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## Incomplete Acquisitions: the Valuation and Performance Effects of Changes in Control.

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**INCOMPLETE ACQUISITIONS: THE VALUATION AND PERFORMANCE  
EFFECTS OF CHANGES IN CONTROL**

**A Dissertation**

**Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy**

**in**

**The Interdepartmental Program in Business Administration**

**by**

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August 1999**



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## DEDICATION

This dissertation is dedicated to the memory of my father, Arthur Louis Lieck, and to my mother, Helen Woelke Lieck, whose love and guidance have enriched my life immeasurably. It is my aspiration to achieve the high personal standards that they have exemplified. Their love and support has filled my life with joy while their spiritual strength, dedication to family, and hard work has been an inspiration to me in times of adversity. I wish to express my deepest gratitude to them for instilling in me a deep faith in God, love and compassion for others, and a dedication to my goals, along with the ability to enjoy the good times, endure the bad times, and appreciate the humor in life. These traits have been invaluable in completing this endeavor.

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## **ABSTRACT**

**This dissertation provides an extensive examination of a corporate control transaction that has not been previously examined in the finance literature, an incomplete acquisition. An incomplete acquisition is defined as an offer for a sufficient amount of equity in a target firm to give the bidder effective control that is not accompanied by a disclosed intention to acquire the remaining minority shares.**

**An original database of incomplete acquisitions is developed and used to examine three major aspects of these unique control transactions. First, descriptive data about the prevalence of incomplete acquisitions and the mechanisms that are used to effect these transactions are provided and event study methodology is used to assess the market valuation effects of incomplete acquisition announcements. Second, the pre- and post-acquisition operating performance of incomplete acquisition targets is examined. By analyzing both the valuation effects and subsequent operating performance of incomplete acquisitions, this study provides evidence to distinguish among alternative hypotheses that generate differential predictions about the wealth effects of changes in control, the distribution of wealth between targets and acquirers, and the subsequent performance of target firms. Third, the ultimate disposition of the parent's controlling stake and the minority interest in the target and the valuation effects of disposition transactions are examined.**

**Empirical results indicate that incomplete acquisitions are value enhancing for targets and have a non-negative effect on the wealth of acquirers. The analysis of target operating performance indicates that target firm performance is similar to control firms both before and after the acquisition. The normal pre- and post-operating**

performance suggests that increases in target shareholder wealth at incomplete acquisition announcements are not due to the market's anticipation of gains from improved efficiency or synergy. The evidence is also inconsistent with the hypothesis that, subsequent to the acquisition, acquirers are able to expropriate the wealth of minority shareholders. The finding of normal pre- and post-acquisition target performance combined with the evidence of significant gains in aggregate shareholder wealth are consistent with the information hypothesis which posits that positive private information concerning target value is revealed by the bidding and acquisition process.

# **CHAPTER 1**

## **AN OVERVIEW**

### **1.1 Introduction**

A large body of evidence in finance indicates that the market for corporate control enhances economic welfare by inducing a more efficient allocation of resources. In a conventional corporate control transaction (i.e., mergers and acquisitions), one corporation obtains control of another corporation by purchasing all of the outstanding equity of the targeted corporation. Another typical form of corporate control event is an asset sale (sometimes termed a divestiture), a transaction in which a buyer acquires ownership and full control of a wholly owned subsidiary (or other asset) from a selling firm. Both of these forms of corporate control transactions are commonly observed events that have been studied extensively in the finance literature. In contrast to conventional mergers and acquisitions and asset sales, corporations have conducted an alternative form of corporate control transaction that has not been previously examined in the finance literature. This form of corporate control transaction can be termed an incomplete acquisition. There are two key aspects of this transaction. First, one corporation (the acquirer) gains a controlling interest in another corporation (the target) that is already a publicly traded firm at the time of the control event. Second, the acquired target corporation continues to trade as a majority controlled subsidiary of the acquirer for an extended period of time after the transaction. These incomplete acquisitions are the subject of this study.

An incomplete acquisition, more specifically, is defined as an offer for a sufficient amount of the equity of a target firm to give the bidder effective control of

the target firm that is not accompanied by an intention to acquire the remaining minority shares. As a result, the target firm becomes a subsidiary of the acquirer but, in contrast to a conventional acquisition, there remains a legally distinct, but affiliated operating firm in which there is a minority interest that continues to trade for a significant period. This dissertation examines and analyzes three major aspects of incomplete acquisitions. First, descriptive data about the prevalence of incomplete acquisitions is provided, the alternative mechanisms used to effect these transactions are examined, and the disposition events that terminate this form of corporate governance structure are determined. Second, the market valuation effects of announcements of incomplete acquisitions and of disposition events that terminate incomplete acquisitions are generated and evaluated. Third, the post-acquisition operating performance of incomplete acquisition targets is examined. These empirical results provide a body of evidence about the effects of incomplete acquisitions that is used to test the applicability of alternative hypotheses that are developed based on the finance literature to explain this unusual corporate control event. This dissertation also addresses the public policy issue of the desirability of permitting this form of corporate control transaction.

Incomplete acquisitions are corporate control events that, although less frequent than conventional mergers and acquisitions, are not uncommon. From this perspective alone, they merit study as a mechanism for transferring corporate control. Such an analysis fills an important gap, because the finance literature has not previously examined these transactions. Although there are numerous studies of conventional mergers and acquisitions, there is only one major empirical study by Holderness and

Sheehan (1988) that examines a subject that is directly related to incomplete acquisitions, namely the role of majority ownership of corporations. However, Holderness and Sheehan's study examines the existence of majority ownership rather than its creation and covers both individual and corporate majority owners.<sup>1</sup> Thus, their sample is more heterogeneous than the incomplete acquisition sample developed in the current study. In contrast to the work of Holderness and Sheehan, this dissertation provides a descriptive analysis of incomplete acquisitions, as well as tests of hypotheses on the valuation and operating performance effects of these transactions.

Part of the explanation for the fact that incomplete acquisitions have not been previously studied is that, although there are many sources of data for conventional mergers and acquisitions, there is no existing database of incomplete acquisitions. Consequently, developing such a database and documenting the prevalence and characteristics of incomplete acquisitions is, by itself, an important contribution to the finance literature.

In this dissertation, the valuation and operating performance effects of these transactions are examined. These results provide perspective on the possible motivations for the use of incomplete acquisitions rather than conventional mergers and acquisitions. In a competitive economy, economic considerations are likely to motivate the use of the most efficient mechanism in achieving a desired objective. Thus, research on the use of incomplete acquisitions rather than complete acquisitions as a

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<sup>1</sup> Their sample consists of 114 firms with majority owners. Of the 65 corporate majority shareholders in their sample, 25 are foreign and 11 are private corporations. Thus, their sample includes only 29 publicly-held corporate parents. Moreover, many of these majority ownership positions are the result of carve-outs of the minority interest. Thus, their sample contains only a small number of incomplete acquisitions as defined in this study.

means of effecting a change in control is important because it can enhance an understanding of the valuation effects of changes in control.

Holderness and Sheehan (1988) suggest that measuring the market's reaction to the unanticipated formation of majority blocks can best assess the effect of majority blocks on firm value. However, they argue that in practice this procedure is not feasible because the Williams Act requires disclosure of equity holdings by an investor once the level of 5% ownership of all outstanding shares of a corporation is reached. In the current study, however, the reaction to unanticipated formation of majority control can be assessed. This is because, in an incomplete acquisition, the intention to gain majority control is typically announced at the outset of the acquisition process. In some cases, the acquirer establishes a toehold prior to announcing the incomplete acquisition, which may increase market expectations of a change in control that will be capitalized at the announcement of the toehold position. In these cases, the share price response to the incomplete acquisition represents a lower bound on the total valuation effect.

Existing theories of mergers and acquisitions generate differential predictions concerning the wealth effects of changes in control, the distribution of wealth between targets and acquirers, and the subsequent performance of the target firm. By analyzing both the valuation effects and subsequent operating performance of incomplete acquisitions, this study can provide evidence that distinguishes among the existing hypotheses. Jensen and Ruback (1983) and Jarrell, Brickley, and Netter (1988) summarize the findings of numerous empirical studies of mergers and acquisitions and conclude that, on average, corporate control transactions increase the wealth of target

shareholders, while returns to bidding firm shareholders are typically small and not statistically significant. Malatesta (1983) and Bradley, Desai, and Kim (1988) find that changes in corporate control increase the market value of the combined firms.

Although prior research provides evidence that changes in control enhance value, the source of this increase in value is unclear. Since target firms are typically absorbed by acquirers, previous studies of subsequent operating performance have focused on the performance of the combined entity. However, target firms are typically small relative to acquirers. As a result, it may be difficult to detect changes in the operating performance of the target within the combined entity. In contrast, incomplete acquisition targets continue to publicly trade as majority-controlled, legally distinct entities. As such, following the change in control, the target firm must generate publicly reported financial data that are separate from the data reported by the parent. Thus, incomplete acquisitions provide a unique opportunity to directly examine the activities and operating performance of the target subsequent to the change in control. This evidence provides a basis to discriminate among the existing theories about the effects of mergers and acquisitions.

