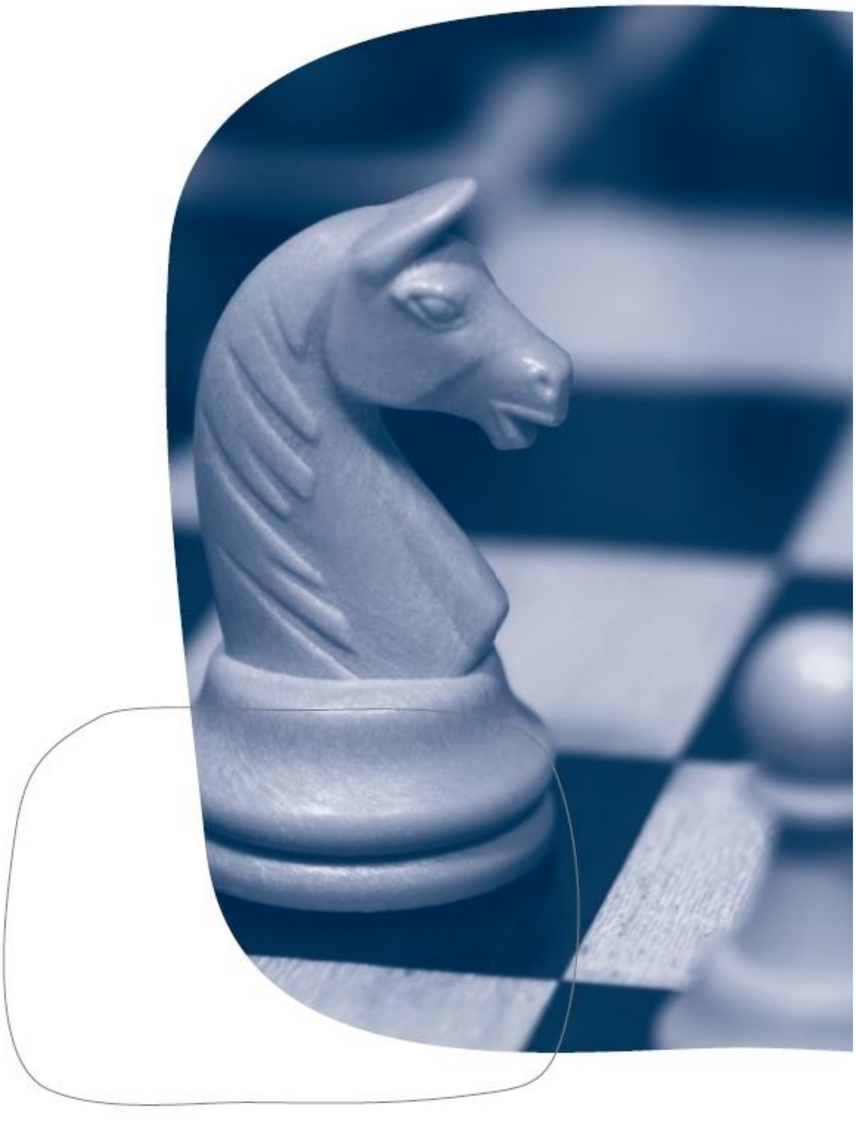
How, and when, to catch a falling knife:

The benefits, risks, and timing issues around distressed M&A

M&A Research Centre – MARC

February 2018



MARC – Mergers & Acquisitions Research Centre

MARC is the Mergers and Acquisitions Research Centre at Cass Business School, City, University of London – the first research centre at a major business school to pursue focussed leading-edge research into the global mergers and acquisitions industry.

MARC blends the expertise of M&A accountants, bankers, lawyers, consultants and other key market participants with the academic excellence of Cass to provide fresh insights into the world of deal-making.

Corporations, regulators, professional services firms, exchanges and universities use MARC for swift access to research and practical ideas. From deal origination to closing, from financing to integration, from the hottest emerging markets to the board rooms of the biggest corporations, MARC researches the wide spectrum of mergers, acquisitions and corporate restructurings.

