Essays on Mergers and Acquisitions

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Declaration

I declare that any material contained in this thesis has not been submitted for a degree to any other university. I further declare that the paper titled "Naked M&A Transactions: How the Lack of Local Expertise in Cross-border Deals Can Negatively Affect Acquirer Performance – and How Informed Institutional Investors Can Mitigate This Effect", drawn from Chapter Two of this thesis, is co-authored with Miles Gietzmann and Anna Faelten and is published in the Journal of Business Finance and Accounting, edited by Peter F. Pope, Andrew Stark and Martin Walker.

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Abstract

This thesis comprises three essays on Mergers and Acquisitions. In the first chapter I use an international sample of M&A deals to test the implications of the clientele theory of dividends in the context of post-acquisition dividend policy. I contribute to the literature by controlling for the effect of the target's shareholder characteristics and the gap between target and bidder pre-acquisition dividend policies on post-M&A dividend policy. In line with the clientele theory of dividends, this chapter demonstrates that, in all stock payment deals, post-acquisition dividends per share increase with the pre-acquisition percentage difference between target and acquirer DPS and with the size of the dividend clientele from the target company which becomes part of the bidder's shareholder base. The second chapter tests how informed investors with local expertise can affect cross-border deal success using a comprehensive dataset of corporate acquirers' share registers. We present evidence which confirms the hypothesis that acquirers in cross-border corporate transactions are more likely to be successful if the acquirer's investors have a higher level of expertise in the target region, and that this effect is strongest when the maturity for corporate transactions of the target country is low. The third chapter contributes to the literature by investigating the wealth effects of horizontal acquisitions on the upstream and downstream participants in the product-market chain when the target company is in financial distress. This chapter posits that the financial health of the target is particularly relevant when considering the buyer power of the merging firms. Specifically, I hypothesise that industry-related acquisitions are more likely to increase the buyer power of the merging companies when the target is financially distressed due to the debtor-oriented insolvency rules in the US which allow bankrupt companies to renegotiate supplier contracts. The results of the study support this a priori expectation.

Introduction

This thesis comprises three essays on Mergers and Acquisitions. In the first chapter I use an international sample of M&A deals to test the implications of the clientele theory of dividends in the context of post-acquisition dividend policy. I contribute to the literature by controlling for the effect of the target's shareholder characteristics on post-M&A dividend policy. The clientele theory posits that the acquirer will change its dividend policy after the deal in order to accommodate the preferences of the investors which it 'inherits' from the target. This effect is expected to be stronger when the target's pre-acquisition dividend policy is significantly different from that of the acquirer, and the larger the proportion of institutional investors from the target company that remain on the share register of the bidder. These implications are most relevant in cases when the bidder pays for the target with its own shares and as a result acquires a large number of the target's dividend clientele. This study demonstrates that, in all stock payment deals, post-acquisition dividends per share increase with the pre-acquisition percentage difference between target and acquirer DPS and with the size of the dividend clientele from the target company which becomes part of the bidder's shareholder base. Thus, the acquirer is more likely to alter post-M&A dividend policy, the higher the bargaining power of the investors coming from the target company, and therefore the higher the likelihood that these investors will negatively impact the bidder's share price should they be dissatisfied with the payout policy. The analysis also reveals that managers can use dividend payments as a signalling mechanism that reduces the information asymmetry that surrounds the acquisition process.

The second chapter tests how informed investors with local expertise can affect cross-border deal success using a comprehensive dataset of corporate acquirers' share registers. We posit that deals in which long-term investors have a high level of expertise in the target firm's region are more likely to perform better than if the deal is 'naked', i.e. when such regional

expertise amongst the investors is low. We show that the strength of this effect depends upon an index of country-level M&A maturity which measures the relative divergence between acquirer and target countries. Specifically, we investigate whether acquirers investing in countries with low M&A maturity gain greater benefit from investors with regional expertise. We present evidence which confirms the hypothesis that acquirers in cross-border corporate transactions are more likely to be successful if the acquirer's investors have a higher level of expertise in the target region, and that this effect is strongest when the maturity for corporate transactions of the target country is low. This provides a specific setting which is consistent with earlier theoretical work that argues in general that information flows should not just be from firms to capital markets but also in the opposite direction, and that this flow of information is particularly important whenever information is dispersed.

The third chapter contributes to the literature by investigating the wealth effects of horizontal acquisitions on the upstream and downstream participants in the product-market chain when the target company is in financial distress. Specifically, this study examines the announcement-related share price revaluations experienced by the suppliers, competitors and customers to the acquisition industry in order to determine whether horizontal deals are driven by buyer power, monopolistic collusion or efficiency motives. This study posits that the financial health of the target is particularly relevant when considering the buyer power of the merging firms. In particular, I hypothesise that industry-related acquisitions are more likely to increase the buyer power of the merging companies when the target is financially distressed due to the debtor-oriented insolvency rules in the US which allow bankrupt companies to renegotiate supplier contracts. Consistent with the buyer power motive, the average announcement abnormal returns which accrue to the suppliers of the acquisition industry are significantly negative while the returns to the competitors of the merging firms are significantly positive. The magnitude of these stock market revaluations is higher when the target company

is in financial distress. The regression analysis of announcement abnormal returns shows that the gains to the merging firms and their rivals are higher while the returns to suppliers are lower when the supplier industry is sufficiently concentrated and when the acquisition is large relative to its industry. The latter effects are stronger when the acquisition is of a financially distressed firm.

CHAPTER 1

Does Dividend Policy Change after M&A?

1.1 Introduction

On October 23, 2009 Suncor Energy (SE), a Canadian energy company, announced its intentions to merge with Petro-Canada (PC), another Canadian company which operates in the oil and gas industry. The method of payment for the deal was all stock and the transaction was valued at US $15.582 billion. Upon deal completion SE shareholders owned approximately 60% and PC shareholders the remaining 40% of the new company. The dividend policies of the firms were considerably different before the closing of the deal, with PC and SE paying out dividends per share (DPS) of US $0.80 and US $0.20 respectively. One year after the takeover, SE increased its DPS by 100% to US $0.40. SE continued increasing the level of dividend payout over the subsequent years, with DPS reaching $0.80 in 2014.[1] The story of Suncor Energy exemplifies how the dividend policy of companies may change following an all stock acquisition. More fundamentally, however, this story raises important questions with regard to the underlying reasons for the change in dividend policy, and whether this type of company behaviour is unique to Suncor Energy or whether it is typical for acquirers in all stock deals to find themselves in the same circumstances.

The phrase 'dividend policy' signifies the idea that dividend streams do not evolve in a random fashion but rather that there must be some fundamental consistency through time. There is a plethora of theories which attempt to rationalise the pattern that dividend payments follow, both in the aggregate and per individual company, depending on the specific financial

[1] This M&A example is obtained from SDC Platinum.

or other characteristics that the company displays. According to the irrelevance proposition of Modigliani and Miller (1961), the dividend policy that companies follow is not important since it cannot affect a firm's value. In contrast, the clientele theory of dividends states that company dividend policy is shaped primarily by the tax and demographic characteristics of shareholders (see, for example, Allen, Bernardo and Welch, 2000; Grinstein and Michaely, 2005; Graham and Kumar, 2006; and Desai and Jin, 2011). This paper extends the literature on the clientele theory of dividends by showing that the acquirer propensity to adjust divided policy in order to satisfy investor preferences is affected by the bargaining power of these investors and therefore their ability to 'punish' the bidder in the cases when the payout policy is dissatisfactory. Specifically, the results indicate that post-M&A dividends increase, the higher the discrepancy between target and bidder dividend payments before the deal and the larger the size of the dividend clientele that is acquired from the target company by the bidder as a result of the takeover. Another strand of the literature, namely agency theory, suggests that institutional investors can exert a disciplining influence on company management by ensuring that the company does not omit or decrease dividend payments (see, for example, Allen et al., 2000). The results of this study, however, do not support the implications of the agency theory with regard to payout policy. Notwithstanding the attempts of previous studies to explain the dividend behaviour of companies, the literature is inconclusive with regard to the ability of the different dividend theories to explain the payout policies that companies adopt.

Despite the fact that the analysis of dividend policy before and after takeovers could provide important insights into the factors which influence dividend payments, there are a very limited number of studies relevant to this issue. Jeon, Ligon and Soranakom (2010) investigate the relationship between the method of payment and the degree of difference between target and acquirer dividend policy. The authors show that stock acquisitions are more likely when the target and acquirer dividend policies are similar. However, Jeon et al. (2010) do not analyse

the post-acquisition policy of acquirers in order to determine whether acquirers are more likely to maintain their pre-acquisition dividend policy, or whether bidders are inclined to adjust their payout policy to that of the target when the policies are dissimilar.

Bolleart, Dereeper and Turki (2013) extend the analysis of Jeon et al. (2010) by showing that acquirers are more likely to adjust their dividend policy to that of the target in all-stock deals and when the target's dividend yield is larger. The authors however do not consider the relative difference between the target and bidder dividend policies before the acquisition. Accounting for the relative discrepancy in payout polices is important as it indicates the degree of dissimilarity between the dividend clienteles of the two companies. In addition, Bolleart et al. (2013) do not consider the effect of the size of the dividend clientele from the target that is inherited by the bidder as a consequence of the M&A. This study extends the analysis of Bolleart et al. (2013), by accounting for: a) the relative difference between the target and bidder dividend polices, i.e. the '*Dividend Gap*' between the two companies and b) the characteristics and proportion of the target's shareholders which remain on the acquirer company's share register, i.e. the '*Inherited II*' (institutional investors). In all-stock acquisitions, it is more likely that the target's shareholders and, therefore, its dividend clientele will become part of the acquiring company's investor base, thereby suggesting that the dividend clientele of the acquirer will change as a result of the takeover. The clientele theory of dividends predicts that the acquirer will alter its dividend policy to accommodate the preferences of the target's shareholders in the cases of all-stock deals and specifically when the size of the target's dividend clientele, as acquired by the bidder, is large enough to cause a shift in the acquirer's own dividend clientele. Bolleart et al. (2013) also do not account for the implications of other theories which aim to explain company payout policies, such as the agency, signalling and life cycle theories.

This study thus fills the void in the current literature on dividend policy by examining it in the context of corporate takeovers. To my knowledge there are no previous studies which test the relationship between the proportion and characteristics of target shareholders which remain on the acquiring company's share register and the post-acquisition dividend policy as well as the relationship between the '*Dividend Gap*' between the target and bidder and the post-acquisition payout policy. The remainder of this paper is organised as follows: Section II reviews the literature on dividend policy and develops the study hypotheses; Section III provides a description of the sample, methodology and variables used to test each hypothesis; Section IV presents a discussion of the results and sensitivity analysis; and Section V concludes.

1.2 Theories of Dividend Policy

1.2.1 Dividend Clientele

Since the main focus of this study is to test the clientele theory of dividends in the context of M&A, the main focus of the literature discussion is concerned with reviewing studies related to this theory.

Modigliani and Miller (1961, hereafter MM), show that under a given set of assumptions, dividend payout policy is not relevant to company valuation and only investment decisions can affect shareholder wealth. Despite the fact that the irrelevance proposition has come under considerable criticism, its importance lies in the fact that it highlights the conditions under which dividend policy is relevant for company valuation. The assumptions underlying the dividend irrelevance principle are:

1. Perfect capital markets - no transaction costs, costless pricing information, price-taking behaviour and no taxes;

2. Rational behaviour - investors are indifferent between dividends and capital gains, prefer more than less wealth and there are no agency conflicts;
3. Perfect certainty - no information asymmetry between company outsiders and management, and investors know about all important income and cash flow in companies.

Relaxing the assumptions underlying the dividend irrelevance principle has inspired the majority of theories that have been developed to explain the factors that drive the payout policy of companies. One of the assumptions underlying the irrelevance theory is the absence of taxes, however, in reality, both companies and investors incur taxes such as income and capital gains taxes. When the tax rate on ordinary income is higher than the tax rate on capital gains, rational shareholders should have a preference for receiving funds through share repurchases rather than dividends. The fact that companies pay dividends even when this form of payout policy is at a tax disadvantage relative to share repurchases is referred to as 'the dividend puzzle' (Black, 1976). In a theoretical study of dividend policy, Farrar and Selwyn (1967) show that when personal income taxes are higher than capital gains taxes, companies should distribute funds in the form of share repurchases rather than dividends. Grullon and Michaely (2000), however, show that dividends and share repurchase are substitute methods of returning cash to shareholders.

The clientele theory of dividends has been developed by academics in an attempt to explain this dividend puzzle. According to the clientele explanation of dividend policy, younger and retail (as opposed to institutional) shareholders, investors with significant disparity between capital gains and personal income tax, as well as shareholders in low tax brackets, favour companies with a high dividend yield (Pettit, 1977). It should be noted, however, that the so-called tax disadvantage associated with dividend payments is not relevant to all types of shareholders. For example, tax exempt investors, such as pension funds, should exhibit a

preference for companies with high dividend payout. In contrast, investors which belong to high income tax brackets should favour companies with low dividend payout or companies which do not pay out any dividends. Ogden, Jen and O'Connor (p. 479, 2003) claim that clientele effects are 'a set of investors who are attracted to the stocks of firms that have the dividend policy they prefer, based on their tax or liquidity circumstances.' The clientele theory of dividends suggest that management can increase the value of a company by following a payout policy that meets the preferences of those investors that are not currently met by other companies in the market.

In a theoretical analysis of company dividend policies, Allen et al. (2000) contend that when retail investors are relatively more highly taxed, as compared to institutional investors, companies paying high dividends are likely to attract a higher proportion of institutional investors. Scholz (1992), Jain (2007) and Graham and Kumar (2006) document a negative relationship between the preference for dividends of retail investors and marginal and income tax levels. Lewellen, Stanley, Lease and Scharbaum (1978), however, report a weak association between shareholders' marginal tax rates and the dividend yields of their portfolios.

Several more recent studies identify the presence of a different type of dividend clientele which is not based on different tax preferences but rather on other company and investor characteristics. For example, Becker, Ivkovic and Weisbenner (2011) demonstrate that individual investors can display a preference for investing in local companies, while older investors are more likely to invest in companies which pay high dividends. The authors suggest that the combined effect of these two distinct preferences results in geographically varying demand for dividends. Lee (2011) finds that the time variation in the demand for dividends (measured by the dividend premium) is positively affected by shifts in the demographic characteristics of investors, such as increases in the proportion of older investors.

Some studies test the clientele theory of dividends by analysing the effect of company ownership structure on the relationship between dividends and taxes. According to Perez-Gonzales (2003) and Holmen, Knopf and Peterson (2008), companies whose ownership structure is characterised by many large shareholders tend to modify their dividend policy in order to minimise the tax burden of their investors following changes in taxation legislation. As a result, the presence of differences in the preferences of majority shareholders may provide an explanation for the conflicting results of studies which analyse the relationship between dividends and taxes. Michaely, Thaler and Womack (1995) investigate change in institutional ownership following dividend omissions and find no evidence of significant shifts in ownership structure. Del Guercio (1996) analyses the effect of dividends on the portfolio selection choices of mutual funds and banks, and shows that dividends do not exert a significant influence on portfolio selection decisions. In contrast, Dhaliwal, Erickson and Trezevant (1999) present evidence that company institutional investor clientele adjusts according to its tax preferences, following dividend initiations, with a significant shift in ownership towards tax-deferred/tax-exempt and corporate institutions. Similarly, Desai and Jin (2011) show empirically that the composition of the institutional ownership of companies is characterised significantly by the presence of a tax-based clientele. Hotchkiss and Lawrence (2007) also present evidence that institutions form different investment styles which are based on dividend yields.

Another strand of the literature analyses the relationship between tax clientele and firm dividend policy by distinguishing between the tax preferences of institutional and individual investors. Specifically, Grinstein and Michaely (2005) examine the effect of the concentration of individual versus institutional investors on company payout policy. The authors do not find significant evidence of the presence of tax-based preferences among individual and institutional shareholders. Jain (1999) shows that institutional investors have a preference for low dividend yield stocks while retail investors prefer to invest in companies with higher

dividend yields. Strickland (1996) demonstrates that taxable institutional investors are more inclined to invest in low dividend yield companies, whereas tax-exempt investors do not show any clear preference for investing in either low or high dividend yield companies. In a survey analysis of company dividend policies, Brav, Graham, Harvey and Michaely (2005) provide evidence that institutional investors are not characterised by a distinct preference for dividends over share repurchases.

A question which remains unanswered is whether companies adjust their dividend policies to attract a given type of investor. Studies which focus on this issue typically analyse the changes in company dividend policies which are associated with amendments to dividend legislation. For example, a number of papers analyse the effect of the 1986 Tax Reform Act on dividend distributions. This tax reform equalised the tax rates on dividends and capital gains, which should have increased the incentive for companies to pay out higher levels of dividends. Bloster and Janjigian (1991), Papaioannou and Savarese (1994) and Casey, Anderson, and Dickens (1999) find little evidence that companies altered their payout polices in response to this regulatory change. In an examination of the effect of the Jobs and Growth Tax Relief Reconciliation Act (JGTRRA) of 2003 on company payout policies, Chetty and Saez (2005) report that there was a higher number of dividend initiations following the introduction of the act. The authors contend that this result is expected given the fact that the JGTRRA decreased the tax rate on dividends from 38% to 15%. Brav, Graham, Harvey and Michaely's (2008) survey of managers indicates that tax reforms exert second order influence on payout decisions. Had the 2003 tax reform affected company payout policies, the expectation would have been that firms with a comparatively large proportion of retail shareholders would have initiated or increased dividends, however, both Chetty and Saez (2005) and Brav et al. (2008) show that companies appear to set dividend policy in line with the interests of their major shareholders.

The extant empirical and theoretical literature provides contradictory findings with regard to the presence of a dividend-induced clientele, or the effect of corporate dividend policy on the investment decisions of individuals and/or institutions – be it for tax, demographic and/or geographical considerations. In addition, the current body of research which analyses the relationship between company dividend policy and ownership structure is inconclusive with regards to the effect of a company's ownership composition or changes in the ownership composition on its dividend policy. Furthermore, the ability of companies to adjust their dividend policy in order to attract or retain a given ownership structure has not been fully explored.

Studies which analyse the ability and willingness of companies to amend their dividend policy typically focus on the effect of changes in dividend legislation on payout policy. M&A can induce a major shift in the ownership composition of companies and thereby provide an alternative setting to test the propensity of companies to adjust their dividend policy in accordance with the prevailing dividend preferences of their ownership structure. The type of corporate takeovers in which a major shift in the ownership structure of the acquirer is likely to occur are those where the acquirer pays for the target with its own shares. In this context, Jeon et al. (2010) test the implications of the clientele theory by analysing company choice of payment method in takeovers. The authors hypothesise that the probability of a stock acquisition is higher, the more similar the dividend policies of the bidder and the target, which is in line with the clientele theory of dividends.

The results of Jeon et al. (2010) provide evidence in support of the clientele theory of dividends, however the authors do not analyse the dividend policy followed by acquirers after the completion of M&A deals. Since acquisitions can result in a significant shift in the ownership composition of the bidder, these corporate events provide a useful setting to test the clientele theory of dividends by examining post-M&A dividend policy. Specifically, it is

expected that the effect of the change in ownership structure, and therefore change in dividend clientele, will be strongest when the acquirer pays for the target with shares. This is due to the fact that in the latter M&A deal type, the target shareholders effectively become shareholders of the bidder company unless they decide to dispose of their holdings. If the target and acquirer dividend policies differ considerably, the dividend clienteles of the two companies are also likely to be very different. As a result, the completion of an all shares acquisition is likely not only to cause a major shift in the bidder's share register, but also to lead to a change in its dividend clientele, a shift in the prevailing preferences for dividends in the acquirer's ownership composition. If the target's shareholders are not satisfied with the dividend policy of the acquirer, they can decide to dispose of their ownership in the bidder either before or after the completion of the deal. Such a sell-off of shares could have a severe negative impact on the share price of the acquirer. There is therefore a strong incentive for the acquirer company to adjust its dividend policy in order to accommodate the preferences of its changed dividend clientele. For example, if a large proportion of the target's shareholders, which belong to a low income tax-bracket, remains on the acquirer's share register and if the acquirer's dividend payments before the completion of the deal are lower than the target's, the acquirer will be inclined to increase its dividends to account for the tax circumstances of the target's investors. The analysis of the change in acquirer dividend policy in the period surrounding the completion of all-shares takeovers, can help gain a deeper understanding of the importance of dividend clienteles in shaping payout policy.

In this context, Bolleart et al. (2013), analyse the dividend policy of companies following the completion of M&A deals. The authors present evidence that bidders are more likely to amend their dividend policy in accordance with the dividend policy of the target in the case of all-stock deals. The Bolleart et al. (2013) study is based on a sample of US bidders and the authors control for the level of dividend payments of the target and acquirer before the

acquisition. The authors do not account for the relative similarity/dissimilarity between the target and bidder dividend policies before the M&A and for the proportion of target shareholders which remain on the acquirer share register post-M&A, however. Accounting for the '*Dividend Gap*' and the '*Inherited II*' is crucial since, by adjusting its dividend policy to the preferences of the newly inherited investors, the acquirer will also be harming its pre-acquisition dividend clientele. The acquirer will only change its dividend policy when there is a significant presence of target shareholders on its share register after the takeover. This is due to the fact that the target's shareholders may choose to dispose of their holdings before or immediately after the acquisition if they are not satisfied with the pre-acquisition dividend policy of the acquirer. In their analysis Bolleart et al. (2013) also do not control for the implications of other theories of dividends, such as the agency, life cycle, signalling and catering theories.[2]

It is also important to account for the characteristics of the investors which the bidder inherits from the target. It is expected that institutional investors (as opposed to retail investors) can exert a stronger influence on the behaviour of companies as their actions can have a direct impact on company valuation due to the fact that these investors tend to own larger blocks of shares (see, for example, Allen et al., 2000). Institutional investors can also directly influence the actions of management through their involvement in the corporate governance process.

Hypothesis 1: *Acquirers are expected to change their dividend policy in order to accommodate the dividend preferences (tax-based or other) of their newly inherited dividend clientele from the target's ownership base.*

[2] Please refer to the following section of the literature review for an analysis of the implications of the other theories of dividends.

Hypothesis 2: *This relationship is expected to hold in all stock deals, when the pre-acquisition dividend policies of the target and acquirer differ considerably and when the proportion of institutional shareholders in the target which remain on the share register of the acquirer is higher.*

1.2.2 Other Theories of Dividends

There are a number of other dividend theories, and therefore factors that need to be accounted for when analysing company dividend policy. The remainder of this section provides a brief overview of the literature pertinent to these theories.

1.2.2.1 Signalling Theory

Miller and Modigliani (p. 430, 1961) refer to the possibility that companies may utilise dividend payments as a signalling device in the following way: '…where a firm has adopted a policy of dividend stabilization with a long-established and generally appreciated 'target payout ratio', investors are likely to (and have good reason to) interpret a change in the dividend rate as a change in management's views of future profit prospects for the firm. The dividend change, in other words, provides the occasion for the price change though not its cause, the price still being solely a reflection of future earnings and growth opportunities.'

According to Allen and Michaely (2003), a consequence of the signalling explanation of dividends is that there should be a positive relationship between future income and increases in dividends. There are a number of studies which examine the relationship between dividend changes and subsequent changes in earnings. Several studies provide empirical evidence which supplements the signalling theory of payout policy (see for example, DeAngelo, DeAngelo, and Skinner, 1992; Aharony and Dotan, 1994; Brook, Carlton, and Hendershott, 1998; Nissim and Ziv, 2001), however, there is a body of research which indicates that there is either no or a

very weak association between dividend changes and consequent changes in income (see for example, Watts, 1973; Gonedes, 1978; Penman, 1983; DeAngelo, DeAngelo, and Skinner, 1996; Benartzi, Michaely, and Thaler, 1997; Fama and French, 2001; Grullon, Michaely, Benartzi, and Thaler, 2005).

Since M&A deals are associated with a high degree of uncertainty, and management expectations about the future benefits of the acquisition may be more accurate than those of shareholders, post-acquisition dividend policy could be used as a signalling mechanism by management in an attempt to convey more precise information to the capital markets about the earnings or cash flow expected to be generated by the acquisition. The signalling theory of dividends suggests that companies will increase or initiate dividends in order to convey information about current and expected future cash flows and profitability to shareholders.

Hypothesis 3: *Acquirers will increase and/or initiate dividends only if they expect the post-acquisition earnings and/or cash flows generated through the acquisition to continue or increase.*

1.2.2.2 Life Cycle Theory

The life cycle theory of dividends suggests that a company begins to distribute funds to shareholders when its profitability and growth are diminishing, which is diametrically opposed to the implications of the signalling theory, according to which companies pay dividends when they expect improvements in profitability and growth (Bulan and Subramanian, 2009). Fama and French (2002) note that dividend payers tend to be profitable and large companies, with levels of retained earnings which are adequate for the purposes of investments. In contrast, companies that have never distributed funds to shareholders tend to be less profitable and smaller in size. The empirical analysis of Fama and French (2002) points to the fact that

dividend payers possess the features of mature companies, whereas non-payers have the features of young firms. In addition, the observed decline in the propensity to pay dividends between 1987 and 1999 can partly be attributed to the dramatic increase in IPOs over the same period, which presents further evidence in favour of the life cycle theory of dividends.

According to the life cycle theory of dividends, the more mature, cash rich and low growth opportunity companies are more likely to initiate or increase dividends. An acquisition could lead to a major change in any or all of the maturity characteristics of the acquirer. Specifically, the acquiring company's growth opportunities profile could change as a result of the M&A deal due to the fact that it inherits the growth opportunities of its target. The life cycle theory of dividends indicates that when the acquirer shifts to a higher growth opportunities profile, the firm will be less likely to increase or initiate dividends or may even be inclined to reduce or omit dividend payments after the takeover in order to devote all of its available resources to seizing these opportunities.

Hypothesis 4: *Acquirers whose growth opportunities increase as a consequence of the acquisition are expected to be less likely to increase or initiate dividends. In addition, these acquirers may even be more likely to reduce or omit dividend payments after the takeover.*

1.2.2.3 Agency Theory

Agency costs arise due to the conflict of interest between management, shareholders and bondholders. The agency costs incurred by shareholders could result from management's inclination to accumulate free cash flow[3] for their personal benefit, rather than pay it out in the form of dividends or share repurchases. The distribution of free cash flow to shareholders

[3] The cash flow which remains after all positive net present value (NPV) projects have been undertaken.

reduces the cash available to management and diminishes its ability to waste this capital, thus alleviating the agency problem (see for example, Jensen and Meckling, 1976; and Jensen, 1986). Lang and Litzenberger (1989) test the proposition that the market reaction to dividend changes should be more pronounced for firms which are more likely to misuse free cash flow (overinvest), i.e. firms with a ratio of market value to replacement cost of capital (Tobin's Q ratio) smaller than 1. According to the free cash flow hypothesis, the share price increase (decrease) associated with a dividend increase (decrease) should be higher for companies which are more likely to overinvest. The authors find evidence in accordance with this hypothesis. In addition, Lie (2000) confirms the findings of Lang and Litzenberger (1989).

According to Allen et al. (2000) informed institutional investors possess the power to discipline management by either disposing of their ownership or being directly engaged in the corporate governance process. The authors also argue that companies that pay dividends and have a large proportion of institutional owners are more likely to be punished by their shareholders if they reduce or omit dividends. In the context of M&A,

the model developed by Allen et al. (2000) suggests that when a substantial proportion of target institutional investors remain on the acquirer's share register, the acquirer will be less likely to decrease or omit dividend payments.

When testing Allen et al.'s (2000) model it is important to account for the corporate governance characteristics of the target and acquirer's countries of domicile. If the target is domiciled in a country with stronger corporate governance regulations its institutional shareholders will be better accustomed to higher quality corporate governance.

It is expected that the disciplining influence of investors will be stronger in the latter cases.

Hypothesis 5*: Acquirers in all stock deals whose ownership composition shifts towards a higher proportion of institutional shareholders are less likely to decrease or omit dividends post-M&A. This relationship will be stronger when the target's country of domicile has stronger corporate governance regulation.*

1.3 Data and Methodology

This study uses a sample of completed M&A deals where the bidder acquires majority ownership of the target, that is deals where the initial percentage of equity owned is below 50% and the final percentage of equity owned is more than 50%, in line with the methodologies followed by Rossi and Volpin (2004) and Faccio, McConnell, and Stolin (2006). This ensures that only deals which are strategically important from the acquiring company's perspective are considered. Acquirer and target ownership data is obtained from the Thomson One Banker database. Since Thomson One Banker covers company ownership information since 1998 the study sample consists of deals completed in the period 1998 - 2011. The final sample consists of 2,821 M&A transactions and excludes both acquirer and target companies which operate in the financial services and utilities sectors, as these companies tend to be highly regulated and therefore less able to freely manage their dividend policy. Table 1.1 provides a breakdown of the data restrictions used to obtain the final sample for this study.

The change in bidder dividend policy is measured as a percentage change in DPS over periods starting one year before and ending one, two or three years after the completion of the M&A deal. The longer time period accounts for the fact that dividend policy change may materialise gradually, over a number of years after the acquisition (see for example, Lintner, 1959). Table 1.2, Panel A, presents a list of the variables used to test the hypotheses developed

in this study, as well as the control variables. Table 1.2, Panel B shows the expected relationship between the dependent variable and the explanatory variables.

To capture the change in the dividend clientele of the bidder this study measures the percentage change in the holdings of those acquirer company investors that were also invested in the target company before the M&A. The holdings of the investors inherited from the target are measured as a proportion of all shares outstanding in the acquirer company. Following Allen et al. (2000) this study focuses on the change in holdings of institutional investors (as opposed to individual investors) due to the fact that these investors have the ability to influence the behaviour of companies. The degree of similarity (dissimilarity) between the bidder and target dividend policies before the M&A deal is measured by the 'Dividend Gap' variable, which is equal to the percentage difference between the target and acquirer's DPS one year before the acquisition completion.[4]

For the purposes of including all possible combinations of target and acquirer pre-acquisition dividend policies, the 'Dividend Gap' is calculated as follows:

1) When the target and acquirer pay zero DPS before the acquisition, the percentage difference variable is 0

[4] It is also possible to use the ratio of target to acquirer DPS as a measure of the disparity between target and acquirer dividend policies, however, this variable would limit the sample to only cases where both the target and acquirer pay dividends before the acquisition. When the acquirer does not pay dividends and the target pays dividends, for example, the ratio of target to acquirer dividends per share will be undefined, thereby further restricting the study sample. It is also possible to use the target and acquirer DPS corresponding to the year of the completion of the acquisition, however, there is limited availability of target DPS information for that period as the year of the completion of the M&A is also the year when the target company ceases to exist as a separate entity. In addition, previous studies show that for some acquisitions (primarily hostile takeovers) the target is more likely to substantially increase its dividend policy in the year of the acquisition as a defence mechanism in order to dissuade the acquirer from completing the deal (see, for example, Page, Jahera and Pugh, 1996; and Ryngaert and Scholten, 2010). As a result, the dividend policy of the target is more likely to be distorted in the year of the acquisition and therefore not reflect the characteristics of the target's dividend clientele.

2) When the target pays dividends before the acquisition and the acquirer does not pay dividends before the acquisition the percentage difference is 1
3) In all other cases the percentage difference is calculated as:

$$\%\ \text{difference in target and acquirer DPS} = \frac{\text{Traget DPS}}{\text{Acquirer DPS}} - 1$$

The change in the dividend clientele of the acquirer is captured by interacting the change in the institutional ownership variable with a dummy variable which is equal to one when the 'Dividend Gap' is positive. This variable should capture the influence of a shift in dividend clientele on the acquirer's dividend policy, especially when the target and acquirer payout policies differ considerably. In order to control for the effect of other/non-institutional investors this study also includes an interaction variable between the dummy for positive 'Dividend Gap' and the percentage change in the proportion of retail/individual investors (out of all shares outstanding) in the bidder that were also invested in the target company.

To account for the implications of the signalling theory of dividends, this study adopts a number of measures of the change in expected future earnings or cash flows of the acquirer company as a consequence of the acquisition. First, this study uses the change in expected/forecasted EPS, which is measured over a period starting one year before and ending one year after the acquisition completion. In addition, this study also measures the present value of future cash flow that is expected to be generated from the takeover, also referred to as the synergy gains associated with the deal. Bradley, Desai and Kim (1988) pioneered a methodology for measuring expected synergistic gains from tender offers. The authors measure the synergy gains as the abnormal return to a value weighted portfolio of the bidder and target companies estimated over an event widow starting five days prior to, and ending five days post deal announcement. Abnormal returns are estimated on the basis of the market model. The target and acquirer weights are based on the market value of each company as of six days prior to deal announcement. Moeller, Schlingemann and Stulz (2005) measure expected synergies

in a similar manner; however, the authors use a smaller event window starting from one day before the acquisition announcement and ending one day after it. The variables used in order to weight the abnormal returns are the market values of the target and acquirer as of twenty days before the announcement of the M&A. This study adopts both methods of measuring expected future cash flows or synergies associated with the takeover.

To control for the implications of the life cycle theory of dividends, this study measures the change in acquirer growth opportunities in the period surrounding the completion of the M&A deal. Specifically, growth opportunities are measured with the market to book ratio of the acquirer, and the change in growth opportunities is captured by the change in the market to book ratio over a period starting one year before and ending one year after the deal completion.

To account for the predictions of the agency theory of dividends, this study measures the change in the proportion of institutional investors in the acquirer company that were also present in the target company's share register. To capture the difference in target and acquirer country corporate governance quality this study uses the difference in the target and acquirer countries' anti-self-dealing indices. To test whether the disciplining effect of investors is stronger when the target's institutional investors are accustomed to higher corporate governance standards, this study uses an interaction variable between the change in the proportion of institutional investors from the target company which remain on the acquirer's share register and a dummy variable which is equal to one when the target country's corporate governance quality is higher than that of the bidder's country.

When examining acquirer dividend policy it is important to include the standard control variables which are used by previous studies which analyse dividend policy (see for example, Alzahrani and Lasfer, 2012; Kale, Kini and Payne, 2012; Lie and Li, 2006; Fama and French, 2001; and Baker and Wurgler, 2005). Specifically, each model which analyses the change in acquirer dividend policy controls for the acquirer company's growth opportunities, measured

as the market to book ratio; the acquirer's liquidity, measured as the ratio of operating cash flow to sales; and the acquirer's degree of maturity, measured as the age of the bidder. In addition, the analysis also controls for the acquirer's profitability, measured as the return on assets (ROA); its size, measured as the company's total assets; and its leverage, measured as the ratio of long-term debt to total assets. Finally, the regressions also account for the acquirer's risk profile, captured by the standard deviation of the company's operating cash flow calculated over a three-year period before the deal, the acquirer country's quality of corporate governance, measured by the anti-self-dealing index, the acquirer country's economic growth, measured as the annual growth in GDP, and the dividend premium, calculated following the methodology of Baker and Wurgler (2005).[5] To ensure the statistical validity of the results, the study estimates the linear regression models with robust standard errors. To control for country, time or industry effects, the regressions are estimated with the inclusion of country, industry and year dummies.

1.4 Empirical Analysis

1.4.1 Descriptive Statistics

Table 1.3 presents the sample breakdown per different time periods as well as target and acquirer country. The table distinguishes between four M&A cycles during the study time period: Cycle 1, which covers the period between 1998 and 2001; Cycle 2, which covers the period between 2002 and 2004; Cycle 3, which covers the period between 2005 and 2007; and Cycle 4, which covers the period between 2008 and 2011. The table demonstrates that the number of M&A deals is relatively evenly distributed between Cycles 1, 3, and 4, with Cycle

[5] Acquirer company and country financials are measured as of one year before the completion of the M&A deal.

2 having the lowest number of sample deals. In terms of the acquirer and target country breakdown, we can see that the study sample is representative of the actual universe of M&A deals, with the United States dominating both the target and acquirer sides of the M&A market. Table 1.3 also shows that most target and acquirer companies in the sample are domiciled in markets which are economically developed, such as North America, Western Europe and South-East Asia.

Table 1.4 presents the key target and acquirer financial characteristics as of one year before the completion of the M&A deal for three different acquirer sub-samples, determined on the basis of the dividend policy that the company follows after the takeover. Specifically, Table 1.4 distinguishes between: a) acquirers that either decrease or omit dividend payments, b) acquirers that maintain their pre-acquisition dividend policy (i.e. companies that did not pay any dividends before and after the M&A deal or companies that preserve the pre-acquisition DPS level), and c) acquirers that either increase or initiate dividends. Dividend policy change is measured over a period starting one year before and ending one year after the completion of the M&A deal.

Table 1.4, Panel A considers deals where the method of payment is shares only, Panel B considers deals where the method of payment is cash only and Panel C considers deals where the method of payment is a combination of cash and stock. The table shows that the percentage difference between the target and bidder DPS, the '*Dividend Gap*', is significantly higher for acquirers that either maintain their pre-acquisition dividend policy or increase/initiate DPS following the completion of the deal - irrespective of the deal's method of payment. In addition, Table 1.4 (All Panels) demonstrates that the holdings of institutional investors from the target company that remain on the share register of the acquirer, i.e. the '*Inherited II*', are also significantly higher before and after the deal for acquirers that either increase or initiate dividends compared to acquirers that maintain their pre-acquisition dividend policy. These

results are confirmed when the presence of target institutional investors on the acquirer's share register is measured not only by the size of their holdings but also by the actual number of institutions. In order to determine whether there is a significant shift in the acquirer's investor composition following the takeover, it is necessary to consider the presence of shareholders from the target post-M&A relative to the presence of shareholders from the target pre-M&A; i.e. it is necessary to consider the *change* in the holdings or number of '*Inherited II*'. Table 1.4 (All Panels) reveals that the change in the number of '*Inherited II*' is statistically significant only for the deals where the method of payment is all stock. Specifically, the number of '*Inherited II*' increases significantly for the group of acquirers that increase/initiate dividends relative to the acquirers that maintain their pre-acquisition DPS level. In addition, Table 1.4, Panel B demonstrates that the change in holdings of '*Inherited II*' is significantly smaller for the group of acquirers that increase/initiate dividend payments when the method of payment is all cash, suggesting that in the latter cases it is not a shift in the dividend clientele that prompts the acquirer to increase/initiate dividends and that there must be other factors at play. These results support the idea that the implications of the clientele theory of dividends are most relevant to the deals for which the acquirer pays with its own shares.

