

Who Gains from Corporate Rescues? Distressed M&A during Four Financial Crises

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January 15, 2014

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Abstract

Mergers and Acquisitions (M&A) were a common exit route for companies in financial distress during the 2007-2008 financial crisis. However, the question of whether distressed M&A can be a value generating strategy for either the buying or selling counterparty remains unanswered. Provided that a selective acquisition strategy is in place, the potential acquirer should be able to do well in all markets, even in downturns. This paper contributes to the existing literature on M&A by exclusively investigating acquisitions of distressed companies, including those involved in bankruptcy proceedings with the use of a global sample over the period of four major crises. Acquirers of distressed and bankrupt targets typically enjoy positive announcement abnormal returns. Similarly, acquisitions of healthy and distressed targets are perceived positively by the shareholders of the target. In acquisitions of distressed and bankrupt targets the long-term post-M&A performance of the combined firm increases compared to the combined pre-acquisition performance - evidence of synergy realization. However, the combined post M&A performance deteriorates when compared to the pre-acquisition performance of the acquirer as a stand-alone firm. Distressed targets are typically acquired by firms in the same industry and tend to suffer from financial and economic distress while bankrupt targets experience insolvency.

Key words: Mergers and Acquisitions; Bankruptcy; Distress; Economic Cycles; Event Study; Performance analysis.

JEL classification: G33, G34, E32.

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1 Introduction

During the 2007-2008 financial meltdown and the resulting worldwide economic recession companies frequently struggled with meeting their creditor obligations or even went bankrupt. Forced acquisitions were in vogue, often with governments stepping in to engineer deals to save key companies in critical industries. In such a market, characterized with higher uncertainty, more volatile stock prices and lower share price levels, it was critical to try to understand whether it was an opportune time for a company to purchase a distressed target and whether, in case of a struggling company, it was a good time to seek a stronger partner.

Jensen (1991) argues that mergers and acquisitions (M&A) are an effective means for resolving financial distress, and they can take place either inside or outside of bankruptcy. Acquisitions of distressed targets are one of three routes to reorganize firms in financial distress, the other two being corporate restructuring in strict sense (asset, operational, financial, and managerial) and liquidation (piecewise sale). Baird and Rasmussen (2003) point out that sales of bankrupt targets have become more frequent in the 2000s, thus emphasizing the importance of studying the distressed acquisition market. Our findings support their analysis by showing that after a major sustained fall in the stock market index such as those that happened in 1990, 2000-2003, and 2007-2008, distressed (using the Interest Cover Ratio criteria) and bankrupt acquisitions typically increase and tend to stay at a higher than average value for a period of three to four years.

Research on distressed acquisitions so far is scarce and has concentrated on the comparison between acquisitions in bankruptcy and acquisitions outside bankruptcy of healthy companies (Hotchkiss and Mooradian [1998]); or on the study of acquisitions of distressed companies (Clark and Ofek [1994]); or on the comparison between acquisitions and bankruptcies as exit strategies (Bergström et al. [2005]). This paper thus fills the void in the literature by exclusively investigating acquisitions of distressed companies (distressed M&A), including those involved in bankruptcy

proceedings. To our knowledge there are no other studies that consider all four major crises since 1984 on the basis of a global sample.

Bergstrom et al. (2005) compare the determinants of acquisitions to those of bankruptcies. As expected, they find evidence of more merger activity in prosperous periods than in recessions. Interestingly, in stressed economic times there seems to be an industry factor, as firms in industries with high bankruptcy rates are less likely to initiate bankruptcy proceedings (see also Faccio and Sengupta [2006]). Using Wruck's (1990) terminology of stock/flow insolvency, this research corroborates and extends Bergstrom et al.'s (2005) findings of more acquisitions of distressed targets and fewer acquisitions of healthy and bankrupt targets when the target industry is in financial distress (flow basis insolvency). The findings also show that there are more distressed acquisitions and fewer healthy acquisitions in distressed industries in economic downturns. However, these results do not apply to less solvent industries (stock basis insolvency), as target industries with higher leverage are positively associated with healthy acquisitions and negatively related to distressed acquisitions.

Hotchkiss and Mooradian (1998) study two matching sub-groups of acquisitions, those that were acquired in Chapter 11 and those that were acquired outside Chapter 11. They find evidence of value creation for the first group (using cash flow performance and event studies) but not for the second group. We extend their results by showing that newly-combined firms where the target is either distressed or bankrupt generally benefit from an overall improvement in performance over the long-term compared to their combined pre-bid performance, evidence of synergy realization. However, if the comparison is between the combined post-acquisition performance and the acquirer's pre-bid performance, then there is a clear deterioration over time.

Clark and Ofek (1994) also find evidence of poor post-merger performance in acquisitions of distressed targets. In terms of short-term performance, even though Clark and Ofek (1994) argue that announcement abnormal returns for both acquirers and distressed targets are similar to those for the general population of acquirers and targets, Hotchkiss and Mooradian (1998) find positive abnormal returns for both acquirer and bankrupt target. We show that acquirers perform well in acquisitions of distressed and bankrupt targets while bankrupt targets lose out in the process in light of their more limited bargaining power. At the industry level, targets typically do well

in all industries (except when they are bankrupt) whereas acquirers need to follow a selective acquisition strategy in order to attain positive abnormal returns.

This research adds to the literature which examines M&A as distress resolution strategy by adopting a unique methodology for capturing the level of negative stock market momentum surrounding each crisis, namely the Peak-to-Trough analysis, we account for the short-term effect of industry- and economy- wide distress on both short- and long-term post-acquisition performance. This extends the findings of studies that analyze the relationship between industry- and economy-wide distress and the effectiveness of M&A as a remedy for distress which tend to use longer-term measures of distress such as financial ratios. At the economy-wide level and in line with the findings of Rhodes-Kropf and Viswanathan (2004), Goel and Thakor (2005) and Bouwman et al. (2009) our event study analysis demonstrates that it is better for the acquirer to announce an acquisition in the period just following a major crisis (e.g., the year 2009 displays such characteristics), but only if the acquisition is of a distressed or bankrupt target. Acquisitions of healthy targets during this period are not rewarded.

The comparison of deals involving healthy, distressed, and bankrupt targets produces some interesting findings. Distressed acquisitions tend to involve smaller (and more distressed) firms, both acquirer and target, which typically belong to the same industry, in line with Clark and Ofek (1994). Distressed targets (and their industries to some extent) suffer from financial and economical distress (flow-based insolvency), while bankrupt targets experience insolvency (stock-based insolvency). Bankruptcy acquisitions are typically very fast processes compared to the other cases, particularly in downturns, in light of the timing issues inherent to a bankruptcy process.

This paper is organized as follows: section 2 is a review of the literature on the determinants of healthy, distressed and bankrupt targets as well as the determinants of short- and long-term post-M&A performance; section 3 describes the sample selection process as well as the data and methodology used in this study; sections 4 provides an overview of the sample descriptives; section 5 discusses the empirical results and the conclusion is presented in section 6.

2 Literature Review

2.1 Determinants of healthy, distressed and bankrupt targets

2.1.1 Industry effects

Shleifer and Vishny (1992) develop a theoretical model in which industry conditions affect the type of acquirers. According to the liquidity hypothesis in crisis acquirers in the same industry as the target might be constrained in their ability to raise funds for the acquisitions when the entire industry is experiencing high levels of distress. Faccio and Sengupta (2006) test the validity of the liquidity hypothesis empirically in the context of the Asian crisis by using Industry Median Leverage (across all countries) and Industry Median Market-to-Book ratio (across all countries) with a sample of companies from five Asian countries (Indonesia, Malaysia, Philippines, South Korea and Thailand). They find that mergers of distressed targets during the Asian crisis are positively associated with the industry median leverage. We extend the analysis of Faccio and Sengupta (2006) by examining the effect of four major crises on the types of acquirers and targets with the use of a global sample. In addition to using long-term measures of the degree of industry- and economy-wide distress, such as ratios, our study adopts a unique methodology to measure short-term distress levels by analyzing changes in the MSCI world.

Using a sample of bankrupt US targets Acharya et al. (2007) argue that in periods of industry distress most bankrupt firms emerge as restructured entities, as opposed to being acquired or liquidated, probably to avoid costly asset fire-sales. Our study builds on Acharya et al.'s (2007) findings by comparing the distress resolution strategies of both distressed and bankrupts targets globally. Consistent with Shleifer and Vishny's (2002) finding that asset disposals are less likely during recessions owing to depressed price levels, Bergstrom et al. (2005) and Buehler et al. (2006) compare mergers and bankruptcies and find that firms in industries with high bankruptcy rates are less likely to initiate bankruptcy proceedings. During high bankruptcy rate periods distressed sellers have a higher propensity to sell to industry outsiders since industry insiders are more likely to experience liquidity problems. Hence, financially distressed firms are more likely to merge than to file for bankruptcy.

Clark and Ofek (1994) find that acquirers of distressed targets are frequently in the same industry, however the authors do not distinguish between distressed and bankrupt targets explicitly. Shleifer and Vishny (1992) and Hotchkiss and Mooradian (1998) also find that acquirers for bankrupt firms are typically in the same industry or have some prior relationship to the target. They argue that acquirers and targets are generally in related industries since those acquirers are likely to be the highest valuation potential buyers. Both studies support Gertner and Picker's (1992) argument that asymmetric information may deter bidding by potentially less well informed firms.

2.1.2 Deal and company characteristics

Clark and Ofek (1994) find that distressed deals are more likely to be friendly. Hotchkiss and Mooradian (1998) also find fewer hostile acquisitions in bankruptcy. The authors also show that Chapter 11 acquisitions transactions are more likely to involve multiple acquirers compared to those outside bankruptcy.

With respect to target and acquirer characteristics, Buehler et al. (2006) show that large firms are less likely to fail but more likely to merge. However, Ambrose and Megginson (1992) find an inverse relation between target size and mergers. A number of papers investigate the effect of the target's financial condition on the likelihood of restructuring inside or outside bankruptcy. Franks and Torous (1994) find that firms restructuring out-of-court are more solvent than those entering Chapter 11. Chatterjee et al. (1996) use leverage to assess the severity of financial distress and find evidence of high leverage for firms restructuring in Chapter 11. Hotchkiss and Mooradian (1998) show that bankrupt firms are typically high-leverage. Bergstrom et al. (2005) find that targets in mergers are more likely to have smaller leverage compared to bankrupt firms suggesting that targets outside bankruptcy are in better financial condition. Franks and Torous (1994) find that firms restructuring out-of-court are more liquid than those entering Chapter 11.

Faccio and Sengupta analyze the interaction between the target's solvency/leverage, the phase of the economic cycle and the likelihood of emerging from distress through bankruptcy or M&A. They find that the likelihood of a merger during the Asian crisis increases with the target's leverage and decreases with the ICR because of need for capital infusion. In addition, Faccio and Sengupta (2006) use

collateral (Property, Plant and Equipment/Total Assets) as a proxy for borrowing ability and find that the likelihood of a merger during the Asian crisis increases with the collateral (acquirers like safe assets).

A number of studies show that the firm's prior operating performance is a significant determinant of the distress exit strategy that the company adopts. Chatterjee et al. (1995) find evidence of poor operating performance for firms restructuring in Chapter 11. Hotchkiss and Mooradian (1998) argue that bankrupt firms are typically in economic distress. Bergstrom et al. (2005) find that targets in mergers outside bankruptcy are more likely to be low-growth and resource-rich compared to bankrupt firms. They find evidence of targets being either very bad performers (in line with Ambrose and Megginson [1992]) or very good performers. Following Brown et al. (1994) who argue performance is a good bankruptcy predictor, Faccio and Sengupta (2006) find that the likelihood of a merger during the Asian crisis increases with ROE.

Hotchkiss and Mooradian (1998) analyze the effect of the bidder's characteristics on the likelihood of acquiring inside or outside of bankruptcy and show that the pre-bid performance of acquirers is worse for those acquiring companies in bankruptcy compared to those acquiring companies outside bankruptcy. Hotchkiss and Mooradian (1998) argue that acquirers outside bankruptcy are in better financial condition. Hence it is expected that acquirers of bankrupt targets are characterized with higher leverage/lower solvency.

2.2 Determinants of short-term post M&A performance

While there seems to be some consensus over target's announcement abnormal returns (AR) as studies show that they are typically positive, acquirer's announcement abnormal returns range from slightly negative (e.g., Andrade et al. [2001]) to slightly positive (e.g., Schwert [2000]), according to the different studies (see e.g., Bruner [2002] for an excellent survey of the literature). Servaes (1991) and Goergen and Renneboog (2004) report average target announcement abnormal returns around 15-25% with similarly sized run-ups. Martynova and Renneboog (2006) study European deals and find significantly positive and large AR for targets (9%) and small for acquirers (0.5%). Andrade et al. (2001) amongst others find positive abnormal returns for the combined firms. Moeller et al. (2005) compute aggregate dollar return for

acquirers as the sum of the product between the acquirer's AR and its market capitalization at the time of the announcement, for each year. They find evidence of a few large-loss deals (only 2.1% of 1998-2001 acquisitions [87/4,136] but accounting for 43.4% of money spent on acquisitions) without which the wealth of acquirer firms' shareholders would have increased.

