M&A Non-Consummation – A Strategic Option?

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ABSTRACT
Title: M&A Non-Consummation - A Strategic Option?
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This study examines the viability of treating M&A non-consummation decisions (NCDs) as strategic options. A review of published research in strategic management journals reveals that this topic has yet to undergo rigorous academic examination. Putting the M&A non-consummation phenomenon under a strategic management lens, this study asks the following research questions about the acquiring firm: 1) How does an M&A NCD affect the market value of firms? 2) Under what conditions does an M&A non-consummation enhance firms' value? And 3) How can an NCD be executed so that it favorably affects the value of the firm?

Study data were collected from numerous secondary sources such as CRSP, Ward's Business Directory, Lexis-Nexis Academic Database etc. The study sample size was 158 and for each NCD event, several variables were computed. With cumulative abnormal returns for a (-30, -1) pre-event period -- as a measure of firm performance -- as the dependent variable, multiple regression estimation used the following independent variables: strategic fit, relatedness, cultural fit, timing of NCD and coverage of NCDs. In estimating the regression models, confounding events were identified and controlled for. Several of the study hypotheses are supported, notably the hypotheses pertaining to cultural fit and timing of the NCD. Findings and implications are discussed. Taken as a whole, the study highlights the value of treating M&A NCDs as part of the repertoire of strategic options of acquiring firms.

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CHAPTER 1

INTRODUCTION

This study examines the viability of treating M&A non-consummation decisions (NCDs) as strategic options. At the highest level the question we are trying to answer is the following – In an M&A transaction how must we view a firm's decision to call it quits on an impending merger/acquisition?   Is it the option of last resort when all efforts to complete the deal have been exhausted? Or is it a strategic move? A high profile case such as the GM-Fiat five-year saga (Stein, 2005) can influence the perception of M&A non-consummations as salvaging or face-saving acts in an M&A transaction gone haywire. However, we contend that the GM-Fiat case is but one of many M&A non-consummations that happen every year. A cursory examination of even a few of these other cases suggests notable variation in the timing, rationale and outcomes of the M&A non-consummation decision (Bartlett, 2004; Cecil, 2001; Messmer, 2006; Salmon, & Roy, 2006; Stein, 2005).

Clearly, not all M&A non-consummations fit the archetype of "M&A transactions of last resort" or "failed M&A transactions". In some instances, we expect the unfolding of a subtle, underlying phenomenon that closely parallels what noted M&A scholars, consultants and practitioners strongly recommend (Bruner, 2004; Paulson, 2001). According to Bruner (2004: 63), any firm engaging in M&A transactions "…must have the discipline to walk away from uneconomic deals". They further caution that there can be no M&A deal that a firm must treat as a "must-have" (p. 788). No matter what the extent of prior investment in due diligence,

negotiations and other processes that precede the completion of an M&A transaction, firms must always keep open the strategic option of non-consummating the transaction.

A review of published research in strategic management journals reveals that this topic has yet to undergo rigorous academic examination. Studies that have explored this topic are few and far in between (Asquith, 1983; Davidson III, Dutia, & Cheng, 1989; Davidson III, Rosenstein, & Sundaram, 2002; Dodd, 1980; Hviid, & Prendergast, 1993; Pickering, 1983; Taffler, & Holl, 1991) and generally limited to economists and finance scholars. These studies have examined the effect of M&A non-consummations on firm value and how these effects vary across acquiring and target firms. These are natural questions to ask for an initial examination of this phenomenon, however more nuanced understandings are required to treat M&A non-consummations as a strategic option for firms. Accordingly, in this study the M&A non-consummation phenomenon is put under a strategic management lens. The research questions that motivate and drive this study are: 1) How does an M&A NCD affect the market value of firms? 2) Under what conditions does an M&A non-consummation enhance firms' value? And 3) How can an NCD be executed so that it favorably affects the value of the firm?

This line of research is important because it resonates well with the essence of a successful M&A culture, namely that, the emphasis should be "… not on closing a high number of deals, but closing good deals" (Bruner, 2004: 788). If firms must include a non-consummation as a potent strategic option in their overall M&A transaction related strategy, there is obviously the need for understanding how best they can execute and leverage this strategy option. Our primary contribution, therefore, is that we attempt to reshape thinking about

M&A NCDs by bringing it within the strategic management radar. We treat NCDs not as failures or options of last resort, rather as valuable options within a firm's M&A strategy.

The study is structured as follows. Chapter 2 provides a literature review of prior research on M&As, M&A non-consummation decisions and two streams of research (strategic management and information economics) that provide the theoretical background for this study. The focus in Chapter 3 is on proposing testable hypotheses. Methodological details and results are discussed in Chapter 4 and Chapter 5 respectively. The final chapter is on discussion and conclusion.

Before we proceed to the next chapter it is important to discuss the scope of this study. In this study, we limit the examination of M&A NCDs as strategic options to the acquiring firms involved in an announced M&A deal. Our decision to limit the focus to acquiring firms was driven by a review of extant literature on this topic. The limited literature that exists on non-consummated M&As is skewed toward examination and discussion of impact on target firms [1] (Davidson III et al., 1989; Davidson III et al., 2002; Pickering, 1983; Sullivan, Jensen, & Hudson, 1994). Implications for acquiring firms typically have found a cursory mention in these studies.

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[1] The exception is Asquith (1983). Asquith examined abnormal returns through the entire merger process for successful and unsuccessful merger bids by following the stock returns of target and acquiring firms. Returns were examined from 480 trading days prior to a merger bid to 240 trading days after a merger outcome.

CHAPTER 2

LITERATURE REVIEW

In this chapter we build a theoretical grounding for subsequent chapters. We begin by reviewing extant research on M&As to determine how and where M&A non-consummations fit within the realm of M&A transactions / outcomes. This is followed by a review of selected studies on M&A non-consummations that give us a perspective on prior research on this topic. Next, we delve into our choice of terminology for the phenomenon of interest and examine its relevance and importance. Finally, we review prior work on two streams of research that form the theoretical underpinning for this study. The two streams of research are: 1) strategic management research on M&A transactions and 2) information economics with particular focus on information asymmetry and informational credibility.

M&A Non-Consummation within the Realm of M&A Transactions / Outcomes

Most of the scholarly understanding on M&As is rooted in studies of M&A transactions that have successfully traversed the announcement to consummation route: e.g., *relationship between organizational fit and post-M&A performance* (Datta, 1991), *relationship between strategic fit and post-M&A performance* (Chatterjee, 1986; Lubatkin, 1987), *why bidding firms pay too much for their target firms* (Roll, 1983), and *post-M&A manager turnover* (Walsh, 1988). Lack of research on non-consummation of M&As is perhaps because non-consummation may be perceived as no M&A (after all) and therefore not deemed worthy of examination. However, this could be a shortsighted perspective. Like the proverbial saying "there are two

sides to a coin", there are two sides to the non-consummation of a planned merger. Therefore, although non-consummation is a failure (of a proposed merger), it may be in certain instances, specifically where a sub-optimal merger is averted, be considered a success. Several factors can result in announced mergers not going through to consummation, including governmental / regulatory intervention, price disagreements, change of mind, among others (Pickering, 1983). The explanation we are interested in pertains to strategic thinking on the part of the managers wherein they "…decide to break off the engagement and return the presents than to go through with the wedding" (*Economist*, 1999). In fact, there is evidence of intermittent research interest in M&A topics that depart from the dominant research theme in M&A research and come close to broaching our research topic: e.g., *abandoned mergers* (Pickering, 1983), *cancelled mergers* (Davidson III, Rosenstein, & Sundaram, 2002), and *failed mergers* (Davidson III, Dutia, & Cheng, 1989). Perhaps the most notable difference between our study and the prior studies, is in the perspective framing our research effort. In a departure from prior studies which consider NCDs as unsought events or "non-events", our study treats an NCD as a strategic option, one that an acquiring firm can include within its strategy repertoire.

Prior Studies on M&A Non-Consummations

In this section we review prior studies that have examined this topic. A summary of these studies is provided in Table 1.

Table 1. Studies Examining the Effect of M&A Non-consummations on Acquiring Firms

	Study Objective and Design	Findings
Asquith, 1983	Examined abnormal stock returns of firms that engage in merger bids. Study sample divided into four subsets based on the outcome of the bid and on whether the firm is a bidding or target firm.	Abnormal returns occurred over an extended period -- from "press date" to "outcome date". In the case of unsuccessful bids, the initial positive abnormal returns were reversed for bidding and target firms.
Pickering, 1983	Qualitative study of abandoned mergers. Looked at the characteristics, causes, and consequences of abandoned mergers.	The reasons for abandonment of proposed mergers are complex. Overall, merger abandonments were not harmful to the firms.
Davidson III, Dutia, & Cheng, 1989	Examined market reaction to merger cancellations. Two criteria used for analyzing the results: party responsible for canceling the merger and post-cancellation merger activity.	Bidding firms generally did not gain from failed mergers. Target firms gained from merger cancellations regardless of the terminating party provided they were involved in follow-up merger activity.
Taffler, & Holl, 1991	Examined the financial performance of merger abandonments for a sample of UK firms (bidder and target firms).	Found no evidence to support the theory that the market for corporate control influences performance of firms in abandoned mergers. Financial performance of bidder and target firms showed no significant improvement.
Hviid, & Prendergast, 1993	Used game theoretic explanations to illustrate the effect of unsuccessful merger proposals on the expected profitability of firms (bidder and target).	Target firms always gain. The effect on bidder firms was inconclusive.

In one the earliest and oft-cited studies that examined this topic, Dodd (1980) examined the market reaction to announcements and outcomes (acceptance or rejection) of merger proposals for bidding and target firms. The empirical findings for canceled mergers were -- slightly positive returns for acquiring firms and significant negative returns for target firms. Based on these observations it appears that on average the market sees the cancellation of a proposed merger as in conflict with target firm shareholders' interests. The sub-sample of target firms, in which the merger cancellation resulted from target management vetoing the merger proposal, had less negative abnormal returns; the management veto did not entirely eliminate the positive returns from the first public announcement of the merger proposal and the stocks for these target firms underwent permanent revaluation due to the merger proposal.

Asquith (1983) examined the impact of successful and unsuccessful merger bids on abnormal stock returns of bidder and target firms. Two event dates used were -- announcement date and the outcome date. The entire merger process from 480 trading days before the announcement date until 240 trading days after the outcome was analyzed. An interesting finding that pertains to our study was the following: there were no significant excess returns for unsuccessful bidding firms at either event dates, however there were significant negative excess returns in the period between the announcement and outcome dates. One plausible explanation proffered for the observed negative excess returns in the interim period was "...the market gathers information about the competency of the bidding firm's management during a merger attempt. Merger bids which are poorly planned and executed usually fail and also reflect negatively on the bidding firm's management" (p. 82). The returns for target firms in mergers headed for cancellations followed a similar trend for the interim period. Unlike the acquiring

firms, the target firms in unsuccessful merger bids had large negative abnormal stock returns around the outcome date.

In an insightful qualitative study Pickering (1983: 267) examined abandoned mergers which he defined as "... proposed mergers that were abandoned after the possibility of merger had been made public". According to Pickering (1983) examining mergers that "...nearly, but not quite, resulted in a merger might be particularly relevant both to the study of the merger process and to clarification of possible alternative outcomes had the merger not proceeded". The study's findings were that the rationales behind abandoned mergers are complex, often involving issues like corporate bidding and defense strategy among others. More importantly the effects of the abandonment were generally not harmful for the firms involved. The consequences of merger abandonment, Pickering found through his case studies, were the following: improved performance in target firms, avoiding efficiency loss in bidding firms, and sustained or even improved competition. Pickering mentions examining financial indicators of performance but does not delve into the specifics in his case study.

Davidson III et al. (1989) examined the market reaction (revaluation of shares) related to merger cancellations over a ten-year period from 1976 to 1985. The study confirmed prior observations (Dodd, 1980) that there is a difference in valuation effects depending on the source (bidder or target firm) of cancellation. In addition, the results suggested that post-cancellation merger activity of a target firm resulted in value creation, regardless of the source of cancellation. As for the acquiring firm the authors note that acquiring firms generally do not gain from failed mergers.

Taffler and Holl (1991) examined the financial performance of merger abandonments for a sample of UK firms (bidder and target firms). A performance index called the performance-analysis score (PAS-score) was derived from a set of financial scores – the PAS-score assessed a firm's profitability and balance sheet strength simultaneously, on a 0-100 scale. The authors posited that in abandoned mergers capital markets are able to exercise discipline in the allocation of capital resources (just as in the case of takeover attempts). The study found no evidence to support the theory that the market for corporate control influences performance of firms in abandoned or completed mergers. In addition, in abandoned mergers the financial performance of acquiring and target firms showed no significant improvement.

Hviid and Prendergast (1993) used game theoretic explanations to illustrate the effect of unsuccessful merger proposals on the expected profitability of firms. The theoretical model proposed by the authors suggested that the stock price of target firms will increase when a merger proposal is made. A rejection of the merger proposal will lead to decrease in acquiring firm's stock value to pre-offer levels. However, the stock price of the target firm will not fall to pre-offer levels due to low cost and other profitability information that gets released to the public domain. The authors conclude that "merger failures aid targets but harm bidders" (382).

Based on the studies reviewed above, we note that merger non-consummations are generally seen by the market as in conflict with shareholder interests for both acquiring and target firms (Dodd, 1980, Asquith, 1983). It is interesting, however, to note that Dodd (1980) and Davidson III et al. (1989) both report sub-samples of target firms that have less punishing or even positive returns. In Dodd's study the sub-sample is made of up firm's in which the target firms' management vetoed the merger proposal whereas in Davidson III et al.'s study the sub-

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sample is made of up firm's which were involved in follow-up merger activity. Pickering's (1983) case study suggests that most firms probably take subsequent action, internal and/or external, after the merger non-consummation. However, despite the steps taken by firms involved to rebound from the non-consummation, firms do not necessarily experience improvement in performance (Toffler, & Holl, 1991). Certain follow-up activity, e.g. merger activity for the target firm, is more favored by the market (Davidson III et al., 1989).

M&A Non-Consummation – The Term and Its Importance

These studies (and others) that examine this phenomenon have used varying terminology to denote it, e.g. abandoned mergers, cancelled mergers, failed mergers, and rejected mergers. In addition to difference in the terminology used, there are nuanced differences in the phenomena examined by prior studies. For example, Pickering (1983) studied transactions in which the proposed merger was made public and later abandoned, whereas Hviid and Prendergast (1993) examined transactions which were rejected at the tender offer /merger proposal stage. For the purpose of this study we decided to use a term that clearly and very specifically captured the phenomenon of interest.[2] We believe "M&A non-consummation" unequivocally represents an impending M&A transaction in which the firms involved decide to "…not consummate an announced corporate combination" (Davidson III, Rosenstein, & Sundaram, 2002: 485).

There can be a strategic need for an M&A non-consummation because the acquiring firm may realize after announcing that the merger is not in the firm's best interest. This is because

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[2] There can be some confusion with the use of terms– cancelled and failed mergers. "Failed merger" can be used to denote mergers in which post-merger performance is sub-optimal, sometimes resulting in merging parties deciding to terminate their partnership (e.g. Weber, & Camerer, 2003). "Cancelled merger" or "abandoned merger" can donate a tender offer or merger proposal that is withdrawn before firms have made significant investments in working out the transaction details (e.g. Pickering, 1978).

