

Benefiting from Bankrupt Firms: Evidence from Local Labor Movement

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Abstract

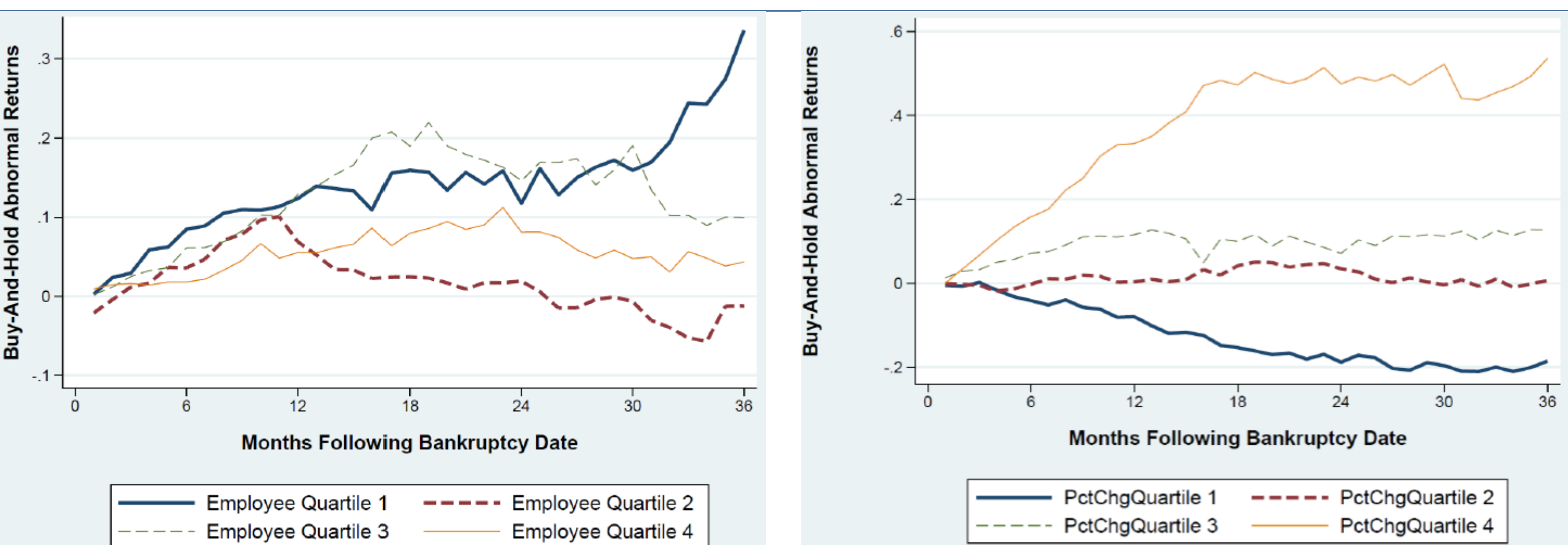
- This paper examines the long-run effect of bankruptcy announcements on stock performance of companies that are located in the same city as the bankrupt firm.
- The empirical analysis uses event study and time-series analyses.
- The result suggests that firms in the same city have positive abnormal returns in the three years after bankruptcy filing. And further studies attribute this effect to labor movement.**

Introduction

- Effect of bankruptcies on industry peers.
 - Lang and Stulz (1992) show an overall negative impact on the stock prices of the competitors of the bankrupt firm.
 - Shleifer and Vishny (1992) show that financially distressed firms are forced to sell assets, and their industry peers are likely to be experiencing problems, leading to asset sales at discount prices.
- The relationship between labor mobility and firm performance.
 - Economic geographers have stated that labor mobility prompts knowledge formation in the local area. As a result, labor mobility contributes to the economic success of regions (Saxenian, 1994).
 - Further, at the micro-level, local labor externalities produced by labor mobility affect firm performance to a large extent (Eriksson and Lindgren, 2008).
 - Almeida and Kogut (1999) claim that new employees can provide knowledge to their new firms, which increases the performance of firms.
 - Boschma, Eriksson and Lindgren (2009) show that the relationship between unrelated skills and firm performance is significantly positive when the new employees are recruited in the same region.
 - This paper is the **first** to study the effect of bankruptcy on the performance of firms in the same geographic area.