Overview

The financial crisis led to an increase in the share of acquisitions involving distressed targets. While we don't know when the next crisis will happen one of the few things we can be sure of in financial markets is that one day there will be another one, throwing up distressed acquisition opportunities. And even without a full-blown crisis, opportunities will arise, whether simply from the normal economic cycle or industry disruption that leaves a company in crisis mode. Hence the need for this report, which looks to analyse past distressed acquisitions with a motivation to better prepare us for the future.

The logic for the need and indeed attraction of such deals is clear. Corporate finance scholars have argued that mergers and acquisitions can be 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 a strict sense and liquidation.

But the question of whether it is the right thing to do for the acquirer is harder to answer. It is not hard to find examples providing evidence either way. In 2009, immediately post the financial crisis, Premier Oil acquired the distressed OIlexco North Sea. Initially the stock performed well, but now you will find Premier shares at less than half the level they were at the time of the deal, having also underperfomed the sector by c.50%. It could be that the deal triggered the underperformance but more likely this was a case of doubling up on a falling asset, oil.

The timing of distressed acquisitions is covered in this report and we account for more general industry trends to try to answer the 'cause' question suggested by the following example. In 2012 the distressed retailer JJB Sports was acquired by competitor Sports Direct. Five years later, despite what has been a very tough time for retailers in general (the impact of online competitors, Amazon in particular), Sports Direct's share price is still up versus 2012 and has marginally outperformed the FTSE 100. Without the JJB Sports deal, would it have done so?

So, the questions are there to be answered, and here are our answers:

- We find that distressed acquisitions have particular characteristics. They tend to take longer to complete, and, perhaps counterintuitively, the deals involve higher premiums. But they are no harder to complete than any 'normal' transaction.

- Based on our analysis of the short-term deal announcement reaction, we also find no particular significant reaction, positive or negative, associated with distressed acquisitions as compared to 'healthy' acquisitions.

- However, if the deals are carried out in a 'falling market' then distressed deals are welcomed by the market more than non-distressed acquisitions.

- And in the longer-term, looking three years out, our analysis shows that the newly-combined firms where the target is distressed generally benefit from an overall improvement in operational performance compared to their combined pre-bid performance (compared to a base case 'healthy' acquisition), evidence of better synergy realization or the benefits of opportunistically consolidating a market.

So, if you are looking to make one of these deals, be patient, the market's reaction may depend on the timing but the payoff operationally may well be positive.

Background (and what we knew)

Jensen in 1991[1] argued 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. As mentioned above, acquisitions of distressed targets are one of three routes to reorganize firms in financial distress, the other two being corporate restructuring in a strict sense (asset, operational, financial and managerial) and liquidation (piecewise sale).

Sales of bankrupt targets became more frequent in the 2000s, emphasising the importance of studying the distressed acquisition market. Our research supports the analysis as it is found 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 as a proportion of total M&A and tend to stay at a higher than average level for up to three to four years (see Figure 1).

Do the deals make sense?

Approximately nine years following the financial crisis, research on distressed acquisitions is still scarce and has relied on the earlier comparison between acquisitions in bankruptcy and acquisitions outside bankruptcy of healthy companies (Hotchkiss and Mooradian, 1998[2]), or on the study of acquisitions solely of distressed companies (Clark and Ofek, 1994[3]), or on the comparison between acquisitions and bankruptcies as exit strategies (Bergström et al., 2005[4]). This paper thus fills the void in the literature by exclusively investigating acquisitions of distressed companies, including those involved in bankruptcy proceedings, over a long time period to account for macroeconomic effects across multiple M&A cycles.

Value creation

Hotchkiss and Mooradian 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. However, this is for a very specific class of targets, bankruptcies, where the negotiating power of the seller is basically nil and likely in the hands of the creditors. This paper extends their results and, as we will see, shows that newly-combined firms where the target is either distressed or bankrupt generally benefit more in performance over the long-term compared to deals with a 'healthy' target.