M&A negotiation starts well (several weeks or even years) before the formal announcement, and in all likelihood continues after the planned M&A announcement. Continuing negotiations after the announcement fosters the likelihood of discovering issues in/with the planned merger. It would perhaps be most favorable if the acquiring firm realized incompatibilities in the planned combination of firms before the formal announcement. This would allow it to back out of a deal without passing on much information about itself and the target firm to the market. However, managers are limited in their decision-making capacity by their bounded rationalities. According to Roll (1983:199), "Psychologists are constantly bombarding economists with empirical evidence that individuals do not always make rational decisions under uncertainty …economists disregard the evidence on individual decision making because it usually has little predictive content for market behavior …Corporate takeovers I believe are one area of research in which this usually valid reaction of economists should be abandoned; takeovers reflect individual decisions." M&As continue to be a popular strategy due to a widespread belief among managers that acquisitions provide a quick and easy route to advancing growth and diversification objectives (Cecil, 2001; Harding, & Rovit, 2004; *Economist*, 2005).

Given the popularity of M&As as a business strategy, early phases of the negotiations process may be marked by a high level of optimism or "deal frenzy" that can blur the perspective of managers (Bruner, 2004). Therefore, managers tend to be oblivious to indicators of drawbacks of the proposed merger. A second possibility is that managers are able to see through the cracks in time and avert what would potentially be a disastrous merger. However, it is difficult to find out about these strategic interventions because few details (if any at all) of the planning and negotiation are in the public domain. We argue, however, in favor of the first possibility --

bounded rationality coupled with unjustified optimism obscures potential problems before the M&A announcement. In a qualitative study of a sample of UK firms involved in abandoned mergers between the time period 1965-1975, Pickering (1983: 271) found that "…companies acknowledged that they had made errors in bidding strategy …Some companies felt that a leak or upward movement in the target's share price forced them into a public announcement too early, before they had carried out all necessary appraisals and consultations". As the consummation date draws closer, both firms, acquiring and target, work at a feverish pitch to work out the final details. As we all know quite well – the devil is in the details. Realization of potential problems with the merger/acquisition, results in a difficult situation for the acquiring firm. It is strategically unwise to proceed with a merger/acquisition that does not bode well for the future. According to Reed (1999: 646) "If the risk is too great, the buyer may walk away. Usually, however, buyers simply use the result of their due diligence to extract price concessions and/or warranties and representations in the acquisition agreement."

Theoretical Underpinnings

This study draws heavily on theoretical understandings from two streams of research – *strategic management research on M&A transactions* and *information economics with a focus on information asymmetry and informational credibility*. In the next two sub-sections we discuss dominant ideas of these two streams of research and how these ideas relate to/ or have been adapted for this study.

Strategic Management Research on M&A Transactions

We reviewed prior strategic management research on M&As (most of which deals with post-M&A outcomes and integration aspects and issues) to provide an appropriate theoretical foundation to our study. Themes that dominated our review (due to the sheer frequency with which they appeared in the literature) include – *relatedness between firms*, *synergies between firms*, and *fit considerations* (strategic fit, organizational fit, and cultural fit). As we delved deeper into M&As studies, a holistic consideration of published research on M&As revealed conflicts and inadequacies which stumped our efforts to apply/extend the existing knowledge base on M&As to our study. In an effort to make sense of the issues we faced, we identified key conflicts which we discuss below. As will be evident in Chapters 3 and 4, the theory development and methodology chapters that follow, recognize and build upon the issues/conflicts discussed below.

Enmeshed Concepts -- Strategic Fit, Synergy and Relatedness

The frequency with which the "strategic fit" concept has been used in strategic management studies on M&As belies the conceptual muddle that underlies its usage. The fundamental question remains unclear – in the M&A context what do we mean by "strategic fit"? The term has been used in strategic management literature primarily in three ways to denote one of the following: 1) fit between a firm's attributes and realities and the offerings from the M&A deal (Salter, & Weinhold, 1979) 2) expected synergies from an M&A deal (Chatterjee, 1986) and 3) similarities between the acquiring and target firm at the product and/or industry level (Lubatkin, 1987). So, which of the above three usages is more appropriate?

In early studies the term "strategic fit" was used in a broad strategy context, where strategic fit implied mergers that made strategic or logical sense (Salter, & Weinhold, 1979; Rumelt, 1974). Over time this broad notion of strategic fit in M&As has conceptually watered down to a mere relatedness between firms. A significant number of scholars today treat strategic fit and relatedness as synonymous (Datta, 1991), or strategic fit and synergies as synonymous (Hitt, Harrison, & Ireland, 2001). We are uncomfortable with the equating of relatedness and/or synergies with strategic fit for reasons we discuss below. Relatedness between merging firms can be one factor contributing to strategic fit, there can be several other dimensions as well (e.g. growth needs and technological opportunities). Underplaying the importance of relatedness, and emphasizing the sometimes incongruous aspect of strategic fit and relatedness, Salter and Weinhold (1979) have stated that it may be in the strategic interest of a firm to opt for a merger that is unrelated. In addition, as Salter and Weinhold have noted, the management of even a highly related merger can proceed along the lines of an unrelated merger with few expectations of and harnessing of synergies. Therefore, the straitjacket usage of "strategic fit" as relatedness between firms or expected synergies, regardless of other factors, is preposterous.

We strongly believe that over the decades of freewheeling usage in M&As studies, the notion of "strategic fit" has unfortunately come to lack the very essence of strategy. In an attempt to get a reality check, we reviewed business publications on M&As from 2001 to 2006, in the Lexis-Nexis database for keywords "strategic fit". We found that contemporary practitioners view the concepts of "strategic fit", "synergies" and "relatedness" as conceptually distinct (e.g. Harding, & Yale, 2002; Pomeroy, 2005) albeit interlinked. An M&A deal is seen by

practitioners as a strategic fit when the merger servers to bolster the firm's overall strategy (Harrision, 2005) or plug a strategic hole (Pomeroy, 2005). As for the overemphasis on relatedness and synergies (stemming from relatedness), Christian Feuer, principal of Briarcliff Manor, had the following to say, "Acquisitions should not be driven by the potential of synergies but by a promising business plan or strategic fit. Synergies are the icing on the cake. An acquisition justified solely through synergies is high risk" (Feuer, 2006).

According to Clemente and Greenspan (1998) the term "strategic fit" is amorphous, overused and generally not well understood. They further state that, "...what has been missing in the literature ...is a definition of strategic advantage and strategic fit in their most practical sense -- a definition that focuses on the various factors that allow them to actually come to fruition (p. x)." The authors advocate due attention and emphasis on the drivers that motivate strategic M&A deals. On a similar note, Schweiger and Very (2003) point out a crucial omission in extant research on M&As. According to them, "...many researchers have argued that cultural differences are a major impediment to integration. When examining the culture, however, researchers have failed to examine the strategic objectives or synergies being sought" (p. 12).

Going back to the fundamental question -- what exactly is strategic fit in the M&A context? -- the best alternative is to go back to the strategy roots. According to Zajac, Kraatz, and Bresser (2000: 429), "Strategic fit is a core concept in normative models of strategy formulation, and the pursuit of strategic fit has traditionally been viewed as having desirable performance implications." In a traditional strategy context, strategic fit implies the match between a firm's goals and objectives and its capabilities (strengths and weaknesses) and external environment (opportunities and threats). If this definition was extended to the merger context, it

would imply fit between firm's goals and objectives and its capabilities (those present and to be made available through the merger) and external environment (opportunities and threats created and thwarted through the merger). What is obvious in the picture we are trying to portray here is that strategic fit is a broad concept, which goes beyond individual consideration of strategic objectives, relatedness between firms, and synergy expectations. It is an enveloping concept that transcends various concepts that have been the focus of strategic management research on M&As. This notion of strategic fit is true to its real nature, given the myriad factors – strategic attributes of the firms involved, market attributes, industry factors, economic and political environment – that can influence the decision of whether or which M&A deal is a strategic fit for the firm involved. Some aspects of strategic fit that have individually been examined in prior studies, e.g. product-market complementarity, synergistic opportunities and relatedness are but one of several considerations that determine strategic fit. Unfortunately there is an abundance of studies that have either inflated one of these to the status of strategic fit, or as we see it relegated the notion of strategic fit to a sub-dimension.

Conflict in the Conceptualization and Operationalization of Relatedness

The "relatedness between firms" concept, has been commonly used in studies over the several decades of strategic management research on M&As (e.g. Homburg, & Bucerius, 2006; Lubatkin, 1987; Lubatkin, Srinivasan, & Merchant, 1997; Robins, & Wiersema, 2003). This continued usage is not surprising because the link between relatedness and value creation in M&A transactions is intuitively appealing and amply expounded in prior studies (e.g. Lubatkin et al., 1997). In addition, strategic management theories like resource based view (RBV) and

knowledge based view (KBV), seamlessly fit in, and offer adequate theoretical grounds for the

link between relatedness and value creation opportunities in M&As (Lien, & Klein, 2006; Teece,

Rumelt, Dosi, & Winter, 1994). There is a disjunction, however, between the theories (RBV and

KBV) and operationalizations (FTC classifications or SIC based distance measures) in studies

that use relatedness. As Lien and Klein (2006) point out, the measures we have faithfully been

using over several decades of research on M&As "...are not derived from theoretical models of

scope, spillovers, experimentation, or other kinds of diversification, and are probably poor

proxies for the kinds of relatedness that matter for value creation (Robins, & Wiersema, 1995,

2003; Markides, & Williamson, 1996; Silverman, 1999; Lien, & Klein, 2004, 2005)" [3].

Teece at al. (1994) note that while much effort has been devoted to developing measures

of corporate diversification, much less effort has focused on developing inter-business

relatedness measures. They review/mention five studies on relatedness – Rumelt (1974), Caves

(1981), Lemelin (1982), Klavans (1989) and Gollop and Monahan (1989). Of the five, only two

are repeatedly cited and similar measures used in published strategic management studies.

Rumelt's (1974) categorical measures and its altered variations have until recently featured in

empirical studies (e.g, Lubatkin et al., 1997). As for measures based on SIC codes, simple and

somewhat sophisticated versions, have also been used by strategic management scholars

conducting research on M&As. Two variations of the SIC based measures, are those used by

Lubatkin et al. (1997) and Finkelstein and Haleblian (2002). Lubatkin et al. (1997) proposed an

SIC-based measured of relatedness that took into consideration the industry classifications the

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[3] The FTC based measures are from Statistical Report of Mergers and Acquisitions which was published by the FTC between 1974 and1979. This classification scheme/M&A typology has repeatedly come under criticism for being vague. In fact, for the purposes of academic research it has been unsatisfactory from the start. Even the early M&A studies that used this typology reworked it (added classifications or collapsed it).

acquiring firm and the target firms participated in and any overlap in industry classifications between the two. This measure of relatedness the authors acknowledge is unweighted and falls into the category of "narrow spectrum" measures (Wood, 1971). The authors point out several studies that indicate that the convergent validity of weighted and unweighted SIC-based measures is robust across studies. Finkelstein and Haleblian (2002) used a continuous measure for their "acquirer-to-target similarity" variable by looking for matches in the SIC codes for up to six main lines of business for the acquiring and target firms. Scores of two, four and six were assigned if the primary SIC codes matches at the two, three and four digit levels respectively and scores of one, three and five were assigned for secondary SIC codes matches at the two, three and four digit levels.

Despite criticisms of predominantly used measures of inter-business relatedness in M&A studies, few alternative measures have gained currency. Criticism of SIC-based measures centers on their bias in favor of economies of scope and against dynamic complementarities (e.g. Larsson, & Finkelstein, 1999; Foss, & Christensen, 2003). In addition, Lien and Klein (2006) note that the key issue with conventionally used measures based on SIC codes is that such measures do not factor in indivisibilities and transaction costs, which are essential for relatedness to result in value creation. In a recent empirical study, Lien and Klein (2006) used relatedness measures based on corporate coherence (Teece et al., 1994) and reported promising findings that are more consistent with business and market realities. On comparing SIC-based traditional measures with measures based on firm coherence they reported two noteworthy findings: 1) Significantly positive relationship between relatedness and firm performance (abnormal stock returns) when traditionally used SIC-based measures were replaced by the new measure of

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relatedness and 2) Greater relatedness between business units that made intuitive and practical sense even though the SIC indicators suggested otherwise. In the authors words, " ...detailed analysis showed that some of the most frequently combined industry pairs do not share the same three-digit SIC codes, though they are obviously closely related businesses. e.g. Office of Physicians (8011) and Outpatient Care Facilities (8081). Conversely many industry pairs sharing a three-digit SIC code were not once combined during the investigated period".

Lien and Klein's (2006) measure was based on operationalizations developed in Teece et al.'s (1994) study on corporate coherence. In this paragraph we discuss the concept; in doing so we rely largely on Teece et al's study. The term "corporate coherence" was used to explain three concurring attributes of the modern corporation: 1) the multi-product scope 2) the non-random (coherent) assortment of product portfolios and 3) the relatively stable nature of the coherent assortment of product portfolios. Firms are clusters of core competences and supporting complementary assets with an underlying thread of coherence (or relatedness in technological and market characteristics) across them. It is this coherence which dictates firms' ability to generate and capitalize on synergies (Foss, & Christensen, 2003). Corporate coherence is a matter of degree and it depends on factors like enterprise learning, path dependencies, technological opportunities and selection environment. Of these factors, the emphasis in Teece et al.'s (1994) operationalization of the relatedness measure is on the (market-process based) selection environment. They do so by using survivor principle reasoning to posit that activities (industry classifications) that are more related will be more frequently combined within corporations. As we have noted earlier, recent studies such as Lien and Klein (2006) and Valvano and Vannoni (2003) have used the measure proposed by Teece et al. (1994) or similar

measures and reported promising findings. For the purpose of this study we will need to modify

and adapt the measure to the M&A context (it was initially operationalized for a diversified

firm). Although Lien and Klein (2006) used it in the M&A context, they determined relatedness

between primary SIC codes of firms undergoing M&A activity and did not factor in secondary

SIC code considerations. In working with this relatively new measure of relatedness between

firms we plan to borrow from studies that have used this novel measure and build on the limited

prior empirical studies that do exist.

Reassessment of Organizational Fit, Cultural Fit and National Fit Constructs

Highlighting the fact that the body of work on "strategic fit" (when in fact most of the

studies cited focused on relatedness or synergies between firms[4]) and performance effects had

been inconclusive, Datta (1991) argued for change in research focus to post-M&A

implementation issues. He examined the influence of two dimensions of organizational fit –

management styles and reward and evaluation systems on post-M&A performance and found

that differences in top management styles had a negative influence on firm performance. The

measure of firm performance was respondents' assessments of the extent to which the merger

met expectations regarding five performance indicators -- ROI, EPS, stock price, cash flow, and

sales growth. The author did not find support for a relationship between differences in reward

and evaluation systems and firm performance. Findings such as these raise questions like -- are

there certain aspects and categories of organizational attributes that are more essential to studies

of M&A outcomes than others. Three categories of organizational attributes have been

mentioned in literature that impact M&A outcomes – procedural, physical, and

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[4] We have argued in favor of disentangling strategic fit and relatedness between firms.

managerial/socio-cultural (Shrivastava, 1986). Managerial styles (Datta, 1991), corporate fit (Weber, Shenkar, & Raveh, 1996), and similar organizational attributes that studies have found have an impact on M&A outcomes clearly fall into the "human side of mergers and acquisitions" (Buono, & Bowditch, 1989).