Table 1.4 also shows that the expected M&A gains (measured by the change in forecast EPS) are significantly higher for acquirers that either maintain the level of (All Panels), or increase/initiate, dividend payments (Panels A and B). This result is in line with the predictions of the signalling theory of dividends which suggests that bidders will signal their expectation of better post-M&A financial performance by either increasing or maintaining the same dividend policy. In terms of acquirer pre-acquisition characteristics, Table 1.4 (All Panels) demonstrates that acquirers that increase or initiate dividends post-M&A are larger (measured by assets and market value), more profitable (measured by ROA and ROE), less risky (measured by the standard deviation of operating cash flows over a 3-year window) and older

(measured by age) companies. These results are in line with the predictions of the life cycle theory of dividends which posits that companies are likely to initiate or increase dividends when they enter the mature phase of their life cycle, since their cash flows and earnings become more stable.

When comparing the targets of the acquirers that initiate/increase DPS post-M&A to the targets of the acquirers that maintain their pre-acquisition dividend policy, Table 1.4 (All Panels) reveals that the targets which belong to the former group are significantly more profitable (ROE and ROA), more liquid (operating cash flow to sales), less risky (standard deviation of operating cash flow over a 3-year window), and older (age). This result is not surprising, as the acquisition of more profitable, liquid, less risky and older companies is likely to shift the acquirer towards a more mature stage of its life cycle, thereby boosting the incentive to increase/initiate dividends.

1.4.2 Analysis of the Change in Acquirer Dividend Policy Post-M&A

Table 1.5 shows the results of a multivariate regression analysis of the change in acquirer dividend policy over three different time windows, starting one year before and ending: a) one year (Model 1), or b) two years (Model 2), or c) three years (Model 3) after the completion of the M&A deal. The dependent variable in all models included in Table 1.5 is the percentage change in acquirer DPS. The analysis presented in Table 1.5 provides evidence in favour of the clientele theory of dividends. The positive and statistically significant coefficient corresponding to the '*Dividend Gap*' variable shows that the acquirer is more likely to increase DPS in the first, second or third year after the completion of the takeover, when the level of target company pre-acquisition DPS is higher *relative* to that of the acquirer. This finding supports the clientele theory of dividends by showing that the acquirer is more likely to change post-M&A dividend policy when the degree of difference between the pre-acquisition dividend policies of the target and bidder is higher. The coefficient corresponding to the interaction

variable which captures the influence of the target company's dividend clientele, '*Tar_Clientele*', is not statistically significantly in any of the models presented in Table 1.5. However, this finding does not provide evidence against the clientele theory of dividends as the change in the holdings of '*Inherited II*' is likely to be significant only in the case of all stock deals. As a result, and as stated in Hypothesis 1, it is expected that the size of the target clientele will induce change in post-M&A dividend policy only when the bidder pays for the target company with its own shares. The positive and statistically significant coefficient corresponding to the interaction variable between the size of the target's dividend clientele and the all stock method of payment dummy, '*Tar_Clientele x All_Shares*', presents evidence in favour of Hypotheses 1 and 2 (Table 1.5, All Models). The acquirer is more likely to alter its dividend policy in order to accommodate the preferences of target institutional shareholders, the higher the bargaining power that these investors possess (as indicated by the change in their holdings in the acquirer company after the M&A). This is because the actions of institutional investors can have a more severe effect on the acquirer company, when the holdings of these investors account for a higher proportion of the acquirer's investor base. If a considerable proportion of institutional investors were dissatisfied with the dividend policy of the acquirer and decided to dispose of their holdings in the company, these adjustments in ownership could have a strongly negative effect on the acquirer company's share price. These results also show that the clientele effect on the acquirer dividend policy persists over the second and third year after the completion of the M&A deal (Table 1.5, Models 2 and 3).

The results presented in Table 1.5 (All Models) provide evidence in favour of Hypothesis 3, the signalling theory of dividends. This finding is confirmed by the fact that the coefficients corresponding to the variable '*M&A_Exp. gains*', which accounts for signalling incentives and is measured by the change in forward-looking EPS, are positive and statistically significant Table 1.5 (All Models). Thus, the bidders are likely to signal the expected gains from the M&A

by increasing their DPS post-M&A. This finding is not surprising since corporate acquisitions can be viewed as a major form of investment project which the acquirer undertakes in order to increase future cash flows/profitability. The literature on the factors which increase the propensity to perform an acquisition is vast, and identifies a variety of motives for M&A which can lead to better financial performance, such as achieving economies of scale and/or scope (Brealey, Myers, and Allen, 2006), or operating synergies (see for example, Copeland, Weston, and Shastri, 2005), financial synergies (see for example, Sudarsanam, 2003; and Copeland et al., 2005) increasing market discipline (see for example, Agrawal and Walkling, 1994), growth in market share and revenue (see for example, Gaughan, 2005), improvement of financial performance through turnaround strategy (see for example, Harzing, 2002), improvement of managerial efficiency (see for example, Martin and McConnell, 1991; and Copeland et al., 2005), and diversification (see for example, Graham, Lemmon, and Wolf, 2002). Irrespective of the specific reason underlying the acquisition, the idea that takeovers can be viewed as major investment projects implies that M&A should increase the expected profitability or future cash flows that are being generated (assuming that management acts in the best interest of shareholders and consequently undertakes only positive NPV projects).

In addition, given the complexity of the M&A process, which is primarily associated with the ability of the acquirer to successfully integrate the target company into its business and the need to devote substantial company funds in order to buy the target company, it can be expected that the success of acquisitions is characterised with a high degree of uncertainty. As a result, the acquirer may be willing to provide a *costly* signal to company shareholders with regard to the degree of expected future synergies and/or earnings that will be generated as a result of the acquisition. In addition, it is likely that the acquirer company management is in the best position to evaluate and accurately forecast the expected future cash flows and synergies that will be generated from the acquisition, given the degree to which these acquisition benefits are

contingent upon a successful post-M&A integration. The positive and significant relationship between change in forecast EPS and post-M&A dividend payments demonstrates that managers are likely to change their dividend policy post-M&A in order to reduce the degree of information asymmetry and uncertainty that arises as a result of the takeover.[6]

The results presented in Table 1.5 (All Models) do not provide any evidence in support of Hypotheses 4 and 5; there is no evidence in favour of the agency and life cycle theories of dividends. The signs and significance of the control variables are relatively as expected in the analysis of the acquirer dividend policy in the first, second and third years after M&A. Specifically, ROA is positively and significantly related to the likelihood of dividend increase or initiation, which is in line with Fama and French (2002). Acquirer size (measured as the natural logarithm of total assets or market value) is positively and significantly associated with the percentage change in post-M&A DPS in line with the life cycle theory of dividends, as larger companies are expected to be more mature (DeAngelo, DeAngelo, and Stulz, 2006). Acquirer leverage is negatively and significantly associated with the change in post-M&A DPS in the first year (Model 1) and second year (Model 2) after the completion of the M&A deal, pointing to low free cash flow problems and debt covenants faced by more leveraged firms. Similarly, the relative size of target and bidder (measured by the ratio of deal value to acquirer market value) is negatively and significantly related to the percentage change in dividends which could be due to lower free cash flow levels following the acquisition of large targets. The dividend premium has an insignificant coefficient which is in line with the findings of Ejie and Megginson (2008), Denis and Osobov (2008), and Hoberg and Prabhala (2009).

[6] Please refer to the 'Sensitivity Analysis' section of this study for a full description of the additional variables used to proxy management expectations.

1.4.3 Sensitivity Analysis

To ensure that the results presented in this study are not driven by country, time and/or industry effects, all regressions are re-estimated with the inclusion of country, industry and year dummies. The regression results remain unaffected by the inclusion of these dummies.

It is possible that the financial characteristics of the target company could also exert an impact on the post-M&A dividend policy followed by the bidder. This is due to the fact that target characteristics can influence the success of the M&A and therefore the post-acquisition financial performance of the bidder. Furthermore, the acquisition of a more leveraged and/or larger target can lead to lower free cash flow levels post-M&A. The target's financial profile can also shift the acquirer's financial profile towards a more or less mature life cycle stage. Table 1.6 presents a re-estimation of the original models (presented in Table 1.5) where the regression models also account for the financial characteristics of the target. The main results of the analysis remain unaffected by the inclusion of these additional control variables.

It is also possible that the level of target DPS one year before the completion of the takeover is unusually high, as higher dividend payouts can be used as a defence mechanism aimed at preventing the acquisition (see for example, Page, Jahera and Pugh, 1996; and Ryngaert and Scholten, 2010). Tables 1.7 and 1.8 present a re-estimation of the original regression models where the target DPS is measured as of two years before the completion of the deal and the acquirer DPS is measured as of either two years before the M&A (Table 1.7) or one year before the M&A (Table 1.8). The sign and significance of the main variables of interest to this study, namely the '*Dividend Gap*' and '*Tar_Clientele x All_Shares*', remain unaffected.

It is also possible that the presence of serial acquirers could drive the results associated with the change in acquirer dividend policy, due to the fact that the presence of more than one

acquisition completed by the same company in the sample could lead to 'duplicate' changes in DPS observations. This is particularly relevant when the serial acquirer performs the subsequent acquisition within a 3-year time window before or after the current acquisition. In the latter cases the results could be 'contaminated' by the continued effects of previous acquisitions, a given change in dividend policy could be affected not by the most recent acquisition (as is originally assumed and accounted for in the regression models) but by preceding acquisitions performed by the same acquirer. The effects of serial M&A on the bidder's dividend policy could also continue to materialise over a period longer than one, two or three years. In order to account for the effect of multiple acquisitions by the same company, the regression models are re-estimated on the basis of a model that either includes variables which account for the presence of serial acquirers in the sample (Table 1.9) or excludes serial acquirers altogether (Table 1.10). The results of the new regressions show that the findings of the study are not driven or biased by the presence of serial acquirers.

To ensure that the results are robust to the measure of the presence of institutional investors from the target company that remain on the acquirer's share register, the regression analysis is re-estimated with the use of alternative proxies for target clientele, such as measuring target ownership in the acquirer as: a) the *difference* in the natural logarithm of the *number* of '*Inherited II*' (Table 1.11); b) the *percentage change* in the natural logarithm of the *number* of '*Inherited II*' (Table 1.12); c) the *difference* in the natural logarithm of the *sum of the holdings* of '*Inherited II*' (Table 1.13). The results of the new regressions show that the findings of the study are not driven or biased by the specific measure used to capture the change in dividend clientele.

To test the robustness of the results to the exclusion of individual/retail investors from the analysis, the original models are re-estimated with the inclusion of variables that measure the change in the ownership of retail/individual investors from the target company that remain

on the share register of the acquirer (Table 1.14). The sign and significance of the main variables of interest to this study, '*Dividend Gap*' and '*Tar_Clientele x All_Shares*', remain unaffected by the inclusion of these additional control variables.

It is possible that the findings of the study are driven by the specific variables used to measure the financial characteristics of the acquirer and target companies. To ensure that this is not the case, the original models are re-estimated with the use of different variables which proxy for the same type of company financial characteristic. For example, size is also measured by the market value of equity (as opposed to total assets) or expected cash flows, or synergies associated with the acquisition are measured by the combined bidder and target abnormal returns associated with the announcement of the takeover (as opposed to change in forecast EPS); profitability is measured by ROE (as opposed to ROA); risk is measured by the five year standard deviation in operating cash flows (as opposed to the three year standard deviation in operating cash flows); leverage is measured as the ratio of long-term debt to the market value of common equity (as opposed to the ratio of long-term debt to total assets); and liquidity is measured as the ratio of current assets to current liabilities (as opposed to the ratio of operating cash flow to sales). The results of the new regressions are presented in Table 1.15. The main findings of the study remain unaffected by the use of different measures of the acquirer and target pre-acquisition financial characteristics.

The regressions are also re-estimated with the use of the ratio of target to acquirer DPS as well as the ratio of target to acquirer dividend yield as the measure of the '*Dividend Gap*' variable. The latter variable makes it possible to use a more granular measure of the degree of discrepancy between the target and bidder dividend policies before the acquisition. In addition, the results are tested with the use of a Tobit regression specification and on the basis of the subsample of US acquisitions.[7] The findings of the study remain unchanged.

[7] The results of these additional sensitivity tests are available from the author upon request.

1.5 Conclusion

This study examines acquirer dividend policy after the completion of M&A. Takeovers present a useful and interesting corporate event which can exert a major impact on the dividend policy of the acquiring company. According to the clientele theory of dividends, the acquirer is expected to adjust its dividend policy to accommodate the preferences of target shareholders, particularly when the bidder pays for the target with its own shares and thus inherits the target's investors. This study adds to the existing literature which examines the clientele theory of dividends by testing it in the context of M&A and by showing that the propensity of the acquirer to adjust its dividend policy to that of the target company depends on the degree of dissimilarity between the target and bidder dividend policies before the acquisition. The results also demonstrate that the propensity to change dividend payments post-M&A is contingent upon the change in the holdings of institutional investors from the target company that remain on the acquirer's share register. Overall, the findings of this study show that acquirers can successfully adapt their payout policy to meet the dividend demand of their changing investor clientele. By changing their payout policy bidder companies can avoid the possibility of negative share price movements due to investor sell-offs in the period surrounding the M&A deal and thereby circumvent any disruptions to the acquisition process.

Acquisitions can be viewed as major investment projects, with companies devoting substantial funds in order to buy target firms. Managers can use dividend policy as a signalling device to inform shareholders of the expected benefits to be reaped from the M&A deal. Since takeovers are complex transactions and the probability of performing a successful acquisition is empirically very low, it can be expected that the outcome of acquisitions is characterised with a high degree of uncertainty. The results of this study demonstrate that acquirers can

increase dividend payments after the takeover when they anticipate that company earnings will be augmented after the M&A deal and thus successfully convey this valuable information to the market. Managers can thus use dividend payments to reduce the information asymmetry between company insiders (the management team) and company outsiders (market participants) that is associated with the M&A deal.

Table 1.1 Sample Restrictions

	Cycle 1 (1998 - 2001)	Cycle 2 (2002 - 2004)	Cycle 3 (2005 - 2007)	Cycle 4 (2008 - 2011)	Total
1. All completed M&A Deals from SDC Platinum	4,173	1,719	2,173	2,173	10,238
2. Deals in 1 with acquirer Sedol or Datastream code	3,969	1,666	2,108	2,121	9,864
3. Deals in 2 excluding financial services companies	2,795	1,149	1,527	1,620	7,091
4. Deals in 3 with acquirer and target ownership information	1,487	682	971	1,042	4,182
5. Deals in 4 with acquirer financial data available	756	539	760	766	2,821

Notes: This table presents the restrictions used when constructing the final sample of the study. As indicated, the final number of deals is 2,821. These deals are completed between 1998 and 2011.

Table 1.2 Variable Definitions and Expected Signs of Explanatory Variables
Panel A: Variable Definitions

Variable Name	Definition
Dependent variable: change in acquirer DPS after the completion of the M&A deal	
Pct_Ch_DPS	Dependent variable used for the analysis of change in acquirer dividend policy. This variable is measured over three time windows: staring one year before the completion of the M&A and ending a) one year, b) two years, and c) three years after the completion of the takeover. This variable is equal to a) -1 when the acquirer distributed dividends one year before the acquisition but omitted DPS payments after, b) 0 when the acquirer did not distribute dividends either before or after the acquisition or when the acquirer distributed equal levels of dividends before and after the acquisition c) the percentage difference between DPS before and after the completion of the takeover, d) 1 when the acquirer did not distribute dividends before the acquisition but initiated dividend payments after.
Explanatory variables used for the purposes of testing the clientele theory of dividends	
Dividend Gap	This variable is equals to a) 1 when the target distributed dividends one year before the acquisition and the acquirer did not, b) 0 when the target and acquirer did not distribute dividends one year before the acquisition or the target and acquirer distributed equal levels of dividends one year before the acquisition c) the percentage difference between target and acquirer dividends per share calculated one year before the completion of the acquisition. This variable is then transformed into a dummy which equals one when the target paid higher DPS relative to the acquirer and zero otherwise.
Tar_Clientele (Inherited II x Dividend Gap)	This variable is equal to the product between the '*Dividend Gap*' and the change in the proportion of the holdings of institutional investors (out of all sahres outstanding) in the bidder company that were also invested in the target company before the acquisition. This variable is measured over a time period starting one year before and ending one year after the completion of the takeover.
Tar_Clientele x All_Shares	Interaction variable between '*Tar_Clientele*' and a dummy variable which is equal to 1 when the method of payment is all stock and 0 otherwise.
Explanatory variables used to control for the effects of the agency theory of dividends	
Inherited II	This variable is equal to the change in the percentage of holdings in the bidder company of institutional investors that were also invested in the target company before the M&A. This variable is measured over a time period starting one year before and ending one year after the completion of the takeover.
Diff_antiself $_{Tar\text{-}Acq}$	Difference between the target and acquirer countries' anti-self-dealing indices developed by Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008).
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$	This variable is equal to the product between the 'Diff_antiself $_{Tar\text{-}Acq}$' variable and the '*Inherited II*' variable
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$ x All_Shares	Interaction variable between **'***Inherited II x Diff_antiself* $_{Tar\text{-}Acq}$' and a dummy variable which is equal to 1 when the method of payment is all stock and 0 otherwise
Explanatory variables used to control for the effects of the signalling theory of dividends	
M&A_Exp. gains	Change in acquirer 12-month forward looking EPS (from t-1 to t+1). According to the Datastream definition, the 12-month forward EPS is defined as follows: F1FD12 = ((M x F1) + ((12 -M) x F2)) / 12 where: M = Number of month ends to end of current fiscal year. F1 = Consensus EPS forecast for current fiscal year. F2 = Consensus EPS forecast for next fiscal year.
Explanatory variables used to control for the effects of the life cycle theory of dividends	
Δ Growth oppt.	Percentage difference in the acquirer's market to book ratio calculated over a period starting one year before and ending one year after the acquisition completion
Control Variables	
$MtoB_{Acq\ Y\text{-}1}$/ $MtoB_{Tar\ Y\text{-}1}$	Ratio of acquirer/target market value of equity to book value of equity calculated one year before the acquisition completion
$Size_{Acq\ Y\text{-}1}$/ $Size_{Tar\ Y\text{-}1}$	Ratio of acquirer/target market value of equity, or total assets or net sales as of one year before the completion of the acquisition. The natural logarithm of these values is used for the purposes of the regression analysis.

Table 1.2 (Continued)

Variable Name	Definition
$ROA_{Acq\ Y-1}$ / $ROA_{Tar\ Y-1}$	Ratio of acquirer/target (Net Income before Preferred Dividends + ((Interest Expense on Debt-Interest Capitalized) * (1-Tax Rate))) / (Last Year's Total Assets)
$Leverage_{Acq\ Y-1}$ / $Leverage_{Tar\ Y-1}$	Ratio of acquirer/target long-term debt divided by the market value of equity, or acquirer long-term debt divided by book value of equity, or acquirer long-term debt divided by total assets all calculated one year before the acquisition completion
$Liquidity_{Acq\ Y-1}$ / $Liquidity_{Tar\ Y-1}$	Ratio of acquirer/target operating cash flow dividend by net sales, or ratio of acquirer/target current assets divided by current liabilities
$Risk_{Acq\ Y-1}$ / $Risk_{Tar\ Y-1}$	Standard deviation of acquirer/target operating cash flows to sales ratio measured over a period of five or three years before the acquisition completion
Age_{Acq} / Age_{Tar}	Number of years that the acquirer/target financial data (net sales) is covered by Datastream
Dividend Premium	Variable calculated as per the methodology developed by Baker and Wurgler (2005) which measures the difference in the market value weighted average of the market to book ratio of dividend payers and dividend non-payers. The constituents companies of the MSCI World index are used for the purposes of calculating this ratio
GDP $Growth_{Acq}$ / GDP $Growth_{Tar}$	Annual GDP growth of target or acquirer country of domicile
CB_Deal	Dummy variable equal to 1 when the acquirer and target countries of domicile are different
Ind_relat.	Dummy variables which equals 1 when the four digits of the target and acquirer primary standard industry classification (SIC) codes are equal and zero otherwise
Rel_Size	Ratio of target to acquirer total assets, or ratio of target to acquirer market value of equity or ratio of deal value to acquirer market value

Table 1.2 (Continued)

Panel B: Expected Relationship between Explanatory Variables Used to Test the Hypotheses of the Study and Percentage Change in Post-acquisition DPS

Variable name	Clientele theory	Agency theory	Life cycle theory	Signalling theory
Dividend Gap	Positive	No relationship	No relationship	No relationship
Tar_Clientele (Inherited II x Dividend Gap)	Positive	No relationship	No relationship	No relationship
Tar_Clientele x All_Shares	Positive	No relationship	No relationship	No relationship
Inherited II	No relationship	Positive	No relationship	No relationship
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$	No relationship	Positive	No relationship	No relationship
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$ x All_Shares	No relationship	Positive	No relationship	No relationship
M&A_Exp. gains	No relationship	No relationship	No relationship	Positive
Δ Growth oppt.	No relationship	No relationship	Negative	No relationship

Table 1.3 Deal Breakdown per Acquirer and Target Country and Time Period

Country	Acquirer	Target	Cycle 1 (1998 - 2001)	Cycle 2 (2002 - 2004)	Cycle 3 (2005 - 2007)	Cycle 4 (2008 - 2011)
United States	1,560	1,496	685	287	321	267
Japan	398	374	26	100	135	137
Canada	229	303	3	43	70	113
Australia	134	159	7	23	50	54
United Kingdom	103	139	6	22	47	28
France	51	22	7	6	18	20
Germany	43	22	2	11	13	17
India	31	28	2	2	12	15
South Korea	31	33	1	1	5	24
Netherlands	26	21	4	0	11	11
Sweden	24	24	0	3	16	5
Switzerland	23	15	2	6	6	9
Finland	14	7	2	0	6	6
Hong Kong	14	11	1	4	4	5
Italy	13	7	2	5	1	5
South Africa	13	14	0	4	4	5
Brazil	11	10	0	1	5	5
Israel	11	12	0	2	2	7
Singapore	11	17	1	3	6	1
Spain	11	5	1	4	3	3
Malaysia	8	11	1	3	3	1
Denmark	7	6	0	3	3	1
China	6	7	0	0	0	6
Greece	6	7	0	1	3	2
Norway	6	21	1	0	3	2
Thailand	6	8	1	2	1	2
Poland	5	9	0	0	2	3
Belgium	4	5	0	1	1	2
Mexico	4	4	0	0	2	2
Philippines	3	2	0	1	1	1
Ireland	2	1	1	0	0	1
New Zealand	2	4	0	0	2	0
Russia	2	1	0	0	1	1
Austria	1	0	0	0	0	1
Chile	1	4	0	0	1	0
Colombia	1	2	0	0	1	0
Indonesia	1	0	0	0	0	1
Luxembourg	1	0	0	0	0	1
Peru	1	0	0	0	0	1
Portugal	1	1	0	1	0	0
Turkey	1	1	0	0	1	0
Uruguay	1	0	0	0	0	1
Taiwan	0	5	0	0	0	0
Czech Republic	0	1	0	0	0	0
Ghana	0	1	0	0	0	0
Venezuela	0	1	0	0	0	0
Total	2,821	2,821	756	539	760	766

Notes: This table presents the sample distribution per target and acquire country of domicile. The deal distribution per each cycle is presented from the acquirer country's perspective.

Table 1.4 Sample Descriptive Statistics
Panel A: All Share Deals

Δ $DPS_{Acq\ Y-1\ to\ Y+1}$	Decrease (1)	No Change (2)	Increase (3)	(2) – (1)	(2) – (3)	(1) – (3)
	Average -0.51	Average 0.00	Average 0.64	t-stat	t-stat	t-stat
Dividend Gap	-0.40	0.02	-0.02	**4.387*****	0.484	**-1.847****
Holding of Inherited II_{Y-1}	18,775,905	4,889,098	22,950,524	**-3.298*****	**-4.233*****	-0.374
Holding of Inherited II_{Y+1}	26,436,090	9,172,570	30,536,457	**-2.732*****	**-3.887*****	-0.293
Δ Holding of Inherited $II_{Y-1\ to\ Y+1}$	0.60	0.62	0.48	0.0622	0.605	0.290
Number of Inherited II_{Y-1}	4.93	3.92	9.01	-0.4666	**-2.720*****	-1.205
Number of Inherited II_{Y+1}	5.76	4.67	10.44	-0.4649	**-2.931*****	**-1.342***
Δ Number of Inherited $II_{Y-1\ to\ Y+1\ (diff)}$	0.06	0.08	0.10	0.4473	-1.112	-1.014
Δ Number of Inherited $II_{Y-1\ to\ Y+1\ (pct.)}$	0.10	0.12	0.17	0.4546	**-1.399***	-1.207
$Diff\_antiself_{Tar-Acq}$	0.0003	-0.0010	0.0091	-0.1690	**-1.957****	-1.175
Rel_Size	0.31	0.46	0.35	**2.540*****	**2.602*****	-0.708
Deal Value	598	641	1,393	0.2259	**-4.083*****	**-2.108****
M&A_Exp. gains	-0.15	0.47	0.46	**3.362*****	0.066	**-4.593*****
Δ Growth oppt.	0.06	0.28	0.13	**1.777****	**1.848****	-0.850
$Size_{Acq\ Y-1\ Total\ Assets}$	5,792	2,261	7,776	**-4.577*****	**-7.258*****	-1.124
$Size_{Acq\ Y-1\ Market\ Value}$	2,896	6,360	12,924	**1.489***	**-3.394*****	**-3.117*****
$ROE_{Acq\ Y-1}$	0.05	-0.09	0.12	**-3.465*****	**-8.329*****	**-3.521*****
$ROA_{Acq\ Y-1}$	0.04	-0.05	0.07	**-4.075*****	**-8.452*****	**-3.000*****
$Liquidity_{Acq\ Y-1}$	0.14	-0.46	0.14	**-3.802*****	**-6.211*****	-0.139
$Leverage_{Acq\ Y-1\ (Assets)}$	0.41	0.19	0.27	**-1.427***	**-1.756****	0.285
$MtoB_{Acq\ Y-1}$	2.08	3.17	2.95	**2.872*****	0.863	**-2.428*****
$Risk_{Acq\ Y-1\ (3-year)}$	0.04	0.69	0.04	**4.056*****	**6.598*****	0.019
Age_{Acq}	15.90	10.74	16.99	**-7.635*****	**-12.701*****	-1.207
$GDP\ Growth_{Acq}$	0.04	0.04	0.04	**3.150*****	**3.845*****	-0.284
$Size_{Tar\ Y-1\ Total\ Assets}$	2,169	3,191	2,737	**1.554***	1.021	-0.931
$Size_{Tar\ Y-1\ Market\ Value}$	1,880	3,170	2,415	**2.140****	**1.863****	-0.956
$ROE_{Tar\ Y-1}$	-0.13	-0.12	0.02	0.073	**-5.060*****	**-4.165*****
$ROA_{Tar\ Y-1}$	-0.04	-0.08	0.01	**-1.611***	**-5.444*****	**-2.764*****
$Liquidity_{Tar\ Y-1}$	-0.20	-0.33	0.00	-0.798	**-3.362*****	**-2.063****
$Leverage_{Tar\ Y-1\ (Assets)}$	0.41	0.13	0.36	**-2.149****	**-4.984*****	-1.168
$MtoB_{Tar\ Y-1}$	5.23	7.46	5.31	**1.994****	**2.907*****	-0.068
$Risk_{Tar\ Y-1\ (3-year)}$	0.36	0.72	0.18	**1.379***	**3.405*****	**1.306***
Age_{Tar}	12.93	11.29	13.00	**-1.593***	**-2.458*****	-0.064
$GDP\ Growth_{Tar}$	0.04	0.04	0.04	**3.120*****	**3.465*****	-0.434
Dividend premium	-0.42	-0.45	-0.42	-1.128	**-1.305***	0.125
Number of observations	103	615	273			

Table 1.4 (Continued), Panel B: All Cash Deals

Δ $DPS_{Acq\ Y-1\ to\ Y+1}$	Decrease (1)	No Change (2)	Increase (3)	(2) – (1)	(2) – (3)	(1) – (3)
	Average -0.49	Average 0.00	Average 0.58	t-stat	t-stat	t-stat
Dividend Gap	-0.53	0.10	-0.22	**4.736*** **	**3.378*** **	**-1.561***
Holding of Inherited II_{Y-1}	39,892,297	27,887,221	45,985,626	-0.828	**-2.204** **	-0.392
Holding of Inherited II_{Y+1}	46,750,125	28,736,509	45,993,193	-1.210	**-2.102** **	0.048
Δ Holding of Inherited $II_{Y-1\ to\ Y+1}$	0.47	0.25	0.04	-0.798	**1.487***	**1.665** **
Number of Inherited II_{Y-1}	11.59	11.90	18.67	0.073	**-2.620*** **	**-1.439***
Number of Inherited II_{Y+1}	11.71	11.64	19.02	-0.017	**-2.919*** **	**-1.502***
Δ Number of Inherited $II_{Y-1\ to\ Y+1\ (diff)}$	0.02	0.03	0.03	0.496	0.285	-0.328
Δ Number of Inherited $II_{Y-1\ to\ Y+1\ (pct.)}$	0.06	0.06	0.06	-0.152	-0.108	0.087
Diff_antiself $_{Tar-Acq}$	0.06	-0.01	0.05	**-4.898*** **	**-6.303*** **	0.726
Rel_Size	0.17	0.23	0.14	1.270	**4.310*** **	1.042
Deal Value	742	605	911	-0.748	**-2.882*** **	-0.766
M&A_Exp. gains	-0.03	0.44	0.41	**3.564*** **	0.557	**-4.816*** **
Δ Growth oppt.	0.13	0.13	0.10	0.010	0.671	0.393
$Size_{Acq\ Y-1\ Total\ Assets}$	14,971	5,930	20,469	**-4.997*** **	**-9.999*** **	**-1.728** **
$Size_{Acq\ Y-1\ Market\ Value}$	9,328	9,950	28,860	0.235	**-8.036*** **	**-3.975*** **
$ROE_{Acq\ Y-1}$	0.10	0.11	0.18	0.416	**-5.745*** **	**-4.934*** **
$ROA_{Acq\ Y-1}$	0.06	0.06	0.09	0.253	**-4.788*** **	**-4.318*** **
$Liquidity_{Acq\ Y-1}$	0.12	0.11	0.14	-0.126	**-1.880** **	**-1.772** **
$Leverage_{Acq\ Y-1\ (Assets)}$	0.18	0.15	0.16	**-1.462***	-0.695	**1.481***
$MtoB_{Acq\ Y-1}$	2.26	3.28	3.05	**2.796*** **	1.234	**-2.824*** **
$Risk_{Acq\ Y-1\ (3-year)}$	0.03	0.09	0.03	**1.291***	**3.325*** **	0.249
Age_{Acq}	20.94	15.71	21.99	**-5.960*** **	**-13.146*** **	-1.185
GDP $Growth_{Acq}$	0.04	0.04	0.03	**2.592*** **	**6.189*** **	0.876
$Size_{Tar\ Y-1\ Total\ Assets}$	996	897	837	-0.282	0.360	0.592
$Size_{Tar\ Y-1\ Market\ Value}$	944	889	907	-0.170	-0.111	0.130
$ROE_{Tar\ Y-1}$	-0.03	-0.10	0.01	**-1.409***	**-4.433*** **	-0.997
$ROA_{Tar\ Y-1}$	0.01	-0.06	0.01	**-2.634*** **	**-5.783*** **	-0.232
$Liquidity_{Tar\ Y-1}$	0.05	-0.17	-0.02	**-1.690***	**-2.292** **	0.815
$Leverage_{Tar\ Y-1\ (Assets)}$	0.16	0.09	0.12	**-4.046*** **	**-3.543*** **	2.029
$MtoB_{Tar\ Y-1}$	2.94	3.49	2.98	0.776	**1.461***	-0.076
$Risk_{Tar\ Y-1\ (3-year)}$	0.26	0.40	0.21	0.656	**1.968** **	0.352
Age_{Tar}	12.22	10.18	11.53	**-2.371*** **	**-2.928*** **	0.809
GDP $Growth_{Tar}$	0.04	0.04	0.04	0.102	**4.581*** **	**2.411*** **
Dividend premium	-0.40	-0.42	-0.43	-0.472	0.464	0.701
Number of observations	94	488	603			

Table 1.4 (Continued), Panel C: Cash and Shares Deals

Δ $DPS_{Acq\ Y-1\ to\ Y+1}$	Decrease (1)	No Change (2)	Increase (3)	(2) – (1)	(2) – (3)	(1) – (3)
	Average -0.19	Average 0.00	Average 0.47	t-stat	t-stat	t-stat
Dividend Gap	-0.71	0.06	0.15	**5.664*****	0.066	**-2.371*****
Holding of Inherited II_{Y-1}	51,315,087	11,368,663	53,385,949	**-2.443*****	**-3.729*****	0.155
Holding of Inherited II_{Y+1}	55,505,794	14,989,364	67,591,575	**-2.561*****	**-4.098*****	-0.071
Δ Holding of Inherited $II_{Y-1\ to\ Y+1}$	0.19	0.44	0.40	-0.218	0.445	0.421
Number of Inherited II_{Y-1}	36.05	11.87	27.71	**-2.357*****	**-2.708*****	0.676
Number of Inherited II_{Y+1}	38.44	13.08	29.50	**-2.357*****	**-2.844*****	0.578
Δ Number of Inherited $II_{Y-1\ to\ Y+1\ (diff)}$	0.05	0.07	0.07	-0.538	-0.154	0.448
Δ Number of Inherited $II_{Y-1\ to\ Y+1\ (pct)}$	0.10	0.09	0.10	-1.022	-0.694	0.579
Diff_antiself $_{Tar-Acq}$	0.01	0.00	0.04	-1.028	**-3.461*****	-0.787
Rel_Size	0.56	0.56	0.50	0.728	1.150	-0.068
Deal Value	3,688	1,480	3,289	**-1.957****	**-5.311*****	-0.930
M&A_Exp. gains	-0.10	0.47	0.61	**2.702*****	-0.710	-4.804
Δ Growth oppt.	-0.04	0.25	0.18	0.488	1.094	0.066
$Size_{Acq\ Y-1\ Total\ Assets}$	16,250	3,303	14,108	**-6.708*****	**-7.771*****	0.742
$Size_{Acq\ Y-1\ Market\ Value}$	20,616	5,533	16,155	**-4.598*****	**-6.168*****	0.465
$ROE_{Acq\ Y-1}$	0.17	0.00	0.17	**-2.252****	**-7.818*****	**-3.061*****
$ROA_{Acq\ Y-1}$	0.09	0.01	0.08	**-2.303****	**-6.914*****	**-2.234****
$Liquidity_{Acq\ Y-1}$	0.23	0.02	0.16	**-2.165****	**-2.514*****	**4.103*****
$Leverage_{Acq\ Y-1\ (Assets)}$	0.22	0.18	0.18	-0.633	0.199	0.990
$MtoB_{Acq\ Y-1}$	2.67	2.82	2.53	0.814	0.494	-0.778
$Risk_{Acq\ Y-1\ (3-year)}$	0.03	0.31	0.03	**1.786****	**4.086*****	**2.094****
Age_{Acq}	18.03	13.30	17.85	**-2.979*****	**-6.802*****	-0.725
GDP $Growth_{Acq}$	0.04	0.04	0.04	**3.012*****	0.896	-2.304
$Size_{Tar\ Y-1\ Total\ Assets}$	2,683	1,412	2,515	**-1.287***	**-2.399*****	-0.026
$Size_{Tar\ Y-1\ Market\ Value}$	2,625	1,455	2,260	-1.225	**-2.157****	0.043
$ROE_{Tar\ Y-1}$	0.06	-0.13	0.09	**-2.194****	**-6.271*****	-1.125
$ROA_{Tar\ Y-1}$	0.06	-0.07	0.03	**-3.107*****	**-5.272*****	1.007
$Liquidity_{Tar\ Y-1}$	0.17	-0.26	0.04	**-1.830****	**-2.546*****	1.017
$Leverage_{Tar\ Y-1\ (Assets)}$	0.20	0.11	0.17	**-1.693****	**-3.729*****	0.177
$MtoB_{Tar\ Y-1}$	2.73	3.83	3.03	0.381	**2.526*****	1.062
$Risk_{Tar\ Y-1\ (3-year)}$	0.08	0.45	0.13	1.161	**2.137****	-0.397
Age_{Tar}	12.31	9.80	11.88	-0.798	**-1.910****	-0.221
GDP $Growth_{Tar}$	0.04	0.04	0.04	**2.075****	0.917	**-1.416***
Dividend premium	-0.41	-0.43	-0.44	1.093	1.178	-0.377
Number of observations	46	378	221			

Table 1.4 (Continued)

Notes: The table presents some descriptive statistics of the study sample. The sample is divided into three sub-samples depending on whether there is a decrease, no change, or an increase in the DPS measured over a period starting one year before and ending one year after the M&A. Panel A, Panel B, and Panel C provide the descriptive statistics for the deals with all stock, all cash, and cash and stock methods of payment respectively. (2) - (1) is a t-test of the difference in averages between the group of acquirers that maintain their pre-acquisition dividend policy and those that decrease the DPS post-M&A; (2) - (3) is a t-test of the difference in averages between the group of acquirers that maintain their pre-acquisition dividend policy and those that increase the DPS post-M&A; (1) - (3) is a t-test of the difference in averages between the group of acquirers that decrease DPS post-M&A and those that increase the DPS post-M&A. '*Holding of Inherited* II_{Y-1}' is the holdings of institutional investors (II) in the acquirer company that were also invested in the target company prior to the acquisition, measured one year before the M&A, '*Holding of Inherited* II_{Y+1}' is the holdings of II in the acquirer company that were also invested in the target company prior to the acquisition measured one year after the M&A, 'Δ *Holding of Inherited* $II_{Y-1\ to\ Y+1}$' is the percentage change in the holdings of II in the acquirer company that were also invested in the target company prior to the acquisition over a period starting one year before and ending one year after the M&A, '*Number of Inherited* II_{Y-1}' is the number of II in the acquirer company that were also invested in the target company prior to the acquisition, measured one year before the M&A, '*Number of Inherited* II_{Y+1}' is the number of II in the acquirer company that were also invested in the target company prior to the acquisition, measured one year after the M&A, 'Δ *Number of Inherited* $II_{Y-1\ to\ Y+1\ (diff)}$' is the difference in the natural logarithm of the number of II in the acquirer company that were also invested in the target company prior to the acquisition over a period starting one year before and ending one year after the M&A, 'Δ *Number of Inherited* $II_{Y-1\ to\ Y+1\ (pct.)}$' is the percentage change in the natural logarithm of the number of II in the acquirer company that were also invested in the target company prior to the acquisition over a period starting one year before and ending one year after the M&A, '*Deal Value*' is the value of the M&A deal measured in millions of US $. For all other variable definitions please refer to Table 2. Variables with '*Tar*' subscript are measured in the same way as the corresponding variables with '*Acq*' subscript but for the target company. ***, **, and * indicate statistical significance at a 1%, 5%, and 10% level, respectively.