The literature on short-term post M&A acquirer and target performance is scarce with only two studies comparing the abnormal returns that accrue to bankrupt acquisitions (i.e. the target in bankruptcy proceedings) and non-bankrupt acquisitions (i.e. the target is healthy) on the basis of samples of US acquisitions. Hotchkiss and Mooradian (1998) argue that acquisitions of bankrupt firms are more complex than those of non-bankrupt firms and involve more bargaining as they require negotiation with each class of creditors both over the sale price and subsequent distribution of proceeds, so there should be fewer "bad acquirers" of bankrupt firms. However, Clark and Ofek (1994) find that in general, AR for both acquirers and distressed targets are similar to those for the general population of acquirers and targets. In contrast, Hotchkiss and Mooradian (1998) find positive abnormal returns for both acquirers and the bankrupt targets in distressed acquisitions (hence evidence of value creation for both firms) but only for the healthy target in non-bankrupt acquisitions. The authors explain these results with the presence of less 'bad bidders' (i.e. bidders with empire-building managers) in their sample of bankrupt acquisitions.

In addition to distinguishing between bankrupt, distressed and healthy acquisitions there are a number of standard control variables identified in the literature on the determinants of short term post-acquisition performance. The remainder of this section provides an overview of these studies.

2.2.1 Country and macro-economic level variables

Djankov et al. (2007) find that common law and richer countries have higher creditor rights scores than civil law and poorer countries. Specifically, the ranking (hi-to-lo) is English, German, Socialist, Nordic, and French, and high scores in this index should favor targets. Freund et al. (2008) argue that there should be no relation between this index and acquirer's ARs because target assets do not change jurisdiction (see also La Porta et al. (2000)). In addition, Djankov et al. (2008) compute an anti-director rights index to measure minority shareholder protection.

Freund et al. (2008) argue that there is a negative relation between this index and acquirer's ARs. Martynova and Renneboog (2006) find that the legal origin of target firms impacts on their ARs. Specifically, in countries with high shareholder protection target shareholders enjoy higher AR compared to those in countries with low shareholder protection. In a similar fashion, acquirers gain in countries with English, German, and Scandinavian legal origin, and obtain insignificant AR in countries of French and EU-accession legal origins, which contradicts Djankov et al. (2008).

In terms of the effect of macro-economic conditions on short-term post-acquisition performance, Bouwman et al. (2009) show that acquirers buying in high-valuation markets enjoy larger short-run abnormal returns compared to those acquirers buying in low-valuation markets. Moeller et al. (2005) and Martynova and Renneboog (2006) argue that acquisitions in the later stages of a takeover wave tend to produce lower ARs for both acquirer and target shareholders, with evidence of acquirer value destruction in the late 1990s and early 2000s.

2.2.2 Deal and company level variables

Following Wansley et al. (1983), Danbolt (2004), and Martynova and Renneboog (2006), targets in cross-border acquisitions typically enjoy larger abnormal returns compared to domestic bids. Conversely, acquirers in cross-border acquisitions significantly underperform those involved in domestic acquisitions, as argued by Conn et al. (2005). Freund et al. (2008) study cross-border acquisitions by US acquirers and find zero acquirer returns for stock acquisitions of private targets but negative (positive) for stock (cash) acquisitions of public targets, thus corroborating the signaling role of the means of payment (Chang (1998)). In terms of industry relatedness, Dennis et al. (2002) and Freund et al. (2007, 2008) argue that ARs are negative for acquirers in diversifying acquisitions. Martynova and Renneboog (2006) show evidence of higher AR for targets in diversifying deals to the detriment of acquirers, who gain more in focus-increasing deals. Focusing on deal attitude, Martynova and Renneboog (2006) find significantly larger (positive) ARs for targets involved in hostile deals (16%) compared to friendly deals (3%), while the opposite holds true for acquirers (-0.4% and 0.8%, respectively).

Martynova and Renneboog (2006) consider differences in wealth creation between tender offers (i.e. negotiated deals) and mergers. The authors find

significantly larger (positive) AR for targets in tender offers. In an analysis of the effect of the method of payment on short-term abnormal returns Faccio et al. (2006) compute higher ARs for cash offers compared to stock offers. Freund et al. (2008) find that cash offers are associated with acquirer's positive AR if public targets and negative if private targets (in line with the monitoring and signaling hypotheses of Chang [1998] and Fuller et al. [2002]). From the target's point of view, cash offers provide higher premiums to compensate for tax obligations. From the acquirer's point of view, cash offers signal that the investment prospects presented by the target are sizeable and so the acquirer is not willing to share these benefits with target shareholders. Moreover, stock offers signal that the acquirer considers its shares to be overvalued at the time of the announcement.

A number of studies demonstrate that different target and acquire characteristics can have a significant influence on the short-term post-M&A performance of bidders and/or targets. Servaes (1991) and Schwert (2000) find a positive relation between the relative size of the target and acquirers' CARs. Faccio et al. (2006), Martynova and Renneboog (2006), and Freund et al. (2008) find positive acquirer returns for private acquisitions but zero for public acquisitions. Chang (1998) and Fuller et al. (2002) explain the results for private targets with arguments such as limited competition and increased monitoring after the deal. Officer (2007) states that these results show evidence of liquidity discount (though for large targets only).

Servaes (1991), Schwert (2000), and Moeller et al. (2005) report a positive relation between acquirers' ARs and their Tobin's Q. However, Freund et al. (2008) argue that overvalued firms are poor acquirers and so the coefficient should be negative (see also Dong et al. [2006] and Moeller et al. [2004]). Moeller et al. (2005) show that acquirers with very negative ARs have high M/B, in line with Dong et al.'s (2006) argument of firms with high valuation ratios (overvalued) having poor abnormal returns.

2.3 Determinants of long-term post M&A performance

2.3.1 Macro-economic level variables

Acquisitions in booming stock markets are of poorer quality compared to those in depressed markets as a result of firms buying late in the merger wave.

Jovanovic and Rousseau (2001), Rhodes-Kropf and Viswanathan (2004), and Goel and Thakor (2005) find that on average the best deals for acquirers occur when markets are depressed and the worst are initiated when the market is booming. Bouwman et al. (2009) find that acquirers buying in high-valuation markets enjoy lower abnormal stock and operating performance in the long-run (2 years) compared to those acquirers buying in low-valuation markets. Bouwman et al. (2009) argue that managerial herding seems to explain long-run underperformance of high-market acquirers. They argue that late movers in merger waves are likely to perform poorly relative to early movers (first 10%, 15%, or 20%: breakdowns of 10-80-10, 15-70-15, and 20-60-20), in line with Rhodes-Kropf and Viswanathan (2004). Their paper shows that while early movers have no long-run abnormal performance, late movers underperform probably because they have more liquidity and so more cash to throw after value-erosion acquisitions. They find no differences in low-valuation markets as merger waves are a phenomenon of bull markets.

2.3.2 Deal and company level variables

Martynova and Renneboog (2006) argue that post-performance might be worse in cross-border deals in light of acquirers' significantly negative announcement ARs. In terms of target and acquirer industry relatedness, Parrino and Harris (2001), Doukas et al. (2002), Rahman and Limmack (2004), and Powell and Stark (2005) find that post-acquisition performance increases for firms undertaking focus increasing strategies in comparison to diversification strategies. When analyzing long-term wealth creation effects of deal attitude and the acquisition method, Martynova et al. (2006) find evidence of deteriorating performance following a hostile bid deteriorating performance following a tender offer.

A number of studies focus on analyzing the influence of the method of payment on long-term post-acquisition abnormal returns. Cash offers are typically associated with larger improvements in post-performance (see e.g., Moeller and Schlingemann [2005]), probably because of the disciplining role of the extra debt required to finance such a transaction, as pointed out by Martynova and Renneboog (2006), in the spirit of the agent-principal problems of Jensen and Meckling (1976). Bouwman et al. (2009) find that cash acquisitions in the 90s produce significantly

negative long-run performance as a result of high-market cash acquisitions, so stock offers seem to be better.

When analyzing post-M&A wealth effects of target and acquirer financial characteristics, Clark and Ofek (1994) find increasingly poor post-merger performance for deals involving distressed targets the larger the subsequent combined leverage. Martynova et al. (2006) report better post-performance when targets are relatively large compared to acquirers. However, Clark and Ofek (1994) argue that post-merger performance is better when distressed targets are relatively smaller than the acquirers, thus emphasizing the complexity of managing a large combined firm. The authors also show evidence of better combined performance with more financially distressed targets and worse combined performance following acquisitions of economically distressed targets. However, they report poor post-merger performance following acquisitions of financially distressed targets for larger premium deals.

Hotchkiss and Mooradian (1998) show that the combined cash flows of the merged company increase by more when the target is bankrupt compared to a non-bankrupt target. Sources of gains include reductions in operating expenses and employment. Devos et al. (2008) and Bouwman et al. (2009) find that gains are larger for value acquirers (low market-to-book ratio) compared to glamour acquirers (high market-to-book ratio), which supports Rau and Vermaelen (1998). Jensen (1996) and Martynova et al. (2006) argue that free cash flows are normally associated with the empire-building syndrome in acquisitions. Clark and Ofek (1994) show a positive relation between acquirer announcement abnormal returns and subsequent combined performance when the target is distressed.

3 Data and Methodology

3.1 Data

The main sources for the data used in this paper are the Thomson ONE Banker and Thomson Datastream. The M&A deals were downloaded from Thomson One Banker. In the spirit of Faccio et al. (2006) and Rossi and Volpin (2004), this paper defines a merger or acquisition when there is an acquisition of majority interests (i.e., only deals where the acquirer owned less than 50% of shares in the target pre-

acquisition and more than 50% of shares in the target post-acquisition are included). The sample excludes Leveraged Buyouts, Spinoffs, Recapitalizations, Self-Tenders, Exchange Offers, Repurchases, and Privitizations. The sample also excludes financial institutions (banks, savings banks, unit trusts, mutual funds, and pension funds) in light of their special regulatory environment and accounting issues, in line with e.g., Martynova and Renneboog (2006). The data spans the period between 1 January 1984 and 31 December 2008 and the initial sample includes 240,132 strategic deals, the total number of M&A deals in the time period identified by the database, public and private, following this criteria. Target and deal information were downloaded from Thomson ONE Banker. Acquirer and industry financial information, share price data and the MSCI World index are downloaded from Thomson Datastream.

As this study focuses on the comparison of distressed (and bankrupt) versus healthy targets, it is important to find a robust classification for ‘distressed’ firms. Despite the vast number of measures of distress there is some consensus over the use of the Interest Cover Ratio (ICR) expressed as Earnings Before Interest, Tax, Depreciation, and Amortization (EBITDA) divided by the Net Interest Expense, measured at year-end prior to the acquisition. This measure has been favored by academics and practitioners alike because it captures firms suffering from both economic and financial distress as it incorporates operating performance and financial expenses at the same time (see e.g., Asquith et al. [1994] and Rajan and Zingales [1995]). Our final study sample consist of deals for which the interest coverage ratio of the target company is available. Please refer to Table 1 for the time-series of the data and criteria used in this paper. The table also shows other restrictions for parts of the study that include passing the screening for accounting data (i.e. the study of financial performance) and passing the screening for market value data (i.e. the event study and study of market performance).

In this paper, a target is classified as ‘Distressed’ if the firm has an ICR less than one in the year prior to the transaction and at the same time it is in the first quartile of the industry ICR in the same year. If the target does not fulfill these two requirements then it is viewed as ‘Healthy.’ All bankrupt targets have been removed to a separate sub-sample. Three sub-groups of M&A deals have thus been identified:

1. Deals involving healthy targets – 9,433 (76.4%)
2. Deals involving distressed (non-bankrupt) targets – 2,652 (21.5%)

3. Deals involving bankrupt targets – 254 (2.1%)

3.2 Methodology

We use a combination of different research methods, ranging from cycle classification to event studies and ratio analysis. We use the MSCI World as a proxy for global performance across all industries for economic cycles. The analysis recognizes market swings with changes in the MSCI World Index. Two major periods have been identified as they represent two types of market cycles: a) Period 1 represents the time periods in which the stock market index is gaining ground overall, including a major peak; and b) Period 2 represents the time periods in which the stock market index is falling towards and including a major trough. In addition, we identify four historic ‘crises’ and their corresponding troughs, using the MSCI World price index graph together with M&A cyclicity: a) the 1990 ‘debt’ crisis which primarily affected the US and Western Europe; b) the 1998 Asian crisis that affected most of South-East Asia and which followed after the Russian crisis in 1997; c) the 2001 dotcom crash together with the terrorist attack on the Twin Towers in New York in the same year; d) the 2003 second round of large falls in stock market valuations following two years of highly volatile market conditions.