A review of contemporary business magazines and trade publications on M&As reveals that organizational and cultural compatibility issues have garnered sufficient attention so that they are no longer relegated to post-M&A issues (Mergers & Acquisitions, 2003). If considered in the pre-merger due diligence stage, aspects of organizational compatibility like reward systems or information control systems can likely be addressed by sufficient attention and prior planning. However, other organizational attributes that permeate the very being of the organization are more deeply rooted. We believe this is where we run into slippery ground because these organizational attributes overlap with cultural dimensions. If we examine the managerial/human aspect in M&As what is it that we are examining – is it organizational fit, cultural fit, or organizational culture fit? Teerikangas and Very (2006: S35) note a similar dilemma, "The concept of culture is bound with complexity. When discussing culture in the context of M&A, a first question to arise is 'which culture' are we debating? Extant research in M&A defines it as organizational and/or national culture." The authors further note that while the trend in sociological and organizational studies is towards a complex, multilevel perspective on culture, in M&A studies we have retained the notion of a unitary culture and have focused on narrow culture dimensions.

In this study, we focus on what scholars and practitioners have termed "organizational culture" for factoring in cultural compatibility between the acquiring and target firms. We heed

the advice to broaden the scope of culture dimensions examined in M&A studies. Accordingly, in the methodology section, we operationalize the cultural fit construct as a complex construct using culture dimension identified in O'Reilly, Chatman and Caldwell (1991). O'Reilly et al.'s (1991) list consists of aspects of organizational culture which have emerged through several decades of academic and practitioner interest in this topic.

Information – Asymmetry and Credibility

Early papers on information asymmetry focused on differential knowledge between buyers and sellers of a product (Nelson, 1970; Stigler, 1961). It was proposed that products had three attributes – search, experience and credence – and that buyers could assess products along these attributes to make better decisions regarding purchase. Over the years the concept of information asymmetry has been widely used by scholars from accounting, economics, finance, marketing, and strategic management (Aboody, & Lev, 2000; Coff, 2003; Healy, & Palepu, 2001; Mishra, & Prasad, 2004; Sanders, & Boivie, 2004). Information asymmetry usage has varied across these studies – some studies have focused on the product attributes (e.g. Brush, & Artz, 1999) while others have studied the different types of information asymmetry -- adverse selection, moral hazard and principal-agent (e.g. Sanders, & Boivie, 2004). More recently, scholars have likened information asymmetry to a power situation (Schutz, 2001) in which the party with information has more power than the other party. Schultz (2001) states that "the issue of power arises ...mainly not insofar as information is difficult to value but insofar as it may be withheld, misrepresented or fabricated" (p. 44).

In the case of M&A NCD information asymmetry arises due to details of the M&A transaction that firms possess, but is lacking with the investors. The peculiarity that arises with information asymmetry in NCDs is -- despite being in a power situation (possessors of information), firms involved in the NCD may not know how best to use the private information. Examining the Lexis-Nexis Academic database for coverage of NCDs suggested great variation in the quantity and content of information in the public domain. In terms of quantity, coverage of M&A NCD events varied from a perfunctory mention of the obvious to a carefully orchestrated NCD coverage or even a seemingly endless blame game in some cases.   In terms of content, a similar variation was observed with some firms preferring "no comments" and others divulging details such as reasons for NCD, impact on firm's M&A strategy, and effect on ties between firms involved. It goes without saying that any detail of the NCD made public must possess informational credibility – given the facts and circumstances the detail must be believable. Informational credibility is the same as the credence attribute identified by early information asymmetry theorists (Stigler, 1961). In the next chapter, we use the information attributes discussed here (i.e. asymmetry and credibility) – and the concepts of strategic fit, relatedness and cultural fit, reviewed previously in this chapter, to develop hypotheses regarding M&A NCDs.

CHAPTER 3

THEORY DEVELOPMENT AND HYPOTHESES

In this chapter, the theoretical backdrop reviewed in Chapter 2 is used to build the following arguments. M&A NCDs influence firm value. The effect on firm value depends on market expectations of the proposed M&A from the time the M&A is first announced. Various considerations influence market expectations of an M&A deal. From a strategic management lens these include strategic fit of the M&A deal with overall firm strategy, relatedness between firms involved in the M&A deal, and knowledge of cultural compatibility between the firms. In addition to the expectations (the market may have from an M&A deal that faces non-consummation) what also matters from a strategy perspective is how the acquiring firms execute the NCDs – the timing of NCD announcement, how much information is made available to investors and the quality of the information. We begin by providing an overview of the proposed theoretical framework for examining the link between M&A NCDs and acquiring firm value. Next, we discuss different parts of the model in greater detail, provide logical reasoning for expected influences in the model and propose testable hypotheses.

Theoretical Framework

Our theoretical framework is depicted in Figure 1 for examining the effect of M&A NCDs on acquiring firms. The figure suggests that M&A deal attributes and NCD attributes influence value of acquiring firms. The left half of the figure deals with three fit aspects – strategic fit, relatedness between firms, and cultural compatibility – and their individual and

interactive effects on firm value. The right half of the figure deals with NCD attributes – timing, information quality and information quantity – and their individual effects on firm value.

M&A deal attributes

- Strategic fit
- Relatedness
- Cultural fit
- Strategic fit X Relatedness
- Strategic fit X Cultural fit

Shareholder returns

NCD attributes

- Timing
- Info quantity
- Info quality
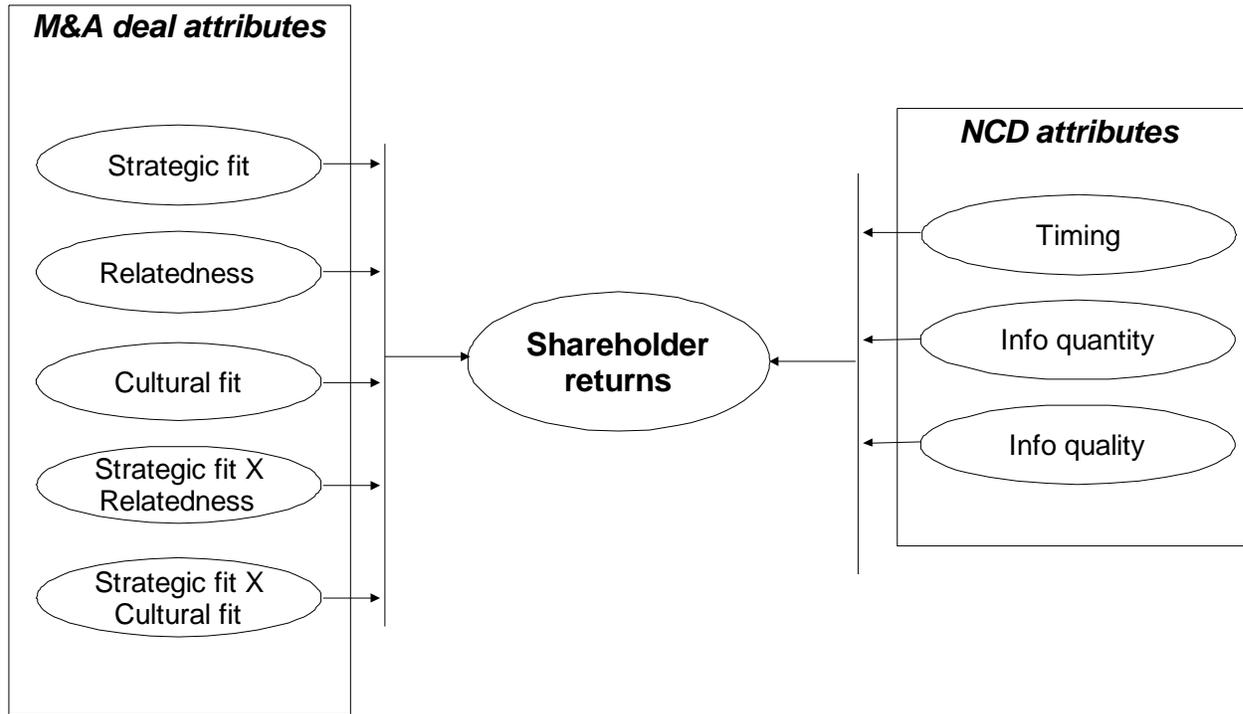
Figure 1. Factors that Explain Variations in Shareholder Returns for Acquiring Firms in NCDs.

M&A NCDs – Influence on Firm Value

One plausible explanation for the seeming lack of academic and practitioner interest in M&A non-consummations is based on a behavioral truism, namely that *prejudice shapes perception* (Riddleberger, & Motz, 1957). We believe that the low level of interest in M&A NCDs (as manifest in academic publications and popular business press) is primarily because M&A non-consummation is not the naturally preferred outcome in any M&A transaction. In an

M&A transaction the desired outcome is the successful closing of an announced merger/acquisition. Therefore, prejudice against a less than desirable M&A outcome, along with a poor understanding of the importance and implications of M&A non-consummations relegates M&A non-consummations to little more than a "salvaging option" status in the minds of M&A practitioners, scholars and market observers and analysts. Due to an overall poor understanding and appreciation of this phenomenon, NCDs are poorly executed by firms (Stein, 2005), not well received by the market (Kalawsky, 2004) and treated as M&A failures (Davidson III, Dutia, & Cheng, 1989; Smith, & Sapsford, 2001).

To our knowledge only a handful of empirical studies have examined the effect of M&A NCDs on the acquiring firms' value. In one of the earliest studies that examined this topic, Dodd (1980) presented abnormal returns (AR) for 40 days before and after the announcement of the termination of a merger proposal for bidding and target firms involved for a sample period 1970 to 1977. He contrasted the abnormal returns for target and acquiring firms: target firms earned a negative AR of - 4.52 % on day 0, and - 4.16 % on day -1, whereas, acquiring firms earned small positive ARs (0.18 % on day 0 and 1.06 % on day -1). Dodd mentioned that it is important to consider the terminating party when interpreting these results. Much of the data interpretation in his study is centered on target management's discretion when rejecting a merger proposal and whether the termination decisions are against shareholder interests.   Dodd did, however, mention that for acquiring firms the cumulative abnormal returns (from the initial public announcement of the merger proposal through termination) were negative in both target and non-target initiated terminations.

Asquith (1983) examined abnormal returns through the entire merger process for successful and unsuccessful merger bids by following the stock returns of target and acquiring firms from 480 trading days prior to a merger bid to 240 trading days after a merger outcome. His sample period was from 1962 to 1976. Findings that are relevant to this study include: 1) the abnormal returns for acquiring firms headed for an "unsuccessful" were strongly negative and significantly different from zero in the interim period between initial press date and the outcome date. 2) The abnormal returns at the outcome date for unsuccessful acquiring firms did not duplicate large negative abnormal returns of the interim period. There was therefore evidence of little market re-evaluation at the outcome date. and 3) Unsuccessful acquiring firms had negative excess returns immediately after outcome date and throughout the first year. Based on these findings Asquith raised an important question, "Since there are no significant excess returns for unsuccessful acquiring firms at either the press or outcome day, why are there significant negative excess returns during the interim period?" (p. 82). One plausible explanation offered by Asquith was that during the interim period the market gathers information regarding competency of the acquiring firms' management. Asquith notes, "Failure itself has little effect on the value of the acquiring firm; it is the information contained in the bidding process that affects the firm's value" (p. 82).

Davidson III, Dutia, and Cheng (1989) studied the stock returns of merger cancellations over the 1976-1985 time period. The authors analyzed results based on the canceling party and post-cancellation merger activity. In the case of bidders canceling the merger, the -1, 0 days average returns (ARs) are slightly positive or normal. However over larger time windows studied by the authors (-5, 5), (-90, 90) and (-90, 250) the cumulative average returns (CARs)

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were negative and statistically significant. Almost similar trend was observed for target canceled merger proposals, except in these cases statistical significance was much weaker. With regard to stock returns of bidding firms the authors concluded that bidding firms appear to lose when they initiate and then cancel a merger. The bidding firms also lose when the target firm cancels the merger proposal (or if the merger is canceled for other reasons).

Based on the evidence presented in the studies reviewed above we decided to work with the following understanding. Although there is conflicting evidence regarding acquiring firms' abnormal stock returns for short time windows around the outcome (NCD) date, the three studies lead to the common conclusion that acquiring firms have negative stock returns in the days and months following a NCD. In addition, Asquith's (1983) study brings our attention to the significant negative abnormal returns in the interim period between the press announcement of a merger proposal and the announcement of termination of the proposal. We will therefore work with the assumption that an impending NCD leads to negative shareholder returns and that shareholder returns after a NCD are negative as well.

Market reaction to NCDs -- Failed Expectations

How the market reacts to a NCD depends on the opportunity cost of the M&A. Players in the stock market build expectations from the M&A transaction based on information available and gleaned about the acquiring and target firms. The concepts of strategic fit, relatedness and cultural compatibility (which have been used extensively in strategic management research on M&As) are commonly used in M&A practitioner, analyst and investor vernacular as well. The

three concepts are applied here, to understand the expectations the market can have of an impending M&A transaction and how these expectations influence acquiring firms' value.

Strategic Fit

In a study of stock market expectations from M&A announcements, Lanes, Stewart and Francis (2001) state that firms can prevent post-announcement pounding of their stocks by precisely communicating where value will be created in an M&A deal. This counsel, oftentimes, goes unheeded in M&A announcements which mention strategic fit and synergies without exception, yet lack clarity when it comes to the crucial question: how does the proposed M&A deal align with the strategic objectives of the bidding firm and how will it help the firm achieve growth? To get to the bottom of this important question Clemente and Greenspan (1998) suggest refocusing on the strategic drivers/motivators of M&A deals. Their review of several hundreds mergers, acquisitions, joint ventures and alliances resulted in a compilation of ten strategic drivers underlying most strategic deals. The ten drivers were: 1) effecting organizational growth 2) increasing market share 3) gaining entry into new markets 4) obtaining new products 5) keeping pace with change 6) capitalizing on policy and regulatory change 7) pursuing innovations/discoveries in products or technology 8) lessening competition 9) strengthening reputation or gaining credibility and 10) responding to or capitalizing on economic scenarios. The authors analyze the drivers of strategic M&A deals, provide case examples and show that instead of the oft heralded cost savings, it is the opportunities for growth-oriented synergies and their realization that result in successful deals. Another point the authors make is that "When companies seek to merge or acquire, and can cite more than two strategic drivers as reasons to

come together, then the chances of success are higher" (p. 44). Clemente and Greenspan's focus on strategic drivers, strategic objectives and growth opportunities is in tune with the strategic management field's core ideas and notions. It is also in congruence with business practices of the day which treat strategic fit as a complex and holistic concept that factors in several aspects of an M&A deal (PwC CN, 2007).