Table 1.5 Analysis of Change in Acquirer DPS

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**
Clientele Theory			
Dividend Gap	**0.193*****	**0.232*****	**0.291*****
	5.750	5.610	5.870
Tar_Clientele (Inherited II x Dividend Gap)	-0.828	-0.553	-1.636
	-1.270	-0.660	-1.630
Tar_Clientele x All_Shares	**10.180***	**17.411****	**20.404****
	1.930	2.290	2.120
Agency Theory			
Inherited II	-0.104	0.009	0.358
	-0.680	0.050	1.350
Diff_antiself $_{Tar\text{-}Acq}$	**0.188*****	0.141	0.131
	2.560	1.420	0.970
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$	-4.407	-3.692	**-10.238****
	-1.460	-0.950	-2.030
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$ x All_Shares	0.410	0.295	-0.385
	1.050	0.500	-0.600
Signalling theory			
M&A_Exp. gains	**0.034*****	**0.050*****	**0.066*****
	5.010	5.320	5.310
Life Cycle Theory			
Δ Growth oppt.	0.000	0.010	0.017
	-0.050	1.170	1.500
Control Variables			
All_Shares	**-0.045****	**-0.054****	**-0.062***
	-2.180	-1.970	-1.850
Dividend Premium	-0.005	-0.014	**-0.183*****
	-0.120	-0.290	-2.990
Age_{Acq}	-0.015	0.037	**0.090*****
	-0.700	1.390	2.770
GDP $Growth_{Acq}$	**-1.385***	0.012	1.507
	-1.840	0.010	1.220
$Size_{Acq\ Y\text{-}1}$	**0.013****	**0.019****	**0.019****
	2.110	2.410	1.980
$ROA_{Acq\ Y\text{-}1}$	**0.335*****	**0.376*****	**0.408*****
	5.990	5.530	5.080
$Liquidity_{Acq\ Y\text{-}1}$	-0.009	-0.012	-0.012
	-1.560	-1.530	-1.200
$MtoB_{Acq\ Y\text{-}1}$	0.001	0.001	-0.001
	0.190	0.200	-0.200
$Leverage_{Acq\ Y\text{-}1}$	**-0.117****	**-0.143***	-0.145
	-2.040	-1.900	-1.510
$Risk_{Acq\ Y\text{-}1}$	-0.005	-0.006	-0.004
	-1.470	-1.270	-0.590
CB_Deal	0.029	**0.064***	**0.086****
	1.160	1.930	2.000
Ind_relat.	-0.009	-0.016	-0.022
	-0.470	-0.670	-0.740
Rel_Size	**-0.032***	**-0.049****	**-0.064****
	-1.810	-2.130	-2.150
Constant	**0.169****	0.001	**-0.199***
	2.500	0.010	-1.810
Number of Obs.	2,821	2,821	2,821
Adjusted R^2	0.0682	0.0707	0.0757

Table 1.5 (Continued)

Notes: The table presents the regression analysis of the determinants of the percentage change in acquirer DPS, '*Pct_Ch_DPS'*, over periods starting from one year before the deal and ending a) one year (Model 1), b) two years (Model 2), and c) three years (Model 3) after the completion of the M&A. Please refer to Table 2 for detailed definitions of the explanatory variables used in the models. To correct for the possibility that our coefficients are not estimated on the basis of a random sample or that the distributions of our independent variables and regression residual are not independent or identically distributed (i.i.d.), all models have robust estimate of variance following Huber (1967) and White (1980, 1982). T-stats are reported below each variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 1.6: Sensitivity Analysis: Controlling for Target Characteristics

Dependant variable: Pct_Ch_DPS	Model 1 (Y-1 to Y+1)	Model 2 (Y-1 to Y+2)	Model 3 (Y-1 to Y+3)
Clientele Theory			
Dividend Gap	**0.184*****	**0.234*****	**0.293*****
	5.060	5.120	5.400
Tar_Clientele (Inherited II x Dividend Gap)	-1.100	-0.670	-1.313
	-1.550	-0.750	-1.280
Tar_Clientele x All_Shares	**12.319****	**19.206****	**21.952****
	2.220	2.370	2.140
Agency Theory			
Inherited II	-0.120	-0.032	0.196
	-0.770	-0.150	0.770
Diff_antiself $_{Tar-Acq}$	**0.277*****	**0.242****	**0.288***
	3.160	2.050	1.950
Inherited II x Diff_antiself $_{Tar-Acq}$	-4.358	-3.821	**-10.806***
	-1.210	-0.850	-1.810
Inherited II x Diff_antiself $_{Tar-Acq}$ x All_Shares	1.411	1.844	-0.403
	1.600	1.320	-0.120
Signalling theory			
M&A_Exp. gains	**0.035*****	**0.051*****	**0.070*****
	4.330	4.480	4.590
Life Cycle Theory			
Δ Growth oppt.	0.001	0.013	0.022
	0.100	1.180	1.550
Control Variables			
All_Shares	**-0.060****	**-0.059***	**-0.071***
	-2.500	-1.870	-1.920
Dividend Premium	-0.039	-0.034	**-0.234*****
	-0.910	-0.610	-3.470
Age_{Acq}	-0.012	0.034	**0.107*****
	-0.470	1.070	2.870
GDP $Growth_{Acq}$	0.866	1.485	2.359
	0.440	0.630	0.870
$Size_{Acq\ Y-1}$	**0.018****	**0.030*****	0.021
	2.170	2.840	1.630
$ROA_{Acq\ Y-1}$	**0.295*****	**0.307*****	**0.336*****
	4.390	3.720	3.530
$Liquidity_{Acq\ Y-1}$	-0.010	-0.020	-0.024
	-1.130	-1.570	-1.510
$MtoB_{Acq\ Y-1}$	0.001	0.001	0.001
	0.210	0.120	0.160
$Leverage_{Acq\ Y-1}$	**-0.123***	-0.109	-0.125
	-1.700	-1.130	-1.040
$Risk_{Acq\ Y-1}$	-0.005	-0.008	-0.002
	-0.970	-1.170	-0.120
CB_Deal	0.002	0.020	0.040
	0.090	0.540	0.880
Ind_relat.	-0.009	-0.032	-0.051
	-0.420	-1.140	-1.490
Rel_Size	-0.023	-0.038	**-0.069***
	-0.950	-1.280	-1.710
$Size_{Tar\ Y-1}$	**-0.016***	**-0.027****	-0.016
	-1.750	-2.210	-1.040
$ROA_{Tar\ Y-1}$	**0.169*****	**0.212*****	**0.207*****
	3.730	3.530	2.970
$Liquidity_{Tar\ Y-1}$	0.003	0.003	0.005

Table 1.6 (Continued)

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**
	0.700	0.390	0.530
$MtoB_{Tar\ Y-1}$	0.001	0.001	-0.001
	0.280	0.360	-0.300
$Leverage_{Tar\ Y-1}$	-0.061	-0.093	-0.039
	-0.940	-1.050	-0.350
Age_{Tar}	-0.007	0.005	0.001
	-0.260	0.140	0.020
GDP $Growth_{Tar}$	-2.891	-2.240	-1.494
	-1.480	-0.960	-0.550
Constant	**0.257*** **	0.101	-0.144
	2.850	0.830	-0.980
Number of Obs.	2,217	2, 217	2,217
Adjusted R^2	0.0769	0.0770	0.0848

Notes: The table presents the regression analysis of the determinants of the percentage change in acquirer DPS, '*Pct_Ch_DPS*', over periods starting from one year before the deal and ending a) one year (Model 1), b) two years (Model 2), and c) three years (Model 3) after the completion of the M&A. These regressions control for the financial characteristics of the target company before the acquisition completion. Variables with '*Tar*' subscript are measured in the same way as the corresponding variables with '*Acq*' subscript but for the target company. Please refer to Table 2 for detailed definitions of the explanatory variables used in the models. To correct for the possibility that our coefficients are not estimated on the basis of a random sample or that the distributions of our independent variables and regression residual are not independent or identically distributed (i.i.d.), all models have robust estimate of variance following Huber (1967) and White (1980, 1982). *T*-stats are reported below each variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 1.7 Sensitivity Analysis: Measuring Target and Acquirer DPS Two Years Prior to Deal Completion

Dependant variable: Pct_Ch_DPS	Model 1 (Y-1 to Y+1)	Model 2 (Y-1 to Y+2)	Model 3 (Y-1 to Y+3)	Model 4 (Y-1 to Y+1)	Model 5 (Y-1 to Y+2)	Model 6 (Y-1 to Y+3)
Clientele Theory						
Dividend Gap	**0.165*** **	**0.209*** **	**0.277*** **	**0.151*** **	**0.205*** **	**0.285*** **
	5.350	5.380	5.680	4.470	4.700	5.290
Tar_Clientele (Inherited II x Dividend Gap)	-0.132	-0.067	-0.114	-0.157	-0.121	-0.194
	-1.210	-0.520	-0.730	-1.420	-0.910	-1.260
Tar_Clientele x All_Shares	**0.266***	**0.346***	**0.508** **	**0.299** **	**0.415** **	**0.608*** **
	1.900	1.940	2.420	2.090	2.220	2.810
Agency Theory						
Inherited II	**0.107** **	**0.125***	**0.215*** **	**0.108***	**0.159** **	**0.252*** **
	2.150	1.920	2.640	1.950	2.170	2.800
Diff_antiself $_{Tar-Acq}$	0.037	0.050	0.078	**0.117** **	**0.134***	**0.215** **
	0.760	0.800	1.000	2.090	1.920	2.520
Inherited II x Diff_antiself $_{Tar-Acq}$	0.056	-0.022	-0.255	0.046	0.049	-0.244
	0.360	-0.100	-1.050	0.260	0.200	-0.890
Inherited II x Diff_antiself $_{Tar-Acq}$ x All_Shares	-0.035	-0.030	-0.085	-0.035	0.084	-0.255
	-0.590	-0.380	-1.010	-0.130	0.230	-0.560
Signalling theory						
M&A_Exp. gains	**0.034*** **	**0.049*** **	**0.065*** **	**0.035*** **	**0.049*** **	**0.067*** **
	4.990	5.230	5.200	4.200	4.300	4.400
Life Cycle Theory						
Δ Growth oppt.	0.000	0.011	**0.019***	0.002	0.014	0.023
	0.070	1.310	1.750	0.200	1.280	1.640
Control Variables						
All_Shares	**-0.047** **	**-0.052***	**-0.062***	**-0.061** **	**-0.057***	**-0.073** **
	-2.300	-1.940	-1.870	-2.540	-1.820	-1.970
Dividend Premium	-0.011	-0.022	**-0.193*** **	-0.046	-0.040	**-0.242*** **
	-0.300	-0.440	-3.180	-1.070	-0.740	-3.640
Age_{Acq}	-0.015	0.037	**0.091*** **	-0.012	0.034	**0.109*** **
	-0.710	1.370	2.810	-0.460	1.060	2.880
GDP $Growth_{Acq}$	**-1.435***	-0.020	1.532	0.781	1.643	2.771
	-1.880	-0.020	1.240	0.400	0.720	1.100
$Size_{Acq\ Y-1}$	**0.015** **	**0.020*** **	**0.020** **	**0.021** **	**0.034*** **	**0.024***
	2.420	2.610	2.060	2.420	3.110	1.850

Table 1.7 (Continued)

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
$ROA_{Acq\ Y-1}$	**0.331*** **	**0.374*** **	**0.407*** **	**0.277*** **	**0.289*** **	**0.321*** **
	6.010	5.580	5.100	4.210	3.570	3.410
$Liquidity_{Acq\ Y-1}$	**-0.011***	**-0.014***	-0.015	-0.012	**-0.022***	-0.026
	-1.870	-1.690	-1.360	-1.390	-1.690	-1.510
$MtoB_{Acq\ Y-1}$	0.000	0.000	-0.001	0.000	0.000	0.000
	0.040	0.100	-0.220	0.040	0.000	0.060
$Leverage_{Acq\ Y-1}$	**-0.108***	**-0.132***	-0.121	-0.107	-0.090	-0.098
	-1.910	-1.770	-1.270	-1.490	-0.940	-0.820
$Risk_{Acq\ Y-1}$	**-0.007****	-0.008	-0.006	-0.008	-0.011	-0.004
	-1.990	-1.630	-0.810	-1.560	-1.560	-0.330
CB_Deal	0.015	0.045	0.054	-0.046	-0.039	-0.049
	0.460	1.050	0.960	-1.320	-0.890	-0.880
Ind_relat.	-0.015	-0.022	-0.031	-0.013	-0.035	**-0.056***
	-0.800	-0.910	-1.040	-0.590	-1.260	-1.650
Rel_Size	**-0.033***	**-0.048****	**-0.066****	-0.023	-0.036	**-0.068***
	-1.810	-2.050	-2.190	-0.940	-1.160	-1.660
$Size_{Tar\ Y-1}$				**-0.016***	**-0.028****	-0.018
				-1.710	-2.250	-1.160
$ROA_{Tar\ Y-1}$				**0.183*** **	**0.226*** **	**0.213*** **
				4.020	3.770	3.050
$Liquidity_{Tar\ Y-1}$				0.004	0.004	0.006
				0.870	0.490	0.640
$MtoB_{Tar\ Y-1}$				0.001	0.002	-0.001
				0.430	0.490	-0.190
$Leverage_{Tar\ Y-1}$				-0.066	-0.096	-0.042
				-1.010	-1.080	-0.370
Age_{Tar}				-0.010	0.002	-0.006
				-0.350	0.050	-0.140
GDP $Growth_{Tar}$				-2.766	-2.335	-1.817
				-1.440	-1.030	-0.730
Constant	**0.158****	-0.011	**-0.215***	**0.246*** **	0.086	-0.155
	2.330	-0.130	-1.960	2.700	0.690	-1.050
Number of Obs.	2,821	2,821	2,821	2,217	2,217	2,217
Adjusted R^2	0.0607	0.0660	0.0741	0.0679	0.0722	0.0862

Table 1.7 (Continued)

Notes: The table presents the regression analysis of the determinants of the percentage change in acquirer DPS, '*Pct_Ch_DPS*', over periods starting from one year before the deal and ending a) one year (Model 1 and 4), b) two years (Model 2 and 5), and c) three years (Model 3 and 6) after the completion of the M&A. Models 4 to 6 account for target financial characteristics in addition to the acquirer financial characteristics. Variables with '*Tar*' subscript are measured in the same way as the corresponding variables with '*Acq*' subscript but for the target company. Please refer to Table 2 for detailed definitions of the explanatory variables used in the models. To correct for the possibility that our coefficients are not estimated on the basis of a random sample or that the distributions of our independent variables and regression residual are not independent or identically distributed (i.i.d.), all models have robust estimate of variance following Huber (1967) and White (1980, 1982). T-stats are reported below each variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 1.8 Sensitivity Analysis: Measuring Target DPS Two Years Prior to and Acquirer DPS One Year Prior to Deal Completion

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
Clientele Theory						
Dividend Gap	0.197	**0.245*** **	**0.328*** **	**0.203*** **	**0.264*** **	**0.348*** **
	5.880	5.930	6.540	5.630	5.790	6.270
Tar_Clientele (Inherited II x Dividend Gap)	-0.177	-0.158	-0.272	**-0.232***	**-0.252***	**-0.362** **
	-1.430	-1.130	-1.580	-1.840	-1.730	-2.160
Tar_Clientele x All_Shares	**0.297***	**0.480** **	**0.672*** **	**0.334** **	**0.563*** **	**0.757*** **
	1.890	2.560	2.960	2.100	2.880	3.280
Agency Theory						
Inherited II	**0.111** **	**0.130** **	**0.225*** **	**0.118** **	**0.171** **	**0.269*** **
	2.240	2.010	2.790	2.150	2.350	3.000
Diff_antiself $_{Tar-Acq}$	0.036	0.047	0.074	**0.116** **	**0.132***	**0.212** **
	0.730	0.760	0.950	2.050	1.880	2.470
Inherited II x Diff_antiself $_{Tar-Acq}$	0.058	-0.010	-0.231	0.054	0.071	-0.213
	0.370	-0.050	-0.960	0.310	0.300	-0.780
Inherited II x Diff_antiself $_{Tar-Acq}$ x All_Shares	-0.036	-0.033	-0.092	-0.036	0.071	-0.273
	-0.600	-0.430	-1.090	-0.130	0.200	-0.590
Signalling theory						
M&A_Exp. gains	**0.033*** **	**0.048*** **	**0.064*** **	**0.034*** **	**0.048*** **	**0.066*** **
	4.930	5.180	5.160	4.130	4.230	4.340
Life Cycle Theory						
Δ Growth oppt.	0.001	0.011	**0.019***	0.001	0.014	0.022
	0.090	1.360	1.780	0.170	1.280	1.640
Control Variables						
All_Shares	**-0.046** **	**-0.052***	**-0.061***	**-0.060** **	**-0.057***	**-0.072** **
	-2.250	-1.920	-1.830	-2.540	-1.850	-1.960
Dividend Premium	-0.014	-0.025	**-0.198*** **	-0.045	-0.041	**-0.243*** **
	-0.360	-0.510	-3.250	-1.070	-0.740	-3.640
Age_{Acq}	-0.016	0.035	**0.088*** **	-0.012	0.033	**0.107** **
	-0.770	1.300	2.730	-0.470	1.020	2.850
GDP $Growth_{Acq}$	-1.527**	-0.157	1.348	0.754	1.606	2.695
	-2.020	-0.150	1.100	0.380	0.700	1.070
$Size_{Acq\ Y-1}$	**0.015** **	**0.021*** **	**0.020** **	**0.022*** **	**0.035*** **	**0.026** **
	2.460	2.660	2.130	2.590	3.290	2.000
$ROA_{Acq\ Y-1}$	**0.334*** **	**0.377*** **	**0.411*** **	**0.280*** **	**0.291*** **	**0.326*** **

Table 1.8 (Continued)

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
	6.070	5.640	5.170	4.270	3.620	3.470
$Liquidity_{Acq\ Y-1}$	**-0.011***	**-0.014***	-0.015	-0.012	**-0.022***	-0.027
	-1.860	-1.720	-1.400	-1.350	-1.700	-1.530
$MtoB_{Acq\ Y-1}$	0.001	0.001	-0.001	0.001	0.000	0.001
	0.170	0.190	-0.120	0.160	0.090	0.160
$Leverage_{Acq\ Y-1}$	**-0.112****	**-0.137***	-0.127	-0.113	-0.099	-0.106
	-1.970	-1.830	-1.330	-1.570	-1.030	-0.890
$Risk_{Acq\ Y-1}$	**-0.007***	-0.008	-0.006	-0.008	-0.011	-0.005
	-1.920	-1.610	-0.820	-1.530	-1.570	-0.370
CB_Deal	0.017	0.046	0.057	-0.044	-0.039	-0.048
	0.520	1.090	1.020	-1.270	-0.870	-0.860
Ind_relat.	-0.015	-0.023	-0.032	-0.013	-0.035	**-0.057***
	-0.820	-0.940	-1.060	-0.600	-1.280	-1.680
Rel_Size	**-0.035***	**-0.050****	**-0.070****	-0.025	-0.038	**-0.071***
	-1.930	-2.150	-2.310	-1.020	-1.230	-1.720
$Size_{Tar\ Y-1}$				**-0.018***	**-0.030****	-0.019
				-1.850	-2.380	-1.250
$ROA_{Tar\ Y-1}$				**0.183*****	**0.228*****	**0.217*****
				4.020	3.780	3.090
$Liquidity_{Tar\ Y-1}$				0.004	0.004	0.006
				0.830	0.470	0.620
$MtoB_{Tar\ Y-1}$				0.001	0.002	0.000
				0.520	0.600	-0.080
$Leverage_{Tar\ Y-1}$				-0.063	-0.093	-0.040
				-0.970	-1.050	-0.360
Age_{Tar}				-0.017	-0.007	-0.016
				-0.630	-0.200	-0.370
GDP $Growth_{Tar}$				-2.895	-2.526	-2.035
				-1.500	-1.110	-0.820
Constant	**0.160****	-0.006	**-0.209***	**0.262*****	0.109	-0.127
	2.360	-0.070	-1.900	2.910	0.890	-0.870
Number of Obs.	2,821	2,821	2,821	2,217	2,217	2,217
Adjusted R^2	0.0655	0.0708	0.0793	0.0761	0.0806	0.0934

Table 1.8 (Continued)

Notes: The table presents the regression analysis of the determinants of the percentage change in acquirer DPS, '*Pct_Ch_DPS*', over periods starting from one year before the deal and ending a) one year (Model 1 and 4), b) two years (Model 2 and 5), and c) three years (Model 3 and 6) after the completion of the M&A. Models 4 to 6 account for target financial characteristics in addition to the acquirer financial characteristics. Variables with '*Tar*' subscript are measured in the same way as the corresponding variables with '*Acq*' subscript but for the target company. Please refer to Table 2 for detailed definitions of the explanatory variables used in the models. To correct for the possibility that the coefficients are not estimated on the basis of a random sample or that the distributions of the independent variables and regression residual are not independent or identically distributed (i.i.d.), all models have robust estimate of variance following Huber (1967) and White (1980, 1982). *T*-stats are reported below each variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 1.9 Sensitivity Analysis: Controlling for Serial Acquirers

Dependant variable: Pct_Ch_DPS	Model 1 (Y-1 to Y+1)	Model 2 (Y-1 to Y+2)	Model 3 (Y-1 to Y+3)	Model 4 (Y-1 to Y+1)	Model 5 (Y-1 to Y+2)	Model 6 (Y-1 to Y+3)
Clientele Theory						
Dividend Gap	**0.193*** **	**0.231*** **	**0.290*** **	**0.184*** **	**0.234*** **	**0.293*** **
	5.730	5.580	5.850	5.070	5.100	5.370
Tar_Clientele (Inherited II x Dividend Gap)	-0.402	-0.378	-1.281	-0.660	-0.586	-0.812
	-0.570	-0.390	-1.100	-0.940	-0.580	-0.720
Tar_Clientele x Serial	-1.498	-0.670	-1.272	-1.642	-0.422	-1.822
	-1.050	-0.380	-0.630	-1.060	-0.220	-0.820
Tar_Clientele x All_Shares	**12.584***	**20.690** **	**23.463***	**15.554** **	**24.030** **	**25.635***
	1.830	2.090	1.820	2.100	2.230	1.830
Tar_Clientele x All_Shares x Serial	-6.820	-9.608	-8.835	-7.963	-13.076	-9.252
	-0.770	-0.710	-0.510	-0.840	-0.910	-0.500
Agency Theory						
Inherited II	-0.109	0.010	0.355	-0.125	-0.027	0.188
	-0.710	0.050	1.330	-0.800	-0.130	0.730
Diff_antiself $_{Tar\text{-}Acq}$	**0.189*** **	0.142	0.132	**0.280*** **	**0.243** **	**0.288***
	2.570	1.430	0.970	3.180	2.050	1.940
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$	-4.133	-3.610	**-10.028** **	-3.946	-3.790	**-10.409***
	-1.380	-0.920	-1.970	-1.100	-0.830	-1.730
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$ x All_Shares	0.373	0.268	-0.422	1.246	1.698	-0.627
	1.000	0.460	-0.650	1.540	1.200	-0.170
Signalling theory						
M&A_Exp. gains	**0.033*** **	**0.049*** **	**0.065*** **	**0.034*** **	**0.051*** **	**0.069*** **
	4.940	5.260	5.250	4.200	4.410	4.520
Life Cycle Theory						
Δ Growth oppt.	0.000	0.010	0.017	0.001	0.013	0.022
	-0.040	1.170	1.510	0.120	1.190	1.550
Control Variables						
All_Shares	**-0.045** **	**-0.054** **	**-0.061***	**-0.059** **	**-0.059***	**-0.070***
	-2.150	-1.960	-1.830	-2.460	-1.870	-1.900
Serial	-0.005	-0.005	-0.007	0.004	-0.005	-0.013
	-0.250	-0.160	-0.190	0.150	-0.150	-0.320
Dividend Premium	-0.004	-0.014	**-0.183*** **	-0.038	-0.034	**-0.234*** **
	-0.110	-0.290	-2.990	-0.890	-0.610	-3.470

Table 1.9 (Continued)

Dependant variable: Pct_Ch_DPS	Model 1 (Y-1 to Y+1)	Model 2 (Y-1 to Y+2)	Model 3 (Y-1 to Y+3)	Model 4 (Y-1 to Y+1)	Model 5 (Y-1 to Y+2)	Model 6 (Y-1 to Y+3)
Age_{Acq}	-0.015	0.037	**0.090*** **	-0.011	0.035	**0.109*** **
	-0.690	1.400	2.780	-0.430	1.100	2.910
GDP $Growth_{Acq}$	**-1.386***	0.000	1.502	0.905	1.496	2.384
	-1.840	0.000	1.210	0.460	0.640	0.880
$Size_{Acq\ Y-1}$	**0.013****	**0.019****	**0.019***	**0.018****	**0.031*** **	0.022
	2.020	2.290	1.890	1.980	2.680	1.630
$ROA_{Acq\ Y-1}$	**0.334*** **	**0.375*** **	**0.407*** **	**0.293*** **	**0.307*** **	**0.333*** **
	5.950	5.490	5.030	4.370	3.710	3.500
$Liquidity_{Acq\ Y-1}$	-0.008	-0.012	-0.012	-0.010	-0.020	-0.024
	-1.520	-1.510	-1.180	-1.110	-1.560	-1.460
$MtoB_{Acq\ Y-1}$	0.001	0.001	-0.001	0.001	0.001	0.001
	0.280	0.240	-0.140	0.270	0.160	0.220
$Leverage_{Acq\ Y-1}$	**-0.115****	**-0.141***	-0.143	-0.118	-0.104	-0.119
	-1.990	-1.860	-1.470	-1.620	-1.070	-0.980
$Risk_{Acq\ Y-1}$	-0.005	-0.006	-0.004	-0.004	-0.008	-0.001
	-1.380	-1.220	-0.550	-0.900	-1.120	-0.050
CB_Deal	0.028	**0.063***	**0.085****	0.001	0.019	0.039
	1.130	1.910	1.980	0.040	0.520	0.850
Ind_relat.	-0.008	-0.015	-0.021	-0.008	-0.031	-0.049
	-0.430	-0.640	-0.710	-0.370	-1.110	-1.450
Rel_Size	**-0.033***	**-0.049****	**-0.065****	-0.023	-0.038	**-0.068***
	-1.830	-2.130	-2.150	-0.950	-1.250	-1.690
$Size_{Tar\ Y-1}$				**-0.016***	**-0.027****	-0.017
				-1.730	-2.210	-1.060
$ROA_{Tar\ Y-1}$				**0.170*** **	**0.210*** **	**0.206*** **
				3.750	3.490	2.940
$Liquidity_{Tar\ Y-1}$				0.003	0.003	0.005
				0.710	0.390	0.530
$MtoB_{Tar\ Y-1}$				0.001	0.001	-0.001
				0.300	0.380	-0.260
$Leverage_{Tar\ Y-1}$				-0.064	-0.096	-0.043
				-0.970	-1.080	-0.390
Age_{Tar}				-0.009	0.004	-0.001
				-0.330	0.110	-0.030
GDP $Growth_{Tar}$				-2.960	-2.281	-1.531
				-1.510	-0.970	-0.570

Table 1.9 (Continued)

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
Constant	**0.165****	-0.002	**-0.203***	**0.258*****	0.099	-0.148
	2.420	-0.020	-1.810	2.820	0.800	-0.990
Number of Obs.	2,821	2,821	2,821	2,217	2,217	2,217
Adjusted R^2	0.0697	0.0713	0.0763	0.079	0.0779	0.0859

Notes: The table presents the regression analysis of the determinants of the percentage change in acquirer DPS, '*Pct_Ch_DPS*', over periods starting one year before the deal and ending a) one year (Model 1 and 4), b) two years (Model 2 and 5), and c) three years (Model 3 and 6) the completion of the M&A. Models 4 to 6 account for target financial characteristics in addition to the acquirer financial characteristics. Variables with '*Tar*' subscript are measured in the same way as the corresponding variables with '*Acq*' subscript but for the target company. Please refer to Table 2 for detailed definitions of the explanatory variables used in the models. To correct for the possibility that the coefficients are not estimated on the basis of a random sample or that the distributions of the independent variables and regression residual are not independent or identically distributed (i.i.d.), all models have robust estimate of variance following Huber (1967) and White (1980, 1982). T-stats are reported below each variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 1.10 Sensitivity Analysis: Excluding Serial Acquirers

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
Clientele Theory						
Dividend Gap	**0.179*** **	**0.202*** **	**0.186*** **	**0.154*** **	**0.172*** **	**0.156*** **
	5.970	6.180	5.520	4.880	4.930	4.380
Tar_Clientele (Inherited II x Dividend Gap)	-0.371	-0.051	-0.313	-0.348	-0.059	-0.190
	-0.730	-0.090	-0.530	-0.650	-0.100	-0.310
Tar_Clientele x All_Shares	**8.313** **	**7.734***	**7.633***	**10.039** **	**8.776***	**8.544***
	1.970	1.690	1.720	2.280	1.800	1.780
Agency Theory						
Inherited II	-0.077	-0.005	0.084	1.590	-0.018	0.029
	-0.690	-0.040	0.580	-1.200	-0.120	0.170
Diff_antiself $_{Tar\text{-}Acq}$	0.106	0.024	-0.024	**0.158***	0.056	0.091
	1.420	0.270	-0.230	1.780	0.510	0.710
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$	-1.134	2.973	-3.200	-0.944	2.696	-5.015
	-0.410	0.960	-0.980	-0.320	0.840	-1.450
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$ x All_Shares	0.040	-0.071	0.047	1.110	**2.091*** **	**2.286** **
	0.160	-0.150	0.090	1.590	3.620	2.430
Signalling theory						
M&A_Exp. gains	**0.020*** **	**0.021*** **	**0.022*** **	**0.024*** **	**0.024** **	**0.025*** **
	3.360	2.830	2.780	3.160	2.530	2.660
Life Cycle Theory						
Δ Growth oppt.	**-0.009***	-0.006	0.001	-0.007	-0.003	0.002
	-1.670	-1.060	0.070	-1.020	-0.410	0.240
Control Variables						
All_Shares	-0.026	-0.023	-0.016	**-0.044** **	-0.026	-0.031
	-1.420	-1.080	-0.710	-2.000	-0.990	-1.110
Dividend Premium	-0.056	**-0.065***	**-0.149*** **	**-0.067***	-0.060	**-0.171*** **
	-1.620	-1.670	-3.540	-1.730	-1.360	-3.680
Age_{Acq}	-0.016	0.016	**0.039***	-0.030	-0.005	0.026
	-0.900	0.800	1.850	-1.300	-0.200	1.000
GDP $Growth_{Acq}$	-0.747	0.318	0.535	-1.008	1.598	**3.742** **
	-1.180	0.430	0.700	-0.700	0.920	2.350
$Size_{Acq\ Y\text{-}1}$	**0.025*** **	**0.028*** **	**0.033*** **	**0.023** **	**0.033*** **	**0.024** **
	4.080	3.950	4.510	2.380	2.890	2.050

Table 1.10 (Continued)

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
$ROA_{Acq\ Y-1}$	**0.198*** **	**0.239*** **	**0.300*** **	**0.147** **	**0.182** **	**0.247*** **
	4.250	4.210	4.910	2.460	2.480	3.170
$Liquidity_{Acq\ Y-1}$	-0.005	-0.010	-0.009	-0.004	-0.015	-0.013
	-1.160	-1.370	-0.770	-0.520	-1.170	-0.640
$MtoB_{Acq\ Y-1}$	0.001	0.002	0.001	0.000	0.001	0.000
	0.560	0.720	0.180	0.030	0.360	0.080
$Leverage_{Acq\ Y-1}$	**-0.142*** **	**-0.192*** **	**-0.222*** **	**-0.177** **	**-0.219*** **	**-0.279*** **
	-2.700	-3.300	-3.540	-2.540	-2.800	-3.430
$Risk_{Acq\ Y-1}$	**-0.008** **	**-0.010** **	-0.003	**-0.011** *	**-0.015** **	0.000
	-2.170	-2.380	-0.360	-1.730	-2.330	0.020
CB_Deal	-0.016	-0.010	0.006	-0.032	-0.025	-0.009
	-0.670	-0.370	0.180	-1.090	-0.720	-0.230
Ind_relat.	**-0.031** *	-0.030	-0.025	**-0.035** *	-0.038	-0.040
	-1.850	-1.520	-1.180	-1.770	-1.630	-1.600
Rel_Size	**-0.027** **	**-0.046*** **	**-0.044** **	-0.032	**-0.051** **	**-0.066*** **
	-1.980	-2.950	-2.390	-1.540	-2.210	-2.710
$Size_{Tar\ Y-1}$				0.000	-0.004	0.011
				-0.030	-0.360	0.870
$ROA_{Tar\ Y-1}$				**0.138*** **	**0.150*** **	**0.157*** **
				3.130	2.970	3.020
$Liquidity_{Tar\ Y-1}$				0.001	0.004	0.006
				0.250	0.970	1.330
$MtoB_{Tar\ Y-1}$				0.002	0.001	-0.001
				0.840	0.350	-0.260
$Leverage_{Tar\ Y-1}$				-0.074	-0.098	-0.028
				-1.220	-1.430	-0.380
Age_{Tar}				0.002	0.011	0.012
				0.090	0.420	0.430
GDP $Growth_{Tar}$				-0.036	-1.474	**-3.411** **
				-0.020	-0.840	-2.110
Constant	0.087	-0.013	-0.114	**0.175** **	0.056	-0.057
	1.460	-0.190	-1.580	2.100	0.590	-0.570
Number of Obs.	1,292	1,292	1,292	1,002	1,002	1,002
Adjusted R^2	0.1459	0.1509	0.1549	0.1507	0.1503	0.1664

Table 1.10 (Continued)

Notes: The table presents the regression analysis of the determinants of the percentage change in acquirer DPS, '*Pct_Ch_DPS*', over periods starting from one year before the deal and ending a) one year after (Model 1 and 4), b) two years after (Model 2 and 5), and c) three years after (Model 3 and 6) the completion of the M&A. The difference between Models 1 to 3 and Models 4 to 6 is that the last three models account for target financial characteristics in addition to the acquirer financial characteristics. The deal sample used for estimating the models in this table exclude acquirers that have performed more than one acquisitions within the sample period. Variables with '*Tar*' subscript are measured in the same way as the corresponding variables with '*Acq*' subscript but for the target company. Please refer to Table 2 for detailed definitions of the explanatory variables used in the models. To correct for the possibility that our coefficients are not estimated on the basis of a random sample or that the distributions of our independent variables and regression residual are not independent or identically distributed (i.i.d.), all models have robust estimate of variance following Huber (1967) and White (1980, 1982). *T*-stats are reported below each independent variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 1.11 Sensitivity Analysis: Measuring Change in Inherited II as the Difference in the Natural Logarithm of the Number of Inherited II