Each crisis is allocated three corresponding ‘Points-in-Time’ (PiT) for each trough: ‘Trough,’ which is the lowest point and trough of the crisis year, ‘Previous Peak,’ which is the peak i.e., where the index reaches its highest value before it starts falling to the trough (in the index, the closest point before the trough), and ‘Next Peak,’ which is the peak i.e., where the index reaches its highest value after it recovers from the trough (in the index, the closest point after the trough). Each period between PiTs is given a unique number to classify differences in the cycle period. For the last period, number 14, the approach uses the last peak before the end of the sample period as the final period. The periods are then consolidated into three major periods with similar characteristics i.e., the stock market was behaving similarly in these periods. The first major period is from the beginning of the index period to a Previous Peak, i.e. ‘In Between Peaks’ (excluded from analysis). The second major period is from Previous Peak to Trough, i.e. ‘Falling Market, from beginning to middle of crisis.’ The third major period is from Trough to Next Peak, i.e. ‘Gaining Market, from middle to end of crisis.’ It should be noted that this is a very short-term

analysis because the approach involves locating a crisis and looking backwards and forwards only a couple of quarters to identify falling and gaining markets.

The paper uses standard event study methodology to assess the market reaction to the announcement of a merger or acquisition. Following Weston et al. (2004), and in the spirit of Brown and Warner (1985), the paper presents results for the market-adjusted model's abnormal returns, the difference between the actual returns and the expected returns, with the benchmark given by the respective country's main stock index. Daily returns are computed as the percentage price (or index) changes in two consecutive trading days. There are two distinct periods, an 81-day event period centered on the announcement day and a 200-day estimation period prior to the beginning of the event period. Results are provided for two windows, the announcement window (-2,+1) and the run-up window (-40,-3).

We use a selection of accounting ratios in order to examine the long-term performance of acquirers. In particular the aim is to investigate the development of operational performance post-acquisition for the target, acquirer, and combined entity compared to pre-acquisition for the acquirer and 'combined' firms (financial data for acquirer and target added). The indicators include Cash Flow (EBITDA/Sales), Profitability (Return on Equity (ROE) is Net Income/Total Equity), Operating performance (EBITDA/Total Assets), Efficiency (Sales Turnover is Sales/Total Assets), Liquidity (Current Ratio is Current Assets/Current Liabilities), and Leverage (Total Liabilities/Total Assets and Total Debt/Total Assets).

We use a regression analysis framework to investigate several research questions such as the determinants of: a) acquisitions of healthy, distressed, and bankrupt targets (probit); acquirers' short-term performance (event study and OLS); acquirers' long-term performance (ratio analysis and OLS); premiums (OLS); and stock offers (probit). To study the characteristics and performance of the deals the regressions use different variables at country, industry, deal and firm levels. The description of each variable is provided in Appendix A.

4 Sample Descriptives

4.1 Deal and firm characteristics

Tables 2 through 4 provide a description of the deal and firm characteristics by type of target (healthy, distressed, and bankrupt) and economic cycle (gaining-falling). Specifically, Table 2 describes some selected deal characteristics. In general –the timing to complete the deal is shorter for acquisitions of distressed and bankrupt targets compared to acquisitions of healthy targets. Bankrupt acquisitions are typically very fast processes in downturns as timing issues are crucial to the survival of the firms. The transaction values of bankrupt and distressed targets are typically smaller compared to healthy targets. Distressed and bankrupt targets are generally sold at a large discount¹, with the situation being worse in downturns for all targets, though healthy firms still manage to benefit from a premium.

Table 3 provides some descriptive statistics for the target companies. Distressed targets are typically smaller than healthy and bankrupt targets. Curiously, distressed targets are more financially distressed (in terms of ICR) than bankrupt targets and belong to industries that appear to be in more distress than those of bankrupt targets. This evidence supports Faccio and Sengupta (2006) of more distressed mergers when targets are already highly leveraged. Distressed targets also appear to be in more economical distress than bankrupt targets. However, the leverage ratios of distressed targets are smaller compared to those of bankrupt companies, showing that while the former suffer more from financial distress (flow-based insolvency), the latter suffer more from insolvency (stock-based insolvency), following Wruck (1990).

Table 4 provides some descriptive statistics for the acquirer companies. Acquirers of distressed targets are also typically smaller and have a smaller ICR compared to acquirers of healthy and bankrupt targets, which shows that distressed acquisitions tend to involve smaller (and more distressed) firms. Acquirers of distressed firms are typically more liquid, less profitable, and have lower leverage than acquirers of bankrupt (and to some extent healthy) firms.

¹ Discount is measured using the transaction value to implied enterprise value (given by asset multiples) approach.

4.2 Distressed M&A Cyclicality

This study uses a full Peak-to-Trough method to determine the different periods in the stock market cycles. This methodology is also extended to the industry level, by comparing an industry price index to the MSCI World (a proxy for the world economic cycle). Figure 1 depicts the frequency of distressed and bankrupt acquisitions across the sample period. We see that on average across the sample period, acquisitions of distressed targets make up 20.6% of all acquisition activity with acquisitions of bankrupt targets accounting for 2.2% of all deals. As shown in Figure 1, the ratio of distressed and bankrupt M&A activity to total activity is somewhat counter-cyclical, with bankrupt targets activity even more so than activity of distressed targets. It is also important to note from the graph that after a major sustained fall in the stock market index e.g., 1990, 2000-2003, and 2007/2008, both the ratios of distressed and bankrupt acquisitions increase and stay higher than average for three to four years, leading to the observation that acquisitions of distressed and bankrupt targets will be at a higher than average level for some years, even if markets start showing signs of recovery. This situation is to be expected as equity markets should be more forward-looking than business trade.

5 Data Analysis

5.1 Determinants of Acquisitions of Healthy, Distressed, and Bankrupt Targets

This section discusses and estimates the determinants of healthy, distressed, and bankrupt acquisitions. Logistic regressions are computed for the determinants of the acquisitions of each type of target, namely, healthy, distressed, and bankrupt. The results of the regression analysis are presented in Table 5. Two separate models are computed for healthy and distressed targets, along with a complete model including all variables and a restricted model including only significant variables using a stepwise approach. As a result of few observations only the stepwise model is presented for bankrupt targets. The fitness of the models is extremely good since the percentage of correct classifications is never below the 93.5% threshold.

In line with the theoretical model of Shleifer and Vishny (2002) which shows that there will be more distressed acquisitions and fewer bankruptcy acquisitions when the

industry is in distress our results show that there are more acquisitions of distressed targets and fewer acquisitions of healthy/bankrupt targets when the target industry is in financial distress.² However target industries with higher leverage³ are positively associated with healthy acquisitions and negatively related to distressed acquisitions. We find that there are more distressed acquisitions and fewer healthy acquisitions in distressed industries in stressed times which supports the findings of Bergstrom et al. (2005) and Buehler et al. (2006). This is due to the fact that companies which belong to financially constrained industries (such as industries with high bankruptcy rates) have lower propensity to initiate bankruptcy proceedings and therefore higher propensity to merge outside bankruptcy.

In accordance with previous studies (see e.g., Clark and Ofek, 1994; and Hotchkiss and Mooradian, 1998) we expect that there will be a higher number of less industry-related deals in healthy acquisitions where relatedness is found by inspecting the first three digits of the SIC codes for both acquirers and targets. This is due to the fact that less-related deals are characterized with higher levels of information asymmetry between the buy- and sell-side suggesting that the highest valuation bids will come from acquirers operating in the same industry as the target. The regression analysis shows that related acquisitions are positively associated with distressed targets and negatively associated with healthy targets. Following the findings of Buehler et al. (2006) we also expect that targets outside bankruptcy will be relatively larger than bankrupt targets in terms of asset book value. While this size effect is not confirmed for bankrupt targets, the analysis shows that distressed targets are typically smaller than healthy targets. As suggested by the studies of Franks and Torous (1994), Chatterjee et al. (1996), and Hotchkiss and Mooradian (1998) we anticipate that targets in bankruptcy proceedings will be characterized with higher leverage/lower solvency⁴. The results show evidence of higher leverage⁵ for healthy targets and lower solvency⁶

² Financial distress here is measured by flow basis insolvency, given by cash flow and ICR.

³ Higher leverage is used to measure stock basis insolvency.

⁴ Leverage/solvency is measured by measured by the ratio of total assets to total liabilities and total debt to total assets.

⁵ Leverage is measured by the debt to assets ratio.

⁶ Solvency here is measured by the inverse of liabilities to assets ratio.

for bankrupt targets. In line with Asquith et al. (1994), Brown et al. (1994) and Faccio and Sengupta (2006) our regression analysis shows that highly indebted firms during distressed times are more likely to be acquired or merge. The results show evidence of fewer acquisitions of healthy targets when they are highly levered in distressed times.

We find that bankrupt targets are less liquid and profitable⁷ than healthy targets which supports the findings of Franks and Torous (1994), Andrade and Kaplan (1998), Chatterjee et al. (1995), and Hotchkiss and Mooradian (1998).

In terms of country and industry effects our findings suggest that while US acquirers are typically more involved in deals with bankrupt targets, US targets are generally more likely to be non-bankrupt. Moreover, emerging market acquirers typically buy distressed targets to the detriment of healthy targets. At the industry level the results show that in general acquisition deals in Healthcare and High Technology typically involve healthy targets to the detriment of distressed targets. The Real Estate industry is more associated with healthy target acquisitions.

5.2 Determinants of short-term post M&A performance

This section presents the results of event studies for both acquirers and targets and finishes with a study of the determinants of the observed abnormal performance surrounding the announcement of the deals for acquirer firms.

Table 6 presents the results of an event study categorized by type of target (healthy, distressed, and bankrupt) and economic cycle (falling-gaining). The results show that acquisitions of distressed targets are a win-win situation for both acquirers and targets since the stock market views these deals as value creating by rewarding both the acquirer and the target with positive abnormal returns. The acquirer also enjoys positive abnormal returns if the target is bankrupt while the target gains when it is healthy. These results are consistent with a larger relative bargaining power enjoyed by targets when they are healthy that deteriorates when moving towards distress and ultimately bankruptcy. On average acquirers gain 3.12% and targets 16.77%. Targets typically enjoy an average run-up of 43.29% that is statistically significant only when they are healthy.

⁷ Liquidity and profitability are measured by the current ratio and ROE (Net Income/Total Equity), Turnover of Assets (Sales/Total Assets), and EBITDA/Total Assets.

Table 7 summarizes the results of the event study surrounding days (-2,+1) for each industry. Targets typically win in all industries except when they are bankrupt whereas acquirers can always do well provided they follow a selective acquisition strategy. Specifically, in gaining markets acquirers which enjoy positive abnormal returns: (1) buy healthy firms in Consumer Products and Services, Consumer Staples, Healthcare, Industrials, Materials, Retail, and Telecommunications; (2) buy distressed firms in Consumer Products and Services, Energy and Power, High Technology, Media and Entertainment, and Telecommunications; and (3) buy bankrupt firms in Healthcare, High Technology, and Materials. In falling markets acquirers which experience positive announcement returns (1) buy healthy firms in Healthcare and Industrials; (2) buy distressed firms in Energy and Power and Real Estate; (3) buy bankrupt firms in Healthcare, High Technology, and Retail; and (4) avoid healthy firms in Media and Entertainment.

Table 8 presents the results for the event study using the peak-to-through approach. This is an extremely short-term analysis as far as falling and gaining markets the approach are identified within a couple of quarters away from each crisis. The analysis shows that it is better for the acquirer to announce the acquisition in the period just following a major crisis (e.g., the year 2009 displays such characteristics), but only if the acquisition is of a distressed or bankrupt target. Acquisitions of healthy targets during this period are not rewarded. Targets typically gain which consistent with the findings of many previous studies.

The analysis now proceeds with the OLS regression approach to identify the determinants of the abnormal performance enjoyed by acquirers. Results are presented in Table 9. Two different models are computed, a complete model with all variables and a restricted model with only significant variables using a stepwise approach.

The results confirm the expectation of positive abnormal returns for acquirers of bankrupt firms in line with Hotchkiss and Mooradian (1998). Considering the difference in the level of creditor protection across countries is crucial as there is evidence that the power of creditors is positively associated with the level of private credit within a financial system (see e.g. Djankov et al., 2007). Freund et al. (2008) argue that there should be no relation between this index and acquirer's ARs because target assets do not change jurisdiction (see also La Porta et al. (2000). Our regression

analysis confirms the expectation of no relation between the target country's level of creditor rights protection and the acquirers' short-term performance.