The market reaction

In terms of short-term performance, even though Clark and Ofek argue that announcement of abnormal returns for both acquirers and distressed targets are similar to those for the general population of acquirers and targets, Hotchkiss and Mooradian find positive abnormal returns for both acquirer and bankrupt target. Again, note the specification of bankrupt. The results in this report, that includes the financial crisis in its analysis, show something a bit different than in the 1998 paper, with the time of deal mattering for both acquirer performance and the performance of the combined entity. And while Hotchkiss found bankrupt targets lose out in the process in light of their more limited bargaining power we find different results for the more general class of distressed sellers. Or could it be that something changed fundamentally in the financial crisis in terms of either distressed targets' bargaining power or market cynicism as to the value of distressed acquisitions?

[1] Jensen, M.C., Journal of Applied Corporate Finance, 1991

[2] Hotchkiss, E.S. and Mooradian, R.M., Journal of Financial Intermediation, 1998

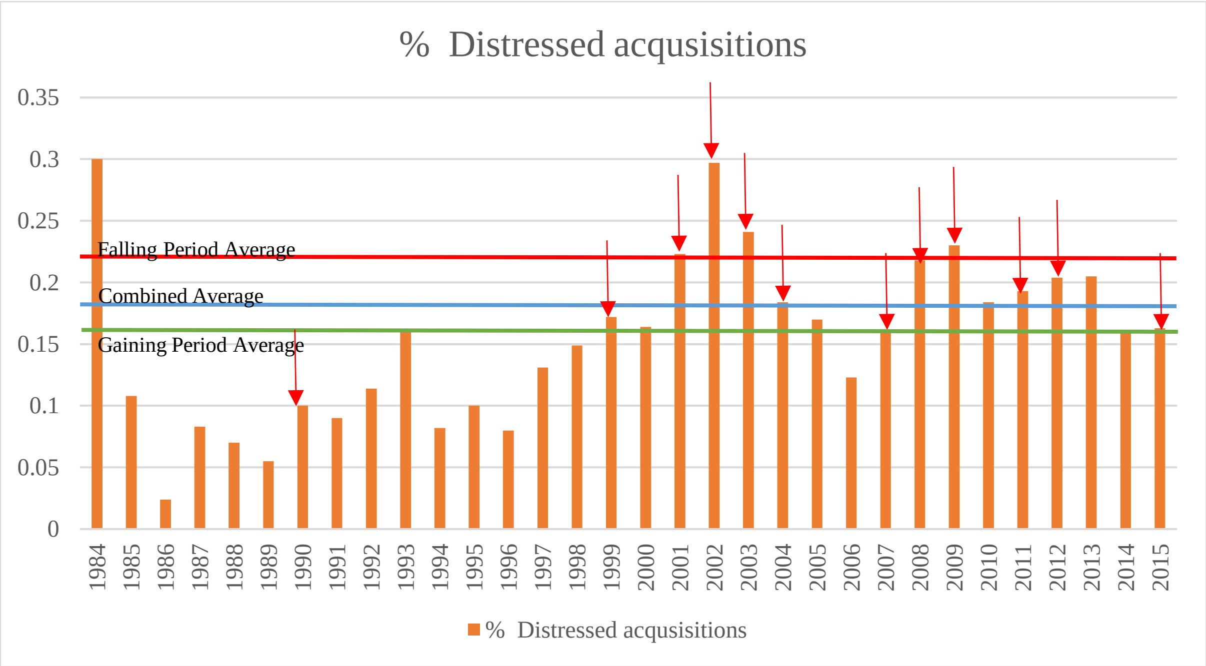
[3] Clark, K. and Ofek, E., Journal of Financial and Quantitative Analysis, 1994

[4] Bergstrom, C., Eisenberg, T., Sundgren, S. and Wells, M.T., Journal of Empirical Legal Studies, 2005

There is a well-known high correlation between periods of high merger activity and high valuations. The pro-cyclicality of M&A is probably one of the reasons why the general value creation of public deals is questioned. As the figure below shows, distressed acquisitions have their own cycle, a counter cyclical cycle that is another potential reason for the greater attractiveness as a strategic option that we find in this report.