The Channel

- We show that labor movement is the reason for positive returns of adjacent firms in four ways (tables below: top left – top right – bottom left – bottom right):
 - Marginal benefits brought by a new employee:** companies in the same city have higher abnormal returns when the adjacent company has fewer employees (larger marginal benefits of diverse skills).
 - Bankrupt firm size:** companies in the same city have higher abnormal returns when the bankrupt firm has more employees (larger influence).
 - Number of adjacent firms of a bankruptcy:** companies in the same city have higher abnormal returns when the bankrupt firm has fewer adjacent firms (less competition in labor market).
 - Post-event percentage change of employees:** companies in the same city have higher abnormal returns when they add more employees after the bankruptcy (more diverse skills).



	(1)	(2)	(3)	(4)	(4) - (1)
BHAR	29.0	-0.02	10.0	5.1	-23.9
	(2.41)	(-0.25)	(1.03)	(0.97)	(-1.80)
3 Factor Alpha/EW	1.03	0.51	-0.14	-0.72	-1.75
	(3.24)	(2.06)	(-0.63)	(-3.19)	(-18.93)

	(1)	(2)	(3)	(4)	(4) - (1)
BHAR	19.57	-5.70	1.31	4.28	-15.29
	(1.27)	(-0.69)	(0.24)	(0.52)	(-0.85)
3 Factor Alpha/EW	0.14	0.39	0.32	-0.27	-0.41
	(0.68)	(1.96)	(1.28)	(-0.96)	(-1.44)

	(1)	(2)	(3)	(4)	(4) - (1)
BHAR	6.51	-13.90	11.28	18.08	11.57
	(1.30)	(-1.71)	(0.93)	(0.89)	(0.56)
3 Factor Alpha/EW	0.04	-0.002	0.41	0.72	0.68
	(0.21)	(-0.01)	(1.76)	(2.47)	(3.64)

	(1)	(2)	(3)	(4)	(4) - (1)
BHAR	-18.54	0.67	12.70	53.57	72.11
	(-2.60)	(0.11)	(1.90)	(3.97)	(4.72)
3 Factor Alpha/EW	0.11	0.32	0.48	0.81	0.70
	(0.36)	(2.57)	(3.65)	(4.11)	(3.94)

Data and Sample Restrictions

Data:

- Bankruptcy filings dataset from Sudheer Chava. The full dataset contains 3,089 bankruptcy filings from 1964 to 2017. Historical headquarter locations are hand collected from firms' 10-K reports.

Sample restrictions:

- All companies must be headquartered in the United States.
- Companies must have a valid **historical** headquarter location (city).

Empirical Strategy and Results

Empirical Strategy:

Calendar-Time portfolio regression using four-factor model:

$$R_{pt} - R_{ft} = \alpha + \beta_1(R_{mt} - R_{ft}) + \beta_2SMB_t + \beta_3HML_t + \beta_4MOM_t + \varepsilon_t$$

- R_{ft} is the return on 3-month T-bill in month t .
- R_{mt} is the return on value-weighted market index in month t .
- SMB_t is the difference between the return on small firm and large firm in month t .
- HML_t is the difference between the return on high book-to-market value stocks and low book-to-market stocks in month t .
- MOM_t stands for momentum factor in month t .
- α is the intercept and is the factor of interest. It represents the extent to which adjacent firms outperform/underperform bankrupt firms.

Matched firm method (using buy-and-hold abnormal returns):