In M&A announcements and post-announcement coverage, the mere mention of strong drivers is not enough. We believe that the inclusion of specifics on each of these drivers in M&A announcements better projects a sense of value to be created from the M&A transaction. The greater the sense of value to be harnessed from an M&A deal, the more interested the investors are in seeing the M&A deal going through to closing and completion. Clearly, in M&A deals with high levels of strategic fit, the preferred outcome is a completed M&A transaction. An NCD in such a case leads to reduced shareholder returns. What happens when the strategic fit of the M&A deal is low or not very convincing? We work with the simplest possibility -- the investors will be relieved that deal did not go through to completion.

> *Hypothesis 1: In NCDs, the higher the strategic fit of the M&A transaction with the acquiring firm, the more negative the shareholder returns of the acquiring firm.*

Relatedness Between Merging Firms

The emphasis on relatedness between firms in strategic management studies of M&As is well grounded in theories that are central to this field. Applications of resource based view, knowledge based view and capability theories of the firm suggest that M&A transactions can add value when the firm's activities are related (e.g. Brush, 1996; Graebner, 2004). There is debate about how much relatedness is good: with some arguing for closely related firms (Shelton, 1988)

and others stressing on the importance of differences between firms (Harrison, Hitt, Hoskisson, & Ireland, 1991). In a recent study, Lien and Klein (2005) suggest that the debate over relatedness may be misplaced and that the confounding findings from empirical studies investigating value-adding influences of relatedness "...are plagued by poor measures of relatedness" (p. 9). Working with the assumption that relatedness between firms is a desired attribute, in the next paragraph we discuss how relatedness affects NCD outcomes.

Relatedness of the acquiring- and target-firms is determined before starting the M&A negotiations. Therefore, relatedness between the firms is an aspect that is *intended* from the start; it is not determined subsequently because of extended negotiations. In a related M&A activity, the bidding firm has sufficient knowledge of the target firm and the industry it is in to assess the strengths and weaknesses of the planned merger. In the case of related mergers Pickering (1983: 269) states that "…companies often knew each other well and, quite frequently, were conscious of differences between them …" In the case of unrelated M&As, however, the situation is quite the opposite. An acquiring firm unrelated to the target firm can have difficulty in appropriately valuating the target firm before negotiations begin. As a result there will be an increased likelihood of disagreements (e.g., over price) in the post announcement negotiations period. The non-consummation of an unrelated merger will thus offer adequate justifications and have less punishing financial consequences. Non-consummation of a related merger on the other hand may be symptomatic of hasty and unjustifiable M&A announcement decisions on the part of the acquiring firm and therefore have adverse financial implications. Prior studies have indeed reported evidence for extremely limited planning and consultation prior to announcement of proposed merger (Pickering, 1983).

Hypothesis 2: In NCDs, the higher the relatedness between the acquiring and target firms, the more negative the shareholder returns for the acquiring firm.

Cultural Fit

The importance of cultural fit (or compatibility) between firms in M&A integrations has been widely covered in academic research (Cartwright, & Schoenburg, 2006; Teerikangas, & Very, 2006). The primary focus, so far, has on issues the merging firms face after the closing of the M&A deal and the prevailing wisdom is that cultural fit, cultural compatibility and cultural tolerance mitigate cultural divides. There has been a notable shift in recent years in the attitudes of firms towards cultural issues in M&A transactions – likely cultural issues which previously found mention largely in the post-merger pages now figure in M&A due diligence and planning considerations as well (Mergers and Acquisitions, 2003).

In addition to firms, investors in all likelihood include cultural considerations in their assessments of M&A deals as well. As Weber and Menipaz (2003: 54) note, "Of course, some may argue that the capital asset market does not concern itself with possible cultural problems in mergers, but instead considers only issues of strategic fit when estimating the financial impact. However, with the continual flow of anecdotal evidence from the business world and the popular business press about the adverse effects of cultural collisions, it is difficult to believe that the capital asset market does not also factor in the human side of a merger." Kerr, Ulrich, Burke, & Ashkenas (2002) echo the importance investors place on the "softer" aspects of a firm, "Investors have recently recognized the importance of intangibles that reflect the market value of a firm above or beyond its expected market value given its cash flow and earnings. Culture and its derivatives (employee commitment and competence) become intangibles when they lead to

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investor confidence in the firm's growth. Cultures can also become negative intangibles when

the investor perception shifts ..." (p. 265).   In M&A transactions, the concern is not whether

cultural gap exists, instead the important question is what are the firms involved doing to

overcome the cultural gap (Reger, 2006).

In the case of NCDs, let us consider how the market may factor in cultural fit

considerations when responding to NCD announcements. In instances of obvious cultural

differences between merging firms, we propose that market is relieved that the M&A deal was

called off. When the market is aware of cultural compatibility between the firms involved

usually through prior successful partnerships between firms, we propose the investors are let

down when an M&A deal is called off.

Hypothesis 3: In NCDs, the higher the cultural compatibility between the acquiring and
target firms, more negative the shareholder returns for the acquiring firm.

Strategic fit, Relatedness and Cultural Fit

In this section we look at the three constructs – strategic fit, relatedness and cultural fit in

conjunction. Undeniably, from a strategy perspective the most important question at the time of

NCD is – how important was this M&A deal to the bidding firm's strategic goals? Treating

strategic fit as the foremost criterion for assessing NCD outcomes, we examine the influence

other constructs can have in moderating (i.e., mitigating or magnifying) the negative association

of strategic fit with shareholder returns. In simpler language, if the M&A deal undergoing non-

consummation was an impressive strategic fit, the question we are trying to answer is whether

cultural compatibility issues or extent of relatedness between firms can offer reasonable

justification for the NCD and mitigate market disappointment. It is to be noted here that the

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influence of relatedness and cultural compatibility on the relationship between strategic fit and shareholder returns is likely to be more pronounced at higher levels of strategic fit, because greater strategic fit we have hypothesized earlier causes higher levels of investor disappointment at the time of NCD.

The two constructs have different natures -- relatedness between firms is a determinable construct, knowledge about which can be gathered early in the M&A process, whereas cultural compatibility issues are more in a state of flux and emerge as the M&A talks and negotiations proceed. Given the profusion (since the year 2000) of articles by M&A scholars and consultants and numerous business leaders' accounts of the "deal-making/deal-breaking" human-aspects in M&A (e.g. Mergers & Acquisitions, 2003; Reger 2006) there is reason to believe that investors are likely to accept cultural compatibility issues as a reason for an NCD. As for the interaction effect of relatedness, as we have discussed previously, with low levels of relatedness between firms the acquiring firm has a lot of ground to cover in terms of learning about the target firm. Given the unfamiliarity with the target firm in case of low relatedness, we expect investors to be more accepting of NCDs even when the strategic fit level is high but the relatedness between firms is low. Based on the discussions in the preceding paragraphs we propose the following hypothesis regarding interaction effects.

> *Hypothesis 4a: In NCDs, the negative association between strategic fit and shareholder returns is mitigated by low levels of relatedness between the firms.*
> *Hypothesis 4b: In NCDs, the negative association between strategic fit and shareholder returns is mitigated by low levels of cultural fit between the firms.*

M&A NCD – A Strategic Option

Several studies in accounting (e.g. Patell, & Wolfson,1982), and finance (e.g. Yermack, 1997) examine the effect of announcements (e.g., earnings announcement) on a firm. These studies generally focus on two aspects of the announcement – timing and content. In this study we use a similar approach to examine the effect of NCDs. Accordingly, we identify three attributes of NCD decisions -- timing, information quantity and information quality -- and study their effects on shareholder returns.

Timing

Prior research has found evidence to suggest that the timings of firm announcements are a valuable determinant of subsequent events (Luo, 2005) and indicators of earnings / value created for firms (Kross, & Schroeder, 1984; Trueman, 1990). In line with this stream of research we expect the timing of a NCD to influence shareholder value for the acquiring firm[5]. The timings we consider in this study are – 1) timing of NCD relative to the initial M&A announcement and 2) timing of NCD relative to intended closing date of the M&A transaction.

Dodd (1980) provided summary statistics for the number of trading days between announcement of an M&A transaction and the transaction cancellation. The mean number of trading days for his sample of canceled mergers was 45, and the range was from 1 to 285 trading days. An M&A that is non-consummated soon after the proposed merger announcement may

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[5] The complexity of a proposed M&A transaction will, undoubtedly, influence the NCD timing. However, it is difficult to pinpoint the exact nature of this influence. This is due to several reasons: 1) M&A complexity is a multi-dimensional construct, the various dimensions of which can have opposite effects on the number and nature of issues in M&A talks and 2) Prior planning, due diligence, and commitment to the M&A transaction can amplify or mitigate the issues that emerge in any M&A transaction. Some aspects of M&A complexity are redundant with our choice of explanatory variables (e.g., strategic fit and cultural fit). We control for others by using appropriate control variables. After accounting for the complexity of M&A transactions, what we are really considering here are crucial signals the timing of an M&A NCD sends to the market.

indicate insufficient planning, screening and/or due diligence before the M&A announcement. It may also suggest insufficient commitment on the part of the firms involved. Conversely, an M&A transaction that stretches for too long, perhaps signals lack of discipline on the part of the firms to pull out from the M&A deal. It can also indicate an M&A deal structured such that the bidding firm has few options as in the case of proposed deal between Reliant Energy Inc. and Orion Power Holdings Inc (Poole, 2004)[6]. Even pulling out from the M&A deal in such a case may be an expensive proposition. We, therefore, hypothesize a curvilinear relationship between time to NCD of a proposed M&A transaction and shareholder returns for the bidding firm.

In addition to the timing of NCD with regard to the timing of the initial M&A deal announcement, a crucial consideration is also the timing of the NCD with regards to the initially proposed closing date of the deal. We expect deals non-consummated closer (before and after) to the announced closing date to have higher abnormal returns. If a deal gets non-consummated closer to the intended closing date, it suggests the acquiring firm invested resources to work out operations, management-related, HR related and cultural issues. It sends the signal that the deal was non-consummated because of insurmountable differences that may have arisen. An NCD decision that is way off timing-wise from the announced closing date can indicate one of several issues with the firms involved: ill-planned closing date, second thoughts on the M&A deal or simply foot-dragging and lack of initiative to call-off an unworkable deal. Based on the discussion in the preceding and this paragraph, we propose the following hypothesis:

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[6] The deal between Reliant Energy Inc. and Orion Power was announced on September 27, 2001 and completed on February 20, 2002. Reliant Energy acquired Orion Power for $2.9 billion in cash, plus assumption of $1.8 billion in debt. The deal was intended to strengthen Reliant's power-generating capacity and was considered a coup for Orion's founders and early investors -- Orion was being paid a 40% premium over its market value. Reliant has regretted this acquisition since the deal closed. In fact, Reliant management realized this deal was a foolish acquisition even before the deal closed. They tried to withdraw from the acquisition, but Goldman Sachs & Co. had crafted an airtight deal, and Reliant had no way out (Poole, 2004).

Hypothesis 5: The relationship between shareholder returns and the time interval between date of M&A deal announcement and the date of NCD is an inverted U-shaped curve. Increase in this time interval is associated with an increase in shareholder returns, until a maximum threshold which is the intended closing date, after which further increase in time interval is associated with a decrease in shareholder returns.

According to Healy and Palepu (2001) financial reporting and voluntary disclosures are valuable means for management to share information regarding firm performance and governance with investors. In addition, the authors report evidence indicating that investors view voluntary disclosures, such as management forecasts, as credible information. Disclosure requirements in the case of M&A transactions, according to Bruner (2004) are "...vague, placing the burden on the practitioner to decide how much to tell" (p. 725). Bruner offers a simple diagnostic for assessing whether a fact pertaining to an M&A transaction constitutes "material" information, "...Would you want to know about it if you were in the investor's shoes?" (p. 725).

Clearly, the purpose served by the disclosures is to reduce information asymmetry between the bidding firm and outside investors. The hypotheses, in this section, regarding information quantity and information quality of NCDs, are based partly on prior research on information asymmetry between firms and the market. In a recent article, Johnson, Ellstrand, Dalton, and Dalton (2005) examined the effect of business press ratings of boards of directors on stockholder wealth. The authors found that favorable and unfavorable ratings both resulted in positive abnormal returns to firms. Positive returns from unfavorable ratings, was an unexpected finding and the authors offer various explanations for this finding. One explanation proffered is that publicity, favorable or unfavorable, builds legitimacy for the board of directors of a firm. We also borrow from insights from the market signaling perspective (Heil, & Robertson, 1991;

Lee, 2001; Spence, 1974). Porter (1980: 75) defined a market signal as "…any action …that provides a direct or indirect indication of …intentions, motives, goals or internal situation". Porter's definition was in the context of competitive behavior. However, we find it equally relevant to the study of M&A non-consummations. The market signaling mechanism we examine is the bidding firms' release of details pertaining to the M&A NCD and the ensuing market reaction. According to Heil and Robertson's (1991) signal aggressiveness, clarity, and consistency determine how signals are interpreted by recipients.

Information Quantity

We begin by discussing information quantity and how it may influence market perceptions of a NCD. In line with information asymmetry arguments we can say that given the information asymmetry between firms involved in the transaction (including insiders such as M&A lawyers and consultants) and the capital market investors, M&A NCD announcements play in important role in revealing what may have transpired between M&A announcement and non-consummation. The greater the press coverage of an NCD, the more likely it is that the market will find out more about the rationale, and short-term and long-term ramifications of the NCD. In terms of how information quantity can influence signal properties the following is obvious – greater information quantity will result in greater signal aggressiveness. The effects on signal clarity and consistency are less straightforward. An NCD can have extensive coverage based on speculation and rumors but lack clarity and consistency due to unwillingness on part of the bidding firm involved to manage external communications regarding the NCD. However, a

certain healthy amount of information is needed for clarity and consistency –   limited and brief

coverage will do little to advance signal clarity and consistency[7]. We therefore hypothesize that:

Hypothesis 6: In an NCD, increase in information quantity of NCD details released is associated with higher shareholder returns.

Information Quality

Investors want justification for the NCD and the contents of NCD announcements,

related conference calls, press coverage other disclosures serve that purpose. As has been noted

by Asquith (1983), it is not the "merger failure" that influences shareholder returns. Rather, the

details that emerge about the bidding firm (its management or poor planning) have a strong

influence on determining shareholder returns. In trying to understand the informational quality

of NCD coverage it helps to first identify the various messages that can be conveyed through

such announcements. These messages can include one or more of the following – reasons for the

NCD, immediate fallout for the bidding firm, effect on future ties between the firms involved

and effect on future M&A plans and firm strategy.   We define information quality in terms of

its comprehensiveness and the extent to which it possesses the three desired signal attributes --

clarity, consistency and aggressiveness. We assume that the overall coverage of an NCD will be

of sufficiently high informational quality when the firms involved recognize the importance of

external communications in an NCD and partake in the ensuing coverage. Else, the coverage

may end up flush with anonymous leaks, conflicting speculations and disclosures that can be

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[7] We want to acknowledge the possibility of "information overload" stemming from excessive NCD coverage. Eppler and Mengis (2004) provide an excellent review of published research on the topic of information overload from four management disciplines – organization science, marketing, accounting, management information systems. In addition to discussing the symptoms and causes, the authors also review research on countermeasures for information overload. In this study we work with the assumption that stock market analysts and investors when compared with other decision makers (e.g. consumers of products or managers in organizations) have more effective countermeasures (e.g. information processing tools and filters) in place.

harmful for the firms. Our assumption is confirmed by case accounts e.g. Schiesel (2001) who

covered the Lucent Technologies and Alcatel merger call off and provided an account of

anonymous disclosures, conflicting speculations and potential damage to Lucent Technologies

that chose to offer "no comment".