Interestingly, while bankruptcy acquisitions are typically very fast processes compared to non-bankrupt acquisitions, particularly in downturns (in light of the timing issues inherent to a bankruptcy process), our extension to distressed targets results in quite a different finding in 'normal' times.

Figure 1: Distressed acquisitions / Total acquisitions



Source: Cass Business School
(Downward arrows represent 'falling periods')

Our findings

In the results tables, as well as showing those variables directly applicable to this study (distressed targets), we include other drivers that arose that may be of interest, although we do not investigate them in the same level of detail.

Is it harder to get a distressed deal done?

In Figure 2 we show the results of a regression analysis examining the impact of three different variables on three outcomes we were interested in: Completion Likelihood, Time to Completion and Premium paid.

The statistically significant conclusions for distressed deals are that the deals do take longer to complete, and you are likely to need to pay a higher premium.

In addition, there is a small but insignificant increase in the likelihood of completion. The complexity of distressed deals is often high (risk of contingent liabilities, for example) so the increase in time to completion is not surprising but the finding on premium perhaps is, if you believe that distressed sellers have less bargaining power. They probably do, but consider what's probably been happening to the share price. The market won't have missed the deterioration in leverage metrics and the share could well be trading below its going-concern valuation. The sellers will be aware of the potentially higher value of the assets to the acquirer and so will want a higher premium, which will still likely give a low takeout price in comparison to intrinsic value

As well as the variables shown we control in particular for: cross-border, acquisition method and creditor rights.

Will the market like it?

The next analysis involves a regression of share price performance around the announcement date, from two days before to two days after. The results are shown in Figure 3. We measure abnormal performance as out or underperformance of the market. We are trying to find the drivers of such performance

Note that here it's not really about positive performance it's about a 'better' performance than you would otherwise expect, all else being equal.

Looking simply at distressed deals we find little evidence for a particular reaction one way or another. We see the expected negative reaction versus deal size (the bolt-ons are the deals that are well received, not the mega deals) and positive reaction to cash deals.

As well as the variables shown we control in particular for: cross-border, contested bids and deal attitude.

Figure 2: Results of regression analysis on various deal completion variables. Source: Cass Business School

Variable	Completion likelihood	Time to Complete	Premium paid
Distressed acquisition	Positive (very weak)	Positive (strong)	Positive (moderate)
Falling period (see below)	Negative (strong)	Positive (very weak)	Positive (weak)
Contested bid	Negative (strong)	Positive (strong)	Positive (very weak)

Figure 3: Short run abnormal performance (-2,2) regression. Source: Cass Business School

Variable	Acquirer performance	Combined (Acq. + Target) performance
Distressed target	Negative (very weak)	Negative (very weak)
Falling period	Negative (strong)	Negative (strong)
Distressed target & falling period	Positive (strong)	Positive (moderate)
Deal value	Negative (strong)	Negative (very weak)
Cash payment	Positive (strong)	Positive (moderate)

The most interesting results relate to deal timing and for this we need some definitions:

Deal timing

Is there a right time to make a distressed acquisition?

This research identifies five historic 'crises' and their corresponding troughs, using the MSCI World price index graph:

- 1990: The second to last 'debt' crisis, which primarily affected the US and Western Europe
- 1998: The Asian crisis that affected most of South-East Asia and which followed the Russian crisis in 1997
- 2001: The initial dotcom crash together with the terrorist attack on the Twin Towers in New York in the same year
- 2003: The second round of large falls in stock market valuations following two years of highly volatile market conditions
- 2008: The financial crisis, originating in the US but propagating worldwide, largely due to global holdings of mortgage backed debt.