Dependant variable: Pct_Ch_DPS	Model 1 (Y-1 to Y+1)	Model 2 (Y-1 to Y+2)	Model 3 (Y-1 to Y+3)	Model 4 (Y-1 to Y+1)	Model 5 (Y-1 to Y+2)	Model 6 (Y-1 to Y+3)
Clientele Theory						
Dividend Gap	**0.188*** **	**0.236*** **	**0.165*** **	**0.177*** **	**0.238*** **	**0.293*** **
	5.540	5.610	6.670	4.880	5.150	5.290
Tar_Clientele (Inherited II x Dividend Gap)	0.052	0.048	0.042	0.038	0.050	0.007
	0.350	0.250	0.400	0.230	0.230	0.030
Tar_Clientele x All_Shares	**0.857** **	**1.078***	**0.845*** **	**1.105** **	**1.233***	**1.704** **
	2.010	1.740	2.660	2.350	1.790	1.990
Agency Theory						
Inherited II	-0.214	-0.012	0.139	**-0.274** **	-0.065	0.024
	-1.560	-0.070	1.310	-1.980	-0.350	0.110
Diff_antiself $_{Tar\text{-}Acq}$	**0.156** **	0.120	0.099	**0.231*** **	0.192	0.230
	2.060	1.170	1.430	2.580	1.600	1.520
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$	0.007	-0.031	-0.104	0.041	0.092	-0.117
	0.040	-0.140	-0.950	0.220	0.360	-0.400
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$ x All_Shares	0.018	0.000	-0.045	0.000	0.089	-0.281
	0.280	0.000	-1.150	0.000	0.250	-0.600
Signalling theory						
M&A_Exp. gains	**0.034*** **	**0.050*** **	**0.020*** **	**0.036*** **	**0.051*** **	**0.071*** **
	5.060	5.360	3.690	4.380	4.510	4.640
Life Cycle Theory						
Δ Growth oppt.	0.001	0.011	0.007	0.002	0.014	0.023
	0.100	1.230	1.120	0.250	1.250	1.640
Control Variables						
All_Shares	**-0.044** **	**-0.048***	-0.012	**-0.058** **	-0.051	**-0.064***
	-2.130	-1.790	-0.710	-2.400	-1.630	-1.740
Dividend Premium	-0.007	-0.016	**-0.099*** **	-0.045	-0.038	**-0.241*** **
	-0.180	-0.320	-3.380	-1.050	-0.700	-3.610
Age_{Acq}	-0.012	0.040	**0.047*** **	-0.008	0.039	**0.114*** **
	-0.570	1.500	2.940	-0.320	1.200	3.030
GDP $Growth_{Acq}$	**-1.446***	-0.086	-0.210	0.629	1.226	1.889
	-1.920	-0.080	-0.370	0.330	0.540	0.740

Table 1.11 (Continued)

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
$Size_{Acq\ Y-1}$	**0.012****	**0.018****	**0.027*****	**0.017****	**0.030*****	0.017
	1.980	2.320	5.810	2.000	2.760	1.340
$ROA_{Acq\ Y-1}$	**0.339*****	0**.383*****	**0.329*****	**0.300*****	**0.313*****	**0.357*****
	6.010	5.580	7.040	4.410	3.750	3.700
$Liquidity_{Acq\ Y-1}$	-0.009	-0.012	-0.009	-0.010	-0.020	-0.024
	-1.620	-1.540	-1.100	-1.150	-1.570	-1.510
$MtoB_{Acq\ Y-1}$	0.001	0.001	-0.003	0.001	0.001	0.001
	0.270	0.270	-1.430	0.310	0.230	0.260
$Leverage_{Acq\ Y-1}$	**-0.108***	**-0.135***	-0.074	-0.111	-0.100	-0.108
	-1.890	-1.800	-1.510	-1.530	-1.030	-0.890
$Risk_{Acq\ Y-1}$	-0.005	-0.006	-0.004	-0.004	-0.008	-0.002
	-1.430	-1.270	-0.610	-0.900	-1.230	-0.130
CB_Deal	0.026	**0.063***	0.033	-0.002	0.013	0.038
	1.000	1.870	1.640	-0.060	0.360	0.830
Ind_relat.	-0.011	-0.018	-0.021	-0.013	-0.034	**-0.057***
	-0.590	-0.730	-1.360	-0.590	-1.220	-1.660
Rel_Size	**-0.033***	**-0.050****	**-0.042*****	-0.025	-0.039	**-0.071***
	-1.880	-2.180	-2.980	-1.020	-1.310	-1.760
$Size_{Tar\ Y-1}$				**-0.017***	**-0.028****	-0.016
				-1.790	-2.270	-1.020
$ROA_{Tar\ Y-1}$				**0.169*****	**0.213*****	**0.204*****
				3.690	3.510	2.910
$Liquidity_{Tar\ Y-1}$				0.003	0.003	0.005
				0.690	0.390	0.540
$MtoB_{Tar\ Y-1}$				0.001	0.001	-0.001
				0.240	0.320	-0.350
$Leverage_{Tar\ Y-1}$				-0.055	-0.085	-0.032
				-0.850	-0.960	-0.280
Age_{Tar}				-0.004	0.007	0.004
				-0.160	0.200	0.100
GDP $Growth_{Tar}$				-2.727	-2.093	-1.176
				-1.440	-0.930	-0.460
Constant	**0.167****	-0.002	-0.069	**0.250*****	0.091	-0.149
	2.470	-0.030	-1.290	2.760	0.740	-1.010

Table 1.11 (Continued)

Dependant variable: Pct_Ch_DPS	Model 1 (Y-1 to Y+1)	Model 2 (Y-1 to Y+2)	Model 3 (Y-1 to Y+3)	Model 4 (Y-1 to Y+1)	Model 5 (Y-1 to Y+2)	Model 6 (Y-1 to Y+3)
Number of Obs.	2,821	2,821	2,821	2,217	2,217	2,217
Adjusted R^2	0.0677	0.0693	0.1250	0.0766	0.0753	0.0821

Notes: The table presents the regression analysis of the determinants of the percentage change in acquirer DPS, '*Pct_Ch_DPS*', over periods starting from one year before the deal and ending a) one year after (Model 1 and 4), b) two years after (Model 2 and 5), and c) three years after (Model 3 and 6) the completion of the M&A. The difference between Models 1 to 3 and Models 4 to 6 is that the last three models account for target financial characteristics in addition to the acquirer financial characteristics. Variables with '*Tar*' subscript are measured in the same way as the corresponding variables with '*Acq*' subscript but for the target company. Please refer to Table 2 for detailed definitions of the explanatory variables used in the models. To correct for the possibility that our coefficients are not estimated on the basis of a random sample or that the distributions of our independent variables and regression residual are not independent or identically distributed (i.i.d.), all models have robust estimate of variance following Huber (1967) and White (1980, 1982). *T*-stats are reported below each independent variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 1.12 Sensitivity Analysis: Measuring Change in Inherited II as the Percentage Change in the Natural Logarithm of the Number of Inherited II

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
Clientele Theory						
Dividend Gap	**0.187*** **	**0.144*** **	**0.164*** **	**0.176*** **	**0.134*** **	**0.293*** **
	5.460	6.020	6.590	4.810	5.270	5.230
Tar_Clientele (Inherited II x Dividend Gap)	0.046	0.045	0.039	0.032	0.030	0.012
	0.410	0.580	0.490	0.270	0.360	0.070
Tar_Clientele x All_Shares	**0.700***	**0.703** **	**0.679** **	**0.913** **	**0.814*** **	**1.381** **
	1.950	2.500	2.460	2.300	2.680	1.970
Agency Theory						
Inherited II	-0.214	0.032	0.135	**-0.274** **	0.045	0.026
	-1.580	0.320	1.290	-1.990	0.410	0.120
Diff_antiself $_{Tar\text{-}Acq}$	**0.154** **	**0.115***	0.098	**0.228** **	**0.123***	0.229
	2.040	1.880	1.420	2.550	1.660	1.510
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$	0.007	-0.051	-0.070	0.038	0.009	-0.081
	0.060	-0.640	-0.880	0.310	0.100	-0.410
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$ x All_Shares	0.044	0.076	-0.006	0.004	0.147	-0.115
	0.290	0.700	-0.050	0.020	1.140	-0.380
Signalling theory						
M&A_Exp. gains	**0.034*** **	**0.021*** **	**0.020*** **	**0.036*** **	**0.022*** **	**0.071*** **
	5.060	4.040	3.690	4.370	3.500	4.650
Life Cycle Theory						
Δ Growth oppt.	0.001	0.002	0.007	0.002	0.004	0.023
	0.090	0.440	1.110	0.250	0.560	1.630
Control Variables						
All_Shares	**-0.044** **	**-0.025***	-0.012	**-0.058** **	-0.028	**-0.064***
	-2.120	-1.640	-0.710	-2.400	-1.600	-1.730
Dividend Premium	-0.007	-0.037	**-0.099*** **	-0.045	-0.049	**-0.241*** **
	-0.180	-1.320	-3.380	-1.050	-1.560	-3.610
Age_{Acq}	-0.012	0.016	**0.047*** **	-0.008	0.004	**0.114*** **
	-0.570	1.020	2.950	-0.320	0.190	3.030
GDP $Growth_{Acq}$	**-1.447***	-0.577	-0.213	0.626	0.527	1.880
	-1.920	-1.040	-0.370	0.320	0.450	0.730

Table 1.12 (Continued)

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
$Size_{Acq\ Y-1}$	**0.012****	**0.025*****	**0.027*****	**0.017****	**0.028*****	0.017
	2.000	5.710	5.800	2.010	4.560	1.350
$ROA_{Acq\ Y-1}$	**0.338*****	**0.296*****	**0.330*****	**0.299*****	**0.259*****	**0.357*****
	6.000	6.750	7.060	4.410	4.640	3.690
$Liquidity_{Acq\ Y-1}$	-0.009	-0.009	-0.009	-0.010	-0.016	-0.024
	-1.620	-1.560	-1.110	-1.150	-1.570	-1.510
$MtoB_{Acq\ Y-1}$	0.001	**-0.003***	-0.003	0.001	-0.004	0.001
	0.280	-1.660	-1.420	0.320	-1.620	0.270
$Leverage_{Acq\ Y-1}$	**-0.109***	**-0.073***	-0.073	-0.111	-0.074	-0.108
	-1.890	-1.680	-1.500	-1.540	-1.320	-0.900
$Risk_{Acq\ Y-1}$	-0.005	**-0.007****	-0.004	-0.004	**-0.008***	-0.002
	-1.430	-2.080	-0.600	-0.910	-1.690	-0.130
CB_Deal	0.025	**0.032***	0.033	-0.003	0.013	0.037
	0.980	1.700	1.610	-0.100	0.570	0.820
Ind_relat.	-0.011	-0.018	-0.021	-0.013	-0.026	**-0.057***
	-0.590	-1.280	-1.370	-0.590	-1.620	-1.660
Rel_Size	**-0.033***	**-0.034*****	**-0.042*****	-0.025	**-0.044*****	**-0.071***
	-1.870	-2.610	-2.980	-1.020	-2.610	-1.760
$Size_{Tar\ Y-1}$				**-0.017***	**-0.012***	-0.016
				-1.790	-1.690	-1.020
$ROA_{Tar\ Y-1}$				**0.170*****	**0.149*****	**0.204*****
				3.700	3.920	2.910
$Liquidity_{Tar\ Y-1}$				0.003	0.004	0.005
				0.680	1.020	0.540
$MtoB_{Tar\ Y-1}$				0.001	0.002	-0.001
				0.240	0.910	-0.350
$Leverage_{Tar\ Y-1}$				-0.055	0.000	-0.032
				-0.840	0.010	-0.280
Age_{Tar}				-0.004	0.000	0.004
				-0.160	0.000	0.090
GDP $Growth_{Tar}$				-2.719	-1.674	-1.171
				-1.440	-1.450	-0.460
Constant	**0.167****	0.031	-0.069	**0.249*****	**0.142****	-0.149
	2.460	0.610	-1.290	2.750	2.080	-1.010
Number of Obs.	2,821	2,821	2,821	2,217	2,217	2,217
Adjusted R^2	0.0678	0.1139	0.1247	0.0766	0.1133	0.0819

Table 1.12 (Continued)

Notes: The table presents the regression analysis of the determinants of the percentage change in acquirer DPS, '*Pct_Ch_DPS'*, over periods starting from one year before the deal and ending a) one year after (Model 1 and 4), b) two years after (Model 2 and 5), and c) three years after (Model 3 and 6) the completion of the M&A. The difference between Models 1 to 3 and Models 4 to 6 is that the last three models account for target financial characteristics in addition to the acquirer financial characteristics. Variables with '*Tar*' subscript are measured in the same way as the corresponding variables with '*Acq*' subscript but for the target company. Please refer to Table 2 for detailed definitions of the explanatory variables used in the models. To correct for the possibility that our coefficients are not estimated on the basis of a random sample or that the distributions of our independent variables and regression residual are not independent or identically distributed (i.i.d.), all models have robust estimate of variance following Huber (1967) and White (1980, 1982). *T*-stats are reported below each independent variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 1.13 Sensitivity Analysis: Measuring Change in Inherited II as the Difference in the Natural Logarithm of the Sum of the Holdings of Inherited II

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
Clientele Theory						
Dividend Gap	**0.193*** **	**0.242*** **	**0.169*** **	**0.184*** **	**0.243*** **	**0.160*** **
	5.670	5.730	6.780	4.960	5.170	6.020
Tar_Clientele (Inherited II x Dividend Gap)	-0.008	-0.026	0.007	-0.011	-0.025	-0.001
	-0.460	-1.070	0.470	-0.550	-0.910	-0.040
Tar_Clientele x All_Shares	**0.310** **	**0.504** **	**0.203** **	**0.367** **	**0.548** **	**0.251** **
	2.270	2.490	2.040	2.500	2.500	2.340
Agency Theory						
Inherited II	-0.200	0.005	0.137	**-0.262***	-0.053	0.152
	-1.410	0.030	1.260	-1.780	-0.270	1.250
Diff_antiself $_{Tar-Acq}$	**0.177** **	0.144	0.110	**0.254*** **	**0.227** **	**0.157***
	2.400	1.460	1.630	2.910	1.980	1.940
Inherited II x Diff_antiself $_{Tar-Acq}$	-0.033	-0.045	**-0.064***	-0.024	-0.024	**-0.074** **
	-0.590	-0.690	-1.790	-0.400	-0.360	-2.030
Inherited II x Diff_antiself $_{Tar-Acq}$ x All_Shares	-0.006	-0.009	-0.002	-0.010	-0.007	0.009
	-0.460	-0.640	-0.290	-0.600	-0.320	0.650
Signalling theory						
M&A_Exp. gains	**0.034*** **	**0.050*** **	**0.020*** **	**0.036*** **	**0.051*** **	**0.022*** **
	5.050	5.340	3.660	4.360	4.510	3.430
Life Cycle Theory						
Δ Growth oppt.	0.000	0.010	0.007	0.002	0.014	0.009
	0.070	1.200	1.110	0.220	1.220	1.220
Control Variables						
All_Shares	**-0.045** **	**-0.053***	-0.010	**-0.059** **	**-0.057***	-0.014
	-2.170	-1.950	-0.620	-2.470	-1.830	-0.720
Dividend Premium	-0.007	-0.017	**-0.099*** **	-0.043	-0.037	**-0.123*** **
	-0.200	-0.350	-3.380	-1.010	-0.670	-3.720
Age_{Acq}	-0.013	0.039	**0.047*** **	-0.009	0.038	**0.039** **
	-0.620	1.440	2.910	-0.360	1.160	2.030
GDP $Growth_{Acq}$	**-1.413***	-0.039	-0.201	0.785	1.477	1.351
	-1.880	-0.040	-0.350	0.400	0.650	1.120
$Size_{Acq\ Y-1}$	**0.012***	**0.017** **	**0.027*** **	**0.017** **	**0.029*** **	**0.026*** **
	1.950	2.250	5.820	1.980	2.700	3.860

Table 1.13 (Continued)

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
$ROA_{Acq\ Y-1}$	0.340	**0.383*** **	**0.329*** **	**0.303*** **	**0.319*** **	**0.307*** **
	6.050	5.610	7.070	4.490	3.820	5.190
$Liquidity_{Acq\ Y-1}$	-0.009	-0.012	-0.009	-0.011	-0.021*	-0.020
	-1.620	-1.590	-1.090	-1.230	-1.680	-1.490
$MtoB_{Acq\ Y-1}$	0.000	0.001	-0.003	0.001	0.000	-0.003
	0.160	0.150	-1.530	0.160	0.060	-1.210
$Leverage_{Acq\ Y-1}$	**-0.111***	**-0.139***	-0.076	-0.111	-0.098	-0.089
	-1.940	-1.850	-1.550	-1.530	-1.020	-1.460
$Risk_{Acq\ Y-1}$	-0.005	-0.006	-0.004	-0.004	-0.008	0.001
	-1.430	-1.280	-0.580	-0.900	-1.210	0.090
CB_Deal	0.032	**0.070** **	**0.036***	0.006	0.026	0.036
	1.260	2.100	1.790	0.210	0.690	1.460
Ind_relat.	-0.010	-0.016	-0.020	-0.011	-0.032	**-0.031***
	-0.540	-0.680	-1.340	-0.520	-1.150	-1.760
Rel_Size	**-0.034***	**-0.051** **	**-0.043*** **	-0.026	-0.040	**-0.062*** **
	-1.930	-2.240	-3.010	-1.040	-1.350	-3.320
$Size_{Tar\ Y-1}$				**-0.017***	**-0.028** **	-0.004
				-1.770	-2.260	-0.560
$ROA_{Tar\ Y-1}$				**0.167*** **	**0.209*** **	**0.146*** **
				3.640	3.480	3.560
$Liquidity_{Tar\ Y-1}$				0.003	0.003	0.005
				0.710	0.410	0.950
$MtoB_{Tar\ Y-1}$				0.001	0.001	0.000
				0.270	0.370	-0.050
$Leverage_{Tar\ Y-1}$				-0.060	-0.090	0.024
				-0.920	-1.010	0.450
Age_{Tar}				-0.007	0.004	**0.002***
				-0.250	0.120	0.090
GDP $Growth_{Tar}$				-2.862	-2.323	-1.956
				-1.500	-1.020	-1.640
Constant	**0.171** **	0.006	-0.068	**0.261*** **	0.107	**0.007***
	2.530	0.070	-1.270	2.870	0.880	0.100
Number of Obs.	2,821	2,821	2,821	2,217	2,217	2,217
Adjusted R^2	0.0680	0.0711	0.1247	0.0764	0.0768	0.1286

Table 1.13 (Continued)

Notes: The table presents the regression analysis of the determinants of the percentage change in acquirer DPS, '*Pct_Ch_DPS*', over periods starting from one year before the deal and ending a) one year after (Model 1 and 4), b) two years after (Model 2 and 5), and c) three years after (Model 3 and 6) the completion of the M&A. The difference between Models 1 to 3 and Models 4 to 6 is that the last three models account for target financial characteristics in addition to the acquirer financial characteristics. Variables with '*Tar*' subscript are measured in the same way as the corresponding variables with '*Acq*' subscript but for the target company. Please refer to Table 2 for detailed definitions of the explanatory variables used in the models. To correct for the possibility that our coefficients are not estimated on the basis of a random sample or that the distributions of our independent variables and regression residual are not independent or identically distributed (i.i.d.), all models have robust estimate of variance following Huber (1967) and White (1980, 1982). *T*-stats are reported below each independent variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 1.14 Sensitivity Analysis: Controlling for the Change in Inherited Retail/Individual Investors

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
Clientele Theory						
Dividend Gap	**0.196*****	**0.238*****	**0.299*****	**0.186*****	**0.240*****	**0.302*****
	5.690	5.690	5.950	5.010	5.200	5.490
Tar_Clientele (Inherited II x Dividend Gap)	-0.739	-0.297	-1.270	-1.019	-0.401	-0.920
	-1.070	-0.330	-1.190	-1.430	-0.420	-0.840
Tar_Clientele x All_Shares	**9.699***	**16.090****	**18.510***	**11.834****	**17.800****	**19.905***
	1.780	2.080	1.880	2.070	2.160	1.900
Tar_Clientele_Inherited Retail	-1.881	**-5.103***	**-7.149***	-1.850	**-5.188***	**-7.285***
	-0.720	-1.820	-1.690	-0.680	-1.850	-1.760
Tar_Clientele_Inherited Retail x All_Shares	1.848	**5.041***	**7.115***	1.828	**5.105***	**7.226***
	0.710	1.800	1.690	0.670	1.820	1.750
Agency Theory						
Inherited II	-0.107	0.010	0.363	-0.127	-0.038	0.195
	-0.700	0.050	1.360	-0.820	-0.180	0.760
Diff_antiself $_{Tar\text{-}Acq}$	**0.187****	0.140	0.129	**0.274*****	**0.236****	**0.282***
	2.550	1.410	0.950	3.110	2.000	1.900
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$	-4.088	-3.373	**-10.078***	-4.077	-3.603	**-10.789***
	-1.330	-0.850	-1.950	-1.120	-0.790	-1.770
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$ x All_Shares	0.430	0.326	-0.355	**1.577***	2.074	-0.204
	1.050	0.530	-0.560	1.680	1.560	-0.060
Inherited Retail$_{Tar}$ x Diff_antiself $_{Tar\text{-}Acq}$	0.519	3.481	5.162	1.011	4.030	5.453
	0.200	1.260	1.230	0.370	1.440	1.320
Inherited Retail$_{Tar}$ x Diff_antiself $_{Tar\text{-}Acq}$ x All_Shares	-2.605	**-6.128****	**-7.279***	-3.045	**-6.467****	**-7.098***
	-1.000	-2.160	-1.720	-1.120	-2.290	-1.710
Inherited Retail$_{Tar}$	0.045	0.073	0.043	0.059	0.126	0.100
	0.920	1.090	0.570	1.060	1.460	1.030
Signalling theory						
M&A_Exp. gains	**0.034*****	**0.049*****	**0.066*****	**0.035*****	**0.051*****	**0.070*****
	4.990	5.310	5.300	4.310	4.480	4.590
Life Cycle Theory						
Δ Growth oppt.	-0.001	0.009	0.015	0.000	0.011	0.020
	-0.170	0.980	1.360	0.010	1.030	1.420

Table 1.14 (Continued)

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
Control Variables						
All_Shares	**-0.045****	**-0.055****	**-0.063***	**-0.061****	**-0.060***	**-0.073****
	-2.180	-2.000	-1.870	-2.500	-1.910	-1.960
Dividend Premium	-0.006	-0.016	**-0.184*****	-0.039	-0.035	**-0.235*****
	-0.150	-0.320	-3.020	-0.920	-0.630	-3.480
Age_{Acq}	-0.015	0.036	**0.088*****	-0.013	0.032	**0.103*****
	-0.720	1.330	2.710	-0.520	0.980	2.770
GDP $Growth_{Acq}$	**-1.345***	0.070	1.562	0.834	1.429	2.249
	-1.780	0.070	1.260	0.420	0.600	0.820
$Size_{Acq\ Y-1}$	**0.013****	**0.018****	**0.018***	**0.018****	**0.031*****	0.021
	2.080	2.370	1.940	2.170	2.840	1.640
$ROA_{Acq\ Y-1}$	**0.338*****	**0.380*****	**0.409*****	**0.295*****	**0.309*****	**0.334*****
	5.980	5.520	5.000	4.330	3.670	3.420
$Liquidity_{Acq\ Y-1}$	-0.009	-0.013	-0.012	-0.012	-0.023*	-0.027
	-1.610	-1.570	-1.190	-1.250	-1.730	-1.580
$MtoB_{Acq\ Y-1}$	0.000	0.001	-0.001	0.001	0.000	0.001
	0.160	0.180	-0.200	0.190	0.100	0.160
$Leverage_{Acq\ Y-1}$	**-0.121****	**-0.151****	-0.156	**-0.130***	-0.123	-0.142
	-2.100	-2.010	-1.620	-1.780	-1.260	-1.180
$Risk_{Acq\ Y-1}$	-0.005	-0.005	-0.004	-0.004	-0.007	-0.001
	-1.440	-1.210	-0.580	-0.940	-1.070	-0.080
CB_Deal	0.030	**0.065****	**0.087****	0.003	0.021	0.040
	1.200	1.960	2.020	0.120	0.560	0.890
Ind_relat.	-0.009	-0.016	-0.022	-0.009	-0.031	-0.051
	-0.470	-0.660	-0.740	-0.420	-1.140	-1.500
Rel_Size	**-0.032***	**-0.047****	**-0.062****	-0.023	-0.036	-0.065
	-1.780	-2.070	-2.060	-0.940	-1.220	-1.620
$Size_{Tar\ Y-1}$				**-0.017***	**-0.028****	-0.017
				-1.780	-2.280	-1.110
$ROA_{Tar\ Y-1}$				**0.172*****	**0.218*****	**0.215*****
				3.780	3.600	3.060
$Liquidity_{Tar\ Y-1}$				0.003	0.003	0.005
				0.660	0.340	0.500
$MtoB_{Tar\ Y-1}$				0.001	0.001	-0.001
				0.280	0.390	-0.250

Table 1.14 (Continued)

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
$Leverage_{Tar\ Y-1}$				-0.059	-0.088	-0.033
				-0.910	-1.000	-0.300
Age_{Tar}				-0.006	0.007	0.003
				-0.220	0.200	0.070
GDP $Growth_{Tar}$				-2.808	-2.114	-1.322
				-1.420	-0.890	-0.480
Constant	**0.170****	0.004	**-0.194***	**0.258*****	0.105	-0.138
	2.510	0.050	-1.750	2.850	0.860	-0.940
Number of Obs.	2,821	2,821	2,821	2,217	2,217	2,217
Adjusted R^2	0.0691	0.0731	0.0784	0.0779	0.0800	0.0883

Notes: The table presents the regression analysis of the determinants of the percentage change in acquirer DPS, '*Pct_Ch_DPS*', over periods starting from one year before the deal and ending a) one year after (Model 1 and 4), b) two years after (Model 2 and 5), and c) three years after (Model 3 and 6) the completion of the M&A. The difference between Models 1 to 3 and Models 4 to 6 is that the last three models account for target financial characteristics in addition to the acquirer financial characteristics. '*Tar_Clientele_Inherited Retail*' is defined as the percentage change in the natural logarithm of the holdings of retail investors in the acquirer company that were also invested in the target company prior to the acquisition over a period starting one year before and ending one year after the M&A completion interacted with a dummy variable which is equal to one when the target DPS before the deal is higher than that of the acquire and zero otherwise, '*Tar_Clientele_Inherited Retail x All_Shares*' is defined as the '*Tar_Clientele_Inherited Retail*' variable interacted with a dummy variable which is equal to one when the deal method of payment is all stock and zero otherwise, '*Inherited* $Retail_{Tar}$ *x* $Diff\_antiself_{Tar\text{-}Acq}$' is defined as the percentage change in the natural logarithm of the holdings of retail investors in the acquirer company that were also invested in the target company prior to the acquisition over a period starting one year before and ending one year after the M&A completion interacted with '$Diff\_antiself_{Tar\text{-}Acq}$', '*Inherited* $Retail_{Tar}$ *x* $Diff\_antiself_{Tar\text{-}Acq}$ *x All_Shares*' is defined as the '*Inherited* $Retail_{Tar}$ *x* $Diff\_antiself_{Tar\text{-}Acq}$' interacted with a dummy variable which is equal to one when the deal method of payment is all stock and zero otherwise, '*Inherited* $Retail_{Tar}$' is defined as the percentage change in the natural logarithm of the holdings of retail investors in the acquirer company that were also invested in the target company prior to the acquisition over a period starting one year before and ending one year after the M&A completion. Variables with '*Tar*' subscript are measured in the same way as the corresponding variables with '*Acq*' subscript but for the target company. Please refer to Table 2 for detailed definitions of the explanatory variables used in the models. To correct for the possibility that our coefficients are not estimated on the basis of a random sample or that the distributions of our independent variables and regression residual are not independent or identically distributed (i.i.d.), all models have robust estimate of variance following Huber (1967) and White (1980, 1982). T-stats are reported below each independent variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 1.15 Sensitivity Analysis: Using Alternative Measures for Target and Acquirer Financial Characteristics

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
Clientele Theory						
Dividend Gap	**0.186*** **	**0.227*** **	**0.292*** **	**0.193*** **	**0.241*** **	**0.296*** **
	5.470	5.410	5.830	5.280	5.220	5.420
Tar_Clientele (Inherited II x Dividend Gap)	-1.010	-0.673	-1.688	-1.159	-0.663	-1.328
	-1.500	-0.760	-1.600	-1.620	-0.690	-1.210
Tar_Clientele x All_Shares	**11.126** **	**18.139** **	**21.782** **	**13.185** **	**19.637** **	**21.863** **
	2.070	2.320	2.200	2.340	2.380	2.160
Agency Theory						
Inherited II	-0.126	-0.010	0.328	-0.064	0.037	0.292
	-0.830	-0.050	1.230	-0.440	0.180	1.160
Diff_antiself $_{Tar\text{-}Acq}$	**0.202*** **	0.160	0.151	**0.282*** **	**0.262** **	**0.294** **
	2.760	1.610	1.110	3.230	2.240	1.980
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$	-4.251	-3.558	**-10.174** **	-5.612	-5.397	**-12.483** **
	-1.420	-0.920	-2.020	-1.520	-1.170	-2.050
Inherited II x Diff_antiself $_{Tar\text{-}Acq}$ x All_Shares	0.388	0.286	-0.409	1.576	2.089	-0.257
	1.050	0.500	-0.640	1.600	1.510	-0.080
Signalling theory						
M&A_Exp. gains	**0.031*** **	**0.046*** **	**0.066*** **	**0.039*** **	**0.056*** **	**0.076*** **
	4.460	4.900	5.250	4.780	4.860	4.900
Life Cycle Theory						
Δ Growth oppt.	-0.003	0.009	0.015	-0.010	0.003	0.013
	-0.350	0.930	1.260	-1.150	0.310	0.920
Control Variables						
All_Shares	**-0.038** **	**-0.049** **	**-0.074** **	**-0.055** **	**-0.060** **	**-0.075** **
	-1.830	-1.800	-2.170	-2.210	-1.840	-1.950
Dividend Premium	0.006	-0.003	**-0.178*** **	-0.034	-0.033	**-0.251*** **
	0.160	-0.060	-2.880	-0.800	-0.590	-3.700
Age_{Acq}	-0.014	**0.045** **	**0.116*** **	-0.002	0.048	**0.126*** **
	-0.740	1.780	3.700	-0.060	1.540	3.380
GDP $Growth_{Acq}$	**-1.506** **	-0.128	1.466	1.012	1.714	2.263
	-1.980	-0.120	1.170	0.500	0.720	0.830
$Size_{Acq\ Y\text{-}1}$	**0.009*** **	**0.012** **	0.013	**0.025*** **	**0.032*** **	0.021
	1.790	1.770	1.630	3.030	2.890	1.540

Table 1.15 (Continued)

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
$ROE_{Acq\ Y-1}$	**0.179*** **	**0.166*** **	0.003	0.000	-0.002	-0.002
	6.110	4.560	0.620	0.070	-0.350	-0.220
$Liquidity_{Acq\ Y-1}$	0.000	0.000	0.002**	0.003	0.003	0.004
	0.430	0.260	2.050	1.640	1.350	1.620
$MtoB_{Acq\ Y-1}$	-0.001	-0.001	-0.002	-0.004	-0.004	-0.002
	-0.290	-0.180	-0.290	-0.940	-0.690	-0.260
$Leverage_{Acq\ Y-1}$	-0.004	-0.002	-0.002	-0.017	-0.005	0.005
	-0.310	-0.150	-0.090	-0.770	-0.150	0.140
$Risk_{Acq\ Y-1}$	-0.002	**-0.004***	**-0.001** **	**-0.007** **	**-0.010*** **	**-0.009** **
	-0.870	-1.850	-2.350	-2.440	-2.760	-2.030
CB_Deal	0.029	**0.066** **	**0.089** **	0.019	0.040	0.060
	1.150	1.980	2.070	0.650	1.060	1.290
Ind_relat.	-0.016	-0.024	-0.032	-0.016	-0.040	**-0.061***
	-0.850	-0.990	-1.050	-0.710	-1.430	-1.750
Rel_Size	**-0.035***	**-0.054** **	**-0.076** **	-0.020	-0.040	-0.054
	-1.910	-2.300	-2.460	-0.780	-1.270	-1.250
$Size_{Tar\ Y-1}$				**-0.019** **	**-0.025** **	**-0.024***
				-2.180	-2.180	-1.680
$ROE_{Tar\ Y-1}$				-0.001	-0.003	-0.004
				-0.310	-0.940	-1.090
$Liquidity_{Tar\ Y-1}$				0.000	0.000	0.000
				-0.160	0.090	0.430
$MtoB_{Tar\ Y-1}$				**0.001*** **	**0.001*** **	**0.001** **
				2.770	2.990	2.510
$Leverage_{Tar\ Y-1}$				**-0.011** **	-0.010	-0.004
				-2.010	-1.430	-0.330
Age_{Tar}				-0.004	0.010	0.018
				-0.170	0.300	0.440
$Risk_{Tar}$				**0.000*** **	**0.000** **	**0.000** **
				-2.710	-2.140	-2.310
GDP $Growth_{Tar}$				**-3.364***	-2.842	-1.921
				-1.680	-1.200	-0.710

Table 1.15 (Continued)

Dependant variable: Pct_Ch_DPS	**Model 1 (Y-1 to Y+1)**	**Model 2 (Y-1 to Y+2)**	**Model 3 (Y-1 to Y+3)**	**Model 4 (Y-1 to Y+1)**	**Model 5 (Y-1 to Y+2)**	**Model 6 (Y-1 to Y+3)**
Constant	**0.192*** **	0.025	**-0.218** **	**0.198** **	0.038	-0.201
	2.760	0.270	-1.970	2.190	0.310	-1.370
Number of Obs.	2,821	2,821	2,821	2,217	2,217	2,217
Adjusted R^2	0.0681	0.0668	0.0674	0.0684	0.0684	0.0774

Notes: The table presents the regression analysis of the determinants of the percentage change in acquirer DPS, '*Pct_Ch_DPS*', over periods starting from one year before the deal and ending a) one year after (Model 1 and 4), b) two years after (Model 2 and 5), and c) three years after (Model 3 and 6) the completion of the M&A. The difference between Models 1 to 3 and Models 4 to 6 is that the last three models account for target financial characteristics in addition to the acquirer financial characteristics. Variables with '*Tar*' subscript are measured in the same way as the corresponding variables with '*Acq*' subscript but for the target company. Please refer to Table 2 for detailed definitions of the explanatory variables used in the models. To correct for the possibility that our coefficients are not estimated on the basis of a random sample or that the distributions of our independent variables and regression residual are not independent or identically distributed (i.i.d.), all models have robust estimate of variance following Huber (1967) and White (1980, 1982). T-stats are reported below each independent variable. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively

CHAPTER 2

Naked M&A Transactions: How the Lack of Local Expertise in Cross-border Deals Can Negatively Affect Acquirer Performance – and How Informed Institutional Investors Can Mitigate This Effect

2.1 Introduction

Ferreira, Massa and Matos (2009), hereafter FMM, consider cross-border M&A deals and find (Subsection 4.3) that the extent to which a deal is value-increasing depends on whether there is foreign institutional ownership of the companies. Specifically, they find (p. 640) that "foreign institutional ownership in both target and acquirer firms is associated with higher combined returns in cross-border deals. This is consistent with the "facilitation hypothesis" that foreign institutions promote deals that offer greater value creation (synergy)." They argue that this is because foreign institutional investors may reduce transaction costs and informational asymmetries between potential acquirers and targets. However, they do not propose in detail how these advantages arise.

Building upon the theory of Financial Geography and the work of Dye and Sridhar (2003), we argue that the reason that the holdings of foreign institutional investors is positively associated with the performance of acquirer returns is because a subset of the investors may hold key expertise in the target region. That is, in an economic setting in which information is hard to gather and diverse in nature, it may be reasonably argued that those investors with regional expertise hold information which the management of the acquirer finds hard to collect. Thus, they may have a role to play in reducing cross-border M&A deal informational

CHAPTER 3

Distressed Horizontal M&A: What's the Wealth Effect on Supply Chain Participants?

3.1 Introduction

One of the most frequently stated reasons for horizontal acquisitions is that they improve productive efficiency and thereby achieve superior post- mergers and acquisitions (M&A) financial performance. The need to enhance productive efficiency is usually brought about by unexpected and/or major economic changes (see e.g., Jensen 1993; Comment and Schwert, 1995; Mitchell and Mulherin, 1996; Mulherin and Boone, 2000; and Andrade, Mitchell and Stafford, 2001). Removal of redundant facilities and/or the attainment of greater economies of scale could lead to the improvement of productive efficiency. In contrast to this idea about the sources of gains in horizontal takeovers is the view usually expressed by antitrust authorities which suggests that industry-related acquisitions can generate benefits for the merging firms by harming their customers and suppliers. In effect, the merging firms are expropriating customer and supplier wealth by engaging in collusive activities with their rival firms. Companies in horizontal takeovers can collude with their rivals, and as a result expropriate gains from customers and suppliers through two different channels, which are not mutually exclusive: a) the colluding firms can restrict the output levels in the takeover industry leading to the purchase of lower input quantities from suppliers and higher prices for customers; b) the colluding firms can negotiate lower input prices from their suppliers owing to their increased bargaining power (due to the lower number of larger industry players after

the horizontal acquisition), with the effect on customer wealth being either positive or negative.[20]

The product-market dynamics between merging firms, customers, rivals and suppliers, in the case of industry-related takeovers, are expected to be different when one of the companies is in financial distress. The company's potential bankruptcy could profoundly influence the actions and performance of all the participants in its supply chain. The decisions of supply chain participants can also change the distressed company's risk of bankruptcy. This is particularly the case for companies domiciled in the United States, where firm bankruptcy is principally governed by the Bankruptcy Reform Act of 1978. Compared with other countries, the US insolvency rules are significantly more debtor-oriented. The US legal environment allows the managers of the bankrupt company to retain control and to carry on operating the company during reorganisation (Franks, Nyborg, and Torous 1996; and Ravid and Sundgren, 1998). These specific rules affect how supply chain contracts are established between different parties both when a firm is in financial distress and if the firm becomes bankrupt (Yang, Birge, and Parker, 2014).