In line with Moeller et al. (2005) and Martynova and Ronneboog (2006), the results confirm the expectation of acquirers benefiting when the markets are rising in the sense that the short-term abnormal returns that accrue to acquirer shareholders are higher for M&A deals initiated in the earlier stages of a takeover wave. Confirming the findings of previous studies (see e.g., Servaes, 1991; Andrade et al., 2001; Faccio et al., 2006; and Martynova and Renneboog, 2006) the regression analysis shows that acquirers of public targets which pay for the acquisition in cash enjoy higher announcement returns. Furthermore, supporting the argument that there is less bidder competition when the target is not exchange-listed and that there is increased monitoring after the deal (see e.g., Faccio et al., 2006; Chang, 1998; and Fuller et al., 2002), the results show that the short-term performance of acquirers is better in acquisitions of private targets. At the country level, our study shows that acquirers of UK targets tend to perform worse compared to acquirers of non-UK firms.

5.3 Determinants of long-term post M&A performance

Table 10 presents the results of the evolution of the cash flow ratio for the acquirer/combined firm (i.e. the long-term post-acquisition performance, measured by the EBITDA to sales ratio from one year prior to the announcement of the acquisition through the three-year period afterwards). To ensure that our analysis is consistent, the calculations involve companies with data for the full period under analysis, totaling 4,118 deals. The analysis shows that the newly-combined firms where the target is either distressed or bankrupt typically see an overall improvement in performance over the long-term when comparing pre- to post- acquisition. These results corroborate and extend the findings of Hothchkiss and Mooradian (1998) for bankrupt targets, to distressed and bankrupt targets. The analysis partially supports Devos et al. (2008), who find increases of combined value of 10%. However the performance of the acquirer typically gets worse over time. In line with Hothchkiss and Mooradian (1998), this study also finds that the pre-bid performance of acquirers

is worse for those acquiring companies in bankruptcy compared to those acquiring companies outside bankruptcy.⁸

Next we consider the determinants of the long-term post-acquisition performance. The results are presented in Table 11.⁹ The results corroborate previous studies which investigate the determinants of long-term post-acquisition performance by showing that the bidder's financial performance before the deal is positively associated with the deal. In addition, and in line with Rhodes-Kropf and Viswanathan (2004), the results confirm the expectation that acquisitions initiated during the earlier stages of an economic cycle tend to perform better. The results also substantiate the analysis of Clark and Ofek (1994) by showing a negative relation between long-term post-acquisition bidder returns and the combined leverage.

In support of the arguments put forward by Jensen (1996) and Martynova et al. (2006), the results support the argument that acquirers with large free cash flows are poor acquirers.

6. Conclusion

This paper analyzes acquisitions of healthy, distressed, and bankrupt firms. In general, the market expects acquisitions of distressed and bankrupt targets to be value enhancing for the acquirer though long-term performance fails to deliver to these expectations. Specifically, acquirers of distressed and bankrupt targets enjoy positive abnormal returns on the days surrounding the announcement, an indication that the market views the acquisition as creating value for the acquirer. This evidence does not hold true for acquirers of healthy targets. However, the analysis of the long-term

⁸ In an untabulated analysis we examine the evolution of selected accounting ratios over a period starting one year before and ending three years after the announcement of the M&A deal. In general, the sales to total assets, the return on equity, and liquidity ratios all decrease, whereas the fixed assets to total assets and leverage (measured as total liabilities to total assets and total debt total assets) ratios increase. The results can be obtained from the authors upon request.

⁹ Only the stepwise regression is presented as a result of the other variables lacking explanatory power.

performance shows that acquirers of distressed and bankrupt targets struggle to realize value as their performance deteriorates as a result of the acquisition. Moreover, the acquirers of distressed and bankrupt targets underperform acquirers of healthy targets. Viewing the results from a more economic point of view, there is evidence that newly-combined firms where the target is either distressed or bankrupt generally benefit from an overall improvement in performance over the long-term compared to their combined pre-bid performance, in line with synergy realization.

If the target is distressed, then it is more likely that the acquirer is in the same industry compared to acquirers of healthy targets which are more likely to acquire a company outside their core industry, an indication that distressed investors want to play it safe and acquire 'core' assets. Comparing distressed and bankrupt targets, distressed targets suffer more from financial distress i.e., when the company cannot meet its obligation with current cash-flow, whereas bankrupt targets suffer more from insolvency, i.e. when the company's liabilities are greater than its assets. In sum, firms with immediate cash-flow problems are more likely to be 'rescued' (acquired) before entering formal insolvency procedures.

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**Appendix A: Description of the variables used in this study and respective
datasources**

A.1 Country-level variables	
Shareholder protection: Anti-director rights index	The index is formed by summing: (1) vote by mail; (2) obstacles to exercise vote; (3) minority representation on the Board of Directors; (4) oppressed minority mechanism; (5) pre-emptive rights to subscribe to new securities; and (6) right to call a special shareholder meeting. The index ranges from 1 (lowest protection) to 6 (highest protection). Source: La Porta et al. (1998) and http://www.economics.harvard.edu/faculty/shleifer/dataset .
Creditor protection: Aggregate Index of creditor rights	The index is formed by summing: (1) restrictions on voluntary filing; (2) secured creditors can seize their collateral; (3) secured creditors paid first; and (4) administrator takes over the management of the firm. The index ranges from 0 (weak creditor rights) to 4 (strong creditor rights). Source: Djankov et al. (2007) and http://www.economics.harvard.edu/faculty/shleifer/dataset .
Economic cycle	Market swings in the MSCI World Index (General stock market index), 01/01/1984 to 01/01/2009 (yearly index data). Source: Thomson Datastream.
Position in Economic cycle	Peak-to-Trough analysis with two phases: (Dummy variable = 1) Period from Previous Peak to Trough – ‘Falling Market, from beginning to middle of crisis;’ (Dummy variable = 0) Period from Trough to Next Peak – ‘Gaining Market, from middle to end of crisis.’ Source: Thomson Datastream.
A.2 Industry-level variables	
Industry distress (Target)	Four metrics: (1) Median EBITDA/Sales; (2) Median Industry ICR; (3) Industry leverage (Total Debt/Total Assets); (4) Capital availability to the acquirer given by the total capital raised in the industry in that year as a proportion of the total acquisition value. Sources: Thomson Datastream and Bloomberg.
Industry bankruptcy rate	Number of bankruptcies in each industry over total bankruptcies in all industries, matched yearly. Source: Thomson Datastream.
Industry relatedness	Dummy variable that takes the value of 1 when the firms have the same macro-industry code (three-digit SIC code) and 0 otherwise. Source: Thomson ONE Banker.
Industry dummies	Dummy variables that take the value of 1 for a particular industry and 0 otherwise: (1) Consumer Products and Services; (2) Consumer Staples; (3) Energy and Power; (4) Healthcare; (5) High Technology; (6) Industrials; (7) Materials; (8) Media and Entertainment; (9) Real Estate; (10) Retail; (11) Telecommunications. Source: Thomson ONE Banker.

A.3 Deal-level variables	
Deal attitude	Dummy variable that takes the value of 1 when the deal is hostile and 0 otherwise. Source: Thomson ONE Banker.
Contested bid	Dummy variable that takes the value of 1 when the deal is contested i.e., presence of multiple acquirers and 0 otherwise. Source: Thomson ONE Banker.
Means of payment	Dummy variable that takes the value of 1 when the deal is in shares and 0 otherwise. Source: Thomson ONE Banker.
Cross-border	Dummy variable that takes the value of 1 when the deal is cross-border and 0 otherwise. Source: Thomson ONE Banker.
Acquisition method	Dummy variable that takes the value of 1 when the deal is a tender offer and 0 otherwise. Source: Thomson ONE Banker.
Premium	Two metrics: (1) The % ratio of takeover price to target's price 4 weeks before the announcement; (2) Transaction Value to implied Enterprise Value (given by asset multiples). Source: Thomson ONE Banker.
A.4 Firm-level variables	
Target is bankrupt	Dummy variable that takes the value of 1 when the target was acquired in bankruptcy/liquidation and 0 otherwise. Source: Thomson ONE Banker.
Target is in financial distress	Dummy variable that takes the value of 1 when the target is in financial distress (Interest Coverage Ratio < 1 and in 1st Industry Quartile) and 0 otherwise. Source: Thomson Datastream.
Target is healthy	Dummy variable that takes the value of 1 when the target is not in financial distress/bankrupt and 0 otherwise. Source: Thomson ONE Banker.
Target is in economic distress	Dummy: variable EBITDA/Sales<0 AND EBITDA/Sales 1st Q (Target)
Target status	Dummy variable that takes the value of 1 when the target is public and 0 otherwise. Source: Thomson ONE Banker.
Target size	Two metrics: (1) Log-Book Value of Total Assets; (2) Deal Value/Acquirer Market Value (Ratio of the purchase price of the target's equity [excluding assumed liabilities] to the acquirer's equity at market value]). Source: Thomson ONE Banker.
Target solvency/leverage	Two metrics: (1) Total Liabilities/Total Assets; (2) Total Debt/Total Assets. Source: Thomson Datastream.
Target liquidity	Current ratio (Current Assets/Current liabilities). Thomson Datastream.
Target operating performance	Three metrics: (1) ROE (Net Income/Total Equity); (2) Turnover of Assets (Sales/Total Assets); (3) EBITDA/Total Assets. Source Thomson Datastream.
Target Market-to-Book	Ratio of (Equity(Market Value) + Total Debt(Book Value))/Total Assets(Book Value). Source Thomson ONE Banker.
Target fixed assets	Ratio of Fixed Assets/Total Assets. Source: Thomson ONE Banker.

US Target and UK Target	Dummy variables that take the value of 1 when the target is from the US(UK) and 0 otherwise. Source: Thomson ONE Banker.
Acquirer liquidity	Current ratio (Current Assets/Current Liabilities). Thomson Datastream.
Acquirer operating performance	Two metrics: (1) Ratio of EBITDA/Total Assets; (2) Ratio of EBITDA/Sales. Source: Thomson ONE Banker.
Acquirer solvency/leverage	Two metrics: (1) Total Liabilities/Total Assets; (2) Total Debt/Total Assets. Source: Thomson ONE Banker.
Acquirer Market-to-Book	Ratio of (Equity(Market Value) + Total Debt(Book Value))/Total Assets(Book Value). Source Thomson ONE Banker.
US Acquirer, UK Acquirer, and Emerging Markets acquirer	Dummy variables that take the value of 1 when the acquirer is from the US(UK)(Emerging Markets) and 0 otherwise. Source: Thomson ONE Banker.
Combined cash flow	Pre/Post combined (EBITDA/Sales) of acquirer and target, weighted by each firm's sales (yearly). Also industry-adjusted. Source: Thomson Datastream.
Combined profitability	Pre/Post combined ROE (Net Income/Total Equity) of acquirer and target, weighted by each firm's Total equity (yearly). Also industry-adjusted. Source: Thomson Datastream.
Combined operating performance	Pre/Post combined (EBITDA/Total Assets) of acquirer and target, weighted by each firm's total assets (yearly). Also industry-adjusted. Source: Thomson Datastream.
Combined efficiency	Pre/Post combined (Sales/Total Assets) of acquirer and target, weighted by each firm's total assets (yearly). Also industry-adjusted. Source: Thomson Datastream.
Combined liquidity	Pre/Post combined current ratio (Current Assets/Current Liabilities) of acquirer and target, weighted by each firm's current liabilities (yearly). Also industry-adjusted. Source: Thomson Datastream.
Combined leverage	Pre/Post combined leverage (Total Debt/Total Assets and Total Liabilities/Total Assets) of acquirer and target, weighted by each firms' total assets (yearly). Also industry-adjusted. Source: Thomson Datastream.
Combined fixed assets	Pre/Post combined (Fixed Assets/Total Assets) of acquirer and target, weighted by each firm's assets (yearly). Also industry-adjusted. Source: Thomson Datastream.
Combined sales growth	Pre/Post combined sales growth of acquirer and target (yearly). Also industry-adjusted. Source: Thomson Datastream.
Combined employment growth	Pre/Post combined employment growth of acquirer and target (yearly). Also industry-adjusted. Source: Thomson Datastream.

Figure 1: Distressed merger activity.