> *Hypothesis 7: In an NCD, increase in information quality of NCD details released is associated with higher shareholder returns.*

CHAPTER 4

RESEARCH METHODOLOGY

Sample

The study's sample of M&A non-consummations from 2000-2006 was compiled from the

SDC Platinum M&A database using the following criteria: 1) the acquiring firm must be an

American firm, 2) the target firm can be an American firm in the U.S. or a foreign firm.

Application of these criteria resulted in a sample size of 1681 non-consummation events. Daily

stock returns of the acquiring firms were available from the Center for Research in Security

Prices (CRSP) database for 668 cases[8]. Out of these 668 cases, 417 cases had target firms for

which CRSP and Compustat data were unavailable[9]. After removing such cases the sample size

reduced to 251.   Further examination of the sample firms revealed that 53 cases were instances

of stock buyback announcements that were withdrawn. Such cases were not relevant to this

study and were therefore removed. In the course of data collection for each individual case from

multiple secondary sources, the preliminary data compiled from SDC Platinum database were

verified. If needed, the merger announcement date or non-consummation date was corrected. In

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[8] According to the wrds website, WRDS. 2008. CRSP. Retrieved August 05, 2008 from
http://wrds.wharton.upenn.edu/ds/crsp/index.shtml, "The Center for Research in Security Prices, often known by its
acronym CRSP, is a research center at the Graduate School of Business of the University of Chicago. It maintains
the most comprehensive collection of security price, return, and volume data for the NYSE, AMEX and NASDAQ
stock markets. … CRSP's unique and permanent security and company identifiers, PERMNO. and PERMCO., offer
uninterrupted time-series analysis by tracking securities across time, regardless of identifier changes to CUSIP,
ticker, company name, SIC Code, and exchange. This feature permits accurate time-series and events studies.
CRSP's dedication to excellence has made CRSP data a staple of academic and commercial research and data
analysis throughout the world."

[9] CRSP and Compustat databases are the databases used for this sort of data. To our best knowledge, there
were no alternatives data sources.

cases where there was no confirmatory news release regarding the merger (announcement or NCD) and it was established that the SDC entry was based on speculations/rumors the case was removed from the sample. SIC level data unavailability for firms led to 23 cases being eliminated from the sample. The final sample size was 158.

Data Collection

Data for the dependent variable, which is shareholder returns (abnormal returns), were obtained from the CRSP database. Data for independent variables *strategic fit*, *cultural fit*, *timing*, *information quality* and *information quantity* were obtained primarily from Lexis-Nexis Academic database[10]. Data for the independent variable, relatedness, were obtained from multiple editions (online and print versions) of the Ward's Business Directory of U.S. Private and Public Companies. In certain cases (see note 12) information from secinfo.com was used to confirm or supplement information obtained from Lexis-Nexis Academic database and the Ward's Directory of U.S. Private and Public Companies.

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[10] Most studies that use press coverage of events have focused on publications in Wall Street Journal (e.g. Kumar, 2005; McWilliams, & Siegel, 1997). Accordingly in the preliminary stages of document collection (for content analysis) we focused on these publications. However, we noted that these sources were inconsistent in their coverage of M&A events. Preliminary document collection efforts also indicated that two sources, PR Newswire and Business Wire were consistent in coverage of M&As regardless of firm size, deal size or industry. PR Newswire and Business Wire are both press release distribution services. The vendors of these services are the firms and the recipients are the media. The documents collected for content analysis focused on these two sources within the Lexis-Nexis academic database.

Variables

Dependent Variable

Firm Value (Abnormal returns)

Event study methodology was used to determine abnormal returns from an M&A NCD. Recent studies have used this methodology to study M&As (e.g. Capron, & Pistre, 2002; Uhlenbruck, Hitt, & Semadeni, 2006), the effect of financial press (Johnson et al., 2005) and announcement of top executive appointments (Lee, & James, 2007) on firms' abnormal returns.

One important consideration in an event study is the event window examined. Seiler (2004: 218) states that "…researchers have not established a recommended number of days …the more unnecessary days you have in the event window, the less powerful the test …for extremely certain events with little to no chance of leakage (such as the sudden death of a CEO), as few as plus and minus 10 trading days can be used …for less certain event dates and for events with substantially long periods of suspected leakage, a window of -30 to +30 can be used …In sum, the event window should cover the entire effect of the event but at the same time be as short as possible". The event window for this study was decided after carefully considering the following three factors: 1) prior event studies 2) review of press coverage of the M&A NCDs in our sample and 3) statistical evidence from daily abnormal returns generated for each day from a -30 to +30 days time period. According to McWilliams and Siegel (1997), for completely unanticipated events the event window must be very short about 1 to 2 days. If the event window exceeds the 2-day length it must be justified. Our review of press coverage of NCD events and examination of statistical significance of daily abnormal returns for a -30 to +30 time period indicated that

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there was a lot of variance in the "unexpectedness" or unanticipatedness of a NCD. In keeping with this evidence we computed abnormal returns for two event windows (-30, -1) and (0,0).

Independent Variables

Strategic Fit

To code strategic fit variable the following steps were followed: 1) PR Newswire and Business Wire releases pertaining to each M&A were collected for the time window (date of M&A announcement - 30 days, date of NCD announcement + 30 days). 2) The collected document(s) was examined by study author for details on the strategic rationale behind the proposed merger. Special attention was given to the excerpts within the documents wherein the top management of the firm (in most cases, the CEO) explicated the benefits of the M&A for the acquiring firm. These excerpts were tagged within the documents using the ATLAS.ti software[11]. 3) The document segments tagged for "strategic rationale" were examined further for rating them along "strategic driver" categories identified by Clemente and Greenspan (1998). Presence of a strategic driver was coded as 1 and absence as 0[12]. Items on Clemente and Greenspan's list are:

- effecting organizational growth

- increasing market share

- gaining entry into new markets

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[11] ATLAS.ti is a computer software used for qualitative data analysis (QDA). It is a powerful utility that supports working with large files of textual, graphical, audio and video data. ATLAS.ti users include researchers at universities, research institution and corporations (ATLAS.ti - The Knowledge Workbench, 2008).

[12] The initial plan was to code each driver on a scale of 1 to 5. However, given the uneven amount of details released regarding strategic rationale, coding as 0 or 1 emerged as the more viable coding scheme.

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- obtaining new products

- keeping pace with change

- capitalizing on policy and regulatory change

- pursuing innovations/discoveries in products or technology

- lessening competition

- strengthening reputation or gaining credibility

- responding to or capitalizing on economic scenarios

Strategic fit was computed as a summative index over these 10 strategic driver dimensions.

Relatedness Between Firms

Two measures for relatedness between firms were computed: 1) SIC-based merger relatedness index (Lubatkin et al. 1997) and 2) Survivor-based relatedness measure (Teece et al. 1994). For each acquiring and target firm, 4 digit SIC industries for up to 5 SIC codes in which the firms participated were obtained from the Ward's Business Directory of U.S. Private and Public Companies[13]. Because our sample time frame was relatively short and Wards data published in a certain year are a couple of years old, we worked with the assumption that SIC codes obtained from the 50th edition (published in 2007) would be relevant to the entire sample[14]. In addition to individuals firms' SIC codes, an entire population's SIC code combination patterns

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[13] We had initially proposed working with NAICS codes instead of SIC codes. However, NAICS data in the Wards database for earlier editions provides only the primary NAICS code for firms. There is information on secondary SIC codes but no data for secondary NAICS codes.

[14] In certain instances Wards 50th edition had no record for a firm. This was true when firms ceased to exist during or before the Wards edition coverage period. For such cases SIC codes for a firm was obtained from the 48th edition (published in 2005). If we still did not have the SIC codes it was looked up in the edition published in 2000. If there was still no matching record for a firm in the three editions of Wards, we looked up SIC code information from secinfo.com

were needed for computing the survivor-based relatedness measure. For the population level

data, the 50th edition of Wards database was used.   Details on how these measures were

computed are provided below.

Lubatkin et al.'s (1997) SIC based merger-relatedness index

$$\text{SIC Merger Relatedness Index} = B_i + T_j - (B_i T_j)$$

where:
B_i = Number of 4 digit SIC industries in which bidder firm B participates;
T_j = Number of 4 digit SIC industries in which target firm T participates;
and $B_i T_j$ = Number of 4 digit SIC industries common to the pair of merging firms.

Survivor-based relatedness measure was developed by Teece et al. (1994). They used the

Trinet Large Establishment data which are no longer available. Similar data are available from

American Business Directory database. According to the survivor principle, competitive process

filters out inefficiency, such that in sample of competitive firms, the decisions that are efficient

will dominate (Alchian, 1950). According to Lien and Klein (2007: 11), "If the survivor

principle holds, relatedness can be measured by observing what industries are most often

combined by firms in competitive markets. In other words, related activities are defined as those

most often performed together. Specifically, we estimate how much the frequencies of actual

combinations of 4-digit SIC industries deviate from what one would expect if diversification

patterns were random. We take this difference to constitute a survivor-based measure of the

relatedness between a pair of industries".

Teece et al.'s (1994) survivor principle based measure of inter-industry relatedness has been discussed in several studies (e.g. Lien and Klein, 2006; Valvano and Vannoni, 2003). We provide an outline of the survivor principle based approach below.

Consider a population of K diversified firms and define the following variables:

$C_{ik} = 1$ if firm k is active in industry i, and 0 otherwise;

$m_k = \sum_i C_{ik}$ is the number of industries i, in which firm k is active;

$n_i = \sum_k C_{ik}$ is the number of firms k, active in industry i;

$n_j = \sum_k C_{jk}$ is the number of firms k, active in industry j;

$J_{ij} = \sum_k C_{ij} C_{jk}$ is the number of firms active in both industry i and industry j, and

$$0 < J_{ij} \leq min(n_i, n_j);$$

J_{ij} is a preliminary indicator of the relatedness between two industries. Since, the value of J_{ij} depends on the size of n_i and n_j, a more reliable measure is preferred. Accordingly, the observed value of J_{ij} is compared with the value that can be expected under the hypothesis that diversification is random (i.e. not driven by relatedness between industries).

The random hypothesis is operationalized as follows. Assume n_i and n_j are fixed. A sample of size n_i is drawn (without replacement) from the population of K firms and assigned to industry i. Similarly, a sample of size n_j is drawn (without replacement) from the population of K firms and assigned to industry j. The numbers of firms active in both industries i and j, represented by

x_{ij} is a hypergeometric random variable with population K, and special numbers n_i and n_j. The distribution function for x_{ij} is:

$$\Pr(X_{ij} = x) = f_{hg}(x, K, n_i, n_j) = \frac{\dbinom{n_i}{x}\dbinom{K-n_i}{n_j-x}}{\dbinom{K}{n_j}}$$

The mean and variance of X_{ij} are:

$$\mu_{ij} = E(X_{ij}) = \frac{(n_i n_j)}{K}$$

$$\sigma_{ij}^2 = \mu_{ij}\left(1 - \frac{n_i}{K}\right)\left(\frac{K-n_i}{K-1}\right)$$

A standardized measure of the relatedness between industries *i* and *j* is derived by comparing the observed value of J_{ij} with μ_{ij}, and scaling the difference with the standard deviation of X_{ij}:

$$t_{ij} = \frac{J_{ij} - \mu_{ij}}{\sigma_{ij}}$$

To determine coherence at the firm level, Teece et al. (1994) calculated the weighted-average relatedness WAR_i of an activity *i* to all other activities within the firm. It was defined as:

$$WAR_i = \frac{\sum_{j\neq i} \tau_{ij} e_j}{\sum_{j\neq i} e_j}$$

where e_j is the employee count for activity *j* for the firm, and

$$\tau_{ij} = t_{q(i)q(j)}$$, where the firm's *i*th activity is in industry $q(i)$

Valvano and Vannoni (2003) used a similar measure of firm coherence by determining the

weighted average of the degrees of relatedness between a firm's primary industry i and secondary

industries j, in which it is diversified.

$$WAR_k = \frac{\sum\limits_{j \neq i} t_{ij} v_j}{\sum\limits_{j \neq i} v_j}$$

where v_j is firm k's sales in industry j.

Most of the various studies we reviewed focus on relatedness within a diversified firm. The

exception being Lien and Klein (2006) in which this approach was used to determine relatedness

in the M&A context (e.g. Lien, & Klein, 2006). Lien and Klein, determine inter-industry

relatedness between acquiring and target firms by computing survivor-principle based

relatedness between the primary 4 digit SIC codes of the merging firms. We build on their

operationalization by also considering the secondary SIC codes for the merging firms involved.

Accordingly, we define the average relatedness between the acquiring and target firm as:

$$AR = \frac{\sum\limits_{\substack{i \\ j}} t_{AiTj}}{m_A . m_T}$$

where:

Ai = Industries i acquiring firm A is active in;

Tj = Industries j target firm T is active in;

t_{AiTj} = Survivor based relatedness between industries i and j;

m_A = Number of industries firm A, the acquiring firm, is active in; and

m_T = Number of industries firm T, the target firm, is active in.

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Clearly, the emphasis in relatedness measures, thus calculated, is on the (market-process based) selection environment. As we have discussed earlier, in addition to the selection environment, corporate coherence at the firm level depends on other factors like enterprise learning, path dependencies, and technological opportunities. One could reasonably argue that technological opportunity considerations are included in market based selection process. If technological advances create opportunities then the market should favor merging/diversification of firms that permit capitalizing on the opportunities. Enterprise learning and path dependencies deal more with internal working of firms. To account for these factors, a measure similar to Teece et al's weighted average relatedness measure that took into account the number of employees engaged in an activity/industry can be useful. Thus the weighted average relatedness between two merging firms is:

$$WAR = \sum_{\substack{i \\ j}} t_{AiTj} . e_{Ai} . e_{Tj}$$

where:

Ai = Industries i acquiring firm A is active in;

Tj = Industries j target firm T is active in;

t_{AiTj} = Survivor based relatedness between industries i and j;

e_{Ai} = Fraction of employees involved in industry i for acquiring firm A; and

e_{Tj} = Fraction of employees involved in industry j for target firm T.

Despite our best efforts to obtain employee data at the industry level we have not been able to identify an appropriate data source. Therefore, we did not have information to assign weights based on employees for determining the cumulative standardized measure of the relatedness

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between various combinations of industries *i* and *j, t_{ij}* for two firms involved in an NCD. We

proceeded by assigning equal weights to the SIC code combinations for an acquirer-target pair[15,][16].