A distinguishing feature of incomplete acquisitions is that there are several alternative mechanisms by which the controlling interest is established. First, an acquirer may seek control by making a tender offer to shareholders of the target firm. Generally, the acquirer specifies the percentage of ownership being sought in the tender offer announcement and indicates that not all shares tendered will necessarily be acquired. These transactions may be either hostile or friendly.



Second, the target may agree as a result of negotiations with the acquirer to issue a sufficient amount of new common stock to the acquirer so as to effectively transfer control from the current shareholders to the acquirer. Unlike other mechanisms of control change, this method provides new equity financing to the target and there is no sale of stock by existing shareholders to the acquirer. In addition, since this transaction is negotiated between the acquirer and the target firm's management, by its nature it cannot be hostile. From this perspective, this type of incomplete acquisition transaction can be viewed as a form of private placement of equity, in which majority control is created.

Third, if the target firm has a concentrated ownership structure, the acquirer may obtain a controlling interest in the target by acquiring shares of stock from individual or corporate blockholders through negotiated purchases of existing blocks. In these transactions, the target firm has a concentrated ownership structure that is transformed into an ownership structure that has a single majority owner.

Finally, the acquirer can gain control through open market purchases of target firm stock. Some incomplete acquisitions involve a combination of these methods. Although each method entails the creation of a majority interest, it is likely that the market reaction to the announcement of a change in control may be different, depending on the method by which majority control is established. Therefore, hypotheses based on differences in the effects of alternative methods for establishing control are offered and the differential wealth effects across methods are examined.

An important facet of the literature on the market for corporate control focuses on divestitures and corporate restructuring transactions. This literature is used in this

study as a basis to generate hypotheses about the reasons for undertaking an incomplete acquisition and to make predictions about the differential valuation effects of the alternative mechanisms for establishing control. Since an incomplete acquisition allows the acquirer to take control of the target while maintaining a publicly traded minority interest in it, an incomplete acquisition can be viewed as a combination of a conventional acquisition and an equity carve-out of a wholly owned subsidiary. Thus, research into incomplete acquisitions may shed light on unresolved issues relating not only to mergers and acquisitions, but also to corporate restructuring transactions that create publicly traded minority interests, such as equity carve-outs of subsidiaries.

More specifically, Schipper and Smith (1986) argue that the positive share price reaction to equity carve-out announcements can be attributed to enhanced disclosure and external monitoring that reduce information asymmetries between managers and investors. From this perspective, the parent firm's increase in value from an equity carve-out results from an increase in the value of the subsidiary. Similarly, an incomplete acquisition may be more value enhancing than a complete acquisition if there are important benefits to separate audited financial reports, or to the writing of managerial contracts based on target stock price performance rather on accounting information or parent stock prices.

Alternatively, an incomplete acquisition may be viewed as a means for an acquirer to obtain control of a target and gather private information about its activities while retaining options about future financing decisions. For example, the observability of the target share price may facilitate the subsequent acquisition of the minority interest or allow the parent to more easily divest the majority interest. This

perspective for incomplete acquisitions is also related to Nanda's (1991) model of equity carve-outs. Nanda argues that equity carve-outs are motivated by the parent's desire to obtain external financing through the issuance of equity in the subsidiary rather than the parent when the subsidiary's equity is overvalued and the parent's equity is undervalued. Thus, an incomplete acquisition allows the acquirer to retain the option to issue seasoned equity in the majority controlled subsidiary when the subsidiary's equity is overvalued and the acquirer's equity is undervalued.

An important aspect of incomplete acquisitions is a key distinction between the legal status of these corporate control transactions in the United States relative to European countries, including the United Kingdom. For example, in the United Kingdom, the City Code on Takeovers and Mergers requires that when an acquirer obtains 30 per cent or more of the ownership of the common equity of another firm, the acquiring firm is required to extend the offer to all remaining target shareholders at the highest price per share that the acquirer paid to obtain its stake. This requirement, which applies throughout Europe, reflects the presumption that incomplete acquisitions foster expropriation of minority shareholders. Within the United States, prominent legal scholars have also suggested that this form of corporate governance leads to expropriation of minority shareholders and that the U.S. should adopt the European approach to incomplete acquisitions.

Within the finance literature, Grossman and Hart (1980) argue that target firm shareholders have an incentive to free ride on the acquirer's discovery of the target firm's real value. As a result, target shareholders have an incentive not to sell their shares to the acquirer, and if the acquirer anticipates this behavior, the market for

corporate control will fail. Grossman and Hart indicate that the ability of an acquirer to conduct an incomplete acquisition so as to expropriate the wealth of non-tendering shareholders is an essential requirement to discourage free riding. This perspective predicts that expropriation of the minority wealth is an intrinsic characteristic of incomplete acquisitions, and that this expropriation is an essential prerequisite for an effective market for corporate control. As such, expropriation of minority interests in an incomplete acquisition is viewed as an important element of American corporate law. The evidence developed in this study can determine whether incomplete acquisitions are value enhancing transactions or a mechanism that generates wealth transfers from minority shareholders to acquirer shareholders. Thus, research into the valuation effects and operating performance of incomplete acquisitions has important implications for public policy.

To summarize, the research entailed in this study evaluates the stock market's response to announcements of incomplete acquisitions, examines the post-acquisition performance of incomplete acquisition targets, and assesses the eventual outcome of these transactions. Data on incomplete acquisitions are analyzed to determine how these transactions occur, whether this form of parent-subsidiary organization is permanent or transitory, and what is the ultimate disposition of the controlling stake. Overall, this integrative analysis of the effects of incomplete acquisitions furthers an understanding of how value is created by a change in control. The remainder of this dissertation is organized into three parts, which are reviewed in the following sections.

## **1.2 The Valuation Effects of Incomplete Acquisitions**

An analysis of incomplete acquisitions does not exist in the finance literature. Thus, in Chapter 2 the literature on related transactions is discussed in order to generate hypotheses about the valuation effects of incomplete acquisitions. First, the extant literature on the valuation effects of conventional mergers and acquisitions is examined since these transactions are similar to incomplete acquisitions in several ways. Existing theories on the valuation effects on conventional mergers and acquisitions are presented as a framework for generating hypotheses on the valuation effects of incomplete acquisitions. Second, two hypotheses on the role of control are presented, specifically, the value enhancement hypothesis and the expropriation hypothesis. Within the context of value enhancement, theories concerning the allocation of gains between target and acquirer shareholders are presented. Third, the potential benefits and costs of incomplete acquisitions relative to complete acquisitions are assessed. Finally, the literature on other transactions that are typically viewed as mechanisms for restructuring, particularly equity carve-outs and private placements, is examined to provide additional perspective on incomplete acquisitions. Similarities and differences that exist between these restructuring mechanisms and incomplete acquisitions are used to generate hypotheses about the differential valuation effects of the alternative mechanisms by which majority control is established. The literature on the role of blockholders is also reviewed since acquirers in incomplete acquisitions can be viewed as majority blockholders.

The development of the sample of incomplete acquisitions is explained in Chapter 3. In addition, event study analysis, the methodology used to determine the

valuation effects of incomplete acquisitions, is described. The chapter concludes with a presentation of descriptive statistics on the distribution of targets and acquirers by market capitalization, industry segment, and the frequency of announcement events over the sample period. The data indicate that incomplete acquisitions are not frequent events, but they also are not uncommon. These transactions continue to occur throughout the sample period, indicating that incomplete acquisitions are transactions that continue to survive in the face of competition from alternative mechanisms available in the market for corporate control.

In Chapter 4, event study methodology is used to obtain the announcement effects of incomplete acquisitions on stock prices for both target and acquiring firms, as well as the effects on the combined wealth of the target and acquirer. The results indicate that incomplete acquisitions generate large gains in wealth for target shareholders, non-negative returns to acquirers, and positive gains in the combined wealth of targets and acquirers. When the sample is disaggregated by the method used to establish control, the results indicate that there are differential share price reactions to targets across the four basic methods through which control is established. There are large gains in response to tender offers by and the issuance of equity to the acquirer, but only small gains for block trades and open market purchases. The returns to acquirers are consistently small regardless of the method used to establish control. When the sample is disaggregated by the degree of relatedness between the target and acquirer industry, no significant differences are observed. These results suggest that there is little evidence to support the hypothesis that synergies are the basis of the gains in wealth from incomplete acquisitions.