To my knowledge there is one theoretical model in the extant literature, developed by Yang et al. (2014), which examines both the effect of the *risk* of bankruptcy (i.e. when the company is in financial distress) and the effect of bankruptcy itself on company rivals and suppliers. Yang et al. (2014)'s model demonstrates that reorganisation, as a possible strategy, can considerably impact the pre-bankruptcy courses of action of the different participants in the supply chain and can generate value for the financially distressed firm as compared to a situation without the possibility of bankruptcy reorganization. If the supplier has the ability to

[20] The effect on customers could be positive if the lower input costs are passed along to customers in the form of lower output prices. Alternatively, the effect could be negative if the suppliers also decide to collude and reduce the level of input that is produced by the industry (Shahrur, 2005).

change the price of its inputs, it has a strong incentive to grant concessions to the financially distressed buyer *before* the period in which bankruptcy takes place Yang et al. (2014). This incentive originates from the fear that the supplier may lose one of its sales channels in the event of the firm going bankrupt.

Reorganisation is not the only course of action available to companies in financial troubles. Jensen (1991) argues that M&A are an effective means for resolving financial distress, and they can take place either inside or outside of bankruptcy. The effect on suppliers, and consequently the effect on customers and rivals, of the financially distressed firm is less clear, however, when the company is acquired out of distress by a competitor. On the one hand, the financially distressed firm is expected to have higher bargaining/buyer power relative to its financially sound peers due to the fact that one of the possible exit routes from financial distress is filing for Chapter 11. The company's suppliers are aware of the fact that when in Chapter 11 a bankrupt company is very likely to re-negotiate its supplier contracts. In anticipation of this possibility, suppliers are likely to react by providing the financially distressed companies with certain concessions such as more favourable contract terms and/or lower input prices. This effect can be strengthened by the fact that the industry concentration of the financially distressed firm could also increase as a result of the horizontal takeover, thus further augmenting the buyer power of the merged company.

On the other hand, through the acquisition, the financially distressed firm becomes part of a new company which could be financially more stable. As a result, suppliers of the takeover industry can benefit from the fact that the newly formed company is more likely to afford the same input prices. The latter effect can be stronger when the supplier industry's structure is monopolistic or oligopolistic, i.e. when the suppliers possess higher bargaining power.

The literature on acquirer post-M&A performance following acquisitions of distressed targets is scarce. 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. 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 announcements of 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 acquirers and bankrupt targets.

To my knowledge there are no previous studies which investigate the wealth implications for the merging firms in horizontal takeovers as well as their customers, competitors, and suppliers when the target is financially distressed. The literature that examines the financial effect of industry-related takeovers on the different participants in the product-market relationship is also limited. There are two studies which analyse the wealth implications of horizontal mergers for customers, suppliers, and rivals as well as the merging firms - Fee and Thomas (2004) and Shahrur (2005). Both studies provide evidence that horizontal acquisitions tend to be motivated by efficiency considerations. However, the authors also show that horizontal mergers can enhance the buyer power of the newly combined firm when the supplier industry is concentrated. This study presents a useful and interesting extension of the analyses of Fee and Thomas (2004) and Shahrur (2005) by examining the wealth effects on the merging firms, customers, rivals and suppliers of industry-related takeovers when the target is financially distressed.

3.2 Related Literature

3.2.1 Buyer Power, Collusion and Productive Efficiency Hypotheses

Table 3.1 presents a summary of the different hypotheses tested in this study and the implications of each hypothesis for the merging firms as well as their customers, suppliers and rivals. Horizontal takeovers can lead to combined purchasing activities as there is a newly formed company as opposed to two companies purchasing from the same suppliers. The idea that such combined purchasing activities can result in lower input prices is referred to as the buyer power hypothesis (Fee and Thomas, 2004; and Shahrur, 2005). The buyer purchasing power effect can result from increased bargaining power on the side of the merging firms or increased competition among the supplier firms, or a combination of the two. The idea that industry-related acquisitions can stimulate anticompetitive behaviour among buyer firms is referred to as monopsonistic collusion (Galbraith, 1952). If horizontal mergers lead to monopsonistic collusion among firms in the takeover industry, company rivals would gain at the expense of suppliers, owing to improved coordination between rival firms (higher bargaining power) that enables them to negotiate lower prices with the suppliers to the takeover industry. Alternatively, when two buyer companies merge, they could induce higher competition among industry suppliers that consequently leads to reduced input prices, if the supplier industry is not perfectly competitive and the suppliers were therefore colluding before the merger (Fee and Thomas, 2004).

The implication of the buyer power hypothesis for customer companies is unclear. On the one hand, the participants in the monopsonistic industry are unlikely to translate lower input costs into lower customer prices. When the takeover industry is perfectly competitive, the monopsonist will sell the product at the market price but the output level will decrease owing to lower input purchases. If the takeover industry is less than perfectly competitive, the

monopsonist will be able to sell the limited output at higher prices, thus hurting customers (Blair and Harrison, 1993). On the other hand, there is some anecdotal evidence that buyer power can exert a positive influence on customer companies. As suggested by Frank and Solomon (2002), "Programmers like Walt Disney and Viacom, which supply cable companies with channels, are using their increasing power to charge cable companies higher fees for programs. Cable companies need equal reach, and influence as "gatekeepers" to the public, to resist the cost increases." The wealth implications for the merging firms, suppliers, rivals and customers of the buyer power hypothesis are summarised in Table 3.1.

Another motive for horizontal acquisitions is the augmentation of productive efficiency by achieving greater economies of scale or reducing overlapping production facilities, for example. There is a plethora of studies that provide evidence for the idea that industry-related M&A, as opposed to diversifying takeovers, can boost operating synergies (see, for example, Healy, Palepu and Ruback, 1992; Maquieira, Megginson and Nail, 1998; Maksimovic and Phillips, 2001). The idea that such benefits can be reaped from horizontal takeovers is referred to as the 'productive efficiency hypothesis' (Fee and Thomas, 2005; Shahrur, 2005). According to the productive efficiency hypothesis, acquirers are expected to experience improved financial performance post-M&A in the form of higher cash flow margins or positive announcement abnormal returns. An improvement in the productive efficiency of the merging firms can also have financial performance implications for the supplier, customer, and rival firms of the bidder. The effect of better productive efficiency on rival companies can be either positive or negative. Rivals could experience a positive market reaction upon the announcement of a horizontal M&A if the capital markets deduce that companies in the given industry are undervalued or that rivals can achieve higher productive efficiency through future acquisitions of their own (see Song and Walkling, 2000). The announcement effect on rival companies could also be negative, however, when the acquiring company is likely to obtain a

competitive advantage that cannot be mimicked by rivals. The effect on customer firms can either be negative, when the acquisition results in elimination of overlapping facilities (i.e. a scale-decreasing acquisition), thus leading to lower output levels and higher customer prices, or positive when the productive efficiency gains are scale-increasing and result in higher levels of output and lower customer prices.

The implication of the productive efficiency hypothesis for suppliers is twofold. On the one hand, it could result in higher demand for the merging companies' products, when the customer prices are decreased, and therefore boost demand for the product's inputs. Alternatively, the improved efficiency could also mean that more can be produced with a lower amount of the same inputs and thus result in less demand for the factors of production provided by the supplier firms. Table 3.1 presents a summary of the implications of the productive efficiency hypothesis for each of the participants in the product-market relationship. The empirical literature, which examines whether productive efficiency is a vital source of gains for takeovers, focuses on analysing the share price announcement reaction for the bidder and target companies as well as acquirer post-M&A operating performance. Most studies report positive announcement returns for bidders in horizontal mergers (see, for example, Bruner, 2002).

Since horizontal M&A increases the concentration of companies in the takeover industry, it can also increase the likelihood of collusion between rival firms in order to limit output levels to monopoly and charge higher prices to customers (Stigler, 1964). This outcome of horizontal acquisitions is referred to as the monopolistic collusion hypothesis (see Fee and Thomas, 2004; and Shahrur, 2005). The monopolistic collusion hypothesis predicts that acquiring firms and their rivals will gain from horizontal merger, while customer companies will be harmed. Similarly, the effect on suppliers of the takeover industry will be negative due to the fact that the lower output levels result in higher consumer prices and lower demand for

the input of the suppliers (Eckbo, 1983). Table 3.1 provides a summary of the effects of monopolistic collusion on the merging firms, as well as the suppliers, consumers and competitors to the acquisition industry.

The literature which tests the implications of the hypotheses described above is empirically limited, with only two previous studies examining the effect of horizontal takeovers on the financial performance of the merging firms as well as their customers, suppliers and rivals (see Fee and Thomas, 2004 and Shahrur, 2005). This study extends the analysis of Fee and Thomas (2004) and Shahrur (2005) by testing the predictions of these hypotheses in the context of distressed horizontal takeovers - when the target company is financially distressed. According to Jensen (1991), takeovers can be an effective mechanism for emerging from financial distress. Acquisitions of distressed targets are one of three routes to reorganising firms in financial distress, the other two being corporate restructuring in the strict sense (asset, operational, financial, and managerial) and liquidation (piecewise sale).

This study focuses on distressed M&A in the United States since the country's insolvency code is heavily debtor-oriented. Once declared bankrupt, a firm is entitled to undertake various legal steps such as automatic stay (which shields the company from creditor actions related to debt repayments), and exclusivity (which provides the exclusive right of a debtor to put forward a plan of reorganisation within a period of 120 days).[21] There are numerous real world examples of companies that have managed to successfully reorganise their businesses and re-emerge from bankruptcy as the leaders in their respective industries. For example, after a speedy reorganisation process in 2009, the new General Motors not only returned to the position of the largest global car producer but also realised a record $7.6 billion

[21] This 120 day period can be extended multiple times by the court.

net income in 2011.[22] In addition, Zhang (2010) demonstrates empirically that bankrupt companies typically re-emerge as stronger rivals following successful reorganization.

When bankrupt, a company is also entitled to re-negotiate its contracts with suppliers. Given this situation, the supplier company can either end up with a lower number of input buyers (if the bankrupt company is unable to propose a reorganisation plan) or at least partially mitigate the problem by agreeing to provide the input at lower prices. The theoretical model developed by Yang et al. (2014) suggests that rational suppliers are likely to choose the latter option. The authors show that after filing for bankruptcy, a successful reorganisation can reduce the company's operating costs. This outcome can also enhance the overall efficiency of the supply chain to which the bankrupt company belongs Yang et al. (2014). In addition, company rivals can gain from lower input prices after a successful reorganisation. The suppliers of the bankrupt company's industry can also sustain some advantage compared to the case of facing a more concentrated buyer industry in the event that the bankrupt firm is liquidated. Kouvelis and Zhao (2012) and Yang and Birge (2009) demonstrate that the efficiency of the supply chain can be enhanced if the financially distressed company obtains financing from its supplier. A number of studies have focused specifically on the supplier's behaviour when the buyer faces bankruptcy risk. Perotti and Spier (1993) argue that companies can use their indebtedness to increase their bargaining power against labour unions. Wilner (2000) shows that trade creditors have an incentive to provide more concessions if the debtor is financially distressed.

Industry-related acquisitions of distressed targets are particularly relevant when testing the buyer power hypothesis. This is because in anticipation of the costs of reorganization and the effects of bankruptcy the company's suppliers and rivals can alter their operational decisions Yang et al. (2014). If the buyer power hypothesis holds, the effect of acquisitions of distressed

[22] Forbes Jan. 19, 2012, "GM Is No. 1 In The World Again In Auto Sales"; ABC, Feb. 17, 2012, "GM Posts Record $7.6-Billion Profit"

targets on suppliers should be more negative compared to the effect of acquisitions of healthy targets. This is because the debtor-oriented insolvency code in the US increases the bargaining power of financially distressed buyers – in anticipation of the possibility that the company will file for Chapter 11 and renegotiate its contracts the company's suppliers are likely to provide these buyers with pre-emptive concessions such as offering lower input prices (i.e. rational supplier would like to avoid the case in which the company files for Chapter 11). By decreasing the distressed company's wholesale price, the supplier lowers the likelihood of bankruptcy and minimizes the total 'bail-out costs' that it could face in the case of bankruptcy Yang et al. (2014). This effect of buyer financial distress on the supplier's pricing decisions is referred to as the *bail-out effect* Yang et al. (2014).

The prediction of the buyer power hypothesis for the wealth effect on rival companies when the target is financially distressed is positive. This effect can be more pronounced relative to the cases when the target is financially healthy owing to the higher bargaining power that a financially distressed target may possess. The enhanced buyer power can be either advantageous or detrimental for the wealth of customer companies, depending on whether the merging firms decide to pass along the lower cost of the factors of production to these customers. Table 3.1 summarises the implications of buyer power when the target is financially distressed.

Importantly, the acquisition of the distressed target could also result in a more financially stable combined entity with lower liquidity and cash flow constraints. As a result, the combined firm may be less well positioned to obtain concessions from its suppliers thereby benefitting these suppliers. I refer to this idea as the financial stabilization hypothesis (Table 3.1). This hypothesis does not have any specific implications for the wealth effect on customers and competitors and the wealth effect on these product-market participants will depend on the validity of the other hypotheses described in this study, which are not mutually exclusive to the

financial stabilization hypothesis. Table 3.1 presents the predictions of the financial stabilisation hypothesis for the different participants in the product-market relationship.

3.2.2 Distressed Acquisitions

The literature on distressed acquisitions is scarce, and has concentrated on: a) the comparison between acquisitions in bankruptcy and acquisitions outside bankruptcy of healthy companies (Hotchkiss and Mooradian, 1998); b) the study of acquisitions of distressed companies (Clark and Ofek, 1994); or c) on the comparison between acquisitions and bankruptcies as exit strategies (Bergström, Eisenberg, Sundgren, and Wells, 2005). This paper thus fills the void in the literature by exclusively investigating acquisitions of distressed targets, including those involved in bankruptcy proceedings. To my knowledge, there are no other studies that investigate horizontal acquisitions of distressed and bankrupt companies over the time period of the four major crises since 1985, and in the context of the buyer power, efficiency and collusion hypotheses.

Bergström 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 Faccio and Sengupta, 2006). The literature on short-term post M&A acquirer and target performance is also 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, abnormal returns (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 the 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 by the presence of less 'bad bidders' (i.e. bidders with empire-building managers) in their sample of bankrupt acquisitions.

When analysing the 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, Oosting, and Renneboog (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 emphasising the complexity of managing a large combined firm. The study reports poor post-merger performance following acquisitions of financially distressed targets for larger premium deals. In addition, Clark and Ofek (1994) show a positive relationship between acquirer announcement abnormal returns and subsequent combined performance when the target is distressed. Hotchkiss and Mooradian (1998) demonstrate that the combined cash flows of the merged company increase by more when the target is bankrupt compared to those of a non-bankrupt target. The sources of gains include reductions in operating expenses and employment.

3.3 Data and Methodology

The M&A deal sample is obtained from the Securities Data Company (SDC) Platinum database. The sample covers acquisitions announced between the period 1985 and 2012. In the spirit of Faccio et al. (2006) and Rossi and Volpin (2004), this paper defines a merger or an acquisition as the purchase of majority interest (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, Recapitalisations, 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, and in line with, for example, Martynova and Renneboog (2006).

As this study focuses on distressed targets, it is important to find a robust definition 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 and Tax (EBIT) divided by the Net Interest Expense[23] and measured at year-end prior to the acquisition. This measure has been favoured by academics and practitioners alike because it captures firms suffering from financial distress as it incorporates the company's financial expenses (see, for example, Asquith, Gertner, and Scharfstein, 1994 and Zingales and Rajan, 1995). The final study sample consists of deals for which the ICR of the target company is available. A target company is considered to be in financial distress when its ICR is less than one. The sample of US acquisitions consists of 1,211 deals. Following Fee and Thomas (2004) and Shahrur (2005), this study uses the acquirer and target companies' primary Standard Industry Classification

[23] This study also uses the ratio of Earnings before Interest, Tax, Depreciation, and Amortization (EBITDA) divided by Net Interest Expense as a measure of financial distress in order to test the sensitivity of the results to the specific measure of financial distress.

(SIC) code to measure industry-relatedness between the target and bidder firms. An acquisition is defined as horizontal when the first three digits of the target and acquirer primary SIC codes are identical. The final study sample of completed horizontal takeovers of distressed targets includes 270 deals. To be included in the final sample bidder companies had to be US domiciled, exchange-listed companies with an available SEDOL identification number from SDC Platinum. Table 3.2 describes the restrictions that were imposed in order to identify the final M&A sample of the study.

This study uses the benchmark input-output (IO) accounts for the US economy which are published by the Bureau of Economic Analysis at the US Department of Commerce every five years. Specifically, this study relies on the so-called *Use* table of the benchmark IO accounts. The *Use* table provides estimates of the amount of supplier industry output, measured in US dollars, which serve as input in the production of output for the customer industry. The customers of a given industry are defined as companies that belong to industries that purchase the output of the acquisition industry. Each acquisition-customer pair of industries is characterised by two variables: *Acquisition Percentage Sold* and *Customer Input Coefficient.* Table 3.3 presents the definitions of all the variables used in this study. Following Shahrur (2005), the former variable is defined as the percentage of the output of the acquisition industry that is purchased by the customer industry, and the latter variable is defined as the total output of the acquisition industry that is purchased by the customer industry divided by the total output of the customer industry. The *Acquisition Percentage Sold* captures the significance of the customer industry as a buyer of the output of the acquisition industry and the *Customer Input Coefficient* captures the significance of the acquisition industry's output for the production of the consumer industry's products.

Since each acquisition industry has a large number of customer industries that purchase its output, I focus on two key industries from the portfolio of all consumer industries with

exchange-listed firms. The industry with the largest *Acquisition Percentage Sold* is defined as the *Main Customer* industry. This is the industry that uses the highest proportion of the acquisition industry's output. The industry with the largest *Customer Input Coefficient* is defined as the *Dependent Customer*. The *Dependent Customer* is the industry whose output depends on the acquisition industry's produce more than any other consumer industry.[24]

Suppliers are defined as the companies which belong to the industries that supply the input necessary for the production of the acquisition industry's output. Each supplier-acquisition industry pair is characterised by two variables. *Supplier Percentage Sold* is defined as the proportion of the total output of the supplier industry that is purchased by the acquisition industry. This variable captures the significance of the acquisition industry as a consumer of the output of the supplier's industry. The *Acquisition Input Coefficient* is the value of the supplier industry's produce that is purchased by the acquisition industry divided by the total output of the acquisition industry. This variable captures the significance of the output of the supplier industry for the production of the acquisition industry's output.

I identify two important supplier industries to the acquisition industry from the portfolio of supplier industries with exchange-listed companies. The industry with the largest *Acquisition Input Coefficient* is defined as the *Main Supplier*. This is the industry that provides the primary input to the acquisition industry. The industry with the largest *Supplier Percentage Sold* is defined as the *Dependent Supplier*. The proportion of output that the latter industry sells to the acquisition industry is larger than that of any other supplier industry.

Following Shahrur (2005), I only include supplier industries with *Supplier Percentage Sold* that is greater than or equal to 1%. The final sample of the study thus consists of 174 *Main*

[24] Please note that I only report the results pertaining to the Main Customers of the acquisition industry since the results pertaining to the Dependent Customers are qualitatively similar.

Supplier and 176 *Dependent Supplier* industries (Table 3.4). Similarly, a 1% cut-off is used for the *Customer Input Coefficient* which results in 129 *Main Customer* industries (Table 3.4). Table 4 provides some additional industry level descriptive statistics related to the *Customer* and *Acquisition Input Coefficient*, as well as the *Supplier* and *Acquisition Percentage Sold*.

SDC Platinum uses SIC codes for the purposes of industry classification, while the *Use* table is based on the IO six-digit coding framework. This study uses the table constructed by Fan and Lang (2000) to match the IO codes with the SIC codes. The authors created this table with the help of the conversion tables available from the Bureau of Economic Analysis. To identify the Suppliers and Customers of each acquisition industry, I use the 1982 *Use* table for acquisitions announced between 1984 to 1987, the 1987 *Use* table for acquisitions announced between 1987 to 1991, the 1992 *Use* table for acquisitions announced between 1992 to 1996, the 1997 *Use* table for acquisitions announced between 1997 to 2001, the 2002 *Use* table for acquisitions announced between 2002 to 2006, and the 2007 *Use* table for acquisitions announced between 2007 to 2012.

This study uses event study methodology to measure the wealth effect associated with the announcements of horizontal acquisitions on the merging companies as well as their suppliers, customers and competitors. Following Weston, Mitchell, and Mulherin (2004), and in the spirit of Brown and Warner (1985), the paper presents results for the model's market-and-risk-adjusted abnormal returns. Abnormal returns are defined as the difference between the actual returns and the expected returns, with the benchmark given by the CRSP value-weighted index. Daily returns are computed as the percentage price (or index) changes on two consecutive trading days. I use a 240-day estimation period prior to the beginning of the event period. Results are provided for a number of different event windows surrounding the acquisition announcement, such as (-1, 0), (-2, 2), (-10, 10), (-40, 40), and (10, 20). In line with Bradley et al. (1988), this study measures the combined target and acquirer wealth effect as the

cumulative average abnormal return (CAAR) which accrues to the value-weighted portfolio of the target and acquirer. The market capitalisation of the target and acquirer companies as of ten days prior to the announcement of the M&A serve as the weights for the portfolio. Following Eckbo (1983), Song and Walkling (200) and Shahrur (2005) this study uses equally-weighted portfolios to measure the CAARs which accrue to the suppliers, customers and competitors of the acquisition industry. The latter methodology controls for the possibility that the CAARs are contemporaneously cross-correlated. The statistical significance of the abnormal returns is tested using the methodology in Mikkelson and Partch (1988) and Shahrur (2005).

It should be noted that it is possible to perform sensitivity analysis of the results obtained on the basis of examining CAARs by analysing the evolution of a selection of accounting ratios which capture company financial performance over longer time windows such as (-1, 3 or -1, 5 years). Examples of ratios that would be suitable for this purpose are profitability ratios (e.g., Return on Equity and Return on Assets) and operating performance ratios (e.g., EBITDA/Total Assets and EBIT/Total Assets).

I use a regression analysis framework to investigate the determinants of the short-term announcement returns to the merging firms, as well as their customers, rivals and suppliers. The regression analysis makes it possible to distinguish between the different hypotheses that can explain the post-M&A performance of the different participants in the product-market relationship. According to Eckbo (1983 and 1992), it is necessary to control for the change in industry concentration that results from the horizontal acquisitions. If the monopolistic collusion hypothesis is valid, there will be a positive association between industry concentration and the short-term gains to acquirers and their competitors. However, if the buyer power hypothesis holds, there will be a positive relationship between acquirer returns and the size of the combined firm (relative to the individual entities before the takeover) when the supplier industry is monopolistic or oligopolistic (i.e. when the supplier industry is more

concentrated). The returns to the suppliers in the latter case will deteriorate when the newly combined firm is large compared to its own industry. The specific regression equations estimated in this study are presented below.

1. Combined Returns to Acquirer and Target

Equation 1

$$CAR_{Acq+Tar}=\beta_1 Sup.Con.+\beta_2 Sup.Con.\ x\ Rel.\ Size+\beta_3 Sup.Con.\ x\ Change\ in\ Herf.\ Index+\beta_4\ Herf.\ Index+\beta_5 Change\ in\ Herf.\ Index+\beta_6 Herf.\ Index\ x\ Change\ in\ Herf.\ Index+\beta_7 Controls$$

Equation 2

$$CAR_{Acq+Tar}=\beta_1 Sup.Con.+\beta_2 Sup.Con.\ x\ Distr.\ Target+\beta_3 Sup.Con.\ x\ Rel.\ Size+\beta_4 Sup.Con.\ x\ Rel.\ Size\ x\ Distr.\ Target+\beta_5 Sup.Con.\ x\ Change\ in\ Herf.\ Index+\beta_6 Sup.Con.\ x\ Change\ in\ Herf.\ Index\ x\ Distr.\ Target+\beta_7 Herf.\ Index+\beta_8 Change\ in\ Herf.\ Index+\beta_9 Herf.\ Index\ x\ Change\ in\ Herf.\ Index+\beta_{10} Controls$$

2. Main/Dependent Supplier and Competitor Returns

Equation 3

$$CAR_{Main/Dep.\ Sup}=\beta_1 Sup.Con.+\beta_2 Sup.Con.\ x\ Change\ in\ Herf.\ Index+\beta_3 Herf.\ Index+\beta_4 Change\ in\ Herf.\ Index+\beta_5 Herf.\ Index\ x\ Change\ in\ Herf.\ Index+\beta_6 Controls$$

Equation 4

$$CAR_{Main/Dep.\ Sup}=\beta_1 Sup.Con.+\beta_2 Sup.Con.\ x\ Distr.\ Target+\beta_3 Sup.Con.\ x\ Change\ in\ Herf.\ Index+\beta_4 Sup.Con.\ x\ Change\ in\ Herf.\ Index\ x\ Distr.\ Target+\beta_5 Herf.\ Index+\beta_6 Change\ in\ Herf.\ Index+\beta_7 Herf.\ Index\ x\ Change\ in\ Herf.\ Index+\beta_8 Controls$$

3. Customer Returns

Equation 5

$$CAR_{Customer}=\beta_1 \text{Herf. Index}+\beta_2 \text{Change in Herf. Index}+\beta_3 \text{Herf. Index x Change in Herf. Index}+\beta_4 \text{Controls}$$

Following Lang and Stulz (1992), Song and Walkling (2000) and Shahrur (2005), this study measures industry concentration with the sales-based Herfindahl Index. Sales information is obtained from Compustat and the market share of each company is measured as of one year before the announcement of the M&A deal. The Herfindahl Index is measured as:

$$\sum_{i=1}^{n} \text{Sales}_i^2 \quad (1)$$

Following Shahrur (2005), when calculating the customer industry concentration, $\sum_{i=1}^{n} \text{Sales}_i^2$ is measured as the proportion of the acquisition industry's output bought by company *i* where *n* is the total number of companies in the industry. Thus, Sales_i^2 is captured by the product of the *Customer Input Coefficient* of the industry and the sales of Company *i*. In line with Ravenscraft (1983) and Shahrur (2005), *Supplier Concentration* is measured as the Herfindahl Index corresponding to each supplier industry where $Sales_i$ is the net sales of each supplier company measured as of one year before the announcement of the M&A deal. This study accounts for the degree of import competition by including the variable *'Foreign Competition'* in the regression analysis. *'Foreign Competition'* is measured as the acquisition industry's imports as a proportion of the industry's total supply (see, for example, Mitchell and Mulherin, 1996; and Shahrur, 2005). The analysis of the combined abnormal returns to the target and bidder accounts for the following standard control variables, which are found in the extant literature on short-term M&A performance: a) *'Stock Financing'* accounts for the presence of stock in the financing of the deal and is constructed as a dummy variable (see, for

example, Travlos, 1987); b) *'Rel. Size'* accounts for the relative size of the target and acquirer companies and is measured as the ratio of target to acquirer market value as of four weeks before the announcement of the M&A (see for example, Servaes, 1991; and Mulherin and Boone, 2000); c) *'Hostile Deal'* accounts for the attitude of the deal and is constructed as a dummy variable which is equal to one if the deal is classified as hostile by the SDC Platinum database and zero otherwise (see, for example, Schwert, 2000).[25] All dependent variables are winsorized at the 1st and 99th percentiles, i.e. the lower- and uppermost percentiles are set to be equal to the values corresponding to the 1st and 99th percentiles respectively. To adjust the regression estimates for the presence of heteroskedasticity and following Shahrur (2005), this study uses Weighted Least Squares (WLS) estimation procedure where the weights are calculated as the ratio of one over the standard deviation of the residuals. In line with Shahrur (2005), I repeat the analysis using the Ordinary Least Squares (OLS) and Maximum Likelihood Estimation (MLE) regression specifications. This study reports the results based on the WLS estimation procedure for the analysis of the returns to suppliers, customers and rivals and the WLS and MLE results for the analysis of the combined target and acquirer returns. The results obtained with the use of the other estimation procedures are qualitatively similar.

[25] It should be noted that in contrast to Shahrur (2005), this study does not include a control variable for the combined target and acquirer CAARs in the regression analysis of the returns to the suppliers, customers and competitors. This is due to the fact that the sample size drops dramatically when I impose the additional restriction that the target company is exchange-listed (from 1, 211 to 421, please see Table 3.2). I have also performed the analysis of supplier, customer and competitor returns with the inclusion of the combined target and bidder CAAR and the results are qualitatively similar to those obtained with the larger sample.

3.4 Empirical Analysis

3.4.1 Sample Descriptives and Univariate Analysis

The baseline sample used for the analysis in this study consists of 1, 211 M&A deals where the acquirer is exchange-listed. The average (median) market value of acquirer companies is $6,651 ($650) million. This sample of deals is used for the analysis of the cumulative abnormal returns that accrue to the suppliers, competitors and customers to the takeover industry. The subsample of deals used for the analysis of the Combined Abnormal Returns that accrue to the target and acquirer companies as a result of the M&A deal consists of 421 deals. The average (median) market value of acquirer companies in this subset of deals is $10,855 ($1,669) million. The average (median) market value of the target companies that belong to this subsample of deals is $1,045 ($156) million.

Table 3.5 presents the distribution of M&A deals by 2-digit SIC code industry and year. The table demonstrates that the distribution of M&A deals per industry is very similar to that reported in Shahrur (2005), as well as Andrade et al. (2001), with the following industries representing the highest proportion of the target and bidder companies in the sample: a) business services (28.57%); b) instruments (10.32%); c) industrial machinery (6.85%); d) oil and gas extraction (6.69%); and e) electronical machinery (5.53%). In addition, the final sample of 1,211 deals consists of 166 four-digit SIC codes which covers approximately 37% of the entire universe of four-digit SIC codes of exchange-listed companies. Table 3.5 also shows the magnitude of acquisition activity for each of the sample industries, which is measured as the number of acquirers from each industry divided by the total number of firms that belonged to that industry over the sample period.[26] The average, median, minimum and maximum values

[26] It should be noted that the acquisition activity variable includes all acquisitions, i.e. both horizontal and diversifying acquisitions.

of the acquisition activity variable are 1.06%, 0.73%, 0.07%, and 6.11% respectively, suggesting that the industries included in the sample differ considerably in terms of the magnitude of acquisition activity that they have experienced throughout the sample period.

The first step of the analysis of this study involves the examination of the cumulative abnormal returns that accrue to each of the participants in the product-market chain as a result of the M&A announcement. The analysis of the combined wealth effect from the M&A on the target and bidder shows that companies earn a significant 0.4% and 0.1% CAAR for the (-1, 0) and (-2, 2) event windows respectively. These findings are in line with the existing evidence of the combined market reaction associated with the announcements of M&A deals (see, for example, Jensen and Ruback, 1983; Andrade et al., 2001, and Shahrur, 2005). The results also reveal that approximately 50% of the acquisitions are value destroying (measured over an event window of (-10, 10)), suggesting that these deals are perceived negatively by the shareholders of the target and bidder firms.

Table 3.6 reports the abnormal returns that accrue to the suppliers, competitors and customers to the acquisition industry. Panel A demonstrates that competitor companies experience a positive and statistically significant CAAR of 0.72% for the (-2, 2) window and 2.02% for the (-40, 40) window. This positive market reaction is in line with the findings of Eckbo (1983), Song and Walkling (2000) and Shahrur (2005). The average CAARs that accrue to the suppliers and customers are negative for most event windows, albeit statistically insignificant. These findings differ from the results reported in Shahrur (2005) where suppliers experience significantly negative, and customers significantly positive CAARs.

Table 3.6, Panel B shows the CAARs to suppliers, competitors and customers for the subsample of distressed targets, where distress is measured with the EBIT to Net Interest Expense ratio. The CAAR earned by competitors is positive and statistically significant, and

amounts to 0.81% for the (-2, 2) window and 3.85% for the (-40, 40) window. The market reaction experienced by the main and dependent suppliers to the acquisition industry is significantly negative, and amounts to 2.11% and 3.04% respectively for the (-10, 10) window. In addition, the CAARs earned by the corporate customers are not statistically significant and range from positive values, for the (-1, 0) and (10, 20) window, to negative values, for the (-2, 2), (-10, 10) and (-40, 40) event windows. These results are consistent with the buyer power hypothesis which predicts a positive CAAR to the competitors and a negative CAAR to the suppliers of the acquisition industry. The buyer power hypothesis is consistent with both positive and negative market reaction for the customer companies of the acquisition industry. Table 3.6, Panel C shows the results from the analysis of abnormal returns for the subsample of distressed acquisitions where distress is measured by the EBITDA to Net Interest Expense Ratio. The CAARs are qualitatively similar to the CAARs obtained for the overall sample of acquisitions (Table 3.6, Panel A) in the sense that only the competitor portfolios earn a positive and statistically significant average return while suppliers and customers experience an insignificant market reaction (Table 3.6, Panel C).

Following Berkovitch and Narayanan (1993) and Shahrur (2005), the analysis of average abnormal returns to the customer, competitor and supplier portfolios is performed separately for the subsamples of acquisitions which result in positive and negative combined CAARs to the target and bidder (Table 3.6, Panels D through I).[27] The rationale behind dividing the sample of acquisitions into value-creating and value-destroying deals is that the buyer power, collusion and productive efficiency hypotheses envisage a positive combined wealth effect for the target and bidder firms. The examination of the two subsamples makes it

[27] Combined (target and bidder) CAARs are measured over (-2, 2) event window.

possible to disentangle the wealth effects predicted by the different hypotheses and to also ensure that the results are not driven by the sub-sample of value-destroying M&A deals.

Table 3.6, Panel D shows that the CAAR which accrues to the competitors of the subsample of value-creating acquisitions is significantly positive, and has an order of magnitude which is similar to the competitor CAAR reported for the overall sample (Table 3.6, Panel A). The results corresponding to the customer portfolios are inconclusive, with the CAAR ranging from negative to positive values for the different event windows. Panel D demonstrates that the CAAR which accrues to the supplier portfolios, including both *Main* and *Dependent Suppliers*, are qualitatively similar to the CAAR earned by customers.

In order to gain a deeper insight into the validity of the collusion, buyer power and efficiency hypotheses, Table 3.6, Panels E and F, present the results for the subsamples of distressed acquisitions which are value-creating for the target and bidder (i.e. with positive combined (target and acquirer) wealth). The market reaction experienced by competitors is statistically positive, which is consistent with the findings for the overall competitor sample, however, the CAARs which accrue to the customer and supplier companies are either positive or negative and mostly insignificant. These results are inconsistent with the evidence obtained from the examination of the overall sample and fail to provide support for the buyer power hypothesis. The CAARs for the subsample of value destroying acquisitions are presented in Table 3.6, Panels G through I. The competitor companies from the overall sample of value-destroying deals enjoy significantly positive CAAR amounting to 0.41% for the (-2, 2) event window. The latter finding differs from the results reported in Shahrur (2005) which show a negative CAAR for the competitor portfolios. In addition, it appears that the suppliers to the overall sample of value-destroying acquisitions experience a negative and statistically significant market reaction associated with the announcement of the M&A deals. The average

CAAR which accrues to the *Dependent Suppliers* is equal to -3% and -1% for the (-40, 40) and (10, 20) event windows respectively.

The examination of the subsamples of value-destroying acquisitions of distressed targets (where distress is measured by EBIT to Net Interest Expense, Table 3.6, Panel H, and EBITDA to Net Interest Expense, Table 3.6, Panel I) reveals that suppliers suffer considerably as a result of the announcement of these M&A deals. Over the (-10, 10) event window, the negative market reaction amounts to -2% and -4% for the *Main* and *Dependent Suppliers* respectively. The results from the investigation of the wealth effect experienced by the customer and competitor companies are inconclusive, as the CAARs are insignificant and range from negative to positive values when considering the different event windows.

The evidence presented above is inconclusive with regard to the validity of the collusion, buyer power and efficiency hypotheses. The statistically significant CAARs which accrue to the competitor and some of the supplier portfolios suggest that acquisitions can reveal new information about overall industry dynamics. Following Shahrur (2005), it is important to note that the results presented so far may be biased against the collusion and buyer power hypotheses, because informational effects are more likely to materialise and thus influence the value of companies across different regions (when the merging firms and their customers, competitors and suppliers operate in different geographic regions). In contrast, geographic distance may hinder the effects associated with changes in market or buyer power (the effects of the buyer power and collusion hypotheses may be less evident for samples dominated by firms which operate in different regions). To address this issue and in line with previous studies (see, for example, Coval and Moskowitz, 1999 and Shahrur, 2005), the analysis of abnormal returns is performed for a subsample of merging firms, customers, competitors and suppliers which are headquartered in the same state. US companies are not obliged to report information on the markets in which they carry out business activities and this fact makes it difficult to

accurately identify the degree to which US companies operate in a given region. Nevertheless, Shahrur (2005) investigates additional sources of information such as Moody's industrial, Factiva, and transportation manuals. The author finds that the headquarter state, as reported by Compustat, is a good proxy for the market in which the company's main operations take place.

Table 3.6, Panels J through N present the results from the analysis of abnormal returns to customers, competitors and suppliers to the acquisition industry which operate in the same state as the states of the target and acquirer firms. Interestingly, the results are qualitatively different from those corresponding to the overall sample, and provide evidence in favour of the buyer power hypothesis. Specifically, Table 3.6, Panel J demonstrates that the suppliers suffer significantly as a result of the acquisition announcements, whereas the competitors enjoy a positive CAAR. The CAAR which accrues to the *Main* (*Dependent*) *Suppliers* amounts to -0.7% (-1.42%) while the CAAR to the competitors is equal to 1.44% for the (-2, 2) window. The same pattern of CAARs to suppliers and rivals is evident when I analyse the subsample of acquisitions of distressed targets (EBIT to Net Interest Expense). In fact, although the direction of the market reaction for the supplier and rival firms is the same as that observed for the overall sample of state companies, the order of magnitude of the reaction is significantly greater for the subsample of distressed targets. Over the (-10, 10) event window, the *Main* (*Dependent*) *Suppliers* experience a wealth loss equal to -3.26% (-6.7%) while the competitor portfolios enjoy a 6.03% CAAR. This difference in magnitude is even more apparent when considering the (-40, 40) window, with the *Main* (*Dependent*) *Supplier* CAAR amounting to -8.8% (-12.48%) while the competitor CAAR equals 17.68%. These results are consistent with the buyer power hypothesis for acquisitions of financially distressed targets. Thus, in anticipation of the fact that the distressed target is likely to file for Chapter 11, it appears that the suppliers to the acquisition industry are willing to provide the merging firms and their rivals with certain concessions which results in a negative market reaction for these suppliers.