Cultural fit

Even though cultural fit has been used in several M&A studies (e.g. Cartwright, &

Schoenburg, 2006; Teerikangas, & Very, 2006), we were unable to find an appropriate precedent

for measurement of cultural fit based on secondary sources of data.   In most cases cultural fit

was rated by managers from either/both the firms involved. Clearly, such studies were not useful

for our measurement purposes because they obtained data from primary sources, specifically,

managers who were involved with the M&A transaction. What we were interested in was

external parties' perception of cultural fit between firms in an M&A transaction based on their

knowledge of each firm's organizational culture. In our efforts to measure organizational culture

and then arrive at a measure of cultural fit between firms, we were able to draw on a study by

Kowalczyk and Pawlish (2002) in which they used external evaluations of organizational culture.

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[15] An offshoot of this study is deciding how to assign a relatedness score to firms with the same SIC codes. We have been communicating with authors who have used this measure and have heard from two authors. Unfortunately at this stage we do not have a satisfactory scheme for determining related scores when merging firms have the same SIC codes.

[16] In their recent book chapter, Torrisi and Granstrand (2004) review empirical measurement of relatedness between sectors. They note that Rumelt (1974) pioneered the empirical examination of the extent of dissimilarity between sectors. However, his study did not establish a metric in the standard mathematical sense. Measurement of relatedness has been advanced further by studies such as Scott (1993) and Teece et al. (1994) who have formulated mathematical measures of relatedness. Scott (1993) measured "relatedness among sectors" and Teece et al. (1994) measured "corporate coherence in diversification" using the similar methodological approaches -- comparing the number of joint occurrences of two industries with the expected number of occurrences under random diversification hypothesis. This approach has been used by other scholars as well (e.g.,Vonortas, 1999). In recent years, scholars have been extending this measure to M&A studies. Most notably, Lien and Klein (2006, 2007) have applied this measure to the M&A context and have been working on refining and fine tuning this measure.

The instrument they used for rating organizational culture was based on the Organizational Culture Profile (OCP) which was developed by O'Reilly et al. (1991).

To measure cultural fit we first needed to identify organizational culture dimensions and then chalk out a coding rubric that could be applied to the acquiring and target firms in our sample. The dimensions of organization culture were identified from extant research on this topic. Although culture dimensions such as that developed Schein (2004) exist as well, we relied on the OCP developed by O'Reilly et al. (1991) because we found it better suited to an external evaluation of firms' organizational culture. In their 1991 study, O'Reilly et al. reviewed academic and practitioner-oriented literature on organizational culture and identified 54 items of culture. Based on factor analysis the 54 items were reduced to 7 dimensions of organizational culture, namely innovation, stability, respect for people, outcome orientation, attention to detail, team orientation and aggressiveness. Only, 26 items out of 54 in the list loaded significantly on these seven dimensions. Other scholars have subsequently, used the 26 items and tried to determine culture dimensions. Windsor and Ashkanasy (1996) for example found support for 6 culture dimensions and had problems with the aggressive items.

To establish a coding rubric we examined the 10K statements (for 2004, 2005, 2006 and 2007) for three firms known for their distinct cultures. The firms were Google, General Electric and Southwest. ATLAS.ti utility "wordcruncher" was used to generate word counts in a matrix format. For the twelve 10Ks wordcruncher generated a list of 6538 words and plotted a matrix for instances of the 6538 words within each 10K. Three coders rated the 6538 words along eleven organizational culture dimensions[17]. These dimensions were:

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[17] Dimensions 1 to 7 were identified in O'Reilly et al.'s (1991) study after factor analysis for firm descriptors. Dimensions 8-10 were from O'Reilly et al's (1991) study as well. These three dimensions were

1. Respect for people

2. Outcome orientation

3. Team orientation

4. Innovation

5. Attention to detail

6. Stability

7. Aggressiveness

8. Emphasis on rewards

9. Supportiveness

10. Decisiveness

11. Leadership

Coder1 and Coder 2 who were not disclosed the identity of the firms identified and rated every culture relevant word in the matrix along the eleven culture dimensions[18]. Coder 3, who is the author of this study, identified and rated culture relevant words from a subset of the matrix. The subset was extracted from the 6538 words based on a cumulative instance count cutoff of atleast forty. This was done to eliminate words with low cumulative instance counts. Inter-rater agreement was assessed with Coder 3's rating as the comparison baseline and we found that for the 164 words identified by coder 3, the three raters agreed on rating along the culture

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identified after factor analysis of individual preferences regarding organizational culture. Dimensions 1-6 were supported in Windsor and Ashkanasy's (1996) study. Dimension 11 was added after preliminary review of word matrix generated by AtlasTi from the 10Ks for Google, General Electric and SouthWest and after consultation with other coders.

[18] Coder 1 has a doctorate in Social Science and Coder 2 has a Masters in Business Administration.

dimensions for 153/164 (>90%) of the words. Coders 1 and 2 were consulted for words on

which there were differences and changes made once agreement was reached.

Having established the organizational culture coding rubric, annual reports were collected

for each firm in the sample (158 acquirers and 158 targets). Our intent was to measure culture

by assessing information about organizational culture as available in the public domain. This

was achieved by examining the same type of document released by all the firms our sample. The

annual report is one such document that is released by all public firms except under special

circumstances. For each firm in our sample we collected two annual reports -- one for the year

in which the NCD event took place and one for the year preceding the NCD event. Word count

matrix was generated using the collected annual reports for each firm. Each matrix (total of 158

X 2 matrices) was then input to a software utility written by the author for the purpose of

computing how many words within each firm's matrix corresponded to the culture coding rubric

established in the previous step. The software utility generated cumulative word counts for each

firm along each of the 11 culture dimensions.

Culture score for the acquiring firm was obtained by adding the word counts for each

culture dimension and dividing it by the total word count in an annual report. Cultural difference

or misfit was computed by taking the absolute value of the difference in scores between the

acquiring and target firms for each dimension and these scores for the 11 dimensions were added

up[19].

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[19] We want to acknowledge studies within the strategic management discipline and other disciplines that have used content analysis methods. Deffner (1986) identified three types of content analysis methods : 1) human scored content analyses; 2) individual-word-count systems; and 3) computerized systems using artificial intelligence. In her review of content analysis in management research, Morris (1994) noted that within strategic management, scholars had used literature content analysis and that the dominant method used for content analysis was human scored content analysis. In fact Morris (1994 : 908) made the observation that "Computerized content analysis using the individual-word-count or artificial intelligence approaches has not been observed in the strategic

Timing

Data for NCD timing were extracted from Lexis-Nexis Academic database. First measure, *Timing1,* is the time interval in days between announcement of M&A and the M&A NCD. Second measure, *Timing2,* is the time interval in days between intended date of closing and the date of the M&A NCD event.

Information Quantity

Data for information quantity was extracted from Lexis-Nexis Academic database. Number of published PR Newswire and Business Wire articles regarding an NCD within a (-30,+30) days time window and the total word count for the NCD articles were determined. Information quantity, *NCDCoverageAv*, was operationalized as the total word count for NCD articles divided by the number of published NCD articles.

Information Quality

Data for information quality was extracted from the documents compiled for determining information quantity. A list of communicable details about an NCD was prepared based on preliminary evaluation of NCD coverage. The list had these 5 broad items:

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management literature to date. This may be due to the emphasis on psychology and sociology variables in the classification schemes utilized by programs such as the General Inquirer III system ...". Our review of strategic management studies suggests that human scored content analyses continues to be used (e.g., Deephouse, 1996; Deephouse, 2000; Deephouse, & Carter, 2005). However, we were unable to find studies that used computerized content analysis. Therefore, there is some precedent for our approach -- D'Aveni and MacMillian (1990) performed content analysis of annual reports. However, in terms of the specifics of our measure of cultural fit, to our knowledge our approach is new -- human coders were used to develop a "dictionary" for identifying culture dimensions, and word counting computer program was used to score text from firms' annual reports along the culture dimensions.

- reasons for the NCD

- immediate fallout for the bidding firm

- effect on future ties between the firms involved

- effect on future M&A plans

- effect on firm strategy

If data were available for an item it was coded as 1 else it was coded as 0. Information quality

was operationalized as the sum along these five items.

Control Variables

Confounding Events

A confounding event is an event coincident with the event of interest. A confounding

event has the potential to distort or camouflage the effect of the event of interest (Kritzman,

2003; McWilliams, & Siegel, 1997).   We control for confounding events if they occur within the

event window under examination. Confounding events have been dealt with in various ways in

event studies. Some studies, especially those with short event windows, have excluded cases

with confounding events (e.g. Uhlenbruck et al., 2006). Instead of eliminating cases with

confounding events we identified confounding events within the event window for each

acquiring firm. The confounding events recorded were the twelve used by McWilliams and

Siegel (1997). These were: changes in earnings or sales, collaboration or partnership, contract

awards, debt or equity related event, dividend announcement, layoffs, litigation or labor unrest,

major executive changes, major initiatives by rivals, new products, price changes and

restructuring or divestiture.

Deal value

The value of the deal as reported in press outlets.

Merger stage - agreement

If the merger proceeded far enough such that an agreement had been signed between the acquiring and target firms, this variable was assigned a value of 1, else it was assigned a 0.

Method

At the onset of data analysis, we conducted an event study, to serve two purposes: 1) to test our working assumption that an NCD event results in decreased firm value (negative abnormal returns) and 2) to extract individuals firms' cumulative abnormal returns for cross-sectional testing of the hypotheses. Campbell, Lo and Mackinlay (1997) have provided a thorough discussion of the biases in event studies and the various correction options. In their recent article, Uhlenbruck et al. (2006) have made several of these corrections. Accordingly, we implemented the event study by giving appropriate attention to issues and corrections discussed in these prior studies. Our sample size is 158 which, according to McWilliams and Siegel's recommendations, did not warrant bootstrapping. We examined two event windows (-30,-1) and (0,0). Scholes-Williams market model adjusted returns (Scholes, & Williams, 1977) were used to adjust for thinly traded securities. The estimation window was (-250,-50), where the date of the NCD was day 0. The standardized cross-sectional test extension of the Patell test, as proposed by Boehmer, Musumeci and Poulsen (1991), was implemented to correct for cross-

sectional correlation[20]. Serial correlation between abnormal returns was corrected by an adjustment proposed by Mikkelson and Partch (1988) to the Patell test[21]. Eventus Version 8 was used to run the event study.

Multiple regression tests were performed between cumulative abnormal returns for a (-30, -1) pre-event period and strategic fit, relatedness, cultural fit, timing of NCD and coverage of NCDs as independent variables to test hypotheses 1 through 7. Results of the event study and regression tests are discussed in the next chapter.

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[20] The standardized cross-sectional test adjusts for a possible variance increase on an event date.

[21] Serial correlation occurs between abnormal returns for a stock within a given window because abnormal returns within the window are derived from the same market model intercept and slope estimators (Mikkelson , & Partch, 1988).

CHAPTER 5

RESULTS

Event Study

The mean daily abnormal returns for the firms in our sample over a 30 day pre- and post-window are reported in Table 2. Table 2 indicates that statistically significant abnormal returns for the acquiring firms are spread out over the 30 day pre- and 30 day post- window. The results in Table 2 corroborate qualitative evidence regarding information leakage of NCD events. We decided on windows for further examination of cumulative abnormal returns based on the aforementioned information leakage patterns (as revealed by qualitative data on NCDs and abnormal returns around the NCD event as in Table 2).

As stated earlier, based on evidence from prior studies on abnormal returns in NCD decisions, we proposed our hypotheses with the assumption that an impending NCD will result in negative shareholder returns for acquiring firms. In terms of abnormal returns this implies negative abnormal returns for the event window. We began our analysis by testing this assumption using event study methodology. Results of the event study are reported in Table 3. Cumulative average abnormal returns (CAARs) for five event windows -- (-30,-1), (-14,-1), (0,0), (+1,+14 and (+1,+30) -- were examined. Windows (-30,-1) and (-14,-1) represented two pre-event windows. (0,0) was a short one day event window, where 0 stood for the date of the NCD event. (+1,+14 and (+1,+30) represented two post-event windows. Table 3 reports cumulative mean abnormal returns for the five windows and results of parametric and non-parametric tests of significance.

Table 2. Daily Mean Abnormal Returns for Acquiring Firms for a (-30,+30) Window

Day	Mean ARs	Pos:Neg	Z		Generalized Sign Z		Signed Rank	
-30	-0.51%	83:99	-0.308		-0.520		-905.500	
-29	0.64%	92:90	1.233		0.816		355.500	
-28	-0.49%	78:104	-1.209		-1.262		-1608.500	*
-27	-0.05%	84:98	0.624		-0.372		-345.500	
-26	-0.54%	88:94	-1.160		0.222		-978.500	$
-25	-0.78%	79:103	-1.325	$	-1.114		-1820.500	**
-24	-0.23%	85:97	-0.668		-0.223		-853.500	
-23	-0.53%	75:107<	-2.325	*	-1.708	*	-2010.500	**
-22	0.09%	86:96	1.244		-0.075		-337.500	
-21	-0.82%	87:95	-1.079		0.074		-600.500	
-20	-0.12%	88:94	-0.397		0.222		-657.500	
-19	-0.02%	92:90	-0.343		0.816		135.500	
-18	-0.52%	78:104	-1.808		-1.262		-1524.500	*
-17	-0.17%	84:98	-0.682		-0.372		-872.500	
-16	0.12%	84:98	-0.051		-0.372		-939.500	$
-15	0.02%	87:95	1.010		0.074		249.500	
-14	-0.58%	84:98	-0.782		-0.372		-846.500	
-13	-0.80%	73:109<	-2.200	*	-2.004	*	-1820.500	**
-12	-0.68%	83:99	-1.448	$	-0.520		-991.500	$
-11	-0.51%	81:101	-1.209		-0.817		-1061.500	$
-10	-0.17%	85:97	0.154		-0.223		-115.500	
-9	-0.16%	73:109<	0.412		-2.004	*	-1201.500	*
-8	-0.14%	85:97	-0.765		-0.223		-553.500	
-7	0.04%	93:89	0.250		0.964		-64.500	
-6	0.29%	87:95	0.606		0.074		-217.500	
-5	-0.42%	86:96	-1.016		-0.075		-440.500	
-4	-0.36%	84:98	-0.419		-0.372		-1093.500	$
-3	-0.14%	97:85)	-0.152		1.558	$	-22.500	
-2	-0.52%	89:93	-0.908		0.371		-224.500	
-1	-0.32%	89:93	-0.647		0.371		-398.500	
0	0.80%	95:87	1.803	*	1.261		1153.500	$

Table 2. (continued)

Day	Mean ARs	Pos:Neg	Z		Generalized Sign Z		Signed Rank	
1	0.08%	90:92	1.140		0.519		275.500	
2	0.00%	88:94	0.001		0.222		-152.500	
3	-0.47%	92:90	-0.091		0.816		-488.500	
4	-0.54%	79:103	-0.636		-1.114		-1060.500	$
5	-0.02%	99:83>	0.485		1.855	*	388.500	
6	0.19%	96:86)	0.702		1.410	$	612.500	
7	0.49%	92:90	1.107		0.816		555.500	
8	-0.53%	85:97	-1.642	$	-0.223		-1071.500	$
9	0.57%	91:91	1.551	$	0.667		64.500	
10	0.23%	95:87	1.392	$	1.261		174.500	
11	0.40%	87:95	0.468		0.074		-336.500	
12	0.32%	92:90	-0.507		0.816		290.500	
13	-0.13%	90:92	0.249		0.519		-449.500	
14	0.04%	88:94	0.163		0.222		-219.500	
15	-0.47%	79:103	-1.189		-1.114		-1599.500	*
16	0.51%	84:98	1.160		-0.372		-416.500	
17	-0.56%	85:97	-1.440	$	-0.223		-1177.500	*
18	0.59%	98:84>	2.256	*	1.706	*	1132.500	$
19	-0.58%	80:102	-1.462	$	-0.965		-1443.500	*
20	-0.28%	84:98	-0.944		-0.372		-891.500	
21	0.68%	87:95	0.550		0.074		-57.500	
22	-0.29%	77:105(	-0.750		-1.411	$	-1134.500	$
23	0.02%	98:84>	0.929		1.706	*	227.500	
24	-0.15%	88:94	0.770		0.222		-286.500	
25	-0.11%	82:100	0.391		-0.669		-388.500	
26	-0.31%	90:92	-0.577		0.519		-952.500	$
27	0.13%	88:94	0.003		0.222		-409.500	
28	0.08%	82:100	0.095		-0.669		-730.500	
29	0.27%	87:95	0.637		0.074		54.500	
30	-0.38%	80:102	-1.329	$	-0.965		-1157.500	$

$ p<0.10, * p<0.05, ** p<0.01 and *** p<0.001
(,< or),> etc. correspond to $,* and represent the significance and direction of the
generalized sign test.