### **1.3 Pre- and Post-Acquisition Operating Performance**

The existence of a separate, but affiliated corporate entity with continued public trading in its shares allows a direct examination of the target's operating performance following the change in control and an assessment of whether this performance is sensitive to the mechanism by which control is established. In Chapter 5, the long-run operating performance of these majority-owned subsidiaries is examined. Analysis of the data indicates that majority-controlled target firms continue to trade publicly for a mean (median) period of 5.7 (4.2) years. This lengthy period of continued trading allows for an analysis of the long-run operating performance of the target to determine whether or not there are improvements in performance following a change in control. The evidence consistently indicates that the operating performance of target firms subsequent to incomplete acquisitions is not significantly different from the performance of benchmark firms. These operating performance results suggest that there are no significant gains or losses to minority shareholders and indicate that there is no evidence to support either the hypothesis that minority shareholders free ride on the acquiring firm or the hypothesis that the acquirer exploits the minority shareholders.

### **1.4 The Valuation Effects of the Disposition of the Majority Stake**

Chapter 6 investigates the ultimate disposition of the majority stakes generated by incomplete acquisitions. Data on dispositions provide evidence about the effects of alternative forms of disposition and provide insight into the reasons why incomplete acquisitions are undertaken. Approximately one-half of the targets of incomplete acquisitions are subsequently merged into the parent, about one-eighth are subsequently merged into a third party acquirer, about one-eighth are sold to a third

party with the publicly traded interest continuing to trade, and about one-eighth continue to trade as majority-controlled subsidiaries. The remainder of the sample is spread across a variety of categories, such as the liquidation or bankruptcy of the subsidiary, the spin-off of the majority interest to parent shareholders, or the repurchase of the parent's majority interest by the target.

Overall, the results indicate that the preponderance of incomplete acquisitions ultimately become completed transactions. Event study methodology is used to investigate the valuation effects of alternative forms of disposition. The results indicate that parent-subsidiary mergers and third party buyouts of subsidiaries generate large gains in shareholder wealth for target firms, but that other disposition events produce little gain to target shareholders. Disposition events consistently have no significant effect on share prices of acquirer firms. There is no evidence of a relationship between interim operating performance and the ultimate disposition of the majority-controlled subsidiary.

Conclusions about the evidence presented in this dissertation are found in Chapter 7. A review of the results of the numerous aspects of this study is presented, conclusions are drawn, and topics for future research are suggested.



## **CHAPTER 2**

### **THE VALUATION EFFECTS OF INCOMPLETE ACQUISITIONS**

#### **2.1 Introduction**

This chapter presents hypotheses about the valuation effects of announcements of incomplete acquisitions on targets and acquirers. Since these acquisitions can be accomplished in several different ways, particular attention is paid to the valuation effects of the alternative methods by which the controlling interest is created. Since incomplete acquisitions have many similarities to traditional mergers and acquisitions, the first part of the chapter reviews the existing literature on mergers and acquisitions. Next, two perspectives on the role of control, value-enhancement and expropriation, are used to generate hypotheses about the valuation effects of incomplete acquisitions. Incomplete acquisitions are similar to equity carve-outs in that after the transaction both structures are characterized by a majority interest held by a corporation with a public minority interest remaining for some period of time. The literature on equity carve-outs is used to generate hypotheses about the benefits and costs of an incomplete acquisition governance structure. Finally, because incomplete acquisitions have not been previously studied, the literature on other transactions that are typically viewed as mechanisms for restructuring, particularly equity carve-outs and private placements of equity, is examined to provide perspective on the alternative mechanisms used to accomplish incomplete acquisitions.

#### **2.2 Mergers and Acquisitions**

Because incomplete acquisitions are in many ways similar to conventional mergers and acquisitions, a discussion of theories and empirical evidence on the

valuation effects of traditional mergers and acquisitions provides a useful framework for generating hypotheses about the valuation effects of incomplete acquisitions. Previous empirical studies have found that on average firms that are a target of mergers and acquisitions exhibit a statistically significant positive share price response at initial acquisition announcements. Jensen and Ruback (1983) average the results of numerous studies of acquisition announcements and find that there is an increase in target firm share price of approximately 20% for mergers and 30% for tender offers. In contrast, early studies of bidding firms report different results depending on the methodology, time period, and sample used.<sup>2</sup> Regardless of whether bidding firm share price movements are positive or negative, they are generally small and not statistically significant or at least much less significant than those of target firms. More recently, a number of studies, including Bradley, Desai, and Kim (1988), Jennings and Mazzeo (1991), Servaes (1991) and Byrd and Hickman (1992), find significantly negative average returns to buyers in conventional mergers and acquisitions. Overall, a consensus has formed that capital markets view changes in corporate control as value-enhancing events since these events generate an increase in the combined shareholder wealth of bidders and targets, a result that is largely due to the substantial positive impact of acquisition announcements on the value of target firms. Nevertheless, certain observers (e.g., Roll (1986)) disagree with this consensus and argue that corporate control events reflect the impact of wealth transfers rather than net gains.

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<sup>2</sup> Bradley (1980), Asquith (1983), and Dennis and McConnell (1986) report positive price movements for bidding firms while Dodd (1980), Firth (1980) and Eger (1983) report negative price movements.

Several theories have been offered to explain overall wealth gains in response to mergers and acquisitions. Efficiency theories and information theories are the two predominant in the literature. Other theories include agency theories, market power theories, and financial consideration theories.<sup>3</sup> Efficiency theories are based on the assumption that the combined value of the target and acquirer will be greater than the sum of their pre-acquisition values. Specifically, the combined entity is able to realize the benefits of economies of scale or operating synergies due to the combination.<sup>4</sup> In either case, the change in control should induce an increase in the subsequent operating performance of the combined firm, and hence, an increase in shareholder wealth at the time of the announcement. In support of this efficiency view, Bradley, Desai, and Kim (1983) find that when an unsuccessful control bid is not followed by a successful takeover within five years, the target firm experiences a reversal of the positive price response at the initial announcement.

The premise of efficiency theories is that corporate control activity is socially optimal and that the post-merger performance of the combined firm should, on average, be better than the performance of the separate firms. Thus, it is presumed that overall wealth is enhanced by changes in corporate control, so that the combined shareholder value of the target and acquiring firm increases at acquisition announcements. In an efficient capital market, investors will bid up the market value of the constituent firms to reflect this gain at the announcement. This gain in value is allocated between the shareholders of the bidder and the target, with the allocation of the wealth effects likely

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<sup>3</sup> The categorization of merger and acquisition theories varies among authors. The categories used herein are generally based on Copeland and Weston (1988), pp. 682-690.

<sup>4</sup> These efficiency gains are considered in Jensen and Ruback (1983).

to depend on the competitiveness of the market for corporate control. For example, if the market for control is perfectly competitive, the gains will be captured exclusively by the target firm shareholders.

Information theories posit that the bidding and acquisition process reveals positive information concerning the target's future earnings performance. In this view, bidding firms expend valuable resources to generate private information about undervalued firms. Thus, a bid is a credible signal about the future prospects of the target firm. This hypothesis is supported by results indicating that a tender offer causes a permanent upward revision in the target's share price even if the offer is unsuccessful, as documented in Dodd and Ruback (1977), Bradley (1980) and Firth (1980). While the Bradley, Desai, and Kim (1988) study, discussed above, is often interpreted as evidence against the information hypothesis, Roll (1987) argues that their findings are fully consistent with the information hypothesis if the subsequent occurrence of a rival bid increases the probability of the existence of positive private information about the target firm while decreasing both the probability that the bidder has sole possession of the information and the probability that the initial bidder will succeed. Like efficiency theories, information theories predict that the combined shareholder value of the target and acquiring firm will increase at the acquisition announcement and that the competitiveness of the market for control will determine the allocation of the gains.

Agency theories suggest three alternative perspectives on the role of the market for corporate control.<sup>5</sup> The first two explanations, the empire-building hypothesis and

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<sup>5</sup> The discussion of the three agency theory views of mergers and acquisitions is based on Weston, Chung, and Siu (1998), pp. 80-82.

the hubris hypothesis, suggest that mergers are a result of agency problems between the managers and shareholders of the acquiring firm. Mueller (1969) argues that if managers can benefit solely by increasing firm size, then managers have an incentive to engage in inefficient acquisitions. Alternatively, Roll ((1986) suggests that managers are overly optimistic in their evaluation of potential merger targets. As a result, bidders pay too much for targets, resulting in a redistribution of wealth from acquiring shareholders to target shareholders. Consistent with the view that mergers are a result of agency problems, Ravenscraft and Scherer (1987) find that the post-transaction performance of merging firms is typically worse than that of their non-merging counterparts, implying that mergers do not create value.