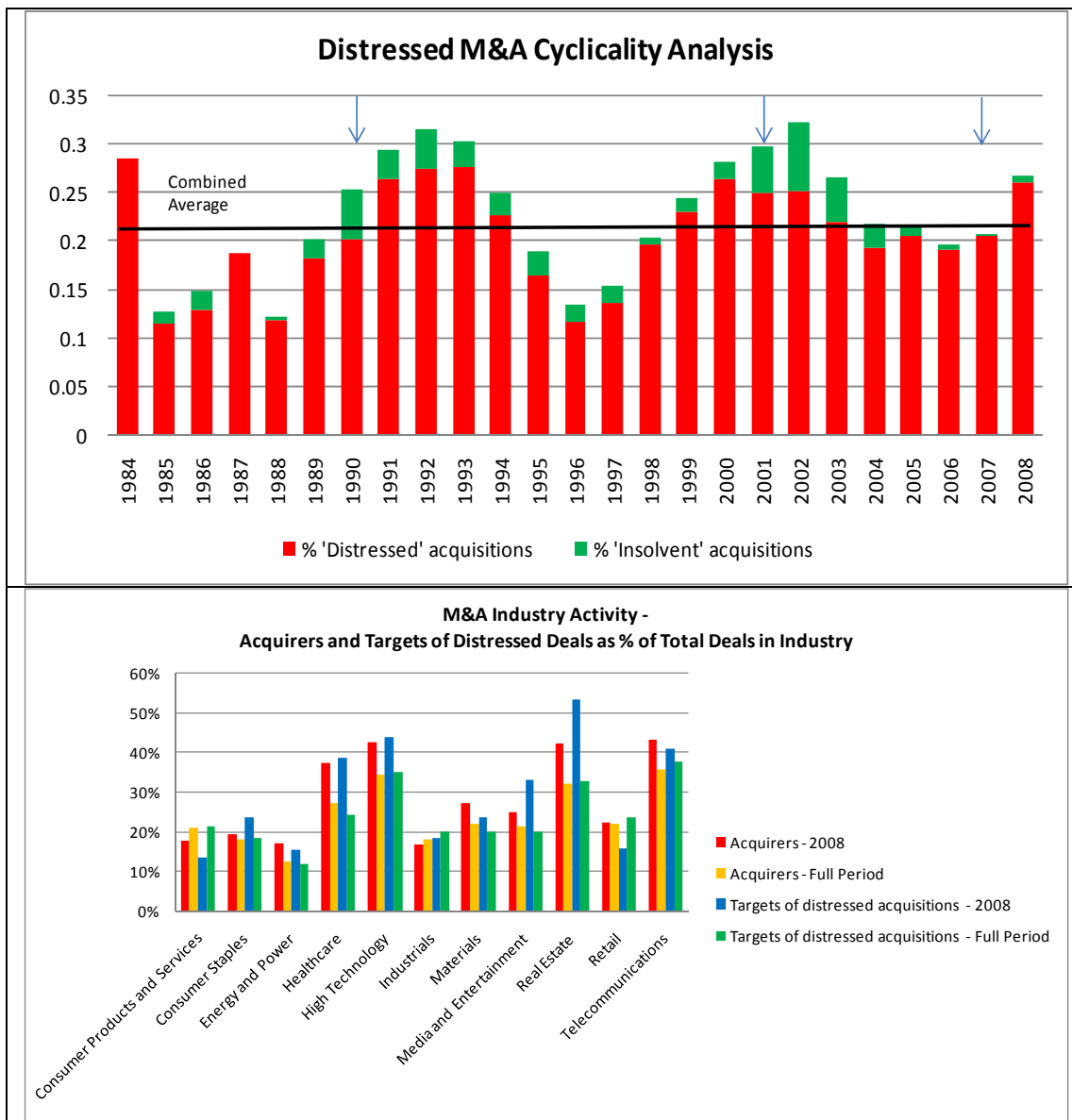


Table 1: Sample inclusion criteria

Panel A: 1984 - 1996													
Criteria	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Number of deals:	948	1,073	1,969	2,382	3,523	4,593	4,702	6,214	6,296	6,684	8,023	10,180	11,306
Number of deals passing the ICR screen for targets	7	86	155	170	219	203	177	193	345	660	718	438	273
Number of deals passing the accounting elimination screen	2	43	62	81	111	99	81	76	145	256	362	237	130
Number of deals passing the Event Study screen for acquirers	3	40	68	82	100	94	65	76	128	269	335	212	115
Number of deals passing the Event Study screen for targets	0	5	7	14	22	40	34	32	47	49	79	123	115
Panel A: 1997 - 2008													
Criteria	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Number of deals:	13,616	15,742	15,992	17,004	12,581	10,690	10,848	12,488	14,946	16,217	17,175	14,940	240,132
Number of deals passing the ICR screen for targets	478	748	878	819	628	423	617	585	758	1,006	1,077	678	12,339
Number of deals passing the accounting elimination screen	267	458	539	488	389	259	368	350	406	435	406	176	6,226
Number of deals passing the Event Study screen for acquirers	242	410	486	443	356	252	361	355	404	447	429	245	6,017
Number of deals passing the Event Study screen for targets	252	428	485	504	394	279	324	293	391	353	382	200	4,852

Notes: This table describes the criteria used to compile the sample.

Table 2: Descriptive statistics by deal characteristics and period

Variables (1)	Healthy			Distressed			Bankrupt			Total	
	No Obs. (2)	Median (3)	Test (3),(6) (4)	No Obs. (5)	Median (6)	Test (6),(9) (7)	No Obs. (8)	Median (9)	Test (9),(3) (10)	No Obs. (11)	Median (12)
Panel A: Overall gaining period											
Days from Announcement to completion	7620	63	0.000	1993	55	0.497	163	52	0.664	9776	62
Value of Transaction (\$mil)	6708	88.485	0.000	1667	25.896	0.418	128	20.057	0.000	8503	67.223
Deal Value/Acquirer Market Value	3070	0.227	0.000	696	0.117	0.371	40	0.210	0.304	3806	0.200
Premium (offer to stock price) 4 Weeks before	3358	0.326	0.082	647	0.295	0.291	7	0.108	0.214	4012	0.324
Premium/(Discount) (Multiple Assets)	6565	0.222	0.000	1646	-0.001	0.000	126	-0.651	0.000	8337	0.171
Panel B: Overall falling period											
Days from Announcement to completion	1813	62	0.391	659	62	0.114	91	34	0.048	2563	62
Value of Transaction (\$mil)	1527	107.297	0.000	550	24.494	0.555	70	37.795	0.000	2147	70.133
Deal Value/Acquirer Market Value	818	0.228	0.000	310	0.093	0.974	29	0.123	0.034	1157	0.169
Premium (offer to stock price) 4 Weeks before	906	0.304	0.757	263	0.333	0.908	2	0.508	0.998	1171	0.309
Premium/(Discount) (Multiple Assets)	1517	0.038	0.609	549	-0.064	0.000	69	-0.787	0.000	2135	-0.024
Panel C: All periods											
Days from Announcement to completion	9433	63	0.000	2652	56	0.748	254	48	0.101	12339	62
Value of Transaction (\$mil)	8235	92.003	0.000	2217	25.500	0.751	198	22.598	0.000	10650	68.020
Deal Value/Acquirer Market Value	3888	0.227	0.000	1006	0.107	0.609	69	0.136	0.023	4963	0.192
Premium (offer to stock price) 4 Weeks before	4264	0.322	0.200	910	0.310	0.363	9	0.108	0.288	5183	0.320
Premium/(Discount) (Multiple Assets)	8082	0.183	0.000	2195	-0.022	0.000	195	-0.702	0.000	10472	0.136

Notes:

This table provides medians for the whole sample and different classification according to type of target (Healthy, Distressed, Bankrupt) and time-period (up-down)

Table 3: Descriptive statistics by deal characteristics and period: Target

Variables (1)	Healthy			Distressed			Bankrupt			Total	
	No Obs (2)	Median (3)	Test (3),(6) (4)	No Obs (5)	Median (6)	Test (6),(9) (7)	No Obs (8)	Median (9)	Test (9),(3) (10)	No Obs (11)	Median (12)
Panel A: Overall gaining period											
Total Assets One Year Prior (\$ mil)	7437	76.296	0.000	1957	23.398	0.000	160	60.904	0.340	9554	59.437
Market-to-Book (Y-1)	3413	1.076	0.200	706	1.082	0.000	30	0.678	0.000	4149	1.074
EBITDA/Interest Expense (Y-1)	7620	7.418	0.000	1993	-3.329	0.000	163	-0.070	0.000	9776	4.913
EBITDA/Interest Expense (Y-1) Industry Median	7620	6.643	0.718	1993	6.640	0.005	163	6.243	0.002	9776	6.640
EBITDA/Interest Expense (Y-1) Industry 1st Q	7620	2.662	0.000	1993	2.502	0.012	163	2.636	0.635	9776	2.636
EBITDA/Interest Expense (Y-1) Quartile Position	7620	3	0.000	1993	1	0.000	163	1	0.000	9776	2
EBITDA/Interest Expense (Y-1) Industry adjusted	7620	0.917	0.000	1993	-11.002	0.000	163	-6.607	0.000	9776	-1.466
EBITDA/Sales (Y-1)	7521	0.125	0.000	1901	-0.066	0.000	161	-0.002	0.000	9583	0.098
EBITDA/Sales (Y-1) Industry adjusted	7521	0.003	0.000	1901	-0.213	0.000	161	-0.111	0.000	9583	-0.024
Net Income/Total Equity (Y-1)	4580	0.100	0.000	1117	-0.120	0.003	98	0.050	0.398	5795	0.087
Net Income/Total Equity (Y-1) Industry adjusted	4580	0.024	0.000	1117	-0.198	0.003	98	-0.014	0.421	5795	0.010
EBITDA/Total Assets (Y-1)	7583	0.138	0.000	1984	-0.071	0.000	160	-0.002	0.000	9727	0.111
EBITDA/Total Assets (Y-1) Industry adjusted	7583	0.031	0.000	1984	-0.183	0.000	160	-0.103	0.000	9727	0.004
Sales/Total Assets (Y-1)	5330	1.137	0.000	1152	0.948	0.093	129	1.064	0.380	6611	1.107
Sales/Total Assets (Y-1) Industry adjusted	5330	0.244	0.000	1152	0.055	0.175	129	0.170	0.128	6611	0.211
Current Assets/Current Liabilities (Y-1)	7045	1.404	0.000	1849	1.099	0.047	157	0.964	0.000	9051	1.338
Current Assets/Current Liabilities (Y-1) Industry adjusted	7045	-0.086	0.000	1849	-0.414	0.473	157	-0.481	0.000	9051	-0.151
Total Liabilities/ Total assets (Y-1)	7250	0.589	0.000	1922	0.761	0.001	158	0.888	0.000	9330	0.614
Total Liabilities/ Total assets (Y-1) Industry adjusted	7250	0.063	0.000	1922	0.238	0.004	158	0.339	0.000	9330	0.090
Total Debt/Total Assets (Y-1)	6539	0.252	0.000	1697	0.342	0.123	150	0.392	0.000	8386	0.267
Total Debt/Total Assets (Y-1) Industry adjusted	6539	0.036	0.000	1697	0.140	0.439	150	0.154	0.000	8386	0.052

Table 3: Continued

Variables (1)	Healthy			Distressed			Bankrupt			Total	
	No Obs (2)	Median (3)	Test (3),(6) (4)	No Obs (5)	Median (6)	Test (6),(9) (7)	No Obs (8)	Median (9)	Test (9),(3) (10)	No Obs (11)	Median (12)
Panel B: Overall falling period											
Total Assets One Year Prior (\$ mil)	1793	110.595	0.000	657	25.141	0.000	90	164.012	0.226	2540	76.894
Market-to-Book (Y-1)	959	0.925	0.064	301	0.834	0.089	8	0.628	0.014	1268	0.900
EBITDA/Interest Expense (Y-1)	1813	7.603	0.000	659	-9.677	0.000	91	-0.384	0.000	2563	4.133
EBITDA/Interest Expense (Y-1) Industry Median	1813	6.263	0.021	659	6.347	0.001	91	6.085	0.014	2563	6.271
EBITDA/Interest Expense (Y-1) Industry 1st Q	1813	2.297	0.000	659	1.345	0.048	91	1.981	0.002	2563	2.055
EBITDA/Interest Expense (Y-1) Quartile Position	1813	3	0.000	659	1	0.000	91	1	0.000	2563	2
EBITDA/Interest Expense (Y-1) Industry adjusted	1813	1.364	0.000	659	-16.621	0.000	91	-5.966	0.000	2563	-1.947
EBITDA/Sales (Y-1)	1794	0.128	0.000	624	-0.244	0.000	91	-0.010	0.000	2509	0.082
EBITDA/Sales (Y-1) Industry adjusted	1794	0.012	0.000	624	-0.386	0.000	91	-0.126	0.000	2509	-0.031
Net Income/Total Equity (Y-1)	1095	0.096	0.000	334	-0.177	0.554	64	-0.024	0.004	1493	0.080
Net Income/Total Equity (Y-1) Industry adjusted	1095	0.031	0.000	334	-0.247	0.539	64	-0.086	0.004	1493	0.014
EBITDA/Total Assets (Y-1)	1811	0.124	0.000	658	-0.167	0.000	91	-0.007	0.000	2560	0.087
EBITDA/Total Assets (Y-1) Industry adjusted	1811	0.031	0.000	658	-0.263	0.000	91	-0.112	0.000	2560	-0.005
Sales/Total Assets (Y-1)	1386	1.028	0.000	386	0.728	0.152	74	0.887	0.040	1846	0.962
Sales/Total Assets (Y-1) Industry adjusted	1386	0.214	0.000	386	-0.087	0.719	74	0.084	0.001	1846	0.165
Current Assets/Current Liabilities (Y-1)	1666	1.354	0.000	623	1.112	0.002	86	0.849	0.000	2375	1.283
Current Assets/Current Liabilities (Y-1) Industry adjusted	1666	-0.104	0.000	623	-0.455	0.072	86	-0.561	0.000	2375	-0.181
Total Liabilities/ Total assets (Y-1)	1784	0.581	0.000	656	0.673	0.000	89	0.901	0.000	2529	0.600
Total Liabilities/ Total assets (Y-1) Industry adjusted	1784	0.077	0.000	656	0.178	0.003	89	0.371	0.000	2529	0.099
Total Debt/Total Assets (Y-1)	1544	0.260	0.386	558	0.244	0.000	86	0.497	0.000	2188	0.263
Total Debt/Total Assets (Y-1) Industry adjusted	1544	0.048	0.001	558	0.060	0.001	86	0.261	0.000	2188	0.059