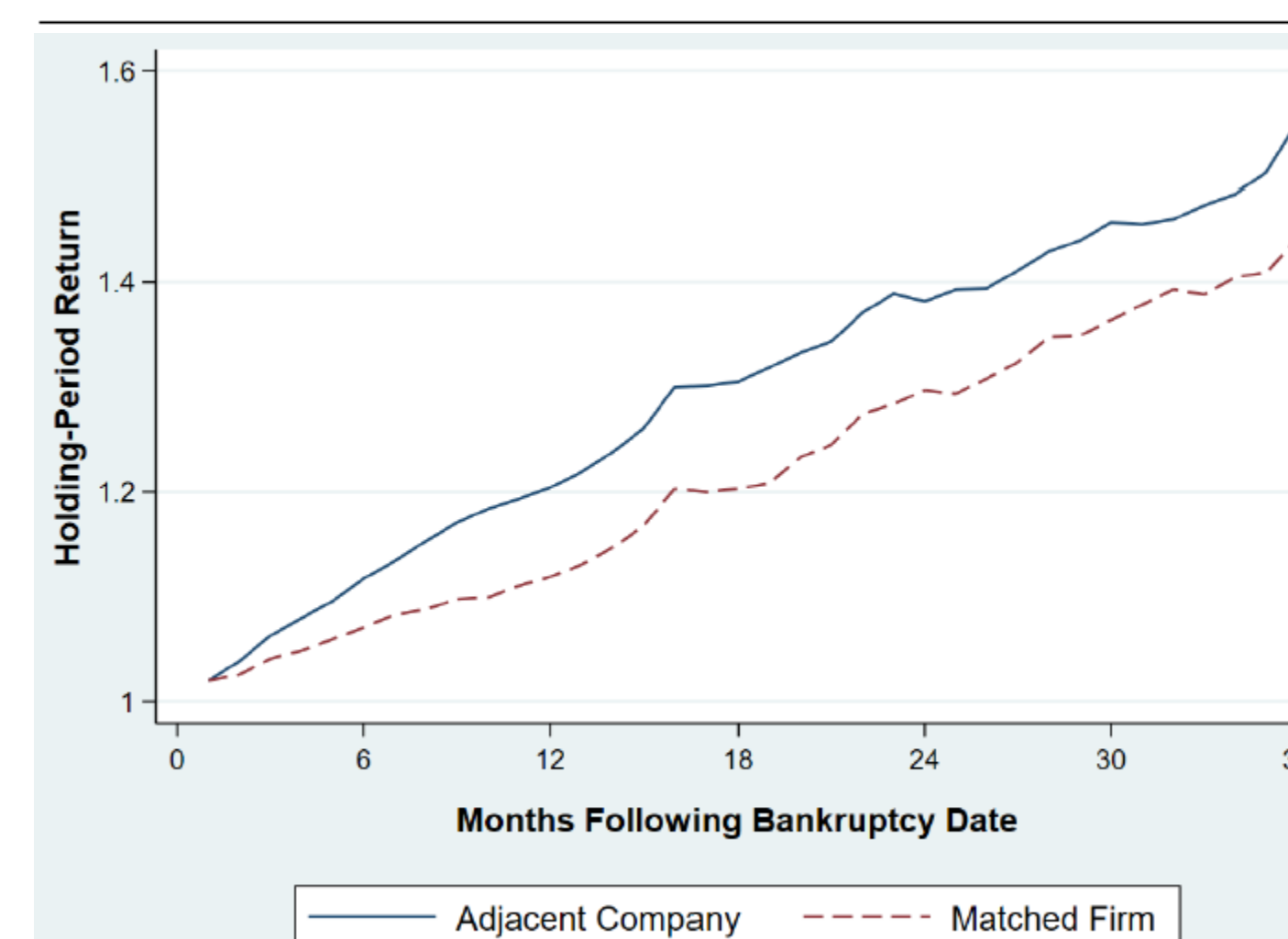
- Companies are matched on size and book-to-market values.
- Specifically, matched firms are found by minimizing the "distance" equaling the sum of squared percentage differences of size and book-to-market ratio (Spiess and Affleck-Graves, 1999).
- We calculate the BHARs of adjacent firms and see if they are significantly positive, meaning adjacent companies outperform their matched firms.

Results:

- The calendar-time portfolio method yields a positive alpha of 0.45 (t-stat=2.24).
- As for the control firm approach, the buy-and-hold abnormal return (BHAR) equals to 10.06% (t-statistic=2.44).
- All results above show that stocks of adjacent firms on average have a positive return in three years after the bankruptcy announcements.

	Alpha	MKT	SMB	HML	MOM	R ² _{adj}	Obs
EW portfolios/WLS	0.45	1.00	0.87	0.00	-0.33	0.91	285
	(2.24)	(20.88)	(13.88)	(0.03)	(-4.27)		
VW portfolios/WLS	0.15	0.98	0.04	-0.19	-0.16	0.91	285
	(0.98)	(26.94)	(0.88)	(-3.35)	(-2.64)		

	Sample Firms	Control Firms	Difference
Obs	4382	4382	NA
Min	-99.71	-99.93	0.16
Max	7388.00	4818.61	2569.39
Std	245.28	158.37	NA
Mean	53.65	43.59	10.06*** (t = 2.44)



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