The empire building and hubris hypotheses emphasize the importance of agency problems at acquiring firms that induce managers to undertake acquisitions that are not in the best interests of shareholders. If overbidding occurs as a result of agency problems, the gains in wealth obtained by target firm shareholders are offset by losses sustained by the shareholders of bidding firms. In addition, there should be no improvement in the post-transaction operating performance of the combined entity, and sales of previously acquired assets should be common.

The final agency cost explanation, the inefficient management hypothesis, suggests that mergers and acquisitions serve as a mechanism for disciplining inefficient target managers.<sup>6</sup> Consequently, a merger allows the control of the assets of the target firm to be transferred to an acquirer that can manage them more efficiently, enhancing

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<sup>6</sup> Some authors include the inefficient management hypothesis under the rubric of efficiency theories; still others classify it as an information theory.

the value of the target firm. This hypothesis was first suggested by Manne (1965) who contends that when alternative mechanisms, such as managerial compensation and the market for managers, fail to discipline target managers, the threat of a takeover resolves agency problems by allowing the market for corporate control to monitor management. He argues that if managers of firms perform sub-optimally, due to inefficiency or agency problems, the takeover market allows outside managers to gain control of the target's assets and increase efficiency by moving resources to a higher valued use.

The inefficient management hypothesis emphasizes the importance of takeovers as a mechanism that reduces agency problems and enhances managerial performance, so that the presence of the market for corporate control contributes to economic value. In addition, the improved management of target operations that results from the change in control should be evidenced by improved performance in the target's operations.

Another reason given for mergers and acquisitions is that consolidation increases the market share of the combined entity and hence its market power. However, Eckbo (1983) and Stillman (1983) find little share price reaction for competitor firms in response to acquisition announcements and conclude that monopoly power is not a motive for mergers.

Finally, financial considerations offer other explanations for mergers and acquisitions, such as tax motives, financial synergies, and risk reduction through diversification. Tax motives include conversion of ordinary income into capital gains, offsetting net income with accumulated tax losses, and valuation for estate tax

purposes.<sup>7</sup> Financial synergy theories argue that the combined firm may realize economies of scale in financing operations of the combined entity. Diversification theories suggest that bankruptcy costs are reduced by the combination of the target and acquirer cash flow streams.

### **2.3 The Role of Control: Value Enhancement vs. Expropriation**

Even though overall value may be enhanced by changes in corporate control, strategic considerations may inhibit a change in control. Specifically, Grossman and Hart (1980) argue that outside agents have a disincentive to acquire an undervalued target firm that has a diffuse ownership structure because of a free-rider problem that occurs if target firm shareholders have the option to remain shareholders following the takeover, for example in the case of a tender offer. In effect, target firm shareholders will rationally infer that the target firm is worth more than the price offered by the acquirer in a tender offer, or the bidder would not have made the offer. As a result, target shareholders will respond strategically by declining to tender their shares, and instead will free ride on the acquirer's information. If each shareholder takes this view, the offer for control will not succeed. If potential acquirers anticipate this behavior, there will be little incentive for them to search for undervalued firms. Thus, there is a breakdown in the market for corporate control because the potential acquirer cannot capture enough of the benefits from the change in control to offset the costs of the takeover, even when the change in control is economically desirable.

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<sup>7</sup> A discussion of the key tax provisions for mergers and acquisitions is contained in Auerbach and Reishus (1988).

Several solutions to this free rider problem that allow the bidder to share in the takeover gains are developed in the literature. Grossman and Hart (1980) show that the free rider problem can be mitigated, allowing the bidder to profit from the takeover, when the bidder is able to take actions that dilute the value of the target firm shares that are not tendered. More specifically, if an acquiring firm can allocate to itself a sufficient proportion of the post-acquisition gains, for example gains from efficiencies that occur after the transaction, the incentive of target firm shareholders to free ride is eliminated. Another method used to circumvent the free rider problem is the two-tier offer, studied by Comment and Jarrell (1987), in which the front-loading of an offer eliminates the incentive of target shareholders to free ride. Bagnoli and Lipman (1988) argue that some stockholders will be pivotal to the success of the bid and thus, cannot free ride. Shleifer and Vishny (1986), Hirshleifer and Titman (1990), and Chowdhry and Jegadeesh (1994) argue that the free rider problem can be avoided when a large shareholder is able to accumulate a large fraction of the equity before making the offer (a toehold) and thereby profit on the appreciation of the toehold.

A distinct but closely related literature concerns the ability of acquirers or controlling shareholders to expropriate the wealth of minority shareholders. Brudney and Clark (1981) and Bebchuk (1989) argue that there is an inherent conflict of interest between controlling and minority shareholders that is not effectively resolved by market forces or legal statutes, which permits a controlling firm to expropriate the interests of minority shareholders. If the majority shareholder is able to expropriate sufficient wealth from the minority shareholders, all target shareholders have an incentive to tender their shares when the intention to gain control is announced. In effect, it is



undesirable to become a minority shareholder in the subsidiary because the acquiring firm will gain a disproportionate share of any subsequent gains from the takeover. Corporate law statutes of European countries assume that a pattern of expropriation of minority shareholders is characteristic of incomplete acquisitions. European law requires that bidders that obtain control of a target firm, by purchasing a majority but not 100% of the target firm's shares, must be prepared to purchase all remaining minority shares on terms equivalent to the highest price the bidder has paid for target shares. Overall, the expropriation hypothesis implies that if shares of the target firm continue to trade after the acquisition, there should be an observable deterioration in the target firm's post-transaction operating performance. It is this expectation of poor subsequent performance that motivates target firm shareholders to tender their shares, eliminating the free rider problem.

An incomplete acquisition can be viewed as the formation of a large (majority) blockholder. The finance literature suggests two distinct and opposing organizational roles for large-block shareholders that are similar to the value enhancement and expropriation hypotheses of the market for corporate control. Shleifer and Vishny (1986) develop a model in which large-block shareholders enhance value by monitoring managers. Moreover, they argue that large shareholders mitigate agency problems because they have both an interest in profit maximization and in control over a firm's assets. This blockholder hypothesis suggests that the creation of majority ownership through an incomplete acquisition should increase overall value, with the gain in value shared by the bidder and the target. This blockholder hypothesis predicts that an acquiring firm will make sufficient changes in the operations of the target firm to

improve its post-transaction performance. These activities generate gains for the bidder through an increase in the value of the target firm stock it acquires, and these gains are shared with minority shareholders. In contrast, Fama and Jensen (1983) suggest that large-block ownership can lead to the expropriation of dispersed shareholders, such as by fostering the private consumption of corporate wealth. From this perspective, the acquiring firm in an incomplete acquisition can sustain an increase in its value as a result of its ability to control the target firm's assets and expropriate value from minority shareholders. Thus, there should be a deterioration in the post-transaction performance of the target firm.

There have been several empirical studies of majority blockholders. Holderness and Sheehan (1988) examine a sample of corporate and individual majority blockholders. They find no evidence to suggest that majority blockholders expropriate or consume corporate resources. Their results suggest that the benefits of majority ownership lie in direct management rather than more effective monitoring. In contrast to the study of Holderness and Sheehan, Rosenstein and Rush (1990) compare a sample of corporations with individuals who are partial owners to a control sample of non-partially owned firms. Their evidence is consistent with the wealth transfer hypothesis. Specifically, they conclude that wealth transfers are effected through intercorporate transactions, that is, transactions conducted at terms that are favorable to the blockholder. However, their results also indicate that the negative effect of partial ownership on shareholder wealth is mitigated when the partial owner has a majority interest.

Mikkelsen and Ruback (1985) examine the share price effects of 13D filings, which report corporate investments of 5% or more of the target company's equity and find that these announcements increase target firm value. In their study, the mean (median) equity stake acquired is 20.9% (23.3%). In contrast, an incomplete acquisition involves transactions in which a majority stake is established; i.e., there is a change in control. Barclay and Holderness (1989) find that, on average, substantial premiums are paid to buy large blocks of equity, and that large blocks of equity sell for a greater premium than smaller blocks.

#### **2.4 Benefits and Costs of Incomplete Acquisitions**

In a competitive economy, the observation of a unique mechanism for transferring corporate control (i.e., an incomplete acquisition) implies that this mechanism conveys certain benefits that are not available through a conventional merger or acquisition. In this section, the literature on equity carve-outs is used to generate hypotheses about the benefits and costs of an incomplete acquisition governance structure. Incomplete acquisitions are similar to equity carve-outs in that after the transaction both structures are characterized by a majority interest held by a corporation with a public minority interest remaining for some (perhaps temporary) period of time. In an equity carve-out, a portion of a wholly-owned subsidiary's common stock is offered for sale to the public. In the typical case, parent control over the subsidiary's assets is not relinquished; instead a publicly traded minority interest is created.