Table 3: Continued

Variables (1)	Healthy			Distressed			Bankrupt			Total	
	No Obs. (2)	Median (3)	Test (3),(6) (4)	No Obs. (5)	Median (6)	Test (6),(9) (7)	No Obs. (8)	Median (9)	Test (9),(3) (10)	No Obs. (11)	Median (12)
Panel C: All periods											
Total Assets One Year Prior (\$ mil)	9230	82.266	0.000	2614	24.258	0.000	250	87.707	0.750	12094	62.955
Market-to-Book (Y-1)	4372	1.044	0.776	1007	1.018	0.000	38	0.638	0.000	5417	1.037
EBITDA/Interest Expense (Y-1)	9433	7.466	0.000	2652	-4.307	0.000	254	-0.233	0.000	12339	4.739
EBITDA/Interest Expense (Y-1) Industry Median	9433	6.571	0.765	2652	6.571	0.000	254	6.183	0.000	12339	6.571
EBITDA/Interest Expense (Y-1) Industry 1st Q	9433	2.633	0.000	2652	2.346	0.147	254	2.461	0.000	12339	2.591
EBITDA/Interest Expense (Y-1) Quartile Position	9433	3	0.000	2652	1	0.000	254	1	0.000	12339	2
EBITDA/Interest Expense (Y-1) Industry adjusted	9433	1.000	0.000	2652	-11.887	0.000	254	-6.536	0.000	12339	-1.571
EBITDA/Sales (Y-1)	9315	0.126	0.000	2525	-0.090	0.000	252	-0.006	0.000	12092	0.095
EBITDA/Sales (Y-1) Industry adjusted	9315	0.005	0.000	2525	-0.238	0.000	252	-0.114	0.000	12092	-0.025
Net Income/Total Equity (Y-1)	5675	0.099	0.000	1451	-0.135	0.011	162	0.030	0.011	7288	0.085
Net Income/Total Equity (Y-1) Industry adjusted	5675	0.026	0.000	1451	-0.209	0.010	162	-0.035	0.015	7288	0.010
EBITDA/Total Assets (Y-1)	9394	0.136	0.000	2642	-0.088	0.000	251	-0.006	0.000	12287	0.107
EBITDA/Total Assets (Y-1) Industry adjusted	9394	0.031	0.000	2642	-0.195	0.000	251	-0.106	0.000	12287	0.002
Sales/Total Assets (Y-1)	6716	1.114	0.000	1538	0.883	0.072	203	1.014	0.029	8457	1.077
Sales/Total Assets (Y-1) Industry adjusted	6716	0.236	0.000	1538	0.011	0.288	203	0.148	0.001	8457	0.200
Current Assets/Current Liabilities (Y-1)	8711	1.393	0.000	2472	1.101	0.000	243	0.909	0.000	11426	1.328
Current Assets/Current Liabilities (Y-1) Industry adjusted	8711	-0.090	0.000	2472	-0.422	0.090	243	-0.520	0.000	11426	-0.155
Total Liabilities/ Total assets (Y-1)	9034	0.587	0.000	2578	0.742	0.000	247	0.894	0.000	11859	0.610
Total Liabilities/ Total assets (Y-1) Industry adjusted	9034	0.066	0.000	2578	0.225	0.000	247	0.356	0.000	11859	0.092
Total Debt/Total Assets (Y-1)	8083	0.254	0.000	2255	0.322	0.001	236	0.423	0.000	10574	0.267
Total Debt/Total Assets (Y-1) Industry adjusted	8083	0.038	0.000	2255	0.114	0.013	236	0.187	0.000	10574	0.053

Notes: This table provides medians for the whole sample and different classification according to type of target (Healthy, Distressed, Bankrupt) and time-period (up-down).

Table 4: Descriptive statistics by deal characteristics and period: Acquirer

Variables (1)	Healthy			Distressed			Bankrupt			Total	
	No Obs. (2)	Median (3)	Test (3),(6) (4)	No Obs. (5)	Median (6)	Test (6),(9) (7)	No Obs. (8)	Median (9)	Test (9),(3) (10)	No Obs. (11)	Median (12)
Panel A: Overall gaining period											
Total Assets (\$mil)	4947	751.374	0.000	1174	239.366	0.013	70	543.112	0.374	6191	613.410
Market-to-Book (Y-1)	3420	1.003	0.016	822	1.160	0.836	45	0.961	0.368	4287	1.019
EBITDA/Interest Expense (Y-1)	4130	7.415	0.000	841	5.385	0.008	57	7.872	0.565	5028	7.172
EBITDA/Interest Expense (Y-1) Industry Median	7620	6.642	0.015	1993	6.539	0.009	163	6.108	0.000	9776	6.640
EBITDA/Interest Expense (Y-1) Industry 1st Q	7620	2.662	0.000	1993	2.502	0.005	163	2.640	0.373	9776	2.640
EBITDA/Interest Expense (Y-1) Quartile Position	4130	3	0.000	841	2	0.002	57	3	0.124	5028	3
EBITDA/Interest Expense (Y-1) Industry adjusted	4130	0.793	0.000	841	-1.128	0.004	57	1.729	0.262	5028	0.583
EBITDA/Sales (Y-1)	3901	0.144	0.000	805	0.125	0.887	61	0.113	0.130	4767	0.140
EBITDA/Sales (Y-1) Industry adjusted	3901	0.023	0.000	805	0.002	0.979	61	0.000	0.084	4767	0.020
Net Income/Total Equity (Y-1)	3262	0.113	0.000	726	0.079	0.864	58	0.082	0.003	4046	0.108
Net Income/Total Equity (Y-1) Industry adjusted	3262	0.034	0.000	726	0.003	0.773	58	-0.003	0.003	4046	0.029
EBITDA/Total Assets (Y-1)	3907	0.136	0.000	825	0.110	0.194	61	0.125	0.099	4793	0.132
EBITDA/Total Assets (Y-1) Industry adjusted	3907	0.029	0.000	825	0.009	0.201	61	0.025	0.190	4793	0.026
Sales/Total Assets (Y-1)	3979	0.960	0.000	868	0.789	0.108	62	0.932	0.659	4909	0.935
Sales/Total Assets (Y-1) Industry adjusted	3979	0.089	0.000	868	-0.024	0.115	62	0.099	0.514	4909	0.064
Current Assets/Current Liabilities (Y-1)	3834	1.505	0.000	824	1.828	0.469	60	1.774	0.129	4718	1.547
Current Assets/Current Liabilities (Y-1) Industry adjust	3834	0.006	0.000	824	0.244	0.828	60	0.138	0.040	4718	0.033
Total Liabilities/ Total assets (Y-1)	3977	0.546	0.000	867	0.489	0.072	62	0.537	0.972	4906	0.537
Total Liabilities/ Total assets (Y-1) Industry adjusted	3977	0.021	0.000	867	-0.024	0.275	62	0.001	0.657	4906	0.015
Total Debt/Total Assets (Y-1)	3978	0.223	0.000	867	0.177	0.009	62	0.279	0.075	4907	0.219
Total Debt/Total Assets (Y-1) Industry adjusted	3978	0.010	0.031	867	-0.013	0.175	62	0.016	0.360	4907	0.005

Table 4: Continued

Variables (1)	Healthy			Distressed			Bankrupt			Total	
	No Obs. (2)	Median (3)	Test (3),(6) (4)	No Obs. (5)	Median (6)	Test (6),(9) (7)	No Obs. (8)	Median (9)	Test (9),(3) (10)	No Obs. (11)	Median (12)
Panel B: Overall falling period											
Total Assets (\$mil)	1233	1094.470	0.000	457	199.178	0.001	46	949.813	0.626	1736	729.360
Market-to-Book (Y-1)	939	0.996	0.002	358	1.340	0.942	31	1.079	0.300	1328	1.069
EBITDA/Interest Expense (Y-1)	1096	8.177	0.000	349	3.548	0.074	43	5.984	0.024	1488	7.289
EBITDA/Interest Expense (Y-1) Industry Median	1813	6.259	0.228	659	6.271	0.003	91	5.954	0.009	2563	6.263
EBITDA/Interest Expense (Y-1) Industry 1st Q	1813	2.318	0.000	659	1.345	0.168	91	1.834	0.000	2563	2.055
EBITDA/Interest Expense (Y-1) Quartile Position	1096	3	0.000	349	2	0.011	43	3	0.382	1488	3
EBITDA/Interest Expense (Y-1) Industry adjusted	1096	1.922	0.000	349	-2.448	0.040	43	0.031	0.068	1488	0.987
EBITDA/Sales (Y-1)	968	0.151	0.000	343	0.112	0.664	37	0.101	0.001	1348	0.138
EBITDA/Sales (Y-1) Industry adjusted	968	0.034	0.000	343	-0.013	0.835	37	-0.022	0.002	1348	0.027
Net Income/Total Equity (Y-1)	851	0.120	0.000	315	0.039	0.671	39	0.052	0.010	1205	0.105
Net Income/Total Equity (Y-1) Industry adjusted	851	0.051	0.000	315	-0.021	0.707	39	0.001	0.012	1205	0.041
EBITDA/Total Assets (Y-1)	971	0.131	0.000	345	0.085	0.924	37	0.064	0.000	1353	0.120
EBITDA/Total Assets (Y-1) Industry adjusted	971	0.038	0.000	345	-0.006	0.830	37	-0.019	0.000	1353	0.029
Sales/Total Assets (Y-1)	991	0.816	0.000	366	0.665	0.026	40	1.033	0.486	1397	0.789
Sales/Total Assets (Y-1) Industry adjusted	991	0.071	0.000	366	-0.054	0.083	40	0.115	0.880	1397	0.041
Current Assets/Current Liabilities (Y-1)	957	1.411	0.000	345	2.022	0.038	39	1.425	0.557	1341	1.485
Current Assets/Current Liabilities (Y-1) Industry adjust	957	-0.051	0.000	345	0.386	0.337	39	0.091	0.256	1341	0.000
Total Liabilities/ Total assets (Y-1)	991	0.554	0.000	367	0.423	0.001	40	0.595	0.080	1398	0.533
Total Liabilities/ Total assets (Y-1) Industry adjusted	991	0.052	0.000	367	-0.042	0.012	40	0.094	0.238	1398	0.036
Total Debt/Total Assets (Y-1)	991	0.248	0.000	367	0.133	0.001	40	0.305	0.126	1398	0.226
Total Debt/Total Assets (Y-1) Industry adjusted	991	0.038	0.000	367	-0.035	0.023	40	0.081	0.257	1398	0.020