Table 3. Event Study Results

Type of Event Study Model	Mean Cummulative Abnormal Return	Z	Positive: Negative	Signed Rank Z
(-30,-1) SW Market Model, VWI	-8.37%	-2.275**	81:101	-1449.5**
(-14,-1) SW Market Model, VWI	-4.47%	-1.610*	83:99	-1041.5*
(0,0) SW Market Model, VWI	0.80%	1.803**	95:87	1153.50*
(+1,+14) SW Market Model, VWI	0.63%	1.410*	94:88	365.500
(+1,+30) SW Market Model, VWI	-0.23%	0.799	90:92	-500.50

* p<0.10; ** p<0.05; *** p<0.01

SW – Scholes Williams

VWI – Value weighted index

Results for all event windows generated by using Scholes-Williams Market model value weighted indices are reported in Table 3. The parametric test results indicated statistical significance for both the pre-event windows, for the event window and for one post-event window. The non-parametric Sign Rank test indicated significant results for the pre-event and event windows, suggesting that outliers do not account for the abnormal returns. For the (-30,-1) event window, an NCD decision by acquiring firms resulted in negative cumulative average abnormal returns of `-8.37%` and for the (-30,-1) event window the cumulative average abnormal return was -4.47%. For the event window (0,0) the acquiring firms making a NCD announcement reported positive cumulative average abnormal returns 0.8%.

The results of the event study analysis as reported in Table 3 lend support to our assumption that an NCD event results in decreased firm value for acquiring firms. The positive abnormal returns for event window (0,0) can be interpreted in several ways. One explanation is that because of information leakage the market has already reacted to the impending NCD in the days before an NCD event, hence the small positive effect. Another explanation is that when the final NCD announcement is made, it ends speculation and uncertainty, and the market responds favorably.

Regression Analysis

Standard multiple regression tests were performed between cumulative abnormal returns for a (-30, -1) pre-event period and strategic fit, relatedness, cultural fit, timing of NCD and coverage of NCDs as independent variables. Analysis was performed using SPSS

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REGRESSION. SPSS FREQUENCIES and SPSS graphing utilities were used for evaluation of assumptions.

Examination of distributional characteristics of variables led to transformation of variables to reduce skewness, reduce the number of outliers and to improve normality and linearity (Tabachnick, & Fidell, 2001). Graphical plots (P-P plots) of cultural fit and timing variables indicated positive skewness. Logarithmic transformations of both the variables improved their normality (P-P plots) and their linearity (bivariate scatterplots with the transformed variable and the dependent variable). The dependent variable was examined for outliers and assumptions of normality, as well. We found outliers and violations of normality and explored various transformation options. However, the transformations did not significantly reduce the number of outliers or improve the normality, and the dependent variable was therefore not transformed. Using a $p < 0.001$ criterion for Mahalanobis distance, two cases within our sample were identified as multivariate outliers and were not included in further analysis (final n=156). We examined these two cases further and noted that both of these cases had emerged as outliers in univariate dependent variable tests of the dependent variable. Further, one case was an NCD event immediately following September 11, 2001.

One variable, the survivor-based measure of relatedness, raised issues that needed further scrutiny. Based on examination of prior studies that have used this measure and correspondence with two of these authors, a resolution is still being worked out for cases in which the acquiring and target firm SIC codes are the same. The sample had 65 such cases. One author recommended a schema for assigning a relatedness score in such cases. However, implementation of the schema significantly altered the distribution. Given this limitation we

made the following two decisions regarding this variable: 1) limit the focus to primary SIC codes and 2) work with a reduced sample of 91 cases for examining the effect of survivor based relatedness measure. These 91 cases consists of acquiring and target firms with different primary SIC codes. Furthermore, the SIC codes for the 91 cases have population level data from which the survivor-based relatedness measure can be computed. This decision has the downside of reducing the sample size and eliminating firms with same SIC codes. Despite this limitation, we see merit in the new approach the survivor based measure proposes and include it in our analysis to the extent possible.

Table 4 provides univariate statistics and bivariate correlations between variables for 156 observations included in the study. Our sample reported a wide spread for CARs for acquiring firm with a mean of -0.064 and standard deviation of 0.294. Such high dispersion for firms' abnormal returns has been reported in prior studies as well (e.g., Capron, & Pistre, 2002; Uhlenbruck et al. 2006). None of the other univariate statistics stood out and the bivariate correlations were within acceptable values as well.

Regression Tests Using the SIC-based Index Measure of Relatedness

The sample of 156, was split into two based on whether the firms involved had the same primary SIC code. This resulted in 91 firms in which the primary SIC code for the firms involved was different and 65 firms for which the primary SIC code was the same. Table 5 displays three sets of regression results, one each for n=156, n=91 and n=65. The same regression model was run for the three cases: the dependent variable CAR was regressed on strategic fit, relatedness (SIC based index and reverse coded), cultural fit (reverse coded),

Table 4. Descriptive Statistics (univariate and bivariate)

		Mean	SD	1	2	3	4	5	6	7	8
1	CAR	-0.042	0.244								
2	Strategic Fit	1.470	1.133	-0.148							
3	Relatedness - SIC based index [a]	2.870	1.733	0.071	-0.005						
4	Relatedness - Survivor based measure	10.649	28.298	0.070	-0.032	0.016					
5	Cultural Fit [a]	-0.897	1.445	0.111	-0.076	-0.203 *	0.105				
6	Information Quantity	362.248	351.640	-0.248 **	0.207 **	0.049	-0.180	-0.149			
7	Information Quality	1.880	1.334	-0.131	0.382 **	0.016	-0.082	-0.182 *	0.273 **		
8	Timing	4.329	1.132	0.182 *	0.191 *	0.085	0.083	0.106	-0.037	0.071	
9	Deal Value	5.538	2.060	-0.027	0.282 **	0.284 **	0.114	-0.188 *	0.037	0.210 **	0.043

[a] - reverse coded

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interaction of strategic fit with relatedness (SIC based index), interaction of strategic fit and cultural fit, timing of NCD and information quantity and information quality. The control variables used were four types of confounding events ("acquisition activity", "collaborations", "major executive changes", "divestiture/restructuring"), deal value and whether the merger went through to the agreement stage. In each case, regression diagnostics were run for multicollinearity and influential data. Due to multicollinearity concerns (based on acceptable tolerance threshold of 0.2), both the interaction (product) terms were computed after centering the variables concerned (Jaccard, Turrisi, & Wan, 1990). Column 1 reports results for the regression test on the entire sample (n=156). Column 2 reports results for cases in which the primary SIC codes for the firms were different (n=91). Column 3 displays results for those instances in which primary SIC codes were same for the acquiring and target firms (n=65). R-squared for Columns 1, 2 and 3 were 0.19, 0.28 and 0.53 respectively. In all three cases the regression model was statistically significant.

Hypothesis 1 predicted a negative relationship between strategic fit and firm returns. The regression results indicate that this predicted relationship was statistically supported ($p < 0.10$) only for the sub-sample comprising of firms with different primary SIC codes (Columns 2). Hypothesis 2 predicted a negative relationship between relatedness and firm returns. This predicted relationship was statistically supported ($p < 0.10$) only for the sub-sample consisting of firms with the same primary SIC codes (Columns 3). Note here that the SIC based index measure is reverse-coded. Hypothesis 3 predicted a negative relationship between cultural fit and firm returns. The cultural fit variable is also reverse coded and we do not find support for Hypothesis 3.

Table 5. Regression of Cumulative Abnormal Returns (SIC-based index measure for relatedness variable)

Independent Variables	n=156		n=91 (primary SIC codes different)		n=65 (primary SIC codes same)	
	B	t	B	t	B	t
Strategic fit	-0.022	-1.125	-0.054 $	-1.940	0.003	0.124
Relatedness [a]	0.017	1.473	0.009	0.504	0.036 $	1.883
Cultural fit [a]	0.014	0.976	0.021	0.841	0.006	0.400
Strategic fit X Relatedness	-0.006	-0.497	0.025	1.362	-0.030 $	-1.712
Strategic fit X Cultural Fit	0.031 *	2.120	0.071 **	2.875	0.018	1.062
Days between M&A ann and NCD	0.006 *	2.499	0.011 **	3.225	0.001	0.169
Information Quantity	0.000 *	-1.988	0.000	0.489	0.000 **	-3.144
Information Quality	-0.008	-0.530	-0.011	-0.471	0.028	1.283
Control Variables						
Acquisition Activity	0.031	0.649	0.026	0.386	0.014	0.221
Collaborations	-0.078	-1.498	0.026	0.361	-0.170 *	-2.323
Major executive changes	0.020	0.295	0.018	0.127	-0.018	-0.257
Diverstiture/Restruturing	0.072	0.974	0.016	0.162	0.149	1.334
Deal value	-0.003	-0.251	0.011	0.733	-0.026 $	-1.900
Merger stage - agreement	0.012	0.300	0.106 $	1.950	-0.149 *	-2.655
Constant	-.096	-1.315	-.302	-2.810	0.158	1.526
F	2.328 **		2.131 *		4.000 ***	
R^2	.19		.28		0.53	

[a] - reverse coded

$ p < .10
* p < .05
** p < .01
*** p < .001

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Hypothesis 4a predicted the interaction effect of relatedness on the relationship between strategic fit and firms' abnormal returns and Hypothesis 4b predicted the interaction effect of cultural fit on the relationship between strategic fit and firms' abnormal returns. According to Hypothesis 4a, a low level of relatedness between firms is expected to mitigate the negative relationship between strategic fit and acquirer firms' abnormal returns. Although the coefficient in Column 3 is statistically significant ($p < 0.10$), the direction is the opposite of that predicted by Hypothesis 4a. Therefore, the regression results contradict Hypothesis 4a. Similarly, Hypothesis 4b predicted that low levels of cultural fit will mitigate the negative relationship between strategic fit and acquirer firms' abnormal returns. The coefficient in the regression table pertaining to this hypothesis is statistically significant ($p < 0.05$ and $p < 0.01$) in Columns 1 and 2. In both cases, the effect on acquirer firms' abnormal returns is as predicted.

Hypothesis 5 predicted an inverse U relationship between the days between the M&A announcement and announcement of NCD and acquirer firm returns. Columns 1 and 2 indicate statistical support ($p < 0.05$ and $p < 0.01$) for this predicted relationship. The plot in Figure 2 further confirms the predicted inverse U curvilinear relationship. The second part of Hypothesis 5 predicted the peak of the inverse U will occur when the interval between the NCD date and the intended closing date for the M&A would be at its minimum value. Data for the intended closing date were released (and thereby available) for eighty three cases. In all the 83 cases the NCD event occurred before the intended closing date. Figure 3 indicates that as the NCD date gets closer to the intended closing date, the acquiring firms' abnormal returns follow a negative trend. The second part of Hypothesis 5 is not supported by the plot of predicted CARS versus days between NCD event and intended closing date.
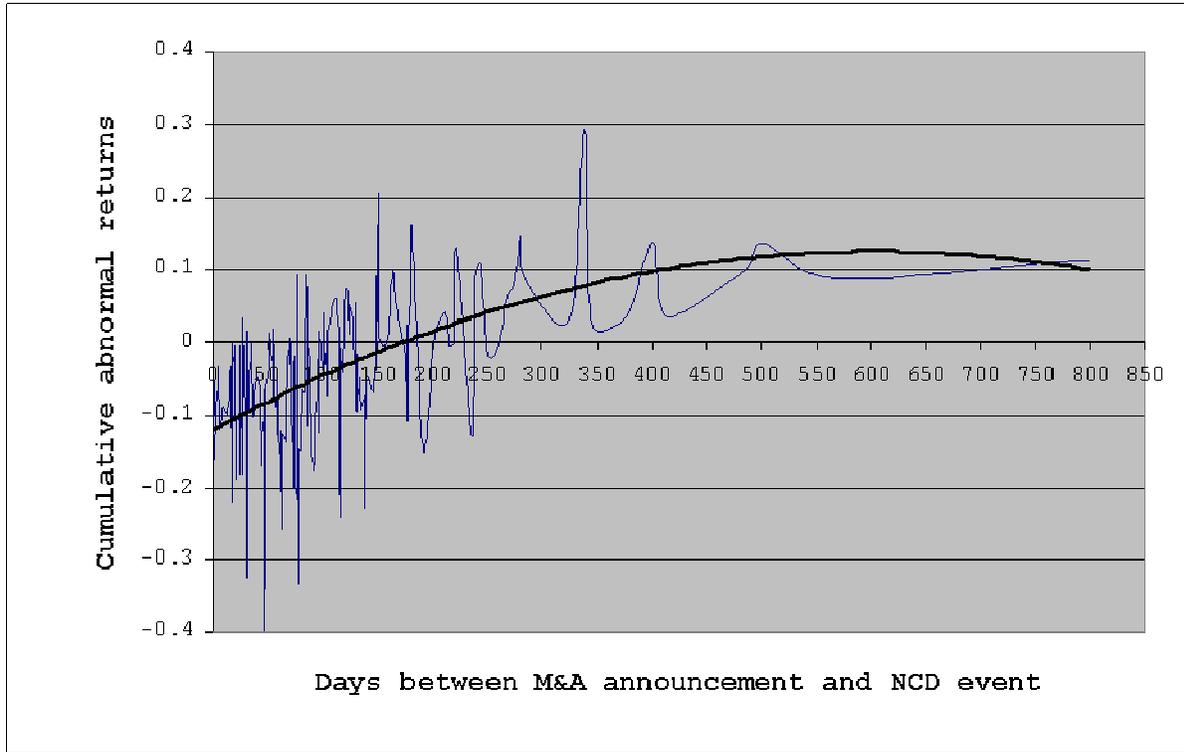
Figure 2. Curvilinear Relationship between Timing of NCDs and Acquiring Firms' Returns