Whereas significantly large, negative excess returns are well documented as the response to firms announcing seasoned equity offerings, Schipper and Smith (1986)

find positive abnormal returns of about two percent during the five-day period when the parent announces an equity carve-out. They hypothesize that the positive reaction to carve-out announcements is in part attributed to a reduction in information asymmetries between managers and investors and/or to gains in efficiency associated with the new governance structure. Thus, the positive excess return to the parent firm reflects an increase in the subsidiary's value. They identify several characteristics that distinguish an equity carve-out from a public offering of seasoned equity. These characteristics include: i) the separation of subsidiary and parent assets for purposes of external equity financing, ii) the initiation of public trading of the subsidiary's common stock, iii) the restructuring of asset management and incentive contracts for managers, and iv) the creation of a publicly held minority interest. They attribute the positive share price reaction to equity carve-outs to these distinguishing characteristics. One of the benefits of a carve-out is that the separation of subsidiary growth opportunities from parent assets avoids the negative implications about managers' private information regarding the value of the parent's assets. In addition, public listing of subsidiary stock improves investor understanding of the subsidiary through increased financial reporting requirements and increased incentives for information collection and monitoring by outside agents, such as analysts and other market participants. Although a publicly-held minority interest may spur monitoring of the subsidiary, it may also create conflicts of interest between the minority shareholders and the parent firm shareholders. Finally, a carve-out permits the restructuring of managerial responsibilities and the initiation of incentive contracts based on the subsidiary's share price that may improve the efficiency of asset management.

**An important characteristic of incomplete acquisitions is the continued trading of the public minority interest and filing of financial statement disclosures. These aspects of incomplete acquisitions may mitigate agency problems by allowing effective market monitoring of target managers. Unlike complete acquisitions in which the target is fully absorbed into the acquirer, incomplete acquisitions are characterized by a much higher degree of transparency. The target's share price and financial statements continue to be observable to market participants after incomplete acquisitions. The willingness of the acquirer to bear the direct and indirect costs of this disclosure suggests that there are offsetting benefits to the higher degree of transparency.**

**An incomplete acquisition may be more value enhancing than a complete acquisition if there are benefits to separate externally audited financial reports or to the writing of managerial contracts based on the target's stock price performance. Specifically, the availability of a market-determined value for the target's stock may strengthen the motivation, evaluation, and compensation of target managers or facilitate the eventual acquisition of the subsidiary by another firm since a market price for the entity is continuously observable. Incomplete acquisitions may allow synergies to be captured while allowing the publicly held minority interest to improve the monitoring of managers.**

**Another aspect of this high degree of transparency is that it may mitigate agency problems between the acquiring firm's managers and shareholders. By allowing the minority interest to continue to trade and maintaining the high degree of transparency intrinsic to a public subsidiary, the acquiring firm managers convey positive information about the value of the target. This is in contrast to a complete**

acquisition in which the target value is subsumed within the acquirer, making it difficult for investors to judge the subsequent performance of the acquisition.

Nanda (1991) also offers a motive for carve-outs that is applicable to incomplete acquisitions. Specifically, Nanda shows that if the consolidated corporation is undervalued, new equity financing through a carve-out allows the parent firm to take on positive net present value projects that would have been foregone if the only option were to issue equity in the undervalued parent. Similarly, an incomplete acquisition allows the acquirer to retain the option to obtain future financing through the issuance of seasoned equity in the target, rather than the parent.

## **2.5 Differential Valuation Effects of Incomplete Acquisition Mechanisms**

An interesting aspect of incomplete acquisitions is that there are several methods by which control is established. Moreover, two of these methods are unique to this form of corporate control transaction because no shares are acquired from dispersed shareholders. These two methods are the issuance of new equity by the target to the acquirer, and the purchase of several existing blocks of stock to form a majority stake. In contrast to tender offers in which the acquirer negotiates with incumbent management and target shareholders decide atomistically whether or not to tender their shares, new equity issues and block purchases establish control without purchasing any shares from dispersed shareholders. By sorting incomplete acquisitions according to the manner by which control is established, the wealth effects of these alternative methods for establishing majority control can be analyzed.

The information hypothesis of mergers and acquisitions focuses on the positive private information generated by an acquirer. From a different perspective, studies of

bidding, control contests, and takeover defenses focus attention on information asymmetries between the buyer and seller. The assumption is that the seller has valuable private information about the firm that is not known to potential buyers, or that a buyer has valuable private information that is not known to the seller. From this perspective, certain methods for conducting incomplete acquisitions are more likely than other methods to reduce these information asymmetries. Specifically, transactions that involve the issuance of new equity to the acquirer can reduce information asymmetry because bidding firm managers and target managers can convey information privately as a basis for negotiating terms of the transaction. Similar considerations apply to block transactions that lead to majority control. In either case, an acquirer obtains control without purchasing shares from dispersed shareholders. New equity issues entail negotiations between the bidder and target managers that can result in the placing of the block of shares at a discount, which may or may not be in the interest of dispersed target firm shareholders. Thus, target firm shareholders may capture a greater share of the gains by selling their holdings directly to the acquirer through a tender offer or a block sale than in transactions in which managers negotiate a new equity issue to the acquirer. In contrast, a tender offer is a public transaction that is actually a series of individual transactions between the acquiring firm and target firm shareholders directly. In addition, the impact of establishing control on the combined wealth of target and bidding firm shareholders may vary across these alternative methods.

When a buyer obtains a controlling interest in a target firm via the acquisition of shares from large blockholders, each (non-majority) blockholder acts in its own

interest, or coordinates its actions with other blockholders, without any need to consider the interests of the remaining minority shareholders. In contrast, in an incomplete acquisition via a tender offer, existing shareholders individually decide whether to sell their shares to the bidder and the number of shares tendered may or may not constitute a majority of the shares in the target firm. The creation of majority ownership through a new equity issue is the result of negotiations between target firm managers and the acquirer, and typically requires that a majority of the existing shareholders approve the transaction recommended by management. In contrast, the creation of majority ownership through the purchase of existing, but non-controlling blockholder shares requires only the consent of the blockholders involved. This difference in the role of non-block shareholders suggests that the target firm's share price response to the announcement of an incomplete acquisition through a block purchase will be less favorable than the response to other acquisition forms.

Incomplete acquisitions that arise from the sale of new seasoned equity by the target to the acquirer are closely related to carve-outs because they also involve a primary equity offering of the target's stock. Slovin, Sushka, and Ferraro (1995) present evidence that suggests that parents may conduct carve-outs when outside investors are likely to price the new shares higher than parent managers' perceived value of such shares. This reasoning suggests that the gain in parent firm value occurs despite a decrease in the value of the subsidiary. From this perspective, incomplete acquisitions through the issuance by the target of new shares to the acquiring firm would convey negative information about the target.



In contrast to carve-outs, however, an incomplete acquisition through the issuance of new seasoned target equity is conducted privately between the target and the acquiring corporation rather than through an initial public offering. Moreover, unlike a carve-out in which the parent typically receives the proceeds of the equity issuance, in an incomplete acquisition the proceeds of the stock offering go to the target firm, although in return the target firm is under the control of the acquirer. These differences suggest that an incomplete acquisition via new equity issuance may be more similar to a large private placement of equity. From this perspective, incomplete acquisitions through the issuance of equity in the target would convey positive private information generated through negotiations between the acquirer and target management.

Wruck (1989) examines a sample of private sales of equity in which the firm sells a block of equity to a single investor or a small number of investors. She finds that the announcement of a private sale of equity is associated with a 4.5% increase in non-participating shareholder wealth. This result is in contrast to the finding that shareholder wealth falls an average of 3% at announcements of seasoned equity offerings.<sup>8</sup>

Firm commitment seasoned equity offerings are generally sold to a dispersed group of investors and thus decrease ownership concentration. Wruck contends that the increase in ownership concentration engendered by private placements is value-increasing. Her sample of private equity placements does not focus on a complete

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<sup>8</sup> See Asquith and Mullins (1986), Masulis and Korwar (1986) and Mikkelsen and Partch (1986).

change of control; instead the block of securities sold has an average (median) of about 20% (12%) of the firm's equity voting rights. The mean (median) post-purchase stake of the buyer is about 26% (18%). Thus, some of her events involve only a small change in ownership concentration. Nevertheless, in Wruck's regression analysis, the change in ownership concentration variable is only significant when the level of ownership is greater than 25%. There is a significantly negative coefficient on the dummy variable for the establishment of control, indicating a negative effect on the target when the buyer announces its intention to establish control. Wruck's explanation for this result is that managers have conveyed control without shareholder approval and perhaps at shareholder expense.

Hertzel and Smith (1993) also find that private placements of equity have a positive share price effect. They argue that this effect is due to the monitoring role provided by large shareholders. The size of the price discount in a private placement is viewed as compensation for the transactions costs the blockholder absorbs in the process of becoming informed about the firm.