Each crisis was allocated three corresponding 'Points-in-Time' (PiT): 'Trough,' which is the lowest point and trough of the crisis year, 'Previous Peak,' which is the peak 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 following peak where the index reaches its highest value after it recovers from the trough (in the index, the closest point after the trough). The periods have then been consolidated into three major periods with similar characteristics, i.e., the stock market was behaving similarly in these periods. The definitions of the three major periods are as follows:

- Period from beginning of index period to Previous Peak – 'In Between Peaks'
- Period from Previous Peak to Trough – 'Falling Market', from beginning to middle of crisis
- Period from Trough to Next Peak – 'Gaining Market', from middle to end of crisis.

Now we can return to the results in Figure 3. We find some very interesting results. While the market is understandably nervous in general about deals being done while the market is falling, if you are buying a distressed asset the opposite is true, it will welcome (relatively) that type of deal.

Will it improve your business?

Lastly, we turn to more long-term considerations. Again, we carry out a regression on the key variables, this time to look at their impact on operating metrics. The results are shown in Figure 4 below. Reassuringly in terms of the quality of our data and process we see results consistent with previous studies on variables such as deal value (larger deals often destroying value) and cross-border M&A (also viewed correctly as higher risk). For the variable we are really interested in, 'distressed', the results are unambiguous, distressed acquisitions are more likely to be positive in terms of change in 'cashflow' (EBITA / Sales), return on equity and operating performance (EBITDA / Total Assets).

As well as the variables shown in the table we control in particular for industry relatedness.

Figure 4: Results of regressions on changes in performance metric from Y-1 to Y+3

Variable	Cashflow	ROE	Operating performance
Distressed acquisition	Positive (strong)	Positive (moderate)	Positive (strong)
Cross-border acquisition	Negative (moderate)	Negative (very weak)	Negative (very weak)
Deal value	Negative (very weak)	Positive (very weak)	Negative (very weak)

Source: Cass Business School

Conclusions and recommendations

This report analyses acquisitions of healthy, distressed, and bankrupt firms. In general, there is no real evidence that the market expects acquisitions of distressed targets to be any more value enhancing or destructive for the acquirer than any 'normal' deal. However long-term performance actually tends to be superior for these deals than the norm, so the market is actually being over sceptical.

However, there is a time when the market welcomes distressed deals to a greater extent than a non-distressed deal. That is at a time of falling markets, perhaps when there are multiple distressed targets out there, so the buyer has the choice of attractive deals. And maybe it's a time when the market is expecting such opportunistic deals and so is less fearful when the buyer takes the plunge. The market generally responds badly to M&A in such times, quite understandably, thinking that this is not the time to be spending aggressively but it is a time to be acting opportunistically. The dislike of deals in general in these periods is mirrored by a dislike of large deals for an acquirer at any time (matching findings in our previous work on the attractions of smaller deals). Those bolt-on acquisitions are generally well received, and, if timed opportunistically, even more so.

We would also highlight the contrast between the operational improvements seen in distressed acquisitions compared to the deterioration seen after cross-border deals. Both types of deal would usually be viewed as 'high risk' but their operating outcomes are quite different. Viewing the results from an economic point of view, there is evidence that newly-combined firms where the target is either distressed or bankrupt generally benefit from a greater overall improvement in performance over the long-term compared to their combined pre-bid performance, in line with synergy realisation.

However, the market is not naïve. To do these attractive deals could well involve a higher premium and take longer, but the chance of successful completion is no less than in a 'healthy' deal, unlike if a deal becomes contested or hostile.

Recommendations

(Things to bear in mind if you are considering making an opportunistic acquisition of a distressed company)

- Be patient, but not greedy. The deal may take longer to complete. The target companies aren't naïve, they know that their share price is probably trading below intrinsic value and so will want a higher premium than otherwise. But you're still probably getting a 'good deal'.