Hypothesis 6 predicted a positive relationship between NCD coverage and firms' abnormal returns. Columns 1 and 3 indicate statistical support ($p < 0.05$ and $p < 0.01$) for Hypothesis 6. Hypothesis 7 predicted a positive effect of information quality on acquirer firms' abnormal returns. The results in columns 1, 2 and 3 do not indicate support for Hypothesis 7.
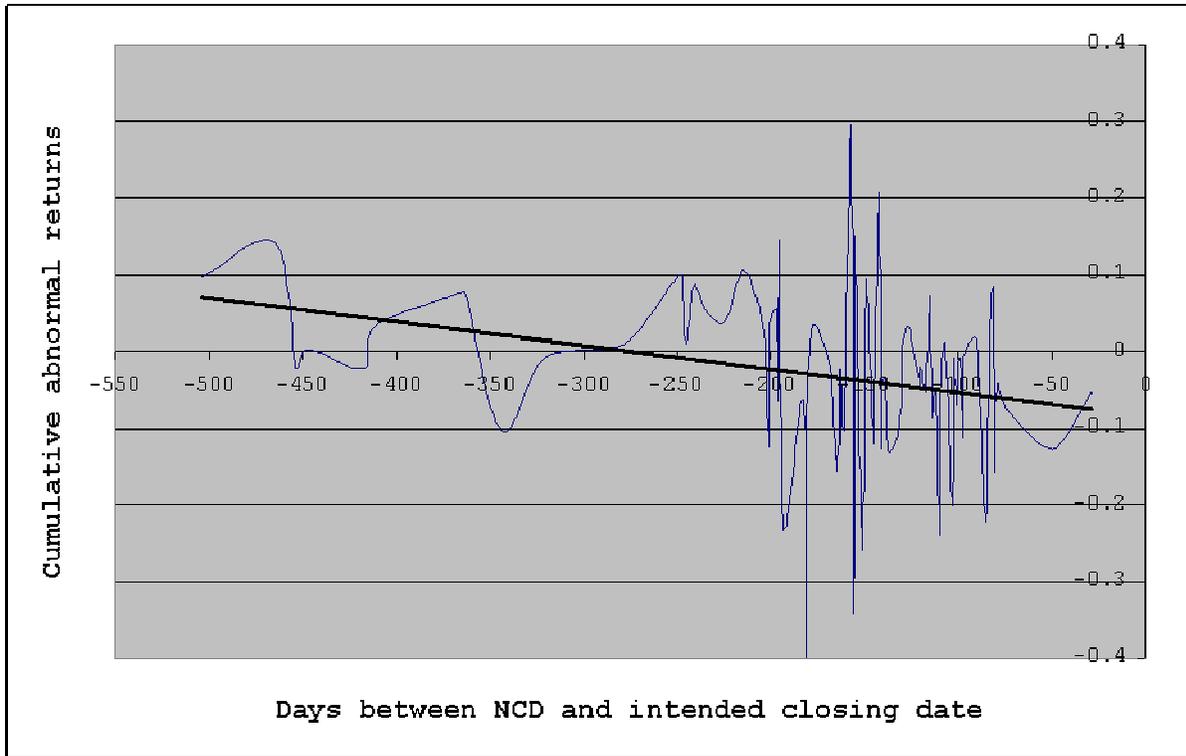
FIGURE 3: Relationship between Timing of NCDs and Acquiring Firms' Returns

The effect of "acquisition activity" control variable is not statistically significant in any of the columns. "Collaboration" as a confounding event is statistically significant ($p < 0.05$) in Column 3. The negative coefficient suggests that in the presence of collaborations as a confounding event, acquiring firms have lower abnormal returns. "Major executive changes" as a confounding variable does not have a statistically significant effect on acquiring firms' returns, as is the case with "divestiture/restructuring" as a confounding event. Not surprisingly, deal value matters. The statistically significant ($p < 0.10$) negative coefficient for deal value as in Column 3 suggests that in M&As involving firms with same primary SIC codes NCDs involving

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larger deals have more negative effect on acquirer firm's returns. The effect of "merger stage – agreement" is somewhat puzzling. In column 2 it has a statistically significant ($p < 0.10$) positive effect, whereas in column 3 it has a statistically significant ($p < 0.05$) negative effect. What the results are revealing is that in case of NCDs involving firms with the same primary SIC codes, if the M&A process has gone up to or beyond the signing of an agreement, an NCD has a negative effect on acquirer firms' returns. The effect is clearly the opposite in case of NCDs involving firms in different primary SIC codes.

We present a summary of the hypotheses and findings in Table 6. Some of the predicted hypotheses are supported. In addition to the supported hypotheses, an important insight that was not anticipated emerges here. The valuable insight is that the effects NCDs of firms differ for acquiring and target firms with the same primary SIC codes and NCDs involving firms with different primary SIC codes. Overall, the results are interesting and shed light on the complex dynamics of the NCD process.

Table 6. Summary of Findings

Hypotheses / Independent Variables	Hypothesized relationship	Observed relationship		
		n=156	*n=91 (primary SIC codes different)*	*n=65 (primary SIC codes same)*
H1 Strategic fit	(−)	n.s.	(−)	n.s.
H2 Relatedness	(−)	n.s.	n.s.	(−)
H3 Cultural fit	(−)	n.s.	n.s.	n.s.
H4a Moderating effect of relatedness	(−)	n.s.	n.s.	(+)
H4b Moderating effect of cultural fit	(−)	(−)	(−)	n.s.
H5 Timing of NCD	(−)	(−)	(−)	n.s.
H6 Information quantity	(+)	(+)	n.s.	(+)
H7 Information quality	(+)	n.s.	n.s.	n.s.

Key

(+) = Hypothesized to be positively associated with shareholder returns

(−) = Hypothesized to be negatively associated with shareholder returns

(n.s.) = Observed no significant relationship with shareholder returns

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Regression Tests Using the Survivor-based Measure of Relatedness

As mentioned earlier survivor-based measure of relatedness could be computed only for 91 cases. This was because the remaining 65 cases involved acquiring and target firms with the same primary SIC code. Table 7 reports the regression results for the 91 cases for which survivor-based measure of relatedness was determinable. Column 1 in the table displays results for a reduced model with main effects only. Column 2 displays results for the full model which included main and interaction effects. Column 3 results have been reproduced from Table 5-Column 2. Column 3 has been included in this table, to make it easier to compare regression results for the 91 cases in which firms with different primary SIC codes are involved. The difference between columns 2 and 3 in Table 6, is in the measure of relatedness used. Column 2 uses survivor-based measure of relatedness whereas Column 3 used the SIC-based index measure of relatedness. The results indicate the regression results across Columns 2 and 3 are almost identical. The effect of the independent variables and controls on acquirer firms' returns are robust and not influenced by the measure used for determining acquirer and target relatedness.

Comparing regression results from tests using two different measures of relatedness adds value to the analysis. This is because we have for long debated the merit of relatedness measures used commonly in studies. The lure of the survivor-based measure is that it has a sound theoretical foundation. Even though there still are some outstanding glitches with its use, establishing robustness across the two relatedness measures - a straightforward SIC based index and the other rooted more strongly in theories – lends credibility to our results.

Table 7. Regression of Cumulative Abnormal Returns (comparing results for the SIC-based index measure and the survivor-based measure for relatedness variable)

Independent Variables	n=91 Survivor based measure; reduced model – main effects only		n=91 Survivor based measure; full model - main and interaction effects		n=91 SIC based index; full model – main and interaction effects	
	B	t	B	t	B	t
Strategic fit	-0.050 $	-1.770	-0.048 $	-1.737	-0.054 $	-1.940
Relatedness [b]	0.011	0.411	-0.009	-0.220	0.009	0.504
Cultural fit [a]	0.023	0.957	0.009	0.367	0.021	0.841
Strategic fit X Relatedness			0.017	0.678	0.025	1.362
Strategic fit X Cultural Fit			0.050 *	2.369	0.071 **	2.875
Days between M&A ann and NCD	0.008 *	2.553	0.011 **	3.186	0.011 **	3.225
Information Quantity	0.000	0.314	0.000	0.304	0.000	0.489
Information Quality	0.000	-0.024	-0.011	-0.486	-0.011	-0.471
Control Variables						
Acquisition Activity	0.042	0.603	0.037	0.539	0.026	0.386
Collaborations	0.044	0.607	0.040	0.558	0.026	0.361
Major executive changes	0.031	0.223	0.027	0.201	0.018	0.127
Diverstiture/Restruturing	-0.026	-0.261	-0.008	-0.086	0.016	0.162
Deal value	0.013	0.853	0.011	0.729	0.011	0.733
Merger stage - agreement	0.088	1.572	0.104 $	1.886	0.106 $	1.950
Constant	-0.263	-2.511	-.290	-2.824	-.302	-2.810
F	1.674 $		1.974 *		2.131 *	
R^2	.21		.27		.28	

[a] - reverse coded
[b] - reverse coded only for SIC based index

$ p < .10
* p < .05
** p < .01
*** p < .001

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CHAPTER 6

DISCUSSION AND CONCLUSION

The fundamental notion that a firm may exercise an M&A NCDs as a strategic option was the seed idea for this study. For NCDs to be considered as strategic options, a better understanding of this phenomenon was needed that went beyond ascertaining whether acquiring firms' value increases or decreases with an NCD event. Towards that end, this study examined a model with explanatory variables that were hypothesized to influence variations in firms' value when NCDs occur. Three of the explanatory variables used – strategic fit, relatedness and cultural fit – have been used extensively in prior M&A studies (albeit in other M&A contexts) by management scholars. Timing of the NCD event and coverage of the NCD event were the other two explanatory variables used in the model. In this chapter the findings are discussed first followed by a discussion of the study's strengths, limitations and future research implications.

Discussion of Findings

Based on the results reported in the prior chapter, several insights emerged from this study. Before we get into the hypotheses supported and what they imply, we would like to repeat a finding that was important to our understanding this complex phenomenon. In the course of our analysis, we took note of statistical evidence which indicated that NCD events involving acquiring and target firms with the same primary SIC codes are different from those involving acquiring and target firms with the different primary SIC codes. Accordingly, we discuss how each explanatory variable matters for the two significantly different types of M&A transactions when an NCD terminates the M&A proceedings.

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We begin by discussing the effect of strategic fit. In NCDs when the primary SIC codes are different, the presence of a strong strategic rationale for the transaction results in lower shareholder returns for the acquiring firm (weak statistical support). However, when the primary SIC codes are the same, strategic rationale was not found to influence acquiring firm shareholder returns. This finding is not surprising because in M&As with same primary SIC codes for the acquirer and target firms the focus is on organizational growth and/or increase in market share. However, when firms with different primary SIC codes are involved the strategic rationale includes acquiring new products, new technology and new markets. It is likely that investors value these rationales more and are disappointed when an M&A transaction that promised so much ends as an NCD.

Relatedness between firms was found to have a (statistically weak support) negative influence on acquirer firms' abnormal returns in NCDs when the firms involved had the same primary SIC code. In the cases when the firms' primary SIC codes were different the extent of relatedness did not matter. We must mention here that degree of relatedness was computed by examining up to five SIC codes for firms. Perhaps one explanation for the negative influence of relatedness in M&A transactions involving firms with same primary SIC codes, is that the focus in these transactions is on value derived from combining and scaling up similar activities. When all other explanatory variables were kept constant, an NCD for highly related firms with the same primary SIC codes had a greater adverse effect on acquiring firms' shareholder returns. In cases of firms with different primary SIC codes, the fact that the firms are different is a given. Thus the extent of relatedness by itself did not influence shareholder returns. Relatedness between firms was also found to have a (statistically weak) moderating influence on the strategic fit and acquirer firms' returns in cases of same primary SIC code. Low relatedness levels

between firms were found to magnify the negative relationship between strategic fit and firms' abnormal returns.

Cultural fit between the acquiring and target firms did not influence shareholder returns in either group of firms. This is perhaps because cultural fit is not the driving factor when the market assesses an M&A transaction. However, cultural fit between firms had a significant moderating influence on the negative relationship between strategic fit and acquiring firms' returns, for the group of firms with different primary SIC codes. For this group of firms we discussed in an earlier paragraph that high levels of strategic fit led to higher expectations of value creation and therefore more punishing consequences in an NCD. Low levels of cultural fit offer a justification for NCDs in these cases leading to lessening of the punishing consequences.

Timing of the NCD was found to have a curvilinear effect (inverted U) on acquirer firms returns for transactions involving firms with different primary SIC codes. The timing of the NCD did not have a notable effect when the primary SIC codes for firms were the same. Perhaps in these cases, the market anticipates delays because of the increased likelihood of regulatory scrutiny resulting in foreseeable delays in the transaction. When regulatory bodies keep coming back for more information, the M&A transaction may have spun out of the acquiring firm's control.

Results for coverage of the NCD event were mixed. Increase in coverage led to increase in acquiring firm shareholder returns in M&A transactions involving the same primary SIC codes. This effect was as predicted. Information quality did not influence shareholder returns in transactions involving firms with different primary SIC codes. Lack of statistical support for the hypothesized relationship between information quality and shareholder returns, may have to do with inadequate operationalization of information quality construct.

Implications

Before we discuss the research and practical implications of this study, we would like to highlight the study's strengths and limitations. This study's foremost strength is that it examines a phenomenon that is relevant to all firms engaged in impending M&A transactions. In addition to the importance of this topic, this study was conducted by drawing on concepts and constructs used in prior M&A studies. The evolution of these constructs (theoretical and operational) was given much thought and efforts were made to use improved or alternate measures where necessary.

We are excited about the measure of cultural fit proposed and used in this study. Measuring organizations' culture and assessing cultural fit between firms from secondary sources of data such as annual reports eliminates issues involved with gathering data about M&As (and other historical events) from primary sources (e.g. managers). Despite problems encountered with computing the survivor based measure of relatedness, we are enthusiastic about this measure as well. The theoretical rationale supporting its computation is compelling and ties in effortlessly with theories used by strategic management scholars.

Our treatment of confounding events is another strength of this study. Instead of eliminating cases with confounding events (as is common practice) or ignoring the confounding events (this is equally common), we introduced confounding events as control variables in the multivariate model. Some of the confounding events were found to influence shareholder returns. This approach gives extra insight into factors that influence acquirer firms' returns. In addition, it allows us to have a sample size that we can work with. Due to data unavailability issues, the sample was 156. Eliminating cases due to confounding events would have led to a

greater reduction in sample size. There is room for improving some of the study measures --

most notably, the measure of information quality needs further refinement.

As far as future research is concerned, this study sets the stage for a better understanding

of M&A NCDs. This study used aggregated measures of strategic fit, cultural fit and

information quality. All three constructs have multiple dimensions. Examining these constructs

along these dimensions is likely to yield better insight. In terms of practical relevance, an NCD

is a strategic option that firms need to understand better and execute more often. Thinking of

and exercising NCD as a strategic option might be akin to the fisherman deciding whether to fish

or cut bait. We are hopeful that cumulation of studies like this can transform the exercise of

NCDs as a strategic option less dependent on intuition and other momentary considerations.

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