractive salaries; rather, we find evidence of compensating differentials
When offered similar positions and wages, do workers prefer to work for healthy firms?

LABOR SUPPLY (TABLES 8 & 9)

- Do more generous UI benefits mitigate job security concerns and make workers’ less sensitive to firms’ distress?
  - Yes—more generous UI benefits dampen applications’ sensitivity to firms’ CDS price

- Are jobs at distressed firms particularly undesirable to workers who have to relocate for the job?
  - Yes—distant applicants are particularly sensitive (implication: firms’ lose access to national labor market)
RESEARCH QUESTIONS

1. How accurate are jobseekers’ perceptions of firms’ financial health?

2. How does a firm’s financial health affect jobseekers’ application behavior? Is it supply or demand?

3. What are the implications for firms’ accumulation of human capital?
The reduction in labor supply affects distressed firms’ accumulation of human capital

- Quality of applicant pool (Table 10)
  - Based on characteristics of their ZIP codes, applicant pool is less educated and lower paid

- Heterogeneity across job types (Table 11)
  - Sensitivity to distress is strongest and most consistent for jobs requiring college education

- Employee retention, brain drain (Table 12)
  - Distressed firms reduce their total workforces more than other firms, but volume of job postings does not decrease
A firm’s financial health affects its ability to attract new workers

CONCLUSION

Using unique datasets from a large online job platform, we find:

1. Jobseekers’ perceptions of firms’ financial health are positively correlated with firms’ actual performance

2. The volume of applicants attracted to open positions is negatively correlated with firms’ financial health
   - Explained partly by reduced labor supply to these firms
   - Lose access to national labor market; reduces quality of applicant pool; particularly strong for high education jobs
Our analysis does not distinguish financial from economic distress

**INTERPRETATION**

- We find that a firm’s distress reduces its labor supply
  - Reduction is related to reduced job security
  - Labor supply response varies with UI generosity

- Other studies find that financial distress substantially reduces job security (Hotchkiss 1995; Agrawal and Matsa 2012)
  - Although we cannot verify to what extent economic vs. financial factors contributed to the distress of the specific firms we study, conclusions likely apply to financial distress
Distressed firms struggle to retain or attract workers who could contribute to recovery

IMPLICATIONS

- Staffing challenges partly explain why distressed firms struggle to regain financial stability (distress reinforces distress)

- Labor market frictions reduce incentives for corporate risk-taking, potentially leading firms to:
  - Reduce financial leverage (Titman 1984; Berk, Stanton and Zechner 2010; Agrawal & Matsa 2012) and operating leverage (Lev 1974)
  - Take on less risky projects (Hennessy and Whited 2005)
  - Redesign job tasks to require fewer firms-specific skills (Jaggia and Thakor 1994)