In contrast to Wruck's and Hertzel and Smith's private placements samples, the sample of incomplete acquisitions studied in this work involves the creation of a more than 30% and typically, more than 50% controlling interest in a target firm by another corporation. This greater degree of increased ownership concentration may create value by aligning management and shareholder interests either through increased monitoring or the replacement of management. From this perspective, the announcement of an incomplete acquisition should have a positive effect on overall value. However, incomplete acquisitions through block purchases are characterized by

a lesser degree of change in ownership concentration than other forms of incomplete acquisitions (i.e., ownership is already concentrated before the acquisition). Therefore, if increased ownership concentration is value-increasing, then incomplete acquisitions that greatly increase concentration should have a more positive effect on the value generated by the acquisition than those that entail only a slight increase in concentration.

The creation of control through new equity issuance entails a large cash infusion for the target. This method is a form of private financing that can allow the target to finance positive net present value projects, i.e., growth options. From this perspective, the share price response to incomplete acquisitions via new equity issuance may be more favorable than for transactions effected through other methods.

Alternatively, the cash infusion may convey negative information about agency problems between the target managers and shareholders. Lang, Poulsen, and Stulz (1995) argue that such agency problems are an important element in asset sales. They demonstrate that the positive share price response to asset sales is confined to those selling firms that do not retain the proceeds. If agency problems characterize incomplete acquisitions via new equity issuance, the share price response to these transactions should be less favorable than for transactions effected through other methods.

In addition, incomplete acquisitions through new equity issues are intrinsically friendly transactions, in contrast to tender offers, which may be friendly or may incur the hostility of target firm managers. Mikkelsen and Ruback (1985) find that target firms experience significant negative returns when the management of the target firm

announces opposition to the proposed acquisition. Management hostility may be in the interest of shareholders if an offer is an inferior bid, or if hostility spurs competitive bidding. Alternatively, managerial hostility may signal inefficient, entrenched managers. Thus, the predicted impact of management resistance in incomplete acquisitions is ambiguous. Evidence on the impact can be obtained by comparing the stock price response to friendly versus hostile offers in incomplete acquisitions.

Another distinction between new equity issues and block purchases is whether shareholder approval of the transfer of control is required. Both the NYSE and Amex require shareholder approval of issues that “significantly” increase the number of voting securities outstanding. Shareholder approval is also required when the sale necessitates the issuance of more shares than are currently authorized. Given the rules of the exchanges, incomplete acquisitions of listed firms that occur through the issuance of additional shares are likely to require shareholder approval. In contrast, creation of a controlling stake through a tender offer or purchase of existing blocks can generally be effected without the approval of the shareholders.

This study explores whether the share price reaction to incomplete acquisitions differs depending on whether new financing is generated in conjunction with the change in control. Both new equity issues and purchases of existing blocks are expected to reduce information asymmetries between the bidder and the target, and at the same time avoid the free rider problem intrinsic to tender offers. Furthermore, new equity offerings have a greater effect on ownership concentration than block purchases. This suggests that the stock market response to the announcement of an incomplete acquisition through the issuance of new equity will be more favorable than the response

to the announcement of a block purchase. Alternatively, new equity offerings could be undertaken when the target is overvalued. This suggests that the stock market response to an incomplete acquisition through new equity issuance would be less favorable than for an incomplete acquisition through a block purchase.

## CHAPTER 3

### SAMPLE DEVELOPMENT, METHODOLOGY AND DESCRIPTIVE STATISTICS

#### 3.1 Introduction

The first part of this chapter describes the development of the incomplete acquisitions sample. The methods used for data collection and sample construction are described. The second part of the chapter presents the methodology used to analyze these events. The final part of the chapter contains descriptive statistics for the sample of incomplete acquisition announcements.

#### 3.2 Sample Development

The sample of incomplete acquisitions is collected from several different sources, since there is no single comprehensive data source on this topic. First, a search for events involving a controlling interest<sup>9</sup> by one corporation in another corporation is conducted using Standard & Poor's Stock Reports, the periodical Mergers and Acquisitions, and the Wall Street Journal Index. A search of these sources generates a large set of potential incomplete acquisitions occurring between 1962 and 1997. Relevant news articles are obtained and examined to determine the substance of the transaction and whether and by what means control is established. Second, announcement dates of events that meet the definition of an incomplete acquisition are identified using the Wall Street Journal Index and the Lexis-Nexis Company News database. Third, transactions are eliminated when the incomplete transaction is a two-step merger, that is, an initial offer for a controlling interest in the

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<sup>9</sup> A controlling interest is defined as a 30% or greater interest in the target. However, tests of the main results are also conducted on the subsample of firms in which the percentage of control is between 50% and 70%. The results are qualitatively the same for this subsample.

target is quickly followed by a compulsory second offer that eliminates the remaining minority shareholders through a freezeout. Transactions are also eliminated from the sample for events in which the establishment of control and the intention to subsequently merge the subsidiary with the parent or sell the subsidiary are announced concurrently. From this set of events, transactions are eliminated if the target firm is not trading on the Center for Research in Securities Prices (CRSP) tapes during the period of analysis for the relevant event. The final sample consists of 275 target firms and 217 parent firms. The sample of paired targets and acquirers that are trading during the period of analysis consists of 217 transactions.<sup>10</sup>

### **3.3 Methodology**

This study begins the analysis of incomplete acquisitions by measuring the security valuation effects of these transactions. Event study methodology is used to measure the share price effects of the initial announcement of these transactions and the share price effects of the ultimate outcome for events in which there is a subsequent disposition of the minority interest. The purpose of this methodology is to adjust realized stock returns for market-wide movements in order to isolate the component of the returns that is due to the event being examined. Daily stock price data are collected from the files of the Center for Research in Security Prices (CRSP).

The standard event study methods described in Brown and Warner (1980, 1985) are used to measure the stock price reaction to incomplete acquisition announcements. Under semi-strong form market efficiency, the stock price reaction

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<sup>10</sup> Sample observations are sometimes missing certain data items necessary to a particular analysis. Thus, the sample size varies depending on the analysis being conducted. Also, although only 217 acquirers are listed on CRSP, SIC codes are available for 227 acquirers.

provides an unbiased valuation adjustment corresponding to the information contained in the announcement and an estimate of the change in shareholder wealth of acquiring firms and target firms around the announcement of an incomplete acquisition. The use of standard event study methodology permits a comparison of the results in this study with the results of previous research using similar methodology.

Event study methodology requires estimates of the parameters of the returns generating process. These estimates are obtained via an ordinary least squares regression using the market model over the estimation period from day -180 to day -61:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

where:

$R_{it}$  = the return for firm  $i$  on day  $t$ ,

$\alpha_i$  = the mean return not explained by the market,

$\beta_i$  = firm  $i$ 's relationship with the market's return (i.e., its risk factor),

$R_{mt}$  = the return on the market index on day  $t$ ,

$\varepsilon_{it}$  = the statistical error or the regression residual.

Events with more than 60 missing observations over the estimation period are eliminated. The event period is defined as the period surrounding the announcement date,  $t=0$ . The predicted return for firm  $i$  on day  $t$  in the event period is the return given by the market model on that day using the estimates of  $\alpha_i$  and  $\beta_i$  from the estimation period. Thus, the predicted return is:

$$\hat{R}_{it} = \hat{\alpha}_i + \hat{\beta}_i R_{mt}$$



Abnormal returns<sup>11</sup> are calculated as the difference between the arithmetic return and the conditional expected return derived as the prediction value obtained from a least squares regression over the estimation period using the return on the CRSP equal-weighted index as the explanatory variable. The abnormal return, AR, is defined as:

$$AR_{it} = R_{it} - \hat{R}_{it}$$

The stock price reaction for firms announcing an incomplete acquisition is estimated by calculating the average abnormal return,  $\overline{AR}$ , during the period around the event date. Abnormal returns are averaged for each day in the event period to obtain average abnormal returns:

$$\overline{AR}_t = \frac{1}{N_t} \sum_{i=1}^{N_t} AR_{it}$$

where  $N_t$  is the number of sample firms trading on day  $t$ . The cumulative abnormal return, CAR, is defined as the sum of the daily average abnormal returns during the event period. The required calculation is:

$$CAR = \sum_{t=t_1}^{t_2} \overline{AR}_t$$

where  $t_1$  is the first day in the event period and  $t_2$  is the last day in the event period.

The analysis focuses on the two-day event window  $(-1, 0)$  and the seven-day event window  $(-5, +1)$ . The date that the announcement appears on the newswire is classified as day  $-1$ . The date that the announcement appears in the Wall Street Journal is classified as day  $0$ . To test for statistical significance, the null hypothesis is that the

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<sup>11</sup> Abnormal returns are also referred to as excess returns or prediction errors. The term prediction error is probably the most accurate, however, the term abnormal return is the most commonly used.

average abnormal return equals zero for each event subperiod. The test statistic is constructed as the ratio of the average abnormal return or cumulative abnormal return to its standard deviation (the square root of the product of the number of days in the event window and the variance) estimated over the pre-event period. This test statistic is distributed as Student-t under the null hypothesis if the abnormal returns are independent, identically distributed and normal. Qualitatively similar results for significance are obtained, but not reported, using the z-statistic and the standardized cross-sectional test of Boehmer, Musumeci, and Poulsen (1991).