- Don't hold back because the market is dropping. If you have the capital, then the market will understand that this is a good time to deploy it. And even in a normal market they won't be particularly fearful of a distressed deal.

- Just because the company is distressed doesn't mean the asset doesn't have value. Whether through operational turnaround or simply the elimination of a competitor, your company will generally benefit more from these deals than if you bought a supposedly healthy target.

Our approach

As this study focuses on the comparison of distressed / bankrupt targets 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 Amortisation (EBITDA) divided by the Net Interest Expense, measured in the year prior to the acquisition. This measure has been favoured by academics and practitioners alike because it captures firms suffering from both economic and financial distress, incorporating operating performance and financial expenses at the same time (see, for example, Rajan and Zingales[6]). From the total M&A population of 265,574 deals in the time period under analysis (1984-2015), the interest coverage ratio was only available for 24,105 targets (9% of the initial sample). Please refer to the Appendix for the time-series of the data and criteria used in this paper. That table also shows other restrictions for parts of the study, that include accounting data for the study of financial performance and market value data for the event study.

In summary:

1. In the first step, as stated above, we require the ICR be available (both EBITDA and interest expense are available), leaving us with 24,105 deals.
2. Exclude the financial services industry, yielding 20,984 deals. (This is unfortunate given the size of the industry and its centrality to the last market downturn but the different nature of operational metrics, combined with the regulatory imposed nature of 'distress', makes it unavoidable. This is also the case for comparable academic studies).
3. Insist on certain acquirer information being available, yielding the final number of 10,930 deals. (There is an additional screening for data required for the event study such as the market value of target).

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 (necessary due to industries having very different leverage 'norms'). If the target does not fulfil these two requirements, then it is viewed as 'healthy.' So, we have:

Deals involving healthy targets – 9,043 (82.7%)

Deals involving distressed targets – 1,887 (17.3%)

Our questions

We look to tackle the following four main questions:

- Are acquisitions of distressed companies harder to get done? (In terms of likelihood to complete, time to completion and premium paid)
- Will the market respond more positively to a distressed acquisition than to an acquisition in general?
- Is there a 'right time' to make a distressed acquisition?
- Will an acquisition of a distressed company improve your own performance in the longer-term?

Our techniques

We tackle these questions using three techniques.

Event study

Our event study measures the market reaction to the announcement of a deal. For those believers in efficient markets, this is also taken

[6] Rajan, R. and Zingales, L., Journal of Finance, 1995

as a marker as to the value creation (or not) of the deal. While this data is often cited and is the most widely used to judge deal success, there are issues with that viewpoint such as its interaction with risk arbitrage strategies. In this study we use a window that runs from two days prior to announcement to two days after to catch any pre-announcement run up and to allow the market to digest the financial implications of a deal. The abnormal returns are calculated versus those of the overall market.

Ratio analysis

In order to examine the long-term performance of acquirers, a selection of accounting ratios are used. The aim is to investigate the development of operational performance post-acquisition for the combined entity compared to pre-acquisition for the 'combined' firms (financial data for acquirer and target added together). The indicators utilised are 'Cash Flow' (EBITDA / Sales), Return on Equity (Net Income / Total Equity) and Operating performance (EBITDA / Total Assets).

Regression analysis

We use regression analysis to look at the drivers of outcomes such as completion, time to completion, stock performance (in conjunction with the event study technique) and operating performance, specifically looking for distressed targets as a potential driver. We use regression analysis rather than a simple event study to eliminate potential cause and effect issues. For example, simple analysis could show that distressed acquisitions are welcomed by the market when actually it is the fact that a distressed deal is less likely to be cross-border (deals that are generally not welcomed by the market) that is driving the outperformance.