Table 4: Continued

Variables (1)	Healthy			Distressed			Bankrupt			Total	
	No Obs. (2)	Median (3)	Test (3),(6) (4)	No Obs. (5)	Median (6)	Test (6),(9) (7)	No Obs. (8)	Median (9)	Test (9),(3) (10)	No Obs. (11)	Median (12)
Panel C: All periods											
Total Assets (\$mil)	6180	822.506	0.000	1631	227.073	0.000	116	736.045	0.552	7927	651.336
Market-to-Book (Y-1)	4359	1.002	0.000	1180	1.205	0.721	76	1.023	0.136	5615	1.035
EBITDA/Interest Expense (Y-1)	5226	7.553	0.000	1190	4.989	0.006	100	6.884	0.327	6516	7.185
EBITDA/Interest Expense (Y-1) Industry Median	9433	6.571	0.037	2652	6.538	0.000	254	6.085	0.000	12339	6.558
EBITDA/Interest Expense (Y-1) Industry 1st Q	9433	2.636	0.000	2652	2.318	0.168	254	2.457	0.000	12339	2.591
EBITDA/Interest Expense (Y-1) Quartile Position	5226	3	0.000	1190	2	0.000	100	3	0.388	6516	3
EBITDA/Interest Expense (Y-1) Industry adjusted	5226	1.051	0.000	1190	-1.571	0.001	100	1.580	0.898	6516	0.671
EBITDA/Sales (Y-1)	4869	0.145	0.000	1148	0.120	0.705	98	0.109	0.001	6115	0.140
EBITDA/Sales (Y-1) Industry adjusted	4869	0.026	0.000	1148	-0.002	0.766	98	-0.006	0.002	6115	0.022
Net Income/Total Equity (Y-1)	4113	0.115	0.000	1041	0.068	0.972	97	0.069	0.000	5251	0.107
Net Income/Total Equity (Y-1) Industry adjusted	4113	0.038	0.000	1041	-0.002	0.951	97	-0.002	0.000	5251	0.032
EBITDA/Total Assets (Y-1)	4878	0.135	0.000	1170	0.103	0.537	98	0.114	0.000	6146	0.130
EBITDA/Total Assets (Y-1) Industry adjusted	4878	0.031	0.000	1170	0.004	0.544	98	0.007	0.001	6146	0.027
Sales/Total Assets (Y-1)	4970	0.937	0.000	1234	0.764	0.012	102	0.990	0.855	6306	0.904
Sales/Total Assets (Y-1) Industry adjusted	4970	0.084	0.000	1234	-0.037	0.022	102	0.106	0.644	6306	0.060
Current Assets/Current Liabilities (Y-1)	4791	1.485	0.000	1169	1.853	0.057	99	1.583	0.187	6059	1.536
Current Assets/Current Liabilities (Y-1) Industry adjust	4791	-0.003	0.000	1169	0.272	0.678	99	0.118	0.028	6059	0.028
Total Liabilities/ Total assets (Y-1)	4968	0.547	0.000	1234	0.471	0.000	102	0.574	0.269	6304	0.536
Total Liabilities/ Total assets (Y-1) Industry adjusted	4968	0.028	0.000	1234	-0.026	0.012	102	0.028	0.540	6304	0.019
Total Debt/Total Assets (Y-1)	4969	0.228	0.000	1234	0.167	0.000	102	0.289	0.011	6305	0.221
Total Debt/Total Assets (Y-1) Industry adjusted	4969	0.015	0.000	1234	-0.019	0.012	102	0.047	0.090	6305	0.009

Notes: This table provides medians for the whole sample and different classification according to type of target (Healthy, Distressed, Bankrupt) and time-period (up-down).

Table 5: Determinants of the acquisition of healthy, distressed, and bankrupt firms

Variables	Healthy		Distressed		Bankrupt
	Model 1	Model 2	Model 3	Model 4	Model 5
Anti-Director Rights (Target Nation)	-0.554		1.201		
Anti-Director Rights (Target Nation)^2	0.068		-0.165		
Creditor Rights Index (Acquirer Nation)	-0.085		0.034		
Creditor Rights Index (Acquirer Nation)^2	0.027		-0.007		
Economic cycle (equity index), yearly % change	0.212		-0.244		
Target EBITDA/Sales (Y-1) Industry Median	-10.267*	-4.136***	8.727	2.934**	
Target EBITDA/Interest Expense (Y-1) Industry Median	-0.143**	-0.066**	0.165**	0.065**	-0.323***
Target Total Debt/Total Assets (Y-1) Industry Median	-3.691	3.388**	3.822	-3.502**	
Acquirer Access Capital / Deal Value Year/Industry	-0.015		0.014		
PtT * Acquirer Bankruptcy Rate (Industry % total)	-4.118**	-3.299***	3.249*	3.307***	
SIC Code related (first 3 digits)	-0.294**	-0.285**	0.320**	0.319**	
Hostile Bid Dummy	(dropped)		(dropped)		
Multiple acquirers Dummy	0.962		-0.948		
Log(Target Total Assets One Year Prior)	0.098**	0.096**	-0.093*	-0.084*	
Target Total Liabilities/Total Assets (Y-1)	-0.687		0.236		1.692**
Target Total Debt/Total Assets (Y-1)	1.686***	0.883***	-1.297***	-0.878***	-2.324**
PtT * Target Total Liabilities/ Total assets (Y-1)	1.009		-0.610		
PtT * Target Total Debt/Total Assets (Y-1)	-1.425*		1.084		
Target Current Assets/Current Liabilities (Y-1)	-0.057		0.053		-1.723***
Target Net Income/Total Equity (Y-1)	0.003		0.024		-0.101***
Target Sales/Total Assets (Y-1)	0.030		-0.029		
Target EBITDA/Total Assets (Y-1)	11.683***	11.434***	11.974***	11.474***	
Target Market-to-Book (Y-1)	0.000		0.000		
Target Fixed Assets/Total Assets (Y-1)	-0.744**		0.665*		
Acquirer EBITDA/Sales (Y-1)	0.139		-0.180		
Acquirer EBITDA/Total Assets (Y-1)	0.226		-0.219		
Acquirer Total Liabilities/ Total assets (Y-1)	1.112*	1.463***	-0.907	-1.276***	
Acquirer Total Debt/Total Assets (Y-1)	-1.695***	-2.107***	1.503**	1.937***	
US Target	0.124		-0.032		-1.924**
UK Target	0.059		0.097		
US Acquirer	-0.023		-0.053		1.562**
UK Acquirer	-0.028		0.006		
EM Acquirer Dummy	-0.596***	-0.557***	0.716***	0.570***	
Consumer Products and Services	4.493**		-5.463**		
Consumer Staples	4.528**		-5.550**		
Energy and Power	5.362**		-6.277***		
Healthcare	5.642***	2.326***	-6.710***	-2.346***	
High Technology	4.156**	0.586**	-5.213***	-0.608**	
Industrials	4.388**		-5.353**		
Materials	4.655**		-5.585***		
Media and Entertainment	4.851**		-5.955***		
Real Estate	8.561**	1.313*	-8.905***		
Retail	4.423**		-5.570***		
Telecommunications	5.869**		-6.661**		
Number of Observations	1,263	1,286	1,263	1,286	1,286
Log Likelihood	221,174	-232.025	-213,464	-226,544	-14,691
P-Value	0.000	0.000	0.000	0.000	0.000
Classification: Observations correctly classified	93.5%	93.7%	93.5%	93.6%	99.7%

Notes: This table provides the results of logistic regressions that explain the choice to acquire healthy, distressed, and bankrupt firms. ***, **, * mean significant at the 1%, 5%, and 10%.

Table 6: Event study results by target type and period

Periods	Overall gaining period			Overall falling period			Total		
	N	CAAR	T-Test	N	CAAR	T-Test	N	CAAR	T-Test
Panel A: Acquirer abnormal returns (-2,+1)									
Healthy	3,812	1.49%	1.515	944	0.16%	0.497	4,756	1.23%	1.533
Distressed	832	2.00%	4.929	338	31.36%	2.492	1,170	10.42%	2.860
Bankrupt	59	3.94%	4.121	32	4.28%	2.278	91	4.07%	4.516
Total	4,703	1.61%	1.997	1,314	8.56%	2.620	6,017	3.12%	3.205
Panel B: Target abnormal returns (-2,+1)									
Healthy	2,861	15.03%	8.927	961	18.12%	52.799	3,822	15.80%	12.487
Distressed	617	16.14%	4.913	285	24.91%	1.793	902	18.91%	3.873
Bankrupt	67	-4.29%	-0.609	61	68.58%	0.358	128	30.44%	0.335
Total	3,545	14.85%	10.197	1,307	21.95%	2.325	4,852	16.77%	6.121
Panel C: Acquirer run-up (-40,-3)									
Healthy	3,812	3.30%	0.491	944	5.13%	0.161	4,756	3.66%	0.497
Distressed	832	5.82%	1.599	338	27.64%	0.809	1,170	12.08%	0.928
Bankrupt	59	-2.20%	1.337	32	2.72%	0.739	91	-0.41%	1.465
Total	4,703	3.70%	0.648	1,314	11.05%	0.850	6,017	5.29%	1.040
Panel D: Target run-up (-40,-3)									
Healthy	2,861	19.77%	2.896	961	11.20%	17.130	3,822	17.62%	4.051
Distressed	617	37.12%	1.594	285	12.05%	0.582	902	29.20%	1.257
Bankrupt	67	459.82%	-0.198	61	1402.90%	0.116	128	909.26%	0.109
Total	3,545	31.11%	3.308	1,307	76.34%	0.754	4,852	43.29%	1.986

Notes: This table provides the results of the event study for the whole sample and different classification according to type of target (Healthy, Distressed, and Bankrupt) and time-period (gaining, falling).

Table 7: Event study results by target type and industry

CAR	Target	Consumer Products & Services	Consumer Staples	Energy & Power	Healthcare	High Tech	Industrials	Materials	Media & Entertain.	Real Estate	Retail	Telecom.
Panel A: Overall gaining period												
Acquirer	Healthy	1.93%	2.52%	-0.01%	4.34%	-0.02%	1.55%	1.74%	0.68%	-0.56%	1.85%	3.54%
	Distressed	2.94%	1.45%	4.38%	0.25%	3.02%	2.48%	-0.36%	3.11%	-0.70%	1.12%	2.49%
	Bankrupt	1.28%	3.04%	3.45%	8.31%	6.45%	0.37%	7.12%	4.36%	9.60%	1.76%	4.19%
	Total	2.09%	2.37%	0.47%	3.56%	0.86%	1.68%	1.46%	0.98%	-0.53%	1.73%	3.27%
Target	Healthy	20.35%	12.70%	13.33%	17.93%	16.54%	16.26%	14.95%	14.24%	8.10%	14.23%	8.94%
	Distressed	7.16%	28.58%	22.57%	23.38%	18.53%	6.44%	16.91%	9.79%	9.14%	27.85%	14.09%
	Bankrupt	-49.14%	-5.23%	2.61%	30.86%	-28.79%	-20.62%	-21.61%	31.73%	-	-6.17%	37.23%
	Total	17.38%	14.10%	13.97%	19.03%	16.66%	14.11%	14.70%	14.18%	8.48%	15.77%	11.09%
Panel B: Overall falling period												
Acquirer	Healthy	1.75%	0.36%	0.19%	1.94%	-1.19%	1.36%	-0.19%	-2.47%	-0.35%	-0.44%	-2.13%
	Distressed	0.33%	3.20%	618.82%	-0.49%	1.06%	1.60%	-1.01%	-3.43%	3.90%	2.31%	0.74%
	Bankrupt	0.97%	-1.98%	-2.68%	12.61%	12.84%	-0.37%	2.58%	-2.18%	4.34%	9.85%	-1.73%
	Total	1.37%	0.79%	61.01%	1.29%	0.11%	1.37%	-0.23%	-2.57%	1.64%	0.97%	-0.67%
Target	Healthy	29.54%	21.58%	14.01%	15.11%	25.80%	17.76%	14.97%	9.51%	2.44%	22.41%	12.72%
	Distressed	21.96%	18.93%	7.75%	54.23%	20.68%	24.81%	24.86%	24.65%	5.52%	23.60%	23.72%
	Bankrupt	-8.02%	11.63%	-54.60%	2.08%	87.63%	-0.84%	-20.04%	-1.25%	-0.05%	-15.98%	428.54%
	Total	24.32%	21.06%	13.07%	25.94%	26.12%	18.11%	15.38%	10.85%	3.51%	17.34%	79.12%
Panel C: All periods												
Acquirer	Healthy	1.90%	2.11%	0.05%	3.83%	-0.26%	1.52%	1.36%	0.22%	-0.53%	1.38%	2.80%
	Distressed	2.24%	1.84%	185.69%	0.02%	2.30%	2.26%	-0.48%	2.10%	0.38%	1.38%	1.94%
	Bankrupt	1.20%	1.79%	2.43%	9.03%	9.64%	0.12%	5.47%	-0.54%	6.97%	5.30%	1.56%
	Total	1.96%	2.06%	17.51%	3.02%	0.66%	1.62%	1.13%	0.44%	-0.18%	1.56%	2.49%
Target	Healthy	22.28%	15.23%	13.51%	17.19%	18.91%	16.66%	14.96%	13.30%	7.13%	16.39%	9.56%
	Distressed	12.43%	26.03%	19.10%	36.49%	19.40%	11.82%	18.65%	13.19%	8.48%	26.61%	17.84%
	Bankrupt	-21.72%	-2.82%	-5.56%	16.47%	48.83%	-11.25%	-21.01%	20.74%	-0.05%	-11.85%	288.79%
	Total	19.12%	16.02%	13.74%	21.11%	19.55%	15.20%	14.89%	13.49%	7.59%	16.22%	28.98%

Notes: This table provides the results of the event study for the whole sample and different classification according to type of target (Healthy, Distressed, and Bankrupt) and industry. Bold font indicates significance at the 5% level.