This study focuses on whether incomplete acquisitions result in an enhancement of overall value. Thus, the analysis requires the calculation of average combined cumulative abnormal returns and average combined market values. Market values for targets ( $MKTVAL_T$ ) and acquirers ( $MKTVAL_A$ ) are calculated as the number of shares outstanding times the stock price six weeks prior to the announcement date. Combined cumulative abnormal returns ( $COMBCAR$ ) are calculated as:

$$COMBCAR = w_T CAR_T + w_A CAR_A$$

$$\text{where } w_T = \frac{MKTVAL_T}{MKTVAL_T + MKTVAL_A}$$

$$\text{and } w_A = \frac{MKTVAL_A}{MKTVAL_T + MKTVAL_A}.$$

The average combined cumulative abnormal return is:

$$\overline{COMBCAR} = \frac{1}{N} \sum_{i=1}^N COMBCAR_i.$$

Combined market values are calculated as:

$$COMBMV = (MKTVAL_T \times CAR_T) + (MKTVAL_A \times CAR_A)$$

The average combined market value is:

$$\overline{COMBMV} = \frac{1}{N} \sum_{i=1}^N COMBMV_i$$

Since  $COMBMV = (MKTVAL_T + MKTVAL_A) \times COMBCAR$ , the average combined market value is a value-weighted average of the combined cumulative abnormal returns while the average combined cumulative abnormal return is an equal-weighted average of the combined cumulative abnormal returns. For this reason, the signs may differ between  $\overline{COMBCAR}$  and  $\overline{COMBMV}$ . Median values of  $COMBCAR$  and  $COMBMV$ , which by definition must have the same sign, are also presented in this analysis.

The analysis is conducted both in the aggregate and by disaggregating the sample of incomplete acquisitions in accordance with the manner by which control is established. The announcement effects are also disaggregated in accordance with the ultimate disposition of the minority interest, that is, whether the minority interest continues to trade or is later extinguished through a parent-subsidiary merger, a sale to a third party, or another means. The methodology described above is used in Chapter 4 to study the stock market reaction to the ultimate disposition of the majority stake.

### **3.4 Descriptive Statistics**

There is little information in the finance literature about incomplete acquisitions. Thus a descriptive analysis of these transactions contributes to knowledge about this type of corporate control event. Descriptive statistics for the sample of incomplete acquisition announcements are found in Tables 1 through 6. Table 1 provides the

distribution of incomplete acquisition announcements by year for the period 1967 to 1997. While there are incomplete acquisition announcements each year, except 1996, there appears to be some concentration in the periods 1968-1969, 1974-1975 and 1979-1987. This pattern is broadly consistent with overall merger and acquisition activity over the sample period.

The distribution of market values for 230 incomplete acquisition targets and 184 acquirers are reported in Panels A and B of Table 2. The market value is defined as the product of the number of shares outstanding and the price per share six weeks prior to the announcement date. The mean (median) market value for the full sample of 230 target firms is \$174 million (\$35 million). The mean (median) market value for the full sample of 184 acquirer firms is \$1.74 billion (\$147 million). Firms that are targets of incomplete acquisitions are typically much smaller than acquiring firms. Holderness and Sheehan (1988) report a mean (median) equity value of \$409 million (\$66 million) for 114 majority-owned (either by individuals or corporations) firms listed on the New York Stock Exchange (NYSE) or American Stock Exchange (Amex) during 1978 to 1984. The sample of incomplete acquisitions includes firms that are traded over-the-counter or on NASDAQ which accounts in large part for the smaller target market values observed in the sample of incomplete acquisitions. In addition, Holderness and Sheehan do not provide information about the mechanism by which majority control was established, but it is likely that equity carve-outs are common in their sample.

For incomplete acquisitions effected through tender offers, the mean (median) market value of 69 target firms is \$230 million (\$47 million) and the mean (median)

**Table 1 - Distribution of Incomplete Acquisition Announcements by Year**  
Number of incomplete acquisitions occurring in each year, 1967-1997.

<b>Year</b>	<b>Number of acquisitions</b>
1967	6
1968	11
1969	11
1970	3
1971	5
1972	4
1973	7
1974	15
1975	12
1976	5
1977	7
1978	8
1979	10
1980	9
1981	17
1982	13
1983	11
1984	17
1985	9
1986	14
1987	10
1988	8
1989	9
1990	8
1991	3
1992	12
1993	7
1994	6
1995	8
1996	0
1997	2
<b>Total</b>	<b>267</b>

**Table 2 - Market Value Descriptive Statistics for Incomplete Acquisition Targets and Acquirers**

The distribution of market values for 230 incomplete acquisition targets are reported in Panel A. The distribution of market values for 184 incomplete acquisition acquirers are reported in Panel B. The relative size of target market value to acquirer market value is given in Panel C.

**Panel A: Target firms by acquisition type**

	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Minimum</b>	<b>Maximum</b>
<b>Market value<sup>a</sup> (\$ millions)</b>					
Full sample	230	174.2	35.4	0.4	5,569.3
Tender offers	69	229.7	46.9	2.9	5,569.3
New equity issues	61	94.6	29.4	0.4	759.8
Block purchases	56	63.8	26.7	0.7	559.7
Open market purchase	10	91.1	58.1	6.5	266.5

**Panel B: Acquirer firms by acquisition type**

	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Minimum</b>	<b>Maximum</b>
<b>Market value<sup>a</sup> (\$ millions)</b>					
Full sample	184	1,740.7	147.3	2.8	58,857.4
Tender offers	52	733.5	119.8	2.8	14,860.8
New equity issues	51	2,694.4	310.7	14.8	53,337.3
Block purchases	47	695.8	134.5	5.8	7,191.3
Open market purchases	8	144.7	81.9	6.8	389.1

**Panel C: Relative size of target firm to acquirer firm:**

	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Minimum</b>	<b>Maximum</b>
<b>Relative size of target to acquirer<sup>b</sup></b>					
Full sample	140	78.41%	22.72%	0.11%	1,066.48%
Tender offers	45	150.04%	71.08%	0.79%	1,066.48%
New equity issues	38	22.78%	6.51%	0.11%	180.90%
Block purchases	37	48.97%	26.04%	1.41%	336.59%
Open market purchase	7	146.09%	79.53%	18.64%	432.17%

<sup>a</sup> Market value is calculated as the number of shares outstanding times the stock price six weeks prior to the incomplete acquisition announcement.

<sup>b</sup> Relative size is calculated as the market value of the target divided by the market value of the acquirer.

market value of 52 acquirer firms is \$734 million (\$120 million). In comparison, Lang, Stulz, and Walkling (1991) report mean (median) equity values of \$466 million (\$134 million) for targets and \$1.74 billion (\$546 million) for acquirers for a sample of successful tender offers occurring from October 1968 to December 1986. Byrd and Hickman (1992) report mean (median) equity values of \$570 million (\$207 million) for targets and \$1.59 billion (\$862 million) for acquirers for a sample of tender offers occurring from 1980 to 1987. Their sample includes only firms in which both the bidder and target are listed on the NYSE or Amex at the time of the bid. The inclusion of firms traded over-the-counter may account for the smaller market values observed in the sample of incomplete acquisitions through tender offers.

For incomplete acquisitions effected through the issuance of new equity, the mean (median) market value of 61 target firms is \$95 million (\$29 million) and the mean (median) market value of 51 acquirer firms is \$2.69 billion (\$311 million). These figures are similar to those reported in Hertz and Smith (1993), where issuing firms in private equity placements from January 1980 to May 1987 have mean (median) equity values of \$95 million (\$46 million). Thus, the targets in incomplete acquisitions through the issuance of new equity are similar in size to firms conducting private placements of equity.

For incomplete acquisitions effected through block purchases, the mean (median) market value of 56 target firms is \$64 million (\$27 million) and the mean (median) market value of 47 acquirer firms is \$696 million (\$135 million). Across incomplete acquisition methods, it appears that tender offer targets are somewhat

larger than new equity issuance targets and block purchase targets, and that new equity issuance acquirers are larger than tender offer acquirers and block purchase acquirers.