To make sure that the latter results are not driven by the subsample of value-destroying acquisitions the CAARs to customer, competitors and suppliers are investigated separately for the subsamples of value-creating and value-destroying M&A deals. The results from the analysis are reported in Table 3.6, Panel M for the value-creating and Panel N for the value-destroying subsamples of M&A deals. The analysis shows that suppliers which primarily operate in the acquirer's states appear to suffer significantly from the announcement of both value-creating and value-destroying acquisitions. For example, the state *Dependent Suppliers* experience -5% (Table 3.6, Panel M) and -3.5% CAAR (Table 3.6, Panel N) over the (-10, 10) event window for the subsamples of value-creating and value-destroying M&A deals respectively. In addition, the competitors of the acquisition industry enjoy a positive CAAR as a result of the announcement of deals which are either perceived positively or negatively by investors. Over the (-1, 0) window, the CAAR to competitor portfolios amounts to 1.47% (Table 3.6, Panel M) and 0.82% (Table 3.6, Panel N) for the acquisitions with positive and negative announcement market reaction respectively. These results demonstrate that the observed valuation effects on suppliers and competitors are not driven by the sub-sample of value-eroding acquisitions. In addition, when considering the order of magnitude of the CAARs to the rival and supplier portfolios, the evidence shows that the returns which accrue to suppliers are significantly more negative, and the returns which accrue to rivals significantly more positive, for the subsample of M&A deals with positive market reaction. These results provide further support for the validity of the buyer power hypothesis, according to which both the merging firms and their rivals gain as a result of increased industry consolidation and this takes effect at the expense of their suppliers.[28]

[28] This study does not report CAAR results for the sub-samples of value-creating and value-destroying acquisitions of distressed targets when the suppliers, customers and rivals operate in the same state as the acquirer. This is due to the lack of sufficient number of observations to perform this type of analysis.

3.4.2 Multivariate Analysis

The findings documented in the previous section reveal that the average horizontal acquisition in the study sample is motivated by buyer power considerations and the wealth effects of this motive are stronger for the sub-sample of acquisitions of distressed targets. The aim of this section is to investigate the motives which drive the cross-section of M&A deals in the sample by analysing the relationship between the CAARs which accrue to the merging firms, rivals, customers and suppliers and the different industry structures in which these companies operate. First, this part of the chapter sets out the hypotheses for the expected signs of the relationships between the dependent variable (abnormal returns to the different industry players) and the independent variables, which capture the different industry characteristics.

3.4.2.1 Regression Hypotheses

Concentration of the Acquisition Industry: When companies operate in industries characterised with perfectly competitive markets, they generate zero economic gains in the long run. As a result, the benefits which accrue to the target and acquirer companies due to improved productive efficiency should be greater when the structure of the acquisition industry is less than perfectly competitive. The suppliers and customers of less-competitive acquisition industries are therefore expected to reap lower gains as a result of M&A deals which lead to more efficient production. In line with Shahrur (2005), this study measures the magnitude of industry competition by the concentration of that industry as indicated by the Herfindahl Index. A higher level of concentration indicates that the industry is less competitive, and vice versa.

According to the productive efficiency hypothesis, the average abnormal returns which accrue to the merging companies will be positively related to the degree of concentration of the acquisition industry. In contrast, the CAARs to the customers and suppliers will be

negatively related to the level of concentration of the M&A industry. Since there is evidence that imports can increase competitiveness in industries with higher concentrations (see, for example, Domowitz et al., 1986, Katics and Peterson, 1994), this study accounts for the effect of foreign rivals on the acquisition industry. When the acquisition increases the level of industry concentration, thereby leading to higher probability of collusion, the merging companies and their competitors will benefit through their ability to generate higher monopoly rents. This capacity to make abnormal profits takes effect at the expense of the corporate customers and suppliers of the acquisition industry. Under the collusion hypothesis, and as suggested by Eckbo (1985), the consequences of acquisitions which lead to collusive behaviour will be more palpable when the acquisition causes a greater surge in industry concentration. Thus, according to the collusion hypothesis, there will be a positive relationship between the level of industry concentration as well as the *size* of the increase in industry concentration caused by the acquisition, and the CAARs to the merging firms and their competitors. These anticompetitive industry effects are expected to lead to lower CAARs to the corporate customers and suppliers of the acquisition industry.

Customer Concentration: The buyer power model posits that the likelihood of collusive activity will be lower the larger the size of the corporate customers (Snyder, 1996). The collusive effects of acquisitions can therefore be alleviated by a highly concentrated buyer industry. It is expected that a more concentrated buyer industry will result in a higher CAAR to the buyers (corporate customers) and a lower CAAR to the merging companies. In contrast, when the acquisition increases the productive efficiency of the industry, and when the corporate customers are concentrated, the benefits will be shared between buyers and sellers, owing to reduced selling and advertising costs (Ravenscraft, 1983). This theory anticipates a positive association between the level of buyer industry concentration and the returns to the merging companies (the sellers) and their customers.

Supplier Concentration: According to the buyer power hypothesis, collusive behaviour and higher buyer power within the acquisition industry can only exist when the suppliers of that industry are sufficiently concentrated (Shahrur, 2005). Acquisitions which augment the buyer power of the merging companies will also boost the rents enjoyed by industry competitors by building competition among suppliers (Snyder, 1996). Thus, the buyer power model anticipates that the higher the supplier concentration, the higher the CAARs that will accrue to the merging firms and their competitors.

3.4.2.2 Regression Results

Combined (Target and Bidder) Returns

Table 3.7 presents the regression analysis of the factors which affect the combined cumulative abnormal returns which accrue to the acquirer and target companies in horizontal M&A. The table reports the results from the two types of estimation procedures that have been used, namely, the weighted least square (Models 1 through 3) and the maximum likelihood (Models 4 through 6). Three different types of regression equations are constructed for each estimation procedure: a) a regression equation which is based on the baseline sample of acquisitions of healthy and distressed targets (Table 3.7, Models 1 and 4); b) a regression equation which is based on the baseline sample of acquisitions of healthy and distressed targets. This model, however, also accounts for the difference in the effect of the supplier industry characteristics on the combined CAAR when the target is financially distressed as opposed to the cases when the target is financially sound, as indicated by a ratio of EBITDA to Interest Expense that is smaller than 1 (Table 3.7, Models 2 and 5); c) a regression equation which is the same as that in b), but where financial distress is measured by the ratio of EBIT to Net Interest Expense (Table 3.7, Models 3 and 6). Specifically, to distinguish between the impact of supplier industry concentration on the combined CAARs which accrue to acquirers of

healthy and acquirers of distressed targets, the independent variables which capture the effect of industry concentration are interacted with a dummy variable which is equal to one when the target is financially distressed and zero otherwise.

This study first considers the variables which are used to test the validity of the buyer power hypothesis. Inconsistent with this hypothesis, the coefficient corresponding to the variable which measures the degree of industry concentration of the suppliers of the acquisition industry, *'Sup. Con.'*, is negative and statistically significant (Table 3.7, All Models). The coefficient corresponding to the interaction variable between the measure of supplier concentration and the financially distressed target dummy, *'Sup. Con. x Distr. Target'*, is positive and significant (Table 3.7, Models 2 and 5), indicating that acquisitions of distressed targets can enable merging companies to exercise higher buyer power. The *'Sup. Con.'* variable is interacted with the relative size of the target and bidder companies in order to further investigate the validity of the buyer power hypothesis. The coefficient corresponding to the *'Sup. Con. x Rel. Size'* variable is positive and statistically significant (Table 3.7, All Models). The latter finding suggests that when the supplier industry is less than perfectly competitive, and when the size of the post-acquisition entity is larger than the acquirer and target companies as stand-alone entities, the merging firms enjoy higher CAARs on average. It follows that acquisitions can increase the buyer power of the merging companies when the newly formed entity is sufficiently large.

The measure of supplier concentration is also interacted with the change in the Herfidahl Index of the acquisition industry in order to account for the effect of the acquisition on the industry structure of the merging companies. The coefficient corresponding to this variable, *'Sup. Con. x Change in Herf. Index'*, is not statistically significant (except for Table 3.7, Model 6), implying that M&A deals which are smaller when compared to the overall industry can augment the buying power of the target and bidder firms. To test whether this

latter effect on the combined CAARs is different when the target is financially distressed, the *'Sup. Con. x Change in Herf. Index'* variable is interacted with the distressed target dummy. The coefficient corresponding to this variable, *'Sup. Con. x Change in Herf. Index x Distr. Target',* is positive and significant when distress is measured by the ratio of EBIT to Net Interest Expense (Table 3.7, Models 3 and 6). This result demonstrates that acquisitions of distressed targets can generate higher combined CAARs relative to their peers when the deal is sufficiently large compared to the industry. In other words, the acquirers of distressed targets have the ability to exert higher buyer power on their suppliers when the M&A deal is large enough to cause an industry-wide shift in the concentration of the acquisition industry.

Next, this study considers the variables which test the validity of the productive efficiency and collusion hypotheses. The coefficient corresponding to the variable which captures the degree of concentration of the acquisition industry, *'Herf. Index'*, is positive and statistically significant (Table 3.7, All Models), which is in line with the predictions of both the collusion and productive efficiency models, and consistent with the findings in Shahrur (2005). In contrast, the coefficient corresponding to the variable *'Change in Herf. Index'* is not statistically significant (Table 3.7, All Models) which contradicts the implications of the collusion hypothesis.

To investigate the influence of the change in the industry concentration variable on the wealth that the acquisition announcements generate for the cases when the M&A industry is already characterised with high levels of concentration, the *'Herf. Index'* variable is interacted with the *'Change in Herf. Index'*. The results of the regression analysis demonstrate that the *'Herf. Index x Change in Herf. Index'* variable has a significantly negative impact on the value that is generated by the average horizontal M&A in the sample (Table 3.7, All Models). The latter finding provides evidence against the collusion hypothesis and is consistent with the results reported in Eckbo (1992) and Shahrur (2005). In addition, the coefficient corresponding

to the *'Customer Concentration'* variable is not statistically significant in any of the models presented in Table 3.7, which is inconsistent with the implications of the productive efficiency hypothesis.

Returns to Suppliers

The analysis of the factors that impact returns to the *Main Suppliers* is presented in Table 3.8. The table shows five different types of regression equations: a) Table 3.8, Model 1 which is estimated on the basis of the baseline sample of horizontal acquisitions; b) Table 3.8, Model 2 which is estimated on the basis of the subsample of horizontal acquisitions of distressed targets as indicated by the EBITDA to Net Interest Expense Ratio; c) Table 3.8, Model 3 which is estimated on the basis of the subsample of horizontal acquisitions of distressed targets as indicated by the EBIT to Net Interest Expense Ratio; d) Table 3.8, Model 4 which is based on the baseline sample of acquisitions of healthy and distressed targets but also accounts for the difference in the effect of the supplier industry characteristics on the supplier CAAR when the target is financially distressed (as indicated by a ratio of EBITDA to Interest Expense that is smaller than 1); e) Table 3.8, Model 5 which is identical to the model in point d) but where financial distress is measured by the ratio of EBIT to Net Interest Expense. Table 3.8, Panel A presents the analysis of the factors which affect the CAARs to the suppliers of the acquisition industry for the sample of all suppliers (i.e. both suppliers which operate in the same state as the acquirer and suppliers which operate outside the state of the acquirer) while Table 3.8, Panel B shows the results based on the analysis of the sub-sample of suppliers which operate in the same state as the acquirer company - the *'State Suppliers'*.

It is expected that the proportion of the supplier industry's output that is sold to the acquisition industry should be related to the CAARs that accrue to the suppliers. Thus, I control for this effect by including the variable *'Supplier Percentage Sold'* in the analysis. This variable

captures the significance of the supplier industry as a provider of inputs to the acquisition industry. This study therefore predicts a positive association between the CAARs that accrue to suppliers and the *'Supplier Percentage Sold'*. Following Shahrur (2005) and to further examine the validity of this hypothesis, I construct a dummy variable, *'Supplier Negative CAAR Dummy'*, which equals one when the CAARs to the suppliers are negative and zero otherwise. In addition, the *'Supplier Negative CAAR Dummy'* is interacted with the *'Supplier Percentage Sold'* in order to test whether the size of the CAARs experienced by suppliers is influenced by the proportion of supplier industry output that is used by the acquisition industry. The coefficient corresponding to the *'Supplier Percentage Sold'* variable is positive and significant in all the models presented in Table 3.8 (except Model 3), which provides support for the a priori expectation that the wealth effect on suppliers is contingent upon the proportion of the total output of the supplier industry that is purchased by the acquisition industry (i.e. the importance of the merged entity as a buyer of the supplier industry's produce). The coefficient corresponding to the *'Supplier Pct. Sold x Sup. Negative CAAR Dummy'* is either significant (Table 3.8, Models 1 and 3) or insignificant (Table 3.8, Models 2, 4, and 5) which suggests that there is no qualitative difference in the impact of *'Supplier Percentage Sold'* on the CAARs to suppliers which depends on the sign of these CAAR.

The results reported in Table 3.8 fail to provide evidence in favour of the collusion hypothesis. The coefficient corresponding to the *'Herf. Index'* has a significantly positive impact on the supplier CAARs in all the models presented in Table 3.8 which is contrary to the prediction of the collusion hypothesis. Furthermore, the coefficients pertaining to the *'Change in Herf. Index'* and *'Herf. Index x Change in Herf. Index'* are either significantly positive, significantly negative or insignificant and thus do not lend empirical support to the collusion model.

The regressions presented in Table 3.8 include a variable which measures the degree of supplier industry concentration, *'Sup. Con.'*, in order to investigate the validity of the buyer power hypothesis. While the sign of the coefficient on the *'Sup. Con.'* variable is not consistent with the buyer power hypothesis (the coefficient is significantly positive in Table 3.8, Panel A, All Models and Table 3.8, Panel B, Models 4 and 5) the sign on the interaction between *'Sup. Con.'* and *'Change in Herf. Index'* is negative and statistically significant in all the models presented in Table 3.8 (Panel A for all suppliers and B for state suppliers). This finding implies that horizontal acquisitions can hurt the suppliers to the takeover industry by enhancing the buyer power of the merging companies when the M&A deal is large in comparison to its industry, and the supplier industry is sufficiently concentrated - evidence in support of the buyer power hypothesis. Since the *'Sup. Conc. x Change in Herf. Index'* variable is in the form of an interaction term, it is necessary to consider the value of its coefficient along with the value of the coefficient of *'Sup. Con.'* in order to gauge the total marginal effect associated with the interaction term. All the models displayed in Table 3.8 (Panel A for all suppliers and Panel B for state suppliers) demonstrate that the value of the coefficient corresponding to the *'Sup. Conc. x Change in Herf. Index'* variable is significantly higher than the value of the coefficient corresponding to the *'Sup. Con.'* variable. The latter result further reinforces the idea that when the supplier industry is concentrated, and when the horizontal acquisition induces a shift in the concentration of the industry of the merging firms, the wealth which accrues to suppliers is reduced significantly. In fact, Table 3.8 also reveals that the buyer power effect appears to be stronger when the target is financially distressed since the coefficient corresponding to the interaction between the *'Sup. Conc. x Change in Herf. Index'* and the distressed target dummy is significantly negative (Table 3.8, Panel A for all suppliers and B for state suppliers, Models 4 and 5). This finding extends the evidence reported in Shahrur (2005) by showing that the degree of the detrimental impact on the CAAR to suppliers is

contingent upon the financial health of the target company and that it is higher when the target is distressed.

Table 3.9 reports the results from the regression analysis of the CAARs to all *Dependent Suppliers* (Panel A) and the state *Dependent Suppliers* (Panel B). The signs and significance of the independent variables in all the models presented in Table 3.9 (Panels A and B) are not qualitatively different from the results pertaining to the sample of *Main Suppliers*. These results provide further support for the validity of the buyer power hypothesis and also demonstrate that the buyer power that can be exerted by the acquirers of targets which are faced with severe financial difficulties is significantly higher.

Returns to Competitors

The results from the analysis of the variables which affect the CAARs to the competitors of the acquisition industry are presented in Table 3.10. Panel A reports the findings corresponding to the overall sample of competitors and Panel B reports the findings corresponding to the state competitors. The signs and significance of the coefficients corresponding to the variables which test the validity of the collusion hypothesis, namely, the *'Herf. Index'*, *'Change in Herf. Index'*, and *'Herf. Index x Change in Herf. Index'* are inconsistent with the predictions of this hypothesis as they are either positive or negative and either significant or insignificant with no discernible pattern.

The *'Sup. Conc. x Change in Herf. Index'* variable is significantly positive in most of the models presented in Table 3.10, Panels A and B. This result provides evidence which supports the buyer power hypothesis according to which companies which belong to the acquisition industry can exert buyer power on their suppliers if the supplier industry is less than perfectly competitive and if there is a sufficient shift in the concentration of the acquisition industry. The sign and significance of the coefficients remain the same when the variable is

interacted with the distressed target dummy (Table 3.10, Panels A and B, Model 5). It follows that the buyer power effect on the CAARs to competitors is more pronounced in acquisitions of financially distressed targets.

Returns to Customers

Table 3.11 shows the analysis of the determinants of the CAARs that accrue to the corporate customers (the *'Main Customers'*) of the acquisition industry. Table 3.11, Model 1 reports the findings based on the analysis of all customers while Table 3.11, Model 2 displays the findings based on the analysis of customers which perform their main business operations in the same state as the acquirer company, i.e. the '*State Customers'*. I include a variable, *'Customer Input Coefficient'*, which measures the importance of the acquisition industry as a seller to the customer industry and thus captures the degree to which the customer companies rely on the output generated by the takeover industry. The magnitude of the CAARs to the corporate customers should be related to the size of the *'Customer Input Coefficient'*. Following Shahrur (2005), and to further explore this proposition, I incorporate a dummy variable which equals one when the CAARs to the customers are negative, *'Customer Negative CAAR Dummy'*, along with an interaction term which is equal to the product of the *'Customer Input Coefficient'* and the negative CAAR dummy. The coefficient corresponding to the *'Customer Input Coefficient'* is significantly negative, while the coefficient of the interaction between the *'Customer Input Coefficient*' and the negative CAAR dummy is significantly positive. This result implies that although higher dependency on the acquisition industry leads to lower CAARs for the customers in general, this negative impact is less pronounced when the customer CAAR is negative.

The results pertaining to the analysis of state customers provide evidence in line with the collusion hypothesis. The coefficient of the *'Change in Herf. Index'* is significantly

negative (Table 3.11, Model 2), revealing that the acquisition-induced shift in industry concentration reduces the wealth of the corporate customers of the takeover industry. In addition, the *'Herf. Index x Change in Herf. Index'* is also significantly negative, suggesting that the detrimental impact on the CAARs for customers from the increase in industry concentration persists when the pre-acquisition level of industry concentration is already high. The positive association between the *'Customer Concentration'* and the CAARs to the customers (Table 3.11, Model 2) suggests that the detrimental wealth effect on the customer CAARs from the anticompetitive behaviour of the merging companies can be mitigated to some extent when the customer industry is sufficiently concentrated. Furthermore, the positive and significant coefficient on the *'Herf. Index x Foreign Competition'* (Table 3.11, Model 2) provides evidence that the presence of foreign players in the takeover industry can boost competitiveness when the industry is concentrated, thereby benefiting corporate customers.

3.5 Conclusion

This study investigates the relative importance of the buyer power, monopolistic collusion and productive efficiency motives as drivers of horizontal takeovers on the basis of a sample of 1,211 US M&A transactions completed between 1985 and 2012. This study posits that the significance of these motives for horizontal acquisitions changes when the target company is financially distressed since: a) the newly formed firm may be able to negotiate lower input prices/better contract terms with its suppliers, thus benefitting itself and its competitors at the expense of industry suppliers; b) the newly formed firm may become financially more stable thereby benefitting itself and its suppliers. To test the validity of the different theories about the wealth effects from horizontal acquisitions of distressed targets, I analyse the cumulative average abnormal returns from the announcements of horizontal acquisitions on the merging companies as well as their suppliers, customers and competitors.

Table 3.12 reviews the findings from the analysis of the CAARs to the different participants in the product-market chain. The analysis reveals that the ability to exercise increased buyer power is a major driver of horizontal acquisitions. This is evidenced by the negative CAAR that accrues to the suppliers of the takeover industry and the positive CAARs that accrue to the merging companies and their competitors. What is more, these effects appear to be more pronounced when the target company is financially distressed, with the merging companies and their competitors enjoying even higher CAARs at the expense of their suppliers. The latter finding demonstrates that the merging companies are able to negotiate even more favourable contract terms with their suppliers when the target company is financially distressed, and when compared to cases with a financially sound target.

Regression analysis of the CAARs which accrue to participants in the product-market chain was performed in order to examine the influence of different levels of industry competitiveness on the relative importance of the four theories tested in this study. The results present evidence in support of the buyer power hypothesis when the target is financially distressed. Specifically, I show that the merging companies and their competitors enjoy significantly higher gains when the supplier industry is relatively more concentrated, and that this effect is more pronounced when the merged company is sufficiently large and when the acquisition was of a financially distressed target. In addition, the regression analysis of the wealth effect on suppliers reveals that the CAARs experienced by these firms are lower when the supplier industry is less than perfectly competitive, when the acquisition is sufficiently large relative to its industry, and when the acquired company was facing severe financial difficulties prior to the acquisition. Thus, this study provides empirical support for the theoretical model developed by Yang et al. (2014) and extends the analysis in Shahrur (2005) by demonstrating that the detrimental impact on supplier wealth is stronger when a target is financially distressed.

This paper carries vital implications for corporate managers and policymakers alike. The analysis presented in this study provides valuable information regarding the effects of regulatory policies which support reorganization following bankruptcy on companies' *ex ante* operational decisions as well as share price valuation. Specifically, this paper reveals that companies which are domiciled in countries with more debtor oriented insolvency rules can develop a competitive advantage over their cross-border rivals. The results also demonstrate that when facing a distressed buyer, suppliers need to understand how M&A can change the profitability and competitiveness of the different players in the supply chain. From the rival company's perspective, this study's findings suggest that facing a financially distressed competitor could be beneficial. From the financially distressed company's perspective, it is important to note that in practice information regarding the financial health of the company may not always be publically available. In the latter case, the management of the distressed company can decide to either reveal or downplay the financial situation of the business depending on the legal environment and product-market dynamics that the company operates in.

Table 3.1 Wealth Implications of the Productive Efficiency, Monopolistic Collusion and Buyer Power Hypotheses

	Buyer power	**Buyer power with financially distressed target**	**Financial stabilization**	**Productive efficiency**	**Monopolistic collusion**
Merging companies	Positive: decreased input costs due to increased bargaining power and/or higher competition among suppliers	More positive relative to buyer power with healthy targets: debtor-oriented insolvency code enables the acquirer to re-negotiate input prices	Positive: improved financial health of the merged firm	Positive: realization of economies of scale or reduction in overlapping facilities results in lower output production costs	Positive: monopoly rents extracted from customers and suppliers
Suppliers	Negative: decreased input costs due to increased bargaining power and/or higher competition among suppliers	More negative relative to buyer power with healthy targets: debtor-oriented insolvency code enables the acquirer to re-negotiate input prices	Positive: the financial health of the target is stabilized	Positive: scale-increasing acquisitions Negative: scale-decreasing takeovers and/or more efficient use of each unit of input	Negative: lower output levels in the takeover industry lead to restricted demand for the factors of production
Customers	Positive: gain from lower input prices for the takeover industry. Negative: monopsonistic takeover industry participants increase prices as a result of lower output levels	Positive: gain from lower input prices for the takeover industry. Negative: monopsonistic takeover industry participants increase prices as a result of lower output levels	No specific prediction	Positive: lower production costs lead to lower customer prices Negative: scale-decreasing acquisitions	Negative: higher output prices due to lower output levels
Competitors	Positive: decreased input costs due to increased bargaining power and/or higher competition among suppliers	Positive/More positive relative to buyer power with healthy targets depending on the degree to which the re-negotiated lower input prices/more favourable contract terms affect the acquisition industry as a whole	No specific prediction	Positive: new information related to company undervaluation or future horizontal M&A Negative: higher takeover industry competition due to the augmented productive efficiency of the acquirer	Positive: monopoly rents extracted from customers and suppliers

Table 3.2 Sample Restrictions

Restriction	Total number of deals
1. All completed M&A Deals from SDC Platinum where the acquirer and target companies are domiciled in the US and the acquirer company has a SEDOL or DataStream code available	6,300
2. Deals in 1 where the first three digits of the target and acquirer primary SIC codes are equal	3,068
3. Deals in 2 with all industry and company level information available and where the acquirer is exchange-listed company	1,211
4. Deals in 3 where the target company is exchange-listed	421

Notes: This table presents the restrictions used when constructing the final sample of the study. Deals are completed between 1985 and 2012. As indicated, the final number of deals is 1,211. This sample is used for the analyses of the CARs to the suppliers, customers and competitors of the acquisition industry. The sample of 421 deals is used for the analysis of the Combined CARs which accrue to the target and bidder companies as a result of the announcement of the horizontal acquisition.

Table 3.3 Variable Definitions

Variable Name	Definition
CAARs	Cumulative average abnormal returns to either the supplier, customer or competitor companies of the acquisition industry. Returns are cumulated over an event window of (-2, 2)
Combined CAARs	Combined cumulative average abnormal returns to the target and acquirer companies. Target and acquirer abnormal returns are weighted by the market value of the respective company as of ten days prior to deal announcement. Returns are cumulated over an event window of (-2, 2)
Herf. Index	The Herfindahl Index of the acquisition industry. Company market share is measured by the net sales of each company as a proportion of industry total net sales.
Change in Herf. Index	Acquisition-induced shift in industry concentration. Following the methodology in Shahrur (2005) this variable is estimated as the product of the acquirer and target market shares multiplied by two (i.e. $2 * Market\ Share_{Acquirer} * Market\ Share_{\ Target}$) Market share is measured with the use of net sales as of one year before the acquisition announcement.
Herf. Index x Change in Herf. Index	Interaction term which is equal to the product of the Herfindahl Index of the acquisition industry multiplied by the acquisition-induced shift in that industry's concentration.
Sup. Con.	Measures the industry concentration of the suppliers to the acquisition industry. This variable is estimated with the use of the Herfindahl Index of each industry.
Sup. Con. x Distr. Target	Interaction term which is equal to the product of the supplier industry concentration and a dummy variable which measures target company financial distress (i.e. the dummy variable is equal to one when the target is in financial distress and zero otherwise). Financial distress is measured with the use of the ratio of EBITDA (Earnings before interest tax depreciation and amortization) to Net Interest Expense as well as the ratio of EBIT (Earnings before interest and tax) to Net Interest Expense.
Rel. Size	Measures the relative size of the acquirer and target companies. The variable is equal to the ratio of target to acquirer market value measured as of four weeks before the announcement of the M&A deal.
Sup. Con. x Rel. Size	Interaction term which is equal to the product of the supplier industry concentration and the relative size of the target and bidder firms.
Sup. Con. x Rel. Size x Distr. Target	Interaction term which is equal to the product of the '*Sup. Con. x Rel. Size.*' variable and a dummy variable which measures target company financial distress.
Sup. Con. x Change in Herf. Index	Interaction term which is equal to the product of the supplier industry concentration and the acquisition-induced shift in the concentration of the acquisition industry.
Sup. Con. x Change in Herf. Index x Distr. Target	Interaction term which is equal to the product of the '*Sup. Con. x Change in Herf. Index*' variable and a dummy variable which measures target company financial distress.
Customer Concentration	Customer industry concentration is measured as $\sum_{i=1}^{n} Sales_i^2$, where $Sales_i$ is measured as the proportion of the acquisition industry's output bought by company *i* and where *n* is the total number of companies in the industry. Thus, $Sales_i$ is captured by the product of the *Customer Input Coefficient* of the industry and the sales of company *i*.
Foreign Competition	Measured as the acquisition industry's imports as a proportion of the industry's total supply following the methodology in Shahrur (2005).
Herf. Index x Foreign Competition	Interaction term which is equal to the product of the Herfindahl index of the acquisition industry and the variable '*Foreign Competition*'.
Stock Financing	Dummy variable which is equal to one when the deal is partly or entirely financed by stock and zero otherwise.
Hostile Deal	Dummy variable which is equal to one when the deal's attitude is classified as hostile by the SDC Platinum Database

Table 3.3 (Continued)

Variable Name	Definition
Distr. Target	Dummy variable which is equal to one when the target company is financially distressed. A company is classified as financially distressed when its EBIT to Net Interest Expense or EBITDA to Net Interest Expense ratio is less than 1.
Supplier Negative CAAR Dummy	Dummy variable which is equal to one when the CAAR to the supplier portfolio is negative and zero otherwise
Supplier Percentage Sold	The proportion of the total output of the supplier industry that is purchased by the acquisition industry
Supplier Pct. Sold x Sup. Negative CAAR Dummy	Interaction term which equals to the product of the '*Supplier Percentage Sold'* variable and the '*Supplier Negative CAAR Dummy*' variable.
Acquisition Percentage Sold	The percentage of the output of the acquisition industry that is purchased by the customer industry
Customer Input Coefficient	The proportion of total output of the acquisition industry that is purchased by the customer industry divided by the total output of the customer industry
Acquisition Input Coefficient	The value of the supplier industry's produce that is purchased by the acquisition industry divided by the total output of the acquisition industry.
Customer Negative CAAR Dummy	Dummy variable which is equal to one when the CAR to the customer portfolio is negative and zero otherwise
Customer Input Coefficient x Cust. Negative CAAR Dummy	Interaction term which equals to the product of the '*Customer Input Coefficient'* variable and the '*Customer Negative CAAR Dummy*' variable.

Table 3.4 Descriptive Statistics for the Measures Used to Define the Supplier and Customer Industries

	Companies (Unique industries)	Mean	Median	25th Percentile	75th Percentile
Main Customer					
Customer Input Coefficient	5,692 (129)	12.22%	2.99%	2.13%	8.44%
Acquisition Percentage Sold	5,692 (129)	18.43%	8.50%	3.76%	16.95%
Main Supplier					
Supplier Percentage Sold	4,754 (174)	9.74%	7.01%	4.20%	11.94%
Acquisition Input Coefficient	4,754 (174)	20.60%	9.52%	4.42%	23.36%
Dependent Supplier					
Supplier Percentage Sold	6,503 (176)	9.02%	6.61%	1.83%	14.59%
Acquisition Input Coefficient	6,503 (176)	12.64%	11.28%	9.01%	13.98%

Notes: The sample includes 1, 211 horizontal acquisitions completed between 1985 and 2012. An acquisition is classified as horizontal when the acquirer and target companies have the same primary three-digit SIC code. The supplier and customer industries are defined with the use of the benchmark input-output accounts of the US economy following the methodology in Shahrur (2005). Please refer to Table 3.3 and the methodology section of this study for a detailed explanation of how each variable is constructed.

Table 3.5 Distribution of M&A Deals by Industry and Year

Industry Name	SIC Code	1985-1989	1990-2000	2000-2008	2009-2012	Total	% of Total	Acquisition Activity
1. Coal Mining	12	0	0	1	0	1	0.08%	0.24%
2. Oil and Gas Extraction	13	0	23	56	2	81	6.69%	0.81%
3. Building construction	15	0	1	2	0	3	0.25%	0.34%
4. Heavy Construction, Except Building	16	0	3	0	1	4	0.33%	0.77%
5. Special Trade Contractors	17	0	3	0	0	3	0.25%	0.85%
6. Food & Kindred Products	20	1	4	3	2	10	0.83%	0.36%
7. Textile mill products	22	0	3	0	0	3	0.25%	0.41%
8. Lumber and wood products	24	0	4	0	0	4	0.33%	0.36%
9. Furniture and fixtures	25	0	1	1	0	2	0.17%	0.34%
10. Paper and allied products	26	1	4	0	1	6	0.50%	0.29%
11. Printing and publishing	27	0	3	5	0	8	0.66%	0.46%
12. Chemicals and allied products	28	2	11	1	0	14	1.16%	0.12%
13. Petroleum refining	29	0	1	6	2	9	0.74%	0.61%
14. Rubber and plastics	30	3	7	3	0	13	1.07%	0.79%
15. Stone, clay, and glass	32	2	1	0	0	3	0.25%	0.27%
16. Primary metal	33	1	1	4	0	6	0.50%	0.24%
17. Fabricated metals	34	0	2	1	0	3	0.25%	0.13%
18. Industrial machinery	35	10	51	12	10	83	6.85%	1.15%
19. Electronical machinery	36	8	43	15	1	67	5.53%	0.79%
20. Transportation equipment	37	1	4	0	0	5	0.41%	0.17%
21. Instruments	38	3	83	26	13	125	10.32%	1.74%
22. Misc. manufacturing	39	2	10	4	1	17	1.40%	1.20%
23. Railroad transportation	40	1	1	2	1	5	0.41%	0.93%
24. Motor freight transportation	42	0	0	4	1	5	0.41%	0.38%
25. Water transportation	44	0	0	1	0	1	0.08%	0.10%
27. Transportation by air	45	14	6	3	4	27	2.23%	2.35%
28. Communications	48	1	32	7	0	40	3.30%	0.66%
29. Electric, gas, and sanitary services	49	5	34	15	11	65	5.37%	0.81%
30. Wholesale trade-durable goods	50	2	16	2	2	22	1.82%	0.70%

Table 3.5 (Continued)

Industry Name	SIC Code	1985-1989	1990-2000	2000-2008	2009-2012	Total	% of Total	Acquisition Activity
31. Wholesale trade-non-durable goods	51	3	7	0	3	13	1.07%	0.78%
32. General merchandise stores	53	4	6	4	0	14	1.16%	6.11%
33. Food stores	54	7	8	2	0	17	1.40%	2.71%
34. Automotive dealers	55	0	1	0	0	1	0.08%	0.23%
35. Apparel and accessory stores	56	0	1	0	1	2	0.17%	0.87%
36. Home furniture	57	2	5	1	0	8	0.66%	3.08%
37. Eating and drinking places	58	2	31	5	0	38	3.14%	2.35%
38. Miscellaneous retail	59	1	7	4	0	12	0.99%	0.86%
39. Hotels and rooming houses	70	0	17	4	1	22	1.82%	2.79%
40. Business services	73	0	167	157	22	346	28.57%	2.53%
41. Motion pictures	78	0	1	1	0	2	0.17%	0.29%
42. Amusement	79	0	1	0	0	1	0.08%	0.07%
43. Health services	80	2	63	14	2	81	6.69%	3.34%
44. Social services	83	0	3	0	0	3	0.25%	1.49%
45. Engineering and related serviced	87	1	8	6	1	16	1.32%	0.66%
Total		79	678	372	82	1,211	100.00%	
% of Total		6.52%	55.99%	30.72%	6.77%	100.00%		

Notes: The sample includes 1, 211 horizontal acquisitions completed between 1985 and 2012. An acquisition is classified as horizontal when the acquirer and target companies have the same primary three-digit SIC code. This table shows the distribution of the M&A deals in the sample by industry and year. '*Acquisition Activity'* is constructed as the number of companies that participated in horizontal acquisitions as a proportion of the total number of companies in the given industry over the sample period.