Table 8: Event study results by target type and period: Surrounding major crises

Periods	Gaining period			Falling period			Total		
	N	CAAR	T-Test	N	CAAR	T-Test	N	CAAR	T-Test
Panel A: Acquirer abnormal returns (-2,+1)									
Healthy	785	2.92%	0.721	431	0.21%	0.383	4,756	1.23%	1.533
Distressed	187	2.97%	3.848	149	1.45%	0.051	1,170	10.42%	2.860
Bankrupt	20	3.91%	2.164	15	3.28%	1.575	91	4.07%	4.516
Total	992	2.95%	0.923	595	0.60%	0.082	6,017	3.12%	3.205
Panel B: Target abnormal returns (-2,+1)									
Healthy	709	14.12%	3.386	405	17.89%	40.712	3,822	15.80%	12.487
Distressed	161	16.00%	1.275	123	25.75%	17.126	902	18.91%	3.873
Bankrupt	37	6.26%	0.326	15	5.71%	0.667	128	30.44%	0.335
Total	907	14.13%	3.532	543	19.33%	35.952	4,852	16.77%	6.121
Panel C: Acquirer run-up (-40,-3)									
Healthy	785	7.97%	0.234	431	3.42%	0.124	4,756	3.66%	0.497
Distressed	187	7.47%	1.249	149	5.44%	0.017	1,170	12.08%	0.928
Bankrupt	20	-1.98%	0.702	15	0.42%	0.511	91	-0.41%	1.465
Total	992	7.67%	0.300	595	3.85%	0.027	6,017	5.29%	1.040
Panel D: Target run-up (-40,-3)									
Healthy	709	44.59%	1.098	405	8.40%	13.209	3,822	17.62%	4.051
Distressed	161	114.15%	0.414	123	11.66%	5.557	902	29.20%	1.257
Bankrupt	37	889.28%	0.106	15	60.70%	0.216	128	909.26%	0.109
Total	907	91.39%	1.146	543	10.59%	11.664	4,852	43.29%	1.986

Notes: This table provides the results of the event study for the whole sample and different classification according to type of target (Healthy, Distressed, and Bankrupt) and time-period (gaining, falling).

Table 9: Determinants of the short-term performance of acquirers

Variables	Model 1	Model 2
Target is Healthy	0.033	-0.007*
Target is in Financial Distress	0.041	
Target is Bankrupt	0.055*	
Anti-Director Rights (Target Nation)	0.000	0.004*
Creditor Rights Index (Target Nation)	-0.002	
Economic cycle (equity index), yearly % change	-0.015	
PtT dummy 0 for gaining and 1 for falling periods	-0.012**	-0.007*
Cross-Border	-0.006	
SIC Code related (first 3 digits)	-0.002	
Hostile Bid Dummy	-0.008	
Tender Offer	-0.003	
Consideration Structure (Cash Dummy Variable)	-0.013**	-0.012**
Deal Value/Acquirer Market Value	0.000	0.000*
Target Public/Private Dummy	-0.044***	-0.041***
Premium*Target Public/Private Dummy	0.000	
Cash Dummy Variable*Target Public/Private Dummy	0.028***	
Cross-Border *Cash Dummy*Target Public/Private	0.002	
Anti-Director Rights (Target)*Cross-Border*Target Public/Private Dummy	0.005	
Acquirer Market-to-Book (Y-1)	0.000***	0.000***
Acquirer Current Assets/Current Liabilities (Y-1)	-0.001	
US Target	-0.001	
UK Target	-0.010	-0.025***
US Acquirer	-0.005	
UK Acquirer	-0.012	
EM Acquirer Dummy	-0.005	
Consumer Products and Services	0.021	0.035***
Consumer Staples	0.024	0.038***
Energy and Power	0.019	0.033***
Healthcare	0.002	0.015*
High Technology	0.010	0.024***
Industrials	0.026	0.040***
Materials	0.020	0.034***
Media and Entertainment	0.007	0.021**
Real Estate	(dropped)	
Retail	0.021	0.035***
Telecommunications	-0.011	
Number of Observations	3,404	3,404
Adjusted R ²	4.5%	4.6%
F-Test	5.57	10.13
P-Value	0.000	0.000

Notes: This table provides the results of OLS regressions that explain the determinants of the short-term performance of acquirers. ***, **, * mean significant at the 1%, 5%, and 10%

Table 10: Performance analysis by type of target and period – Cash Flow

Periods (1)	Median Acquirer alone & Combined (2)	Median industry adjusted Acquirer alone & Combined (3)	Median Acquirer & Target Combined (4)	Median industry adjusted Acquirer & Target Combined (5)	Median Acquirer alone & Combined (6)	Median industry adjusted Acquirer alone & Combined (7)	Median Acquirer & Target Combined (8)	Median industry adjusted Acquirer & Target Combined (9)	Test (2)-(6) (10)	Test (3)-(7) (11)	Test (4)-(8) (12)	Test (5)-(9) (13)	Median Acquirer alone & Combined (14)	Median industry adjusted Acquirer alone & Combined (15)	Median Acquirer & Target Combined (16)	Median industry adjusted Acquirer & Target Combined (17)
	Overall gaining period				Overall falling period								All periods			
	Panel A: Healthy targets															
-1	0.145	0.022	0.141	0.015	0.150	0.033	0.144	0.026	0.398	0.006	0.457	0.000	0.146	0.024	0.141	0.017
1	0.142	0.019	0.142	0.019	0.127	0.022	0.127	0.022	0.009	0.431	0.009	0.431	0.139	0.019	0.139	0.019
-1 to +1	0.497	0.107	0.000	0.000	0.000	0.193	0.001	0.878					0.084	0.406	0.000	0.000
+2	0.139	0.016	0.139	0.016	0.130	0.025	0.130	0.025	0.524	0.044	0.524	0.044	0.138	0.017	0.138	0.017
-1 to +2	0.021	0.286	0.023	0.000	0.000	0.006	0.009	0.760					0.000	0.782	0.406	0.000
+3	0.130	0.014	0.130	0.014	0.136	0.021	0.136	0.021	0.031	0.004	0.031	0.004	0.131	0.016	0.131	0.016
-1 to +3	0.000	0.923	0.125	0.000	0.000	0.047	0.078	0.760					0.000	0.426	0.029	0.001
	Test Healthy vs. Distressed targets															
-1	0.024	0.035	0.000	0.000	0.001	0.002	0.000	0.000					0.000	0.001	0.000	0.000
+1	0.003	0.008	0.003	0.008	0.000	0.000	0.000	0.000					0.000	0.000	0.000	0.000
+2	0.000	0.001	0.000	0.001	0.000	0.002	0.000	0.002					0.000	0.000	0.000	0.000
+3	0.003	0.002	0.003	0.002	0.013	0.027	0.013	0.027					0.000	0.000	0.000	0.000
	Panel B: Distressed targets															
-1	0.150	0.033	0.144	0.026	0.128	0.005	0.069	-0.050	0.186	0.525	0.015	0.104	0.131	0.013	0.095	-0.028
1	0.127	0.022	0.127	0.022	0.075	-0.014	0.075	-0.014	0.000	0.056	0.000	0.056	0.116	0.001	0.116	0.001
-1 to +1	0.000	0.193	0.001	0.878	0.126	0.578	0.001	0.000					0.058	0.880	0.000	0.000
+2	0.130	0.025	0.130	0.025	0.105	0.005	0.105	0.005	0.094	0.630	0.094	0.630	0.114	0.005	0.114	0.005
-1 to +2	0.000	0.006	0.009	0.760	0.404	1.000	0.001	0.000					0.006	0.081	0.000	0.000
+3	0.136	0.021	0.136	0.021	0.121	0.018	0.121	0.018	0.805	0.474	0.805	0.474	0.123	0.007	0.123	0.007
-1 to +3	0.000	0.047	0.078	0.760	0.487	0.165	0.000	0.000					0.034	0.596	0.000	0.000
	Test Distressed vs. Bankrupt targets															
-1	0.965	0.726	0.912	0.856	0.156	0.257	0.634	0.823					0.290	0.271	0.621	0.828
+1	0.777	0.399	0.777	0.399	0.869	0.922	0.869	0.922					0.612	0.381	0.612	0.381
+2	0.388	0.531	0.388	0.531	0.574	0.369	0.574	0.369					0.926	0.816	0.926	0.816
+3	0.855	0.722	0.855	0.722	0.042	0.027	0.042	0.027					0.131	0.088	0.131	0.088

Table 10: Continued

Periods (1)	Median Acquirer alone & Combined (2)	Median industry adjusted Acquirer alone & Combined (3)	Median Acquirer & Target Combined (4)	Median industry adjusted Acquirer & Target Combined (5)	Median Acquirer alone & Combined (6)	Median industry adjusted Acquirer alone & Combined (7)	Median Acquirer & Target Combined (8)	Median industry adjusted Acquirer & Target Combined (9)	Test (2)-(6) (10)	Test (3)-(7) (11)	Test (4)-(8) (12)	Test (5)-(9) (13)	Median Acquirer alone & Combined (14)	Median industry adjusted Acquirer alone & Combined (15)	Median Acquirer & Target Combined (16)	Median industry adjusted Acquirer & Target Combined (17)
	Overall gaining period				Overall falling period								All periods			
	Panel C: Bankrupt targets															
-1	0.117	0.003	0.085	-0.028	0.101	-0.022	0.059	-0.033	0.035	0.173	0.058	0.196	0.111	-0.003	0.079	-0.031
1	0.117	-0.008	0.117	-0.008	0.084	-0.014	0.084	-0.014	0.116	0.643	0.116	0.643	0.107	-0.011	0.107	-0.011
-1 to +1	0.775	1.000	0.085	0.253	1.000	0.473	1.000	0.720					0.738	0.576	0.146	0.219
+2	0.123	-0.005	0.123	-0.005	0.077	-0.017	0.077	-0.017	0.052	0.105	0.052	0.105	0.112	-0.009	0.112	-0.009
-1 to +2	1.000	1.000	0.152	0.085	0.281	1.000	0.281	0.281					0.434	0.911	0.057	0.033
+3	0.105	-0.017	0.105	-0.017	0.070	-0.039	0.070	-0.039	0.079	0.101	0.079	0.101	0.096	-0.024	0.096	-0.024
-1 to +3	0.568	0.775	0.775	0.392	0.720	1.000	1.000	1.000					0.911	0.738	0.738	0.434
	Test Healthy vs. Bankrupt targets															
-1	0.424	0.220	0.003	0.003	0.001	0.004	0.000	0.000					0.008	0.008	0.000	0.000
+1	0.135	0.040	0.135	0.040	0.014	0.023	0.014	0.023					0.003	0.003	0.003	0.003
+2	0.698	0.585	0.698	0.585	0.005	0.002	0.005	0.002					0.034	0.030	0.034	0.030
+3	0.179	0.095	0.179	0.095	0.000	0.000	0.000	0.000					0.001	0.000	0.001	0.000
	Panel D: All targets															
-1	0.144	0.021	0.134	0.009	0.144	0.028	0.131	0.014	0.544	0.134	0.102	0.224	0.144	0.023	0.133	0.010
1	0.140	0.017	0.140	0.017	0.120	0.015	0.120	0.015	0.000	0.478	0.000	0.478	0.135	0.016	0.135	0.016
-1 to +1	0.860	0.120	0.000	0.000	0.000	0.211	0.211	0.041					0.022	0.445	0.000	0.000
2	0.136	0.014	0.136	0.014	0.124	0.017	0.124	0.017	0.033	0.424	0.033	0.424	0.133	0.015	0.133	0.015
-1 to +2	0.002	0.887	0.000	0.000	0.000	0.021	0.742	0.065					0.000	0.342	0.001	0.000
3	0.129	0.012	0.129	0.012	0.130	0.018	0.130	0.018	0.222	0.031	0.222	0.031	0.129	0.014	0.129	0.014
-1 to +3	0.000	0.972	0.860	0.000	0.010	0.292	0.792	0.075					0.000	0.585	0.767	0.000

Notes: This table provides the results of the performance (EBITDA/Sales) for 4,118 deals and according to type of target (Healthy, Distressed, Bankrupt) and time-period (gaining-falling). Ratios are in the blue cells and tests on medians are in the white cells

Table 11: Determinants of the long-term performance of acquirers

Variables	Pre-performance	
	Model 1: Acquirer only	Model 2: Combined
Target is Healthy	0.782****	0.790***
Acquirer EBITDA/Sales (Y-1)	0.007*	0.043**
PtT dummy 0 for gaining and 1 for falling periods	-0.390*	-0.378*
Acquirer Current Assets/Current Liabilities (Y-1)	-0.072*	-0.079*
Combined Total Debt/Total Assets (Y+1)	-0.892**	-0.898**
Healthcare	-1.766***	-1.791***
Number of Observations	2,336	2,308
Adjusted R ²	2.0%	2.4%
F-Test	8.88	9.00
P-Value	0.000	0.000

Notes: This table provides the results of OLS regressions that explain the determinants of the long-term performance of acquirers. Only variables with significant coefficients are presented as a result of the other variables having no explanatory power. ***, **, * mean significant at the 1%, 5%, and 10%.