In all the analysis above, two of the factors that we have controlled for are particularly significant. The first is the industry that the company is in. Clearly when we look at share price performance or accounting metrics certain industries will have periods when these will have tended to rise or fall, independent of the deals we are looking at. This is adjusted for. Secondly there is a size issue. We do not want a stock move or profitability improvement to be ascribed to a very small deal. We control for this as well.

Appendix

The main sources for the data used in this paper are Thomson ONE Banker and Thomson Datastream. In the spirit of Faccio et al.[7] this paper defines a merger or acquisition as one where 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 have been included. The sample excludes Leveraged Buyouts, Spinoffs, Recapitalizations, Self-Tenders, Exchange Offers, Repurchases, and Privatisations. 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[8]. The data spans the period between 1 January 1984 and 31 December 2008 and the initial sample includes 265,574 deals, the total number of M&A deals in the time period identified by the database, public and private, following our criteria. Target and deal information were downloaded from Thomson ONE Banker. Acquirer and industry financial information were downloaded from Thomson Datastream.

Figure 5: Condition requirements by year for study. Source: Cass Business School

Year	Number of Deals	Number of Deals passing the ICR screen for targets	Number of deals after dropping financial industry	Number of deals passing acquirer information screen	Number of deals passing Event study screen for both targets and acquirers
1984	2,055	38	32	10	4
1985	847	76	71	37	24
1986	1,126	166	155	83	47
1987	1,300	179	172	96	53
1988	1,943	319	297	142	80
1989	2,719	355	343	126	73
1990	2,535	244	221	100	52
1991	4,066	278	237	130	76
1992	4,292	263	226	114	63
1993	4,860	275	234	99	52
1994	5,446	284	235	133	93
1995	7,035	424	357	208	134
1996	7,185	457	410	249	162
1997	7,149	628	550	358	242
1998	7,873	921	802	547	384
1999	9,579	1,253	1,083	707	528
2000	11,038	1,203	1,048	670	486
2001	9,072	975	832	497	362
2002	7,629	882	757	386	284
2003	8,736	1,027	889	443	300
2004	9,819	900	746	434	338
2005	10,954	1,113	959	535	404
2006	12,562	1,295	1,102	590	479
2007	14,547	1,496	1,279	680	491
2008	14,657	1,387	1,192	573	430
2009	13,968	1,379	1,240	552	437
2010	14,955	1,231	1,072	509	402
2011	14,460	1,138	1,002	434	339
2012	12,759	1,035	905	392	314
2013	12,245	861	750	307	244
2014	13,747	1,000	877	371	310
2015	14,416	1,023	909	418	341
Total	265,574	24,105	20,984	10,930	8,028

[7] Faccio, M. McConnell, J.J. and Stolin, D., Journal of Financial and Quantitative Analysis, 2006

[8] Martynova, M. and Renneboog, L., Advances in Corporate Finance and Asset Pricing, 2006

Notes on Authors

Dr Valeriya Vitkova, MARC Research Fellow. Her research and teaching at Cass focus on M&A, corporate restructuring, hedge fund activism and related topics.

Siyang Tian, MARC Researcher. He researches in the fields of mergers and acquisitions and private equity.

Scott Moeller, Director of MARC and Professor in the Practice of Finance. His research and teaching focuses on the full range of mergers and acquisitions activities.

Contact: **cassmarc@city.ac.uk**

.

Notes

Notes

Notes

M&A Research Centre

Cass Business School
106 Bunhill Row
London EC1Y 8TZ
T: +44 (0)20 7040 5146
E: CassMARC@city.ac.uk
www.cass.city.ac.uk/marc

Cass Business School
In 2002, City University's Business School was renamed Sir John Cass Business School following a generous donation towards the development of its new building in Bunhill Row. The School's name is usually abbreviated to Cass Business School.

Sir John Cass's Foundation
Sir John Cass's Foundation has supported education in London since the 18th century and takes its name from its founder, Sir John Cass, who established a school in Aldgate in 1710. Born in the City of London in 1661, Sir John served as an MP for the City and was knighted in 1713.