Table 3.6 Average Announcement Abnormal Returns to Suppliers, Competitors and Customers

Panel A: CAARs (%) to the Baseline Sample of Acquisitions				
	Main Suppliers	**Dependent Suppliers**	**Customers**	**Competitors**
Average (Median) Number of Companies	27 (18)	37 (10)	44 (28)	56 (31)
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	-0.0002 (-0.1570)	-0.0003 (-0.1600)	-0.0001 (-0.0548)	**0.0045*** ** (3.6752)
(-2, 2)	-0.0006 (-0.4003)	-0.0033 (-1.1224)	-0.0014 (-0.6922)	**0.0072*** ** (3.7095)
(-10, 10)	-0.0020 (-0.6269)	-0.0097 (-1.6294)	0.0011 (0.2720)	0.0083** (2.0991)
(-40, 40)	0.0012 (0.1892)	-0.0042 (-0.3601)	-0.0034 (-0.4301)	**0.0202*** ** (2.5946)
(10, 20)	-0.0006 (-0.2419)	-0.0018 (-0.4150)	-0.0014 (-0.4840)	0.0008 (0.2900)
Panel B: CAAR (%) to the Subsample of Acquisitions of Distressed Targets (EBIT)				
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	-0.0002 (-0.0874)	-0.0010 (-0.2776)	0.0010 (0.2857)	0.0042 (1.6387)
(-2, 2)	-0.0030 (-0.7950)	-0.0048 (-0.8461)	-0.0044 (-0.8069)	**0.0081** ** (1.9962)
(-10, 10)	**-0.0211*** ** (-2.7585)	**-0.0304*** ** (-2.6246)	-0.0045 (-0.4015)	0.0095 (1.1400)
(-40, 40)	**-0.0334** ** (-2.2229)	-0.0255 (-1.1217)	-0.0136 (-0.6191)	**0.0385** ** (2.3639)
(10, 20)	**-0.0093*** (-1.6841)	-0.0065 (-0.7797)	0.0006 (0.0790)	0.0012 (0.2026)
Panel C: CAAR (%) to the Subsample of Acquisitions of Distressed Targets (EBITDA)				
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	0.0020 (0.6304)	0.0005 (0.1001)	0.0006 (0.1577)	0.0046 (1.4641)
(-2, 2)	-0.0017 (-0.3409)	-0.0054 (-0.6878)	-0.0037 (-0.5914)	**0.0107** ** (2.1687)
(-10, 10)	-0.0160 (-1.5316)	-0.0210 (-1.3159)	-0.0064 (-0.4984)	0.0142 (1.4104)
(-40, 40)	-0.0288 (-1.3981)	0.0166 (0.5285)	-0.0258 (-1.0320)	**0.0546*** ** (2.7608)
(10, 20)	-0.0100 (-1.3145)	0.0036 (0.3154)	-0.0009 (-0.0991)	0.0015 (0.2056)

Table 3.6 (Continued)

Panel D: CAAR (%) to the Subsample of Acquisitions with Positive Combined Abnormal Returns				
	Main Suppliers	**Dependent Suppliers**	**Customers**	**Competitors**
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	-0.0012 (-0.9391)	-7.8E-05 (-3.0E-02)	-0.0003 (-0.1862)	**0.0045**** (2.3826)
(-2, 2)	0.0003 (0.1483)	-0.0009 (-0.2202)	-0.0016 (-0.5671)	**0.0101***** (3.3556)
(-10, 10)	-0.0021 (-0.4917)	-0.0070 (-0.8202)	0.0050 (0.8425)	**0.0116*** (1.8801)
(-40, 40)	-0.0102 (-1.2427)	0.0238 (1.4207)	0.0003 (0.0254)	**0.0266**** (2.2032)
(10, 20)	-0.0027 (-0.9002)	0.0077 (1.2448)	-0.0049 (-1.1429)	0.0006 (0.1254)
Panel E: CAAR (%) to the Subsample of Acquisitions of Distressed Targets (EBIT) Where the Combined CAAR is Positive				
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	-0.0028 (-0.7997)	0.0032 (0.5379)	0.0010 (0.2546)	0.0031 (0.7985)
(-2, 2)	0.0010 (0.1776)	0.0018 (0.1890)	-0.0002 (-0.0311)	**0.0117*** (1.9307)
(-10, 10)	-0.0224 (-1.9413)	-0.0139 (-0.7106)	0.0097 (0.7445)	0.0154 (1.2355)
(-40, 40)	-0.0311 (-1.3741)	0.0474 (1.2354)	0.0031 (0.1212)	**0.1022***** (4.1788)
(10, 20)	-0.0030 (-0.3648)	0.0085 (0.6021)	-0.0010 (-0.1050)	0.0108 (1.1993)
Panel F: CAAR (%) to the Subsample of Acquisitions of Distressed Targets (EBITDA) Where the Combined CAAR is Positive				
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	-0.0021 (-0.4028)	0.0067 (0.8708)	-0.0005 (-0.1141)	0.0039 (0.7536)
(-2, 2)	-0.0029 (-0.3467)	0.0042 (0.3454)	-0.0016 (-0.2091)	**0.0162*** (1.9761)
(-10, 10)	**-0.0348*** (-2.0507)	-0.0008 (-0.0316)	0.0029 (0.1922)	0.0152 (0.9031)
(-40, 40)	-0.0436 (-1.3069)	**0.0863*** (1.7619)	-0.0255 (-0.8497)	**0.1108***** (3.3505)
(10, 20)	0.0093 (0.7589)	0.0218 (1.2075)	-0.0038 (-0.3394)	0.0127 (1.0447)

Table 3.6 (Continued)

Panel G: CAAR (%) to the Subsample of Acquisitions with Negative Combined Abnormal Returns				
	Main Suppliers	**Dependent Suppliers**	**Customers**	**Competitors**
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	0.0010 (0.6057)	-0.0005 (-0.1984)	0.0003 (0.1649)	**0.0045*** ** (2.9391)
(-2, 2)	-0.0016 (-0.6211)	-0.0054 (-1.3801)	-0.0011 (-0.4374)	**0.0041*** (1.7272)
(-10, 10)	-0.0019 (-0.3563)	-0.0121 (-1.5126)	-0.0035 (-0.7026)	0.0049 (1.0017)
(-40, 40)	0.0136 (1.2922)	**-0.0300*** (-1.9051)	-0.0079 (-0.8051)	0.0135 (1.3956)
(10, 20)	0.0018 (0.4676)	**-0.0105*** (-1.8107)	0.0027 (0.7474)	0.0011 (0.3135)
Panel H: CAAR (%) to the Subsample of Acquisitions of Distressed Targets (EBIT) Where the Combined CAAR is Negative				
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	0.0020 (0.6046)	-0.0048 (-1.1250)	0.0009 (0.1904)	0.0052 (1.5284)
(-2, 2)	-0.0063 (-1.1934)	-0.0107 (-1.5900)	-0.0097 (-1.2450)	0.0047 (0.8666)
(-10, 10)	**-0.0201*** (-1.8442)	**-0.0452**** (-3.2882)	-0.0223 (-1.4009)	0.0040 (0.3568)
(-40, 40)	-0.0354 (-1.6570)	**-0.0906**** (-3.3566)	-0.0345 (-1.1044)	-0.0205 (-0.9397)
(10, 20)	**-0.0147*** (-1.8626)	**-0.0200**** (-2.0078)	0.0027 (0.2330)	-0.0077 (-0.9543)
Panel I: CAAR (%) to the Subsample of Acquisitions of Distressed Targets (EBITDA) Where the Combined CAAR is Negative				
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	0.0048 (1.1451)	-0.0051 (-0.9023)	0.0019 (0.3457)	0.0051 (1.4281)
(-2, 2)	-0.0010 (-0.1460)	-0.0140 (-1.5628)	-0.0060 (-0.6964)	0.0056 (0.9917)
(-10, 10)	-0.0033 (-0.2429)	**-0.0392**** (-2.1407)	-0.0164 (-0.9338)	0.0133 (1.1442)
(-40, 40)	-0.0187 (-0.6954)	-0.0462 (-1.2858)	-0.0262 (-0.7586)	0.0039 (0.1713)
(10, 20)	**-0.0230**** (-2.3201)	-0.0127 (-0.9587)	0.0022 (0.1699)	-0.0086 (-1.0264)

Table 3.6 (Continued)

Panel J: CAAR (%) to the Subsample of Acquisitions with Supplier, Customer and Competitor Companies Domiciled in the State of the Acquirer				
	Main Suppliers	**Dependent Suppliers**	**Customers**	**Competitors**
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	**-0.0040*** (-1.8223)	-0.0001 (-0.0326)	0.0022 (0.5884)	**0.0119***** (3.6303)
(-2, 2)	**-0.0070**** (-2.0387)	**-0.0142**** (-2.2846)	0.0012 (0.1981)	**0.0144***** (2.7684)
(-10, 10)	-0.0108 (-1.5373)	**-0.0425***** (-3.3363)	0.0030 (0.2490)	0.0113 (1.0637)
(-40, 40)	-0.0059 (-0.4248)	**-0.0669***** (-2.6765)	-0.0055 (-0.2327)	0.0101 (0.4824)
(10, 20)	**-0.0100*** (-1.9644)	-0.0017 (-0.1869)	0.0004 (0.0448)	-0.0099 (-1.2890)
Panel K: CAAR (%) to the Subsample of Acquisitions of Distressed Targets (EBIT) Where Supplier, Customer and Competitor Companies are Domiciled in the State of the Acquirer				
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	0.0040 (0.6869)	0.0142 (1.5187)	-0.0031 (-0.2611)	0.0141 (1.6601)
(-2, 2)	-0.0077 (-0.8478)	-0.0119 (-0.8042)	-0.0089 (-0.4717)	**0.0249*** (1.8521)
(-10, 10)	**-0.0326*** (-1.7435)	**-0.0670**** (-2.2066)	-0.0016 (-0.0410)	**0.0603**** (2.1908)
(-40, 40)	**-0.0880**** (-2.3989)	**-0.1248*** (-2.0923)	0.0787 (1.0319)	**0.1768***** (3.2703)
(10, 20)	-0.0210 (-1.5528)	-0.0166 (-0.7559)	-0.0109 (-0.3890)	-0.0105 (-0.5253)
Panel L: CAAR (%) to the Subsample of Acquisitions of Distressed Targets (EBITDA) Where Supplier, Customer and Competitor Companies are Domiciled in the State of the Acquirer				
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	0.0021 (0.2888)	0.0177 (1.1362)	-0.0016 (-0.1123)	0.0124 (1.1282)
(-2, 2)	-0.0073 (-0.6470)	-0.0150 (-0.6082)	0.0004 (0.0186)	0.0263 (1.5085)
(-10, 10)	-0.0296 (-1.2722)	-0.0617 (-1.2237)	-0.0028 (-0.0621)	0.0560 (1.5671)
(-40, 40)	**-0.0856*** (-1.8723)	-0.1241 (-1.2530)	0.0669 (0.7426)	**0.1939**** (2.7628)
(10, 20)	-0.0188 (-1.1146)	-0.0127 (-0.3488)	-0.0196 (-0.5909)	-0.0092 (-0.3550)

Table 3.6 (Continued)

	Main Suppliers	Dependent Suppliers	Customers	Competitors
Panel M: CAAR (%) to the Subsample of Acquisitions with Positive Combined Abnormal Returns Where Supplier, Customer and Competitor Companies are Domiciled in the State of the Acquirer				
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	**-0.0097***** (-3.2865)	0.0021 (0.3434)	0.0001 (0.0319)	**0.0147***** (2.9463)
(-2, 2)	**-0.0150***** (-3.2321)	-0.0147 (-1.4871)	-0.0022 (-0.3049)	**0.0222***** (2.8170)
(-10, 10)	**-0.0259***** (-2.7158)	**-0.0500**** (-2.4679)	-0.0050 (-0.3370)	0.0196 (1.2170)
(-40, 40)	**-0.0391**** (-2.0871)	-0.0426 (-1.0706)	-0.0191 (-0.6537)	0.0306 (0.9678)
(10, 20)	-0.0059 (-0.8509)	0.0090 (0.6171)	0.0058 (0.5398)	-0.0092 (-0.7850)
Panel N: CAAR (%) to the Subsample of Acquisitions with Negative Combined Abnormal Returns Where Supplier, Customer and Competitor Companies are Domiciled in the State of the Acquirer				
Window	Average (t-stat)	Average (t-stat)	Average (t-stat)	Average (t-stat)
(-1, 0)	0.0015 (0.4461)	-0.0024 (-0.5644)	0.0056 (0.8987)	**0.0082**** (2.0985)
(-2, 2)	0.0006 (0.1206)	**-0.0137**** (-2.0335)	0.0068 (0.6902)	0.0038 (0.6192)
(-10, 10)	0.0035 (0.3282)	**-0.0350**** (-2.5346)	0.0164 (0.8109)	8E-05 (6E-03)
(-40, 40)	0.0257 (1.2284)	**-0.0912***** (-3.3686)	0.0172 (0.4321)	-0.0178 (-0.7129)
(10, 20)	**-0.0139*** (-1.8103)	-0.0125 (-1.2514)	-0.0087 (-0.5916)	-0.0110 (-1.1945)

Notes: This table displays the CARs (cumulative abnormal returns) to the Main Suppliers, Dependent Suppliers, Customers and Competitors of the acquisition industry. The sample includes 421 horizontal acquisitions completed between 1985 and 2012. An acquisition is classified as horizontal when the acquirer and target companies have the same primary three-digit SIC code. The supplier and customer industries are defined with the use of the benchmark input-output accounts of the US economy following the methodology in Shahrur (2005). Please refer to Table 3: Variable definitions and the methodology section of this study for a detailed explanation of how each variable is constructed. CAARs are measured on the basis of equally-weighted portfolios of the companies in the corresponding industry. Panel A shows CAARs to the baseline sample of acquisitions. Panels B and C show CAARs for the subsample of acquisitions of distressed targets (where distress is measured by the EBIT to Net Interest Expense and EBITDA to Net Interest Expense ratios respectively). Panel D (Panel G) shows the CAARs for the subsample of acquisitions with positive (negative) '*Combined CAAR'*. Panels E and F (Panels H and I) show the CAARs for the subsample of acquisitions with positive (negative) '*Combined CAAR'* where the target is financially distressed as indicated by the EBIT to Net Interest Expense and EBITDA to Net Interest Expense ratios respectively. Panel J shows the CAARs for the subsample of acquisitions with supplier, customer and competitor companies domiciled in the state of the acquirer. Panels K and L show the CAARs for the subsamples of acquisitions with supplier, customer and competitor companies domiciled in the state of the acquirer and where the target is financially distressed as indicated by the EBIT to Net Interest Expense and EBITDA to Net Interest Expense ratios respectively. Panel M (Panel N) shows the CAARs to the subsample of acquisitions with supplier, customer and competitor companies domiciled in the state of the acquirer and where the '*Combined CAAR'* is positive (negative).

Table 3.7 Analysis of Combined Wealth Effect from the Acquisition on Target and Bidder Companies

	Model 1 WLS	Model 2 WLS	Model 3 WLS	Model 4 MLE	Model 5 MLE	Model 6 MLE
Dependent Variable: Combined CAR (-2, 2)	**No Dummies**	**Distressed Dummies (EBITDA)**	**Distressed Dummies (EBIT)**	**No Dummies**	**Distressed Dummies (EBITDA)**	**Distressed Dummies (EBIT)**
Buyer Power Hypothesis						
Sup. Con.	**-0.00014****	**-0.00015****	**-0.000142***	**-0.00014****	**-0.00015****	**-0.000142***
	(-1.976)	(-2.078)	(-1.912)	(-2.005)	(-2.118)	(-1.950)
Sup. Con. x Distr. Target		**0.000259***	7.53e-05		**0.000259***	7.53e-05
		(1.739)	(0.744)		(1.773)	(0.758)
Sup. Con. x Rel. Size	**0.000210***	**0.000235***	**0.000248****	**0.000210***	**0.000235***	**0.000248****
	(1.720)	(1.819)	(2.087)	(1.745)	(1.855)	(2.128)
Sup. Con. x Rel. Size x Distr. Target		-0.000570	-0.000909		-0.000570	-0.000909
		(-1.544)	(-1.225)		(-1.574)	(-1.249)
Sup. Con. x Change in Herf. Index	0.00187	0.00210	0.00260	0.00187	0.00210	**0.00260***
	(0.990)	(1.157)	(1.622)	(1.004)	(1.179)	(1.654)
Sup. Con. x Change in Herf. Index x Distr. Target		0.180	**0.114****		0.180	**0.114****
		(0.825)	(1.984)		(0.841)	(2.023)
Productive efficiency and Collusion Hypotheses						
Herf. Index	**0.000148***	**0.000134***	**9.87e-05***	**0.000148***	**0.000134***	**9.87e-05****
	(1.756)	(1.760)	(1.932)	(1.781)	(1.794)	(1.969)
Change in Herf. Index	0.000509	0.000426	5.12e-05	0.000509	0.000426	5.12e-05
	(0.531)	(0.417)	(0.0491)	(0.538)	(0.426)	(0.0501)
Herf. Index x Change in Herf. Index	**-0.00298***	**-0.00305***	**-0.0037*****	**-0.00298***	**-0.00305***	**-0.0037*****
	(-1.814)	(-1.906)	(-2.671)	(-1.840)	(-1.943)	(-2.723)
Controls						
Customer Concentration	2.67e-05	1.57e-05	1.43e-05	2.67e-05	1.57e-05	1.43e-05
	(0.448)	(0.265)	(0.248)	(0.454)	(0.270)	(0.253)
Foreign Competition	2.05e-05	3.36e-06	1.40e-05	2.05e-05	3.36e-06	1.40e-05
	(0.563)	(0.157)	(0.436)	(0.572)	(0.160)	(0.445)
Herf. Index x Foreign Competition	-0.000428	-0.000402	-0.000326	-0.000428	-0.000402	-0.000326
	(-0.854)	(-0.627)	(-0.734)	(-0.867)	(-0.640)	(-0.748)
Rel. Size	-2.77e-05	-2.84e-05	-2.66e-05	-2.77e-05	-2.84e-05	-2.66e-05
	(-1.242)	(-0.919)	(-0.802)	(-1.260)	(-0.937)	(-0.818)
Stock Financing	-1.19e-05	-9.73e-06	-1.21e-05	-1.19e-05	-9.73e-06	-1.21e-05
	(-0.824)	(-0.673)	(-0.848)	(-0.836)	(-0.687)	(-0.865)
Hostile Deal	**0.000393****	**0.000394****	**0.000392****	**0.000393****	**0.000394****	**0.000392****
	(2.326)	(2.298)	(2.294)	(2.360)	(2.343)	(2.339)
Distr. Target		-1.39e-05	-7.93e-06		-1.39e-05	-7.93e-06
		(-0.700)	(-0.298)		(-0.714)	(-0.304)
Intercept	8.41e-06	1.12e-05	1.62e-05	8.41e-06	1.12e-05	1.62e-05
	(0.418)	(0.506)	(0.751)	(0.424)	(0.516)	(0.765)
Number of Deals	421	421	421	421	421	421
Adjusted R^2 / Chi^2	0.092	0.098	0.109	1352	5181	7843

Table 3.7 (Continued)

Notes: The dependent variable, '*Combined CAAR'* is measured by cumulating the combined weighted abnormal returns to the target and acquirer companies over an event window of (-2, 2). Models 1 through 3 present the results from the Weighted Least Squares (WLS) estimation procedure where the weights are measured as one divided by the standard deviation of the residuals. Models 4 through 6 present the results from the Maximum Likelihood Estimation (MLE) procedure. Statistical significance at the 1%, 5%, and 10% levels is indicated by the symbols *, **, *** respectively. The t-statistics corresponding to each regression coefficient are presented in parentheses. The sample used for the purposes of the models in this table consists of 421 horizontal acquisitions where the acquirer and target companies are both exchange-listed. Please refer to Table 3.3 and the methodology section of this study for a detailed explanation of how each variable is constructed.

Table 3.8 Analysis of Cumulative Abnormal Returns to Main Suppliers

Dependent Variable: Supplier CAR **Panel A: All Suppliers**	**Model 1 All Deals**	**Model 2 Distressed Deals (EBITDA)**	**Model 3 Distressed Deals (EBIT)**	**Model 4 All Deals - Distressed Dummies (EBITDA)**	**Model 5 All Deals - Distressed Dummies (EBIT)**
Buyer Power Hypothesis					
Sup. Con.	**0.0506*** **	**0.0451*** **	**0.0669*** **	**0.0253*** **	**0.0281*** **
	(28.51)	(7.874)	(18.23)	(13.12)	(13.89)
Sup. Con. x Distr. Target				**0.0337*** **	**0.0386*** **
				(7.925)	(10.48)
Sup. Conc. x Change in Herf. Index	**-1.051*** **	**-7.544** **	**-1.061** **	**-1.369*** **	**-1.396*** **
	(-11.02)	(-2.464)	(-2.019)	(-29.17)	(-29.65)
Sup. Conc. x Change in Herf. Index x Distr. Target				**-84.84*** **	**-5.194*** **
				(-13.52)	(-5.575)
Collusion Hypothesis					
Herf. Index	**0.0245*** **	**0.0185*** **	**0.0291*** **	**0.0221*** **	**0.0229*** **
	(29.68)	(7.847)	(17.13)	(27.35)	(28.33)
Change in Herf. Index	**0.0302***	**-0.723*** **	0.0615	**0.127*** **	**0.124*** **
	(1.676)	(-3.627)	(0.987)	(17.63)	(17.16)
Herf. Index x Change in Herf. Index	**-0.166*** **	**3.795*** **	**0.435*** **	**-0.269*** **	**-0.261*** **
	(-5.495)	(3.129)	(2.716)	(-17.30)	(-16.79)
Controls					
Supplier Negative CAAR Dummy	**-0.0691*** **	**-0.0636*** **	**-0.0656*** **	**-0.0700*** **	**-0.0692*** **
	(-215.2)	(-67.38)	(-96.61)	(-217.2)	(-216.0)
Supplier Percentage Sold	**0.00316*** **	**0.0176*** **	-0.000452	**0.00651*** **	**0.00601*** **
	(4.490)	(4.752)	(-0.224)	(9.327)	(8.602)
Supplier Pct. Sold x Sup. Negative CAAR Dummy	**0.00312*** **	-0.00586	**0.00669*** **	-0.000380	-0.000808
	(3.218)	(-1.434)	(2.800)	(-0.412)	(-0.878)
Foreign Competition	**-0.00965*** **	**0.0110*** **	**0.00910*** **	**0.00649*** **	**-0.0124*** **
	(-16.54)	(3.245)	(5.372)	(11.09)	(-19.66)
Herf. Index x Foreign Competition	**0.105*** **	**-0.172*** **	**-0.140*** **	**-0.0126*** **	**0.137*** **
	(23.56)	(-4.034)	(-6.885)	(-20.07)	(25.90)
Distr. Target				**0.140*** **	**0.00134*** **
				(26.81)	(2.995)
Intercept	**0.0275*** **	**0.0322*** **	**0.0266*** **	**0.0281*** **	**0.0278*** **
	(79.41)	(28.04)	(35.46)	(81.31)	(78.51)
Number of Deals	1,049	205	205	1,049	1,049
Chi^2	8303	7409	14578	8428	8374

Table 3.8 (Continued)

Dependent Variable: Supplier CAR **Panel B: State Suppliers**	**Model 1 All Deals**	**Model 2 Distressed Deals (EBITDA)**	**Model 3 Distressed Deals (EBIT)**	**Model 4 All Deals - Distressed Dummies (EBITDA)**	**Model 5 All Deals - Distressed Dummies (EBIT)**
Buyer Power Hypothesis					
Sup. Con.	**-0.140***** (-67.96)	**-0.0721***** (-7.940)	**-0.0419***** (-6.507)	**0.0281***** (12.70)	**0.0551***** (24.50)
Sup. Con. x Distr. Target				**-0.334***** (-62.91)	**-0.430***** (-106.6)
Sup. Conc. x Change in Herf. Index	**-71.23***** (-172.8)	**-112.4***** (-51.94)	**-78.70***** (-55.36)	**-0.202***** (-3.545)	**-0.249***** (-4.368)
Sup. Conc. x Change in Herf. Index x Distr. Target				**-248.8***** (-37.56)	**-19.72***** (-17.04)
Collusion Hypothesis					
Herf. Index	**0.0655***** (58.53)	**0.0285***** (7.922)	**0.122***** (46.72)	**0.0192***** (16.37)	**0.0289***** (25.02)
Change in Herf. Index	**1.437***** (87.11)	**-4.694***** (-10.85)	**4.753***** (36.50)	**0.142***** (12.74)	**0.162***** (14.60)
Herf. Index x Change in Herf. Index	**-2.191***** (-53.52)	**49.80***** (31.61)	**-5.314***** (-23.21)	**-0.255***** (-13.42)	**-0.304***** (-16.05)
Controls					
Supplier Negative CAAR Dummy	**-0.0514***** (-179.4)	**-0.0702***** (-56.43)	**-0.0980***** (-111.4)	**-0.0277***** (-95.00)	**-0.0309***** (-107.4)
Supplier Percentage Sold	**0.0207***** (37.24)	**0.00905**** (2.536)	**0.0529***** (19.75)	**0.00534***** (9.649)	**0.00198***** (3.559)
Supplier Pct. Sold x Sup. Negative CAAR Dummy	**0.0298***** (22.30)	0.00290 (0.641)	**0.0245***** (5.753)	**-0.00654***** (-5.551)	**0.00204*** (1.743)
Foreign Competition	**0.00660***** (12.24)	**0.0259***** (20.92)	**0.0457***** (47.78)	**-0.00434***** (-7.242)	**-0.0085***** (-14.92)
Herf. Index x Foreign Competition	**-0.0621***** (-11.50)	**-0.277***** (-19.67)	**-0.519***** (-52.05)	**0.0473***** (7.734)	**0.0936***** (15.66)
Distr. Target				**0.0410***** (56.29)	**0.0432***** (67.64)
Intercept	**0.0158***** (62.33)	**0.0334***** (22.74)	**0.0130***** (11.34)	**0.00287***** (11.03)	0.000118 (0.451)
Number of Deals	770	160	160	770	770
Chi^2	2496	1140	1464	3011	2976

Notes: The dependent variable, '*Supplier CAAR'* is measured by cumulating the abnormal returns to an equally-weighted portfolio of supplier companies for each industry over an event window of (-2, 2). All models are estimated using the Weighted Least Squares (WLS) estimation procedure where the weights are measured as one divided by the standard deviation of the residuals. Panel A (Panel B) presents the results pertaining to all (state) supplier companies. '*State Suppliers'* are defined as companies which are domiciled in the same state as the acquirer. Statistical significance at the 1%, 5%, and 10% levels is indicated by the symbols *, **, *** respectively. The t-statistics corresponding to each regression coefficient are presented in parentheses. The sample used for the purposes of the models in this table consists of 1,211 horizontal acquisitions where the acquirer and target companies are both exchange-listed. Please refer to Table 3.3 and the methodology section of this study for a detailed explanation of how each variable is constructed..

Table 3.9 Analysis of Cumulative Abnormal Returns to Dependent Suppliers

Dependent Variable: Supplier CAR **Panel A: All Dependent Suppliers**	**Model 1 All Deals**	**Model 2 Distressed Deals (EBITDA)**	**Model 3 Distressed Deals (EBIT)**	**Model 4 All Deals - Distressed Dummies (EBITDA)**	**Model 5 All Deals - Distressed Dummies (EBIT)**
Buyer Power Hypothesis					
Sup. Con.	**-0.0124***** (-8.435)	0.0058 (1.19)	**0.0442***** (13.47)	**-0.0062***** (-3.756)	**-0.0081***** (-4.204)
Sup. Con. x Distr. Target				**-0.0101*** (-1.718)	**0.0645***** (16.79)
Sup. Conc. x Change in Herf. Index	**-0.706**** (-2.282)	**-13.9958***** (-5.18)	**-15.2796***** (-8.96)	**-1.062**** (-2.298)	0.223 (0.719)
Sup. Conc. x Change in Herf. Index x Distr. Target				**-673.120***** (-10.52)	**-0.996***** (-4.566)
Collusion Hypothesis					
Herf. Index	**-0.0827***** (-30.85)	**0.0270**** (2.02)	**-0.0566***** (-7.18)	**-0.0566***** (-17.99)	0.00661 (1.590)
Change in Herf. Index	**0.0197**** (2.004)	**4.7799***** (6.73)	**2.2994***** (9.70)	0.0618 (0.326)	**6.948***** (17.49)
Herf. Index x Change in Herf. Index	**10.78***** (5.989)	**-35.5603***** (-4.77)	**-15.5325***** (-3.23)	0.775 (0.958)	**-34.94***** (-10.54)
Controls					
Supplier Negative CAAR Dummy	**-0.0648***** (-113.2)	**-0.0844***** (-46.76)	**-0.0860***** (-59.92)	**-0.0504***** (-79.34)	**-0.0781***** (-101.6)
Supplier Percentage Sold	**-0.0151***** (-10.52)	**-0.0171***** (-3.17)	**-0.0333***** (-16.00)	**-0.00986***** (-7.471)	**-0.0242***** (-17.07)
Supplier Pct. Sold x Sup. Negative CAAR Dummy	**0.0645***** (35.69)	0.0038 (0.51)	**0.0292***** (8.40)	**0.0431***** (22.83)	**0.138***** (53.71)
Foreign Competition	**-0.143***** (-40.42)	-0.0110 (-0.72)	**-0.1705***** (-17.66)	**-0.0515***** (-18.57)	**-0.0538***** (-14.18)
Herf. Index x Foreign Competition	**0.646***** (35.45)	-0.0192 (-0.24)	**0.6631***** (13.47)	**0.273***** (15.48)	**0.201***** (10.39)
Distr. Target				0.00161 (0.817)	**-0.0208***** (-16.97)
Intercept	**0.0446***** (65.59)	**0.0413***** (15.15)	**0.0493***** (24.12)	**0.0347***** (46.63)	**0.0325***** (39.39)
Number of Deals	1,049	205	205	1,049	1,049
Chi^2	2396	2315	2117	1827	2056

Table 3.9 (Continued)

Dependent Variable: Supplier CAR **Panel B: State Dependent Suppliers**	**Model 1 All Deals**	**Model 2 Distressed Deals (EBITDA)**	**Model 3 Distressed Deals (EBIT)**	**Model 4 All Deals - Distressed Dummies (EBITDA)**	**Model 5 All Deals - Distressed Dummies (EBIT)**
Buyer Power Hypothesis					
Sup. Con.	**-0.155*** **	-0.0296	**-0.0933*** **	**-0.173*** **	**-0.159*** **
	(-30.42)	(-0.953)	(-3.169)	(-33.91)	(-28.69)
Sup. Con. x Distr. Target				**0.236*** **	**0.232*** **
				(10.79)	(11.83)
Sup. Conc. x Change in Herf. Index	**-0.960*** **	**-269.9*** **	**-11.34***	0.663	0.253
	(-5.485)	(-2.859)	(-1.892)	(1.554)	(1.169)
Sup. Conc. x Change in Herf. Index x Distr. Target				**-14.85** **	**-1.363*** **
				(-2.077)	(-3.142)
Collusion Hypothesis					
Herf. Index	**-0.0885*** **	**-0.137*** **	**-0.129*** **	**0.0423*** **	**0.0598*** **
	(-18.88)	(-5.668)	(-4.931)	(8.757)	(10.52)
Change in Herf. Index	**11.69*** **	2.755	**-4.108***	0.00239	**5.813*** **
	(23.39)	(0.206)	(-1.649)	(0.0170)	(10.90)
Herf. Index x Change in Herf. Index	**-29.08*** **	40.16	**12.05** **	-0.0905	**-34.54*** **
	(-7.476)	(0.632)	(2.474)	(-0.0768)	(-8.386)
Controls					
Supplier Negative CAAR Dummy	**-0.0143*** **	**-0.112*** **	**-0.108*** **	**-0.0319*** **	**-0.0391*** **
	(-12.38)	(-26.22)	(-30.66)	(-27.95)	(-28.17)
Supplier Percentage Sold	-0.00186	**-0.0403*** **	**-0.0355*** **	-0.00373	**-0.0259*** **
	(-0.816)	(-5.214)	(-9.060)	(-1.609)	(-10.37)
Supplier Pct. Sold x Sup. Negative CAAR Dummy	**-0.181*** **	**0.0659*** **	**0.0437*** **	**-0.00863*** **	0.00296
	(-42.72)	(5.909)	(7.128)	(-2.633)	(0.510)
Foreign Competition	0.000176	0.0128	**0.117** **	**0.0683*** **	**0.0961*** **
	(0.0320)	(0.207)	(2.132)	(12.47)	(16.42)
Herf. Index x Foreign Competition	-0.0404	-0.473	**-1.018*** **	**-0.532*** **	**-0.615*** **
	(-1.337)	(-1.480)	(-3.578)	(-13.36)	(-18.23)
Distr. Target				**-0.0326*** **	**-0.0280*** **
				(-11.07)	(-9.449)
Intercept	**0.0419*** **	**0.0877*** **	**0.0923*** **	**0.0305*** **	**0.0340*** **
	(31.41)	(12.64)	(16.02)	(21.40)	(22.41)
Number of Deals	770	160	160	770	770
Chi^2	1427	1427	1891	6380	6758

Notes: The dependent variable, '*Supplier CAAR'* is measured by cumulating the abnormal returns to an equally-weighted portfolio of supplier companies for each industry over an event window of (-2, 2). All models are estimated using the Weighted Least Squares (WLS) estimation procedure where the weights are measured as one divided by the standard deviation of the residuals. Panel A (Panel B) presents the results pertaining to all (state) supplier companies. '*State Suppliers'* are defined as companies which are domiciled in the same state as the acquirer. Statistical significance at the 1%, 5%, and 10% levels is indicated by the symbols *, **, *** respectively. The t-statistics corresponding to each regression coefficient are presented in parentheses. The sample used for the purposes of the models in this table consists of 1,211 horizontal acquisitions where the acquirer and target companies are both exchange-listed. Please refer to Table 3.3 and the methodology section of this study for a detailed explanation of how each variable is constructed..

Table 3.10 Analysis of Cumulative Abnormal Returns to Competitors

Dependent Variable: Competitor CAR **Panel A: All Competitors**	**Model 1 All Deals**	**Model 2 Distressed Deals (EBITDA)**	**Model 3 Distressed Deals (EBIT)**	**Model 4 All Deals - Distressed Dummies (EBITDA)**	**Model 5 All Deals - Distressed Dummies (EBIT)**
Buyer Power Hypothesis					
Sup. Con.	**0.0285***** (5.302)	-0.0232 (-1.569)	**0.0434***** (5.021)	**0.0365***** (6.467)	**0.0238***** (4.067)
Sup. Con. x Distr. Target				**0.0457***** (2.848)	**0.0570***** (4.155)
Sup. Conc. x Change in Herf. Index	**47.29***** (14.78)	**8.671***** (2.671)	**2.212***** (3.139)	**182.0***** (11.92)	**0.828***** (3.676)
Sup. Conc. x Change in Herf. Index x Distr. Target				-1.421 (-0.867)	**1.964***** (2.656)
Collusion Hypothesis					
Herf. Index	**0.0800***** (14.69)	-0.000139 (-0.00802)	-0.0122 (-1.013)	**0.0720***** (14.71)	**0.0391***** (7.306)
Change in Herf. Index	**-7.037***** (-11.15)	**-10.79***** (-18.85)	**-1.528***** (-8.952)	**-7.648***** (-10.75)	**-2.010***** (-10.93)
Herf. Index x Change in Herf. Index	-2.127 (-0.506)	**9.654***** (3.785)	**1.647***** (2.942)	**17.13***** (4.242)	**-0.850***** (-3.759)
Controls					
Customer Concentration	**-0.0133***** (-5.962)	**-0.0171***** (-2.781)	**-0.0256***** (-5.133)	**-0.0169***** (-7.264)	**-0.0140***** (-7.145)
Foreign Competition	**0.0139***** (6.518)	-0.00820 (-1.195)	-0.00716 (-1.424)	**0.0145***** (7.134)	**0.00501**** (2.306)
Herf. Index x Foreign Competition	**-0.202***** (-8.040)	0.130 (1.589)	0.0987 (1.622)	**-0.195***** (-8.537)	**-0.0720***** (-2.942)
Distr. Target				**-0.0119***** (-5.252)	**-0.0150***** (-7.710)
Intercept	**-0.0105***** (-12.23)	0.00322 (1.130)	**-0.00868***** (-4.450)	**-0.0108***** (-12.55)	**-0.0055***** (-5.965)
Number of Deals	1,049	205	205	1,049	1,049
Chi^2	847.6	701.7	194.1	934.2	427.1

Table 3.10 (Continued)

Dependent Variable: Competitor CARs **Panel B: State Competitors**	**Model 1 All Deals**	**Model 2 Distressed Deals (EBITDA)**	**Model 3 Distressed Deals (EBIT)**	**Model 4 All Deals - Distressed Dummies (EBITDA)**	**Model 5 All Deals - Distressed Dummies (EBIT)**
Buyer Power Hypothesis					
Sup. Con.	**-0.130***** (-41.83)	**-0.0910***** (-3.305)	-0.0197 (-0.895)	**-0.133***** (-42.20)	**-0.292***** (-50.96)
Sup. Con. x Distr. Target				**0.0408*** (1.665)	**0.309***** (11.84)
Sup. Conc. x Change in Herf. Index	**3.473***** (4.714)	**833.4***** (4.273)	**538.9***** (4.809)	**3.597***** (4.876)	**331.8***** (6.303)
Sup. Conc. x Change in Herf. Index x Distr. Target				-24,786 (-0.959)	**321.6***** (3.430)
Collusion Hypothesis					
Herf. Index	**-0.0515***** (-5.531)	**-0.201***** (-5.311)	-0.0283 (-0.996)	**-3.037***** (-21.04)	**-0.100***** (-9.045)
Change in Herf. Index	**-2.934***** (-20.49)	**-172.6***** (-3.095)	**-36.36**** (-2.192)	**-0.0459***** (-4.873)	**-171.0***** (-14.97)
Herf. Index x Change in Herf. Index	0.0426 (0.123)	**888.6***** (2.873)	140.3 (1.551)	-0.0801 (-0.229)	**978.3***** (9.373)
Controls					
Customer Industry Concentration	**-0.0643***** (-17.73)	**-0.118***** (-8.762)	**-0.0536***** (-4.962)	**-0.0617***** (-16.84)	**-0.0479***** (-12.95)
Foreign Competition	**-0.0198***** (-6.179)	-0.00957 (-1.205)	-0.00496 (-0.730)	**-0.0183***** (-5.664)	**-0.00943***** (-2.964)
Herf. Index x Foreign Competition	**0.195***** (5.882)	0.0388 (0.437)	0.0711 (0.903)	**0.184***** (5.514)	**0.0926***** (2.822)
Distr. Target				**-0.0141***** (-3.470)	**-0.0579***** (-22.84)
Intercept	**0.0391***** (28.51)	**0.0560***** (7.647)	0.00277 (0.673)	**0.0388***** (28.10)	**0.0674***** (39.90)
Number of Deals	770	160	160	770	770
Chi^2	9720	154.5	72.94	9766	3952

Notes: The dependent variable, '*Competitor CAAR'* is measured by cumulating the abnormal returns to an equally-weighted portfolio of competitor companies for each industry over an event window of (-2, 2). All models are estimated using the Weighted Least Squares (WLS) estimation procedure where the weights are measured as one divided by the standard deviation of the residuals. Panel A (Panel B) presents the results pertaining to all (state) competitor companies. '*State Competitors'* are defined as companies which are domiciled in the same state as the acquirer. Statistical significance at the 1%, 5%, and 10% levels is indicated by the symbols *, **, *** respectively. The t-statistics corresponding to each regression coefficient are presented in parentheses. The sample used for the purposes of the models in this table consists of 1,211 horizontal acquisitions where the acquirer and target companies are both exchange-listed. Please refer to Table 3.3 and the methodology section of this study for a detailed explanation of how each variable is constructed..

Table 3.11 Analysis of Cumulative Abnormal Returns to Customers

Dependent Variable: Customer CAR	Model 1 All Customers	Model 2 State Customers
Collusion Hypothesis		
Herf. Index	**-0.0169*** **	**0.00177** **
	(-13.88)	(2.129)
Change in Herf. Index	**0.0988*** **	**-0.0242** **
	(5.278)	(-1.997)
Herf. Index x Change in Herf. Index	**-0.140*** **	**-0.954*** **
	(-3.738)	(-3.330)
Controls		
Customer Negative CAR Dummy	**-0.0687*** **	**-0.0388*** **
	(-180.2)	(-57.72)
Customer Input Coefficient	**-0.0375*** **	**-0.0392*** **
	(-12.54)	(-13.42)
Customer Input Coefficient x Cust. Negative CAR Dummy	**0.0446*** **	**0.0731*** **
	(11.99)	(13.51)
Customer Concentration	**-0.00299** **	**0.00737*** **
	(-2.368)	(4.931)
Foreign Competition	**0.0177*** **	**-0.359*** **
	(4.079)	(-77.29)
Herf. Index x Foreign Competition	**-0.0552** **	**1.189*** **
	(-2.243)	(45.86)
Intercept	**0.0406*** **	**0.0234*** **
	(112.4)	(54.61)
Number of Deals	1,049	770
Chi2	1354	3521

Notes: The dependent variable, '*Customer CAR'* is measured by cumulating the abnormal returns to an equally-weighted portfolio of customer companies for each industry over an event window of (-2, 2). All models are estimated using the Weighted Least Squares (WLS) estimation procedure where the weights are measured as one divided by the standard deviation of the residuals. Model 1 (Model 2) presents the results pertaining to all (state) customer companies. '*State Customers'* are defined as companies which are domiciled in the same state as the acquirer. Statistical significance at the 1%, 5%, and 10% levels is indicated by the symbols *, **, *** respectively. The t-statistics corresponding to each regression coefficient are presented in parentheses. The sample used for the purposes of the models in this table consists of 1,211 horizontal acquisitions where the acquirer and target companies are both exchange-listed. Please refer to Table 3.3 and the methodology section of this study for a detailed explanation of how each variable is constructed.

Table 3.12 Summary of Univariate Analysis

	Theoretical Model					Empirical Findings					
Panel A: All Companies	**Buyer Power**	**Buyer Power with distressed target**	**Financial stabilization**	**Collusion**	**Productive Efficiency**	**All M&A**	**M&A of distressed targets**	**Value-creating distressed M&A**	**Value-destroying distressed M&A**	**Value-creating M&A**	**Value-destroying M&A**
Merging companies	+	+/Stronger than with healthy targets	+	+	+	+	+	+	-	+	-
Suppliers	-	-/Stronger than with healthy targets	+	-	+/-	Insignificant	-	Insignificant	-	Insignificant	-
Customers	+/-	+/-	No specific prediction	-	+/-	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
Competitors	+	+/ Stronger than with healthy targets	No specific prediction	+	+/-	+	+	+	Insignificant	+	+

Table 3.12 (Continued)

	Theoretical Model					Empirical Findings					
Panel B: State Companies	**Buyer Power**	**Buyer Power with distressed target**	**Financial stabilization**	**Collusion**	**Productive Efficiency**	**All M&A**	**M&A of distressed targets**	**Value-creating distressed M&A**	**Value-destroying distressed M&A**	**Value-creating M&A**	**Value-destroying M&A**
Merging companies	+	+/Stronger than with healthy targets	+	+	+	+	+/ Stronger than with healthy targets	N/A	N/A	+	-
Suppliers	-	-/Stronger than with healthy targets	+	-	+/-	-	-/Stronger than with healthy targets	N/A	N/A	-	-
Customers	+/-	+/-	No specific prediction	-	+/-	Insignificant	Insignificant	N/A	N/A	Insignificant	Insignificant
Competitors	+	+/ Stronger than with healthy targets	No specific prediction	+	+/-	+	+/ Stronger than with healthy targets	N/A	N/A	+	+

Notes: This table presents the signs of the CAARs (Cumulative Average Abnormal Returns) that accrue to the merging companies, as well as the suppliers, customers and competitors of the acquisition industry. The sample consists of 421 horizontal acquisitions completed between 1985 and 2012. The supplier and customer industries are defined with the use of the benchmark input-output accounts of the US economy following the methodology in Shahrur (2005). The abnormal returns are estimated using the market and risk model. The CAARs to the supplier, customer and competitor industries are calculated on the basis of equally-weighted portfolios of companies which belong to the corresponding industry. Value-creating (value-destroying) acquisitions are defined as acquisitions for which the Combined CAR corresponding to a value-weighted portfolio of the acquirer and target companies is positive (negative). Panel A (Panel B) presents the results pertaining to all (state) companies. State companies are defined as companies which are domiciled in the same state as the acquirer company.

Bibliography

Agrawal, A. and R. Walkling (1994), 'Executive Careers and Compensation Surrounding Takeover Bids', *Journal of Finance,* Vol. 49, pp. 985-1014.

Aharony, J. and A. Dotan (1994), 'Regular Dividend Announcements and Future Unexpected Earnings: An Empirical Analysis', *Financial Review,* Vol. 29, No. 1, pp. 125-51.

Allen, F., A. Bernardo and I. Welch (2000), 'A Theory of Dividends Based on Tax Clienteles', *Journal of Finance,* Vol. 55, No. 6, pp. 2499-536.

Allen, F. and R. Michaely (2003), 'Payout Policy', In *Handbook of the Economics of Finance* 1A, ed. Constantinides, G., Harris, M., Stulz, R. 337-429. Amsterdam: North-Holland-Elsevier.

Alzahrani, M. and M. Lasfer (2012), 'Investor Protection, Taxation, and Dividends', *Journal of Corporate Finance,* Vol. 18, No. 4, pp. 745-62.

Andrade, G., M. Mitchell and E. Stafford (2001), 'New Evidence and Perspectives on Mergers', *Journal of Economic Perspective,* Vol. 15, pp. 103-20.

Anyanwu, J. (2012), 'Why Does Foreign Direct Investment Go Where It Goes?: New Evidence from African Countries', *Annals of Economics and Finance,* Vol.13, No.2, pp. 433-70.

Appadu, N., A. Faelten, S. Moeller and V. Vitkova (2014), 'Assessing Market Attractiveness for Mergers and Acquisitions: The M&A Attractiveness Index Score', *The European Journal of Finance,* Routledge, pp 1-24.

Asquith, P., R. Gertner and D. Scharfstein (1994), 'Anatomy of Financial Distress: An Examination of Junk Bond Issuers', *Quarterly Journal of Economics,* Vol. 109, pp. 625-58.

Bae, K., R. Stultz and H. Tan (2008), 'Do Local Analysts Know More? A Cross-country

Study of the Performance of Local Analysts and Foreign Analysts', *Journal of Financial Economics,* Vol.88, pp. 581-606.

Baker, M., R. Ruback and J. Wurgler (2005), 'Behavioural Corporate Finance: A Survey', *The National Bureau of Economic Research Working Paper No. 10863*. Retrieved from: http://www.nber.org/papers/w10863

Baker, M. and J. Wurgler (2004), 'A Catering Theory of Dividends', *Journal of Finance,* Vol. 59, No. 3, pp. 1125-65.

Barber, B. and J. Lyon (1997), 'Detecting Long-run Abnormal Stock Returns: The Empirical Power and Specification of Test Statistics', *Journal of Financial Economics,* Vol.43, pp. 341-72.

Becker, B, Ivkovic, Z., Weisbenner, S. (2011) 'Local Dividend Clienteles', *Journal of Finance,* Vol. 66, No. 2, pp. 655-83.

Benartzi, S., R. Michaely and R. Thaler (1997), 'Do Changes in Dividends Signal the Future or the Past?', *Journal of Finance,* Vol. 52, No. 3, pp. 1007-34.

Bergström, C., T. Eisenberg, S. Sundgren and M. Wells (2005), 'The Fate of Firms: Explaining Mergers and Bankruptcies', *Journal of Empirical Legal Studies,* Vol. 2, No. 1, pp. 49-85.

Berkovitch, E. and M. Narayanan (1993), 'Motives for Takeovers: An Empirical Investigation', *Journal of Financial and Quantitative Analysis,* Vol. 28, pp. 347-62.

Berthelemy, J. and S. Demurger (2000), 'Foreign Direct Investment and Economic Growth: Theory and application to China', *Review of Development Economics,* Vol.4, No.2, pp. 140-55.

Bouwman, C., K. Fuller and A. Nain (2009), 'Market Valuation and Acquisition Quality: Empirical Evidence', *Review of Financial Studies*, Vol. 22, pp. 633-79.

Brennan, M., J. and H. Cao (1997), 'International Portfolio Investment Flows', *Journal of*

Finance, Vol.52, pp. 1851-80.

Bruner, R. (1988), 'The Use of Excess Cash and Debt Capacity as a Motive for Merger', *Journal of Financial and Quantitative Analysis*, Vol.23, pp. 199-217.

Bushee, B. (1998), 'The Influence of Institutional Investors on Myopic R&D Investment Behaviour', *Accounting Review*, Vol.73, pp. 305-33.

Bushee, B. and C. Noe (2000), 'Corporate Disclosure Practices, Institutional Investors, and Stock Return Volatility', *Journal of Accounting Research*, Vol.38, pp. 171-202.

Black, F (1976), 'The Dividend Puzzle', *Journal of Portfolio Management*, Vol. 2, No. 2, pp. 5-8.

Blair, R. and J. Harrison (1993), '*Monopsony: Antitrust Law and Economics*', Princeton University Press, Princeton, NJ.

Bloster, P. and J. Vahan (1991), 'Dividend Policy and Valuation Effects of the Tax Reform Act of 1986', *National Tax Journal*, Vol. 44, No. 4, pp. 511-18.

Bollaert, H., S. Dereeper and A. Turki (2013), 'Dividend Policy and Mergers and Acquisitions', *SSRN Manuscript*.
Retrieved from: http://ssrn.com/abstract=1628122

Bradley, M., A. Desai and E. Kim (1988), 'Synergistic Gains from Corporate Acquisitions and Their Division between the Stockholders of Target and Acquiring Firms', *Journal of Financial Economics*, Vol. 21, pp. 3-40.

Brav, A., J. Graham, C. Harvey and A. Michaely (2008), 'Managerial Response to the May 2003 Dividend Tax Cut', *Financial Management*, Vol. 37, No. 4, pp. 611-24.

Brav, A., J. Graham, C. Harvey and A. Michaely (2005), 'Payout Policy in the 21st Century', *Journal of Financial Economics*, Vol. 77, No. 3, pp. 483-527.

Brealey, R., C. Myers and F. Allen (2006), *Corporate Finance*, 8th edition, McGraw–Hill Irwin.

Brook, Y., D. Charlton and R. Hendershott (1998), 'Do Firms Use Dividends to Signal Large Future Cash Flow Increases?', *Financial Management*, Vol. 27, No. 3, pp. 46-57.

Brown, S. and J. Warner (1985), 'Using Daily Stock Returns: The Case of Event Studies', *Journal of Financial Economics,* Vol. 14, pp. 3-31.

Bruner, R. (2002), 'Does M&A Pay? A Survey for the Decision-maker', *Journal of Applied Finance,* Vol. 12, pp. 48-60.

Bulan, L. and N. Subramanian (2009), '*Dividends and Dividend Policy*', Theory of Dividends, Ed. Kent, B., John Wiley and Son inc Haboken New Jesrsey.

Carow K., R. Heron and T. Saxton (2004), 'Do Early Birds Get the Returns? An Empirical Investigation of Early-mover Advantages in Acquisitions', *Strategic Management Journal*, Vol.25, pp. 563-85.

Casey, K., D. Anderson and R. Dickens (1999), 'Examining the Impact of the 1986 Tax Reform Act on Corporate Dividend Policy: A New Methodology', *Financial Review*, Vol. 34, No. 3, pp. 33-46.

Chen, X., J. Harford and K. Li (2007), 'Monitoring: Which Institutions Matter?', *Journal of Financial Economics*, Vol.86, pp. 279-305.

Chetty, R. and E. Saez (2005), 'Dividend Taxes and Corporate Behaviour: Evidence from the 2003 Dividend Tax Cut', *Quarterly Journal of Economics*, Vol. 120, No. 3, pp. 791-833.

Clark, K. and E. Ofek (1994), 'Mergers as a Means of Restructuring Distressed Firms: An Empirical Investigation', *Journal of Financial and Quantitative Analysis,* Vol. 29, pp. 541-65.

Comment, R. and G. Schwert (1995), 'Poison or placebo? Evidence on the Deterrence and Wealth Effects of Modern Antitakeover Measures', *Journal of Financial Economics*, Vol. 39, pp. 3-43.

Conn, R., A. Cosh, A., P. Guest and A. Hughes (2005), 'The Impact on UK Acquirers of Domestic, Cross-border, Public, and Private Acquisitions', *Journal of Business Finance & Accounting*, Vol.32, No.5, pp. 815-70.

Copeland, T., F. Weston and K. Shastri (2005), '*Financial Theory and Corporate Policy*', 4th edition, Pearson Education, International Edition.

Cosh, A. and P. Guest (2001), 'The Long-run Performance of Hostile Takeovers: UK Evidence', *ESRC Centre for Business Research Working Papers* (ESRC Centre for Business Research).

Retrieved from: http://www.cbr.cam.ac.uk/pdf/WP215.pdf

Coval, J. and T. Moskowitz (2001), 'The Geography of Investment: Informed Trading and Asset Prices', *Journal of Political Economy*, Vol.109, pp. 811-41.

Coval, J. and T. Moskowitz (1999), 'Home Bias at Home: Local Equity Preference in Domestic Portfolios', *Journal of Finance*, Vol. 54, pp. 2045-73.

Danbolt, J. and G. Maciver (2012), 'Cross-border versus Domestic Acquisitions and the Impact on Shareholder Wealth', *Journal of Business Finance & Accounting*, Vol.39, No.7, pp. 1028-67.

DeAngelo, H., L. DeAngelo and D. Skinner (1996), 'Reversal of Fortune: Dividend Signalling and the Disappearance of Sustained Earnings Growth', *Journal of Financial Economics*, Vol. 40, No. 3, pp. 341-71.

DeAngelo, H., L. DeAngelo and D. Skinner (1992), 'Dividends and Losses', *Journal of Finance*, Vol. 47, No. 5, pp. 1837-63.

DeAngelo, H., L. DeAngelo and R. Stulz (2006), 'Dividend Policy and the Earned/Contributed Capital Mix: A Test of the Life-Cycle Theory', *Journal of Financial Economics*, Vol. 81, No. 2, pp. 227-54.

Del Guercio, D. (1996), 'The Distorting Effect of the Prudent-man Laws on Institutional

Equity Investments', *Journal of Financial and Economics*, Vol. 40, pp. 31-62.

Denis, D. and I. Osobov (2008), 'Why Do Firms Pay Dividends? International Evidence on the Determinants of Dividend Policy', *Journal of Financial Economics*, Vol. 89, No. 1, pp. 62-82.

Desai, M. and L. Jin (2011), 'Institutional Tax Clienteles and Payout Policy', *Journal of Financial Economics*, Vol. 100, No. 1, pp. 68-84.

Devos, E., P. Kadapakkam and S. Krishnamurthy (2008), 'How Do Mergers Create Value? A Comparison of Taxes, Market Power, and Efficiency Improvements as Explanations for Synergies', *Review of Financial Studies*, Vol. 22, pp. 1179-211.

Dhaliwal, D., M. Erickson and R. Trezevant (1999), 'A Test of the Theory of Tax Clienteles or Dividend Policies', *National Tax Journal*, Vol. 52, pp. 179-94.

Djankov, S., O. Hart, C. McLeish and A. Shleifer (2007), 'Private Credit in 129 Countries', *Journal of Financial Economics*, Vol. 84, pp. 299-329.

Domowitz, I., G. Hubbard and B. Petersen (1986), 'Business Cycles and the Relationship between Concentration and Price-costs Margins', *RAND Journal of Economics*, Vol. 17, pp. 1-17.

Dye, R. and S. Sridhar (2003), 'Investment Implications of Information Acquisition and Leakage', *Management Science*, Vol. 49, pp.767-83.

Eckbo, E. (1983), 'Horizontal Mergers, Collusion, and Stockholder Wealth' *Journal of Financial Economics*, Vol. 11, pp. 241-73.

Eckbo, E. (1985), 'Mergers and the Market Concentration Doctrine: Evidence from the Capital Market', *Journal of Business*, Vol. 58, pp. 325-49.

Eckbo, E. (1992), 'Mergers and the Value of Antitrust Deterrence', *Journal of Finance*, Vol. 47, pp. 1005-29.

Ejie, H. and W. Megginson (2008), 'Dividend and Share Repurchases in the European

Union', *Journal of Financial Economics*, Vol. 89, No. 2, pp. 347-74.

Faccio, M. and R. Sengupta (2006), 'Corporate Response to Distress: Evidence from the Asian Financial Crisis', *Federal Reserve Bank of St. Louis Working Paper Series No 004A.*

Retrieved from: http://research.stlouisfed.org/publications/review/11/03/127-154Sengupta.pdf

Fama, E. and K. French (2001), 'Disappearing Dividends: Changing Firm Characteristics or Lower Propensity to Pay?', *Journal of Financial Economics*, Vol. 60, No. 1, pp. 3-43.

Fama, E. and K. French (2002), 'Testing Trade-Off and Pecking Order Predictions about Dividends and Debt', *Review of Financial Studies*, Vol. 15, No. 1, pp. 1-33.

Fan, J. and L. Lang (2000), 'The Measurement of Relatedness: An Application to Corporate Diversification', *Journal of Business*, Vol. 73, pp. 629-60.

Farrar, D. and L. Selwyn (1967), 'Taxes, Corporate Financial Policy and Return to Investors', *National Tax Journal*, Vol. 20, No. 4, pp. 444-54.

Fee, C. and S. Thomas (2004), 'Sources of Gains in Horizontal Mergers: Evidence from Customer, Supplier, and Rival Firms', *Journal of Financial Economics*, Vol. 74, pp. 423-60.

Ferreira, M., M. Massa and P. Matos (2009), 'Shareholders at the Gate? Institutional Investors and Cross-border Mergers and Acquisitions', *The Review of Financial Studies*, Vol.23, pp. 601-44.

Financial Reporting Council (2010), 'UK Stewardship Code'.

Retrieved from: https://www.frc.org.uk/getattachment/e2db042e-120b-4e4e-bdc7d540923533a6

Franks, J., K. Nyborg and W. Torous (1996), 'A Comparison of US, UK, and German Insolvency Codes', *Financial Management*, Vol. 25, No. 3, pp. 86-101.

Frank, R. and D. Solomon (2002), 'Cable Industry Mergers? Let's Count the Ways', *The Wall Street Journal*, January 22, C1.

Fuller, K., J. Netter and M. Stegemoller (2002), 'What do Returns to Acquiring Firms Tell Us? Evidence from Firms that Make Many Acquisitions', *Journal of Finance*, Vol.57, pp. 1763-94.

Galbraith, J. (1952), '*American Capitalism: The Concept of Countervailing Power*', Houghton-Mifflin, Boston.

Gaughan, P. (2005) *'Merger: What Can Go Wrong and How to Prevent It'*, John Wiley & Sons Inc, United States.

Gietzmann, M. (2006), 'Disclosure of Timely and Forward-looking Statements and Strategic Management of Major Institutional Ownership', *Long Range Planning*, Vol.39, No.4, pp. 409-27.

Gonedes, N. (1978) 'Corporate Signalling, External Accounting, and Capital Market Equilibrium: Evidence on Dividends, Income, and Extraordinary Items', *Journal of Accounting Research*, Vol. 16, No. 1, pp. 26-79.

Graham, J., Kumar, A. (2006), 'Dividend Preference of Retail Investors: Do Dividend Clienteles Exist?' *Journal of Finance*, Vol. 6, No. 3, pp. 1305-36.

Graham, J., L. Lemmon and G. Wolf (2002), 'Does Corporate Diversification Destroy Diversification', *Journal of Finance*, Vol. 57, No. 2, pp. 695-720.

Grinblatt, M. and M. Keloharju (2001), 'How Distance, Language, and Culture Influence Stockholdings and Trades', *Journal of Finance,* Vol.56, pp. 1053-73.

Grinstein, Y. and R. Michaely (2005), 'Institutional Holdings and Payout Policy', *Journal of Finance*, Vol. 60, No. 3, pp. 1389-426.

Grullon, G., R. Michaely, S. Benartzi and R. Thaler (2005), 'Dividend Changes Do Not Signal Changes in Future Profitability', *Journal of Business*, Vol. 78, No. 5, pp.

1659-82.

Harzing, A. (2002), 'Acquisitions versus Greenfield Investments: International Strategy and Management of Entry Modes', *Academy of Management Journal*, Vol. 49, pp. 357-70.

Hau, H. (2001), 'Location Matters: an examination of trading profits', *Journal of Finance*, Vol. 56, pp. 1959-83.

Healy, P., K. Palepu and R. Ruback (1992), 'Does Corporate Performance Improve after Mergers?', *Journal of Financial Economics* Vol. 31, pp. 135-76.

Hoberg, G. and R. Prabhala (2009), 'Disappearing Dividends: The Importance of Idiosyncratic Risk and the Irrelevance of Catering', *Review of Financial Studies*, Vol. 22, pp. 79-116.

Holl, P. and J., F. Pickering (1988), 'The Determinants and Effects of Actual Abandoned and Contested Mergers', *Managerial and Decision Economics*, Vol.9, pp. 1-19.

Holland, J. (2006), 'Fund Management, Intellectual Capital, Intangibles and Private Disclosure', *Managerial Finance*, Vol.32, pp. 277-316.

Holmen, M., J. Knopf and P. Stefan (2008), 'Inside Shareholders' Effective Tax Rates and Dividends', *Journal of Banking and Finance*, Vol. 32, No. 9, pp. 1860-69.

Hotchkiss, E. and S. Lawrence (2007), 'Empirical Evidence on the Existence of Dividend Clienteles', *SSRN Manuscript*.
Retrieved from: http://dx.doi.org/10.2139/ssrn.1001429

Hotchkiss, E. and R. Mooradian (1998), 'Acquisitions as a Means of Restructuring Firms in Chapter 11', *Journal of Financial Intermediation*, Vol. 7, No. 3, pp. 240-62.

Huang, Y. and R. Walkling (1987), 'Target Abnormal Returns Associated with Acquisition Announcements – Payment, Acquisition Form, and Managerial Resistance', *Journal of Financial Economics*, Vol.19, pp. 329-49.

Huberman, G. (2001), 'Familiarity Breeds Investment', *The Review of Financial Studies*, Vol.14, pp. 659-80.

Jain, R. (2007), 'Institutional and Individual Investor Preferences for Dividends and Share Repurchases', *Journal of Economics and Business*, Vol. 59, No. 5, pp. 406-29.

Jennings, R. and M. Mazzeo (1991), 'Stock Price Movements around Acquisition Announcements and Management's Response', *Journal of Business*, Vol.64, pp.139-63.

Jensen, M. (1986), 'Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers', *American Economic Review*, Vol. 76, No. 2, pp. 323-9.

Jensen, M. (1991), 'Corporate Control and the Politics of Finance', *Journal of Applied Corporate Finance,* Vol. 4, No. 2, pp. 13-33.

Jensen, M. (1993), 'The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems', *Journal of Finance,* Vol. 48, pp. 831-80.

Jensen, M. and W. Meckling (1976), 'Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure', *Journal of Financial Economics*, Vol. 3, pp. 305-60.

Jensen, M. and R. Ruback (1983), 'The Market for Corporate Control: The Scientific Evidence', *Journal of Financial Economics*, Vol. 11, pp. 5-50.

Jeon, J., J. Ligon and C. Sorankom (2010), 'Dividend Policy and the Method of Payment in Mergers and Acquisitions', *Unpublished Manuscript*.
Retrieved from: http://www.apjfs.org/conference/2010/cafm2010/5-3.pdf

Kale, J., O. Kini and J. Payne (2012), 'On the Dividend Initiation Decisions of Newly Public Firms', *Journal of Financial and Quantitative Analysis*, Vol. 47, pp. 365-96.

Katics, M. and B. Petersen (1994), 'The Effect of Rising Import Competition on Market Power: A Panel Data Study of US Manufacturing', *Journal of Industrial Economics*, Vol. 42, pp. 277-86.

Kang, J. and M. Stulz (1997), 'Why is There a Home Bias?', *Journal of Financial Economics*, Vol.46, pp. 3-28.

Kouvelis, P. and W. Zhao (2012), 'Financing the Newsvendor: Supplier vs. Bank, and the Structure of Optimal Trade Credit Contracts', Operations Research, Vol. 60, No.3, pp. 566-80.

Lang, L. and R. Litzenberger (1989), 'Dividend Announcements: Cash Flow Signalling vs. Free Cash Flow Hypothesis', *Journal of Financial Economics*, Vol. 24, No. 1, pp. 137-54.

Lang, L. and R. Stulz (1992), 'Contagion and Competitive Intra-industry Effects of Bankruptcy Announcements', *Journal of Financial Economics*, Vol. 32, pp. 45-60.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (1997), 'Legal Determinants of External Finance', *Journal of Finance*, Vol.52, pp. 1131-50.

Lee, K., F. (2010), 'Demographics, Dividend Clienteles and the Dividend Premium', *Quarterly Review of Economics and Finance*, Vol. 51, No. 4, pp. 368-75.

Lewellen, G., K. Stanley, R. Lease and G. Schlarbaum (1978), 'Some Direct Evidence on the Dividend Clientele Phenomenon', *Journal of Finance*, Vol. 33, No. 5, pp. 1385-99.

Li, K. (2004), 'Confidence in the Familiar: an international perspective', *Journal of Financial and Quantitative Analysis*, Vol.39, pp. 47-68.

Li, W. and E. Lie (2006), 'Dividend Changes and Catering Incentives', *Journal of Financial Economics*, Vol. 80, No. 2, pp. 293-308.

Lie, E. (2000), 'Excess Funds and Agency Problems: An Empirical Study of Incremental Disbursements', *Review of Financial Studies*, Vol. 13, No. 1, pp. 219-47.

Lintner, J. (1956), 'Distribution of Incomes of Corporations among Dividends, Retained Earnings, and Taxes', *American Economic Review*, Vol. 46, No. 2, pp. 97-113.

Liu, X., C. Shu and P. Sinclair (2009), 'Trade, Foreign Direct Investment and Economic

Growth in Asian Economies', *Applied Economics*, Vol.41, No.13, pp. 1603-12.

Loughran, T. and A. Vijh (1997), 'Do Long-term Shareholders Benefit from Corporate Acquisitions?', *Journal of Finance*, Vol.52, pp. 1765-90.

Ivkovic, Z. and S. Weisbenner (2005), 'Local Does as Local Is: Information content of the Geography of Individual Investors' Common Stock Investments', *Journal of Finance*, Vol.60, pp. 267-306.

Maksimovic, V. and G. Phillips (2001), 'The Market for Corporate Assets: Who Engages in Mergers and Asset Sales and Are There Efficiency Gains?', *Journal of Finance*, pp. 2019-65.

Malloy, C., J. (2005), 'The Geography of Equity Analysis', *Journal of Finance*, Vol.60, pp. 719-55.

Maquieira, C., W. Megginson and L. Nail (1998), 'Wealth Creation Versus Wealth Redistributions in Pure Stock for Stock Mergers', *Journal of Financial Economics*, Vol. 48, pp. 3-33.

Martin, K. and J. McConnell (1991), 'Corporate Performance, Corporate Takeovers, and Management Turnover', *Journal of Finance*, Vol. 46, pp. 671-87.

Martynova, M., S. Oosting and L. Renneboog (2006), 'The Long-term Operating Performance of European Mergers and Acquisitions', in *Advances in Corporate Finance and Asset Pricing*, L. Renneboog (ed.), Amsterdam: Elsevier.

Martynova, M. and L. Renneboog (2006), 'Mergers and Acquisitions in Europe', in *Advances in Corporate Finance and Asset Pricing*, L. Renneboog (ed.), Amsterdam: Elsevier.

Megginson, L., A. Morgan and L. Nail (2004), 'The Determinants of Positive Long-term Performance in Strategic Mergers: Corporate focus and cash', *Journal of Banking and Finance*, Vol.28, pp. 523-52.

Mateev, M. (2009), 'Determinants of Foreign Direct Investment in Central and Southeastern

Europe: New empirical tests', *Oxford Journal*, Vol.8, No.1, pp. 133-49.

Michaely, R., R. Thaler and K. Womack (1995), 'Price Reactions to Dividend Initiations and Omissions: Overreaction and Drift?', *Journal of Finance*, Vol. 50, pp. 573-608.

Mikkelson, W. and M. Partch (1988), 'Withdrawn Security Offerings', *Journal of Financial and Quantitative Analysis* 23, 119-33.

Miller, M. and F. Modigliani (1961), 'Dividend Policy, Growth, and the Valuation of Shares', *Journal of Business*, Vol. 34, No. 4, pp. 411-33.

Mitchell, M., L. and J., H. Mulherin (1996), 'The Impact of Industry Shocks on Takeover and Restructuring Activity', *Journal of Financial Economics*, Vol. 41, pp. 193-229.

Mitchell, M. and E. Stafford (2000), 'Managerial Decisions and Long-term Stock Price – Performance', *Journal of Business*, Vol.73, No.3, pp. 287-329.

Moeller, S. and F. Schlingemann (2005), 'Global Diversification and Acquirer Gains: A Comparison between Cross-border and Domestic Acquisitions', *Journal of Banking and Finance*, Vol. 29, pp. 533-64.

Mulherin, H., J. and A., L. Boone (2000), 'Comparing Acquisitions and Divestitures', *Journal of Corporate Finance*, Vol. 6, pp. 117-39.

Nieuwerburgh, S. and L. Veldkamp (2009), 'Information Immobility and the Home Bias Puzzle', *Journal of Finance*, Vol. 64, No.3, pp. 1187-215.

Nissim, D. and A. Ziv (2001), 'Dividend Changes and Future Profitability', *Journal of Finance*, Vol. 56, No. 6, pp. 2111-33.

Ogden, J., F. Jen and P. O'Connor (2003), '*Advanced Corporate Finance: Policies and Strategies*', Upper Saddle River, NJ: Prentice Hall.

Page, D., S. Jahera and W. Pugh (1996), 'The Effect of Takeover Defences on the Firm Dividend Decision', *Journal of Economics and Finance*, Vol. 20, No. 3, pp. 49-58.

Papaioannou, J. and C. Savarese (1994), 'Corporate Dividend Policy Response to the Tax

Reform Act of 1986', *Financial Management,* Vol. 23, No. 1, pp. 56-63.

Penman, S. (1983), 'The Predictive Content of Earnings Forecasts and Dividends', *Journal of Finance,* Vol. 38, No. 4, pp. 1181-99.

Perez-Gonzales, F. (2003), 'Large Shareholders and Dividends: Evidence from U.S. Tax Reforms', *SSRN Manuscript*.

Retrieved from: http://ssrn.com/abstract=337640

Perotti, E., C. and K., E. Spier (1993) 'Capital Structure as a Bargaining Tool: The role of Leverage in Contract Renegotiation', *American Economic Review,* Vol. 83, No. 5, pp. 1131-41.

Pettit, R. (1977), 'Taxes, Transaction Costs and the Clientele Effect of Dividends', *Journal of Financial Economics,* Vol. 5, pp. 419-36.

Porter, M. (1993), 'The Competitive Advantage of Nations', *Journal of Development Economics,* Vol.40, No.2, pp. 399-404.

Quazi, R. (2007), 'Economic Freedom and Foreign Direct Investment in East Asia', *Journal of the Asia Pacific Economy,* Vol.12, No.3, pp. 329-44.

Ravenscraft, D. (1983), 'Structure-profit Relationship at the Line of Business and Industry Level', *Review of Economics and Statistics,* Vol. 65, pp. 22-31.

Rau, P. and T. Vermaelen (1998), 'Glamour, Value and the Post-acquisition Performance of Acquiring Firms', *Journal of Financial Economics,* Vol.49, pp. 223-53.

Ravid, S., A., and S. Sundgren (1998), 'The Comparative Efficiency of Small-firm Bankruptcies: A Study of the US and Finnish Bankruptcy Codes', *Financial Management,* Vol. 27, No. 4, pp. 28-40.

Rossi, S., and P., F. Volpin (2004), 'Cross-country Determinants of Mergers and Acquisitions.' *Journal of Financial Economics,* Vol. 74, pp. 277-304.

Ryngaert, M. and R. Scholten (2010), 'Have Changing Takeover Defence Rules and

Strategies Entrenched Management and Damaged Shareholders? The Case of Defeated Takeover Bids', *Journal of Corporate Finance,* Vol. 16 (1), 16-37.

Saborowski, C. (2011), 'Can Financial Development Cure the Dutch Disease?', *International Journal of Finance & Economics,* Vol.16, No.3, pp. 218-36.

Schlingemann, F., P., R. Stultz and S., B. Moeller (2005), 'Wealth Destruction on a Massive Scale: A Study of Acquirer Firm Returns in the Recent Merger Wave', *Journal of Finance,* Vol.60, pp. 757-82.

Scholz, J., K. (1992), 'A Direct Examination of the Dividend Clientele Hypothesis', *Journal of Public Economics,* Vol. 49, pp. 261-85.

Schwert, G. (2000), 'Hostility in Takeovers: In the Eyes of the Beholder', *Journal of Finance,* Vol. 55, pp. 2599-640.

Sekkat, K. and M. Veganzones-Varoudakis (2004), 'Trade and Foreign Exchange Liberalisation, Investment Climate and FDI in the MENA Countries', *Unpublished Manuscript* (Centre d'Etudes et de Recherches sur le Développement International). Retrieved from: http://publi.cerdi.org/ed/2004/2004.30.pdf

Servaes, H. (1991), 'Tobin's Q and the Gains from Takeovers', *Journal of Finance,* Vol. 46, pp. 409-419.

Shahrur, H. (2005), 'Industry Structure and Horizontal Takeovers: Analysis of Wealth Effects on Rivals, Suppliers, and Corporate Customers', *Journal of Financial Economics,* Vol. 76, pp. 61-98.

Snyder, C. (1996), 'A Dynamic Theory of Countervailing Power', *Rand Journal of Economics,* Vol. 27, pp. 747-69.

Song, M. and R. Walkling (2000), 'Abnormal Returns to Rivals of Acquisition Targets: A Test of the ''Acquisition Probability Hypothesis''', *Journal of Financial Economics,* Vol. 55, pp. 143-71.

Stigler, G., J. (1964), 'A Theory of Oligopoly', *The Journal of Political Economy*, Vol. 72, pp. 44-61.

Strickland, D. (1996), 'Determinants of Institutional Ownership: Implications for Dividend Clienteles', *SSRN Manuscript*.
Retrieved from: http://ssrn.com/abstract=8204

Tong, T., T. Alessandri, J. Reuer and A. Chintakananda (2008), 'Sources of Valuable Growth Options: A multi-country analysis', *Journal of International Business Studies*, Vol.39, pp. 387-405.

Travlos, N. (1987), 'Corporate Takeover Bids, Method of Payment and Bidding Firm's Stock Returns', *Journal of Finance*, Vol. 42, pp. 943-963.

Uysal, V., S. Kedia and V. Panchapagesan (2008), 'Geography and Acquirer Returns', *Journal of Financial Intermediation*, Vol.17, pp. 256-75.

Watts, R. (1973), 'The Information Content of Dividends', *Journal of Business*, Vol. 46, No. 2, pp. 191-211.

Weston, J., F., M., L. Mitchell and J., H. Mulherin '*Takeovers, Restructuring, and Corporate Governance*', Prentice Hall 2004 (4th edition).

Wilner, B., S. (2000) 'The Exploitation of Relationships in Financial Distress: The Case of Trade Credit', *The Journal of Finance*, Vol. 55, No. 1, pp. 153-78.

Winter, J. (2011), 'Shareholder Engagement and Stewardship: The Realities and Illusions of Institutional Share Ownership', *SSRN Manuscript*.
Retrieved from: http://ssrn.com/abstract=1867564

Wong, S. (2010), 'Index-based Investing Mars Stewardship', *Financial Times*, 13 June.

Yang, S., A. and J., R. Birge (2009) 'How Inventory is (Should Be) Financed: Trade Credit in Supply Chains with Demand Uncertainty and Costs of Financial Distress', *Unpublished Manuscript*.

Retrieved from SSRN eLibrary doi:10.2139/ssrn.1734682.

Yang, S., J. Birge and J. Parker (2014), 'The Supply Chain Effects of Bankruptcy', *SSRN Manuscript*.

Retrieved from http://ssrn.com/abstract=2080436.

Yartey, C., A. (2008), 'The Determinants of Stock Market Development in Emerging Economies: Is South Africa different?', *IMF Working Paper WP 08/32*.

Retrieved from http://www.imf.org/external/pubs/ft/wp/2008/wp0832.pdf

Zhang, G. (2010), 'Emerging from Chapter 11 Bankruptcy: Is It Good News or Bad News for Industry Competitors? ', *Financial Management*, Vol. 39, No. 4, pp. 1719-42.

Zingales, L. and R. Rajan (1995), 'What Do We Know about Capital Structure? Some Evidence from International Data', *Journal of Finance,* Vol. 50, pp. 1421-60.