The relative size of target firms to acquiring firms is reported in Panel C of Table 2. The relative size is calculated as the market value of the target divided by the market value of the acquirer. For the full sample of 140 paired targets and acquirers, the mean (median) relative size of the targets is 78.4% (22.7%).<sup>12</sup> For tender offers, the mean (median) relative size of the targets is 150.0% (71.1%). These figures confirm the earlier observation that tender offer targets are generally larger than the new equity issuance and block purchase targets. The mean (median) relative size of new equity issuance targets is 22.8% (6.5%) and is consistent with the observation that the acquirers are generally larger for this method of incomplete acquisition. The mean (median) relative size of block purchase targets is 49.0% (26.0%). In comparison, Byrd and Hickman (1992) report a mean (median) relative size of 68% (30%) for targets of traditional tender offers while Loderer and Martin (1990) report a median relative size of 20.9% for targets in tender offers and 9.4% for targets of mergers. Overall, the relative size of incomplete acquisition targets to parents is comparable to those in other studies of corporate control changes. Moreover, the finding that the relative size of new equity issuance incomplete acquisition targets is much smaller than the relative size of tender offer incomplete acquisition targets parallels the finding that

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<sup>12</sup> In a few cases, the acquirer is majority-owned by another corporation. Since acquirer market value is calculated as shares outstanding times price, the actual size of majority-owned acquirers is understated. These acquirers account for the three largest relative size observations (1,066%, 432%, and 337%). Thus, the median relative size is more representative of the true relative size of targets to acquirers.



the relative size of merger targets is much smaller than the relative size of conventional tender offer targets.

The distribution of methods used to establish control is reported in Table 3.

For the 271 incomplete acquisition announcements, there are three methods of acquisition that dominate the sample. These three methods are tender offers (27.7%), new equity issues (28.8%), and block purchases (25.1%). Incomplete acquisitions by open market purchases of stock are relatively rare (4.4%). For this latter method of acquisition, it is often difficult to determine the precise date that an attempt at control becomes public. There are also a small number of transactions in which an asset, such as a division of the acquirer, is exchanged for a controlling interest in the target (4.4%). The remaining transactions (9.6%) are a combination of two or more of these methods. Given this distribution of transactions, the analysis of incomplete acquisitions focuses primarily on the first three methods by which acquirers obtain control.

**Table 3 – Distribution of Methods Used to Establish Control**  
Number and percentage of incomplete acquisitions disaggregated by method used to establish control for 271 incomplete acquisitions.

<b>Method</b>	<b># of Events</b>	<b>Percentage</b>
Tender offer	75	27.7%
Issuance of new equity	78	28.8%
Blockholder purchase	68	25.1%
Open market purchase	12	4.4%
Asset/equity exchange	12	4.4%
Tender offer & new equity issue	10	3.7%
Tender offer & block purchase	5	1.8%
New equity issue & block purchase	6	2.2%
Tender offer & open market purchase	1	0.4%
Block purchase & asset/equity exchange	4	1.5%
<b>Total</b>	<b>271</b>	<b>100.0%</b>

The distribution of incomplete acquisitions by industry classification based on Standard Industrial Classification (SIC) codes for 274 targets and 227 acquirers is reported in Panels A and B of Table 4. SIC codes are taken from Compustat when available. If a sample firm is not on Compustat, the SIC code is collected from CRSP. The percentage of firms in each category is calculated as the number of firms in the category divided by the total number of firms with SIC codes.

In Panel A, for incomplete acquisition targets, there are 128 target firms or almost half of the total sample that are in the category of Manufacturing (SIC codes: 20xx-39xx). Within this category, 12 firms are in the Food and Kindred Products group (SIC=20xx), 17 firms are in the Chemical and Allied Products group (SIC=28xx), 11 firms are in the Primary Metals Industries group (SIC=33xx), 17 firms are in the Industrial, Commercial Machinery, and Computer Equipment group (SIC=35xx), 15 firms are in the Electrical Equipment group (SIC=36xx), and 12 firms are in the Measuring Instruments, Photographic Goods, and Watches group (SIC=38xx). The category of Finance, Insurance and Real Estate (SIC codes 60xx-67xx) contains 39 target firms or about 14% of the sample. Within this category, nine companies are in the Insurance group (SIC=63xx). The category of Transportation, Communication, Electric, Gas, and Sanitary Services (SIC codes: 40xx-49xx) contains 25 target firms or about 9% of the sample, with a concentration of 11 firms in the Communications group (SIC=48xx). The category of Services (SIC codes: 70xx-89xx) contains 23 target firms or about 8% of the sample, with a concentration of six firms in the Business Services group (SIC=73xx). The category of Mining (SIC codes: 10xx-14xx) contains 20 target firms or about 7% of the sample, with a concentration of

**Table 4 - Distribution of Incomplete Acquisition Targets and Acquirers by Standard Industrial Classification (SIC) Code**

The number and percentage of firms in each SIC group are reported for targets and acquirers in Panel A and Panel B, respectively. SIC codes are taken from Compustat when available. If the firm is not on Compustat, the SIC code is taken from CRSP. Percentages are calculated as the number of firms in the SIC group divided by the number of available SIC codes.

**Panel A: Distribution of SIC codes for targets**

<b>Two-Digit SIC Group</b>	<b>Description</b>	<b>Number of firms</b>	<b>Percent</b>
01-09	Agriculture, Forestry and Fishing	1	0.37%
10-14	Mining	20	7.33%
15-17	Construction	3	1.10%
20-39	Manufacturing	128	46.87%
40-49	Transportation, Communication, Electric, Gas and Sanitary Services	25	9.16%
50-51	Wholesale Trade	14	5.13%
52-59	Retail Trade	20	7.33%
60-67	Finance, Insurance and Real Estate	39	14.29%
70-89	Services	23	8.42%
91-97	Public Administration	0	0.00%
<b>Total available</b>		<b>274</b>	<b>100.0%</b>
<b>Not available</b>		<b>1</b>	
<b>Total</b>		<b>275</b>	

**Panel B: Distribution of SIC codes for acquirers**

<b>Two-Digit SIC Group</b>	<b>Description</b>	<b>Number of firms</b>	<b>Percent</b>
01-09	Agriculture, Forestry and Fishing	0	0.00%
10-14	Mining	20	8.81%
15-17	Construction	3	1.32%
20-39	Manufacturing	107	47.13%
40-49	Transportation, Communication, Electric, Gas and Sanitary Services	24	10.57%
50-51	Wholesale Trade	10	4.41%
52-59	Retail Trade	12	5.29%
60-67	Finance, Insurance and Real Estate	40	17.62%
70-89	Services	11	4.85%
91-97	Public Administration	0	0.00%
<b>Total available</b>		<b>227</b>	<b>100.0%</b>
<b>Not available</b>		<b>46</b>	
<b>Total</b>		<b>273</b>	

15 firms in the Oil and Gas Extraction group (SIC=13xx). The category of Retail Trade (SIC codes: 52xx-59xx) contains 20 target firms or about 8% of the sample, with no particular areas of concentration.

In Panel B, for incomplete acquisition acquirers, there are 107 firms or almost half of the total sample in the category of Manufacturing (SIC codes: 20xx-39xx). Within this category, 17 firms are in Food and Kindred Products (SIC=20xx), 15 firms are in the Chemical and Allied Products group (SIC=28xx), 12 firms are in the Industrial, Commercial Machinery, and Computer Equipment group (SIC=35xx), and ten firms are in the Electrical Equipment group (SIC=36xx). The category of Finance, Insurance and Real Estate (SIC codes: 60xx-67xx) contains 40 acquirer firms or about 18% of the sample, with 20 companies in the Insurance group (SIC=63xx). The category of Transportation, Communication, Electric, Gas, and Sanitary Services (SIC codes: 40xx-49xx) contains 24 acquirer firms or about 11% of the sample, with a concentration of 13 firms in the Communications group (SIC=48xx). The category of Mining (SIC codes: 10xx-14xx) contains 20 acquirer firms or about 9% of the sample, with a concentration of 12 firms in the Oil and Gas Extraction group (SIC=13xx). In general, the distribution of SIC codes for incomplete acquisition targets and acquirers is similar to the distribution of SIC codes in Guenther and Rosman's (1994) sample of all NYSE and AMEX firms with data on both the 1989 Compustat and CRSP tapes.

The degree of relatedness between the SIC codes of 227 paired targets and acquirers is reported in Panel A of Table 5. The target and acquirer have the same primary SIC code at the four-digit level in 35 transactions (15.4%). The target and acquirer have the same primary SIC code at the three-digit level or better in 45

transactions (19.83%), at the two-digit level or better in 67 transactions (29.52%), and at the one-digit level or better in 118 transactions (51.99%). There is no agreement in the primary SIC code of targets and acquirers in 109 transactions (48.01%).

**Table 5 - Degree of Relatedness between Standard Industrial Classification (SIC) Codes of Incomplete Acquisition Targets and Acquirers**

The degree of relatedness between target and acquirer SIC codes for 227 paired target and acquirer firms with SIC codes available on either Compustat or CRSP.

**Panel A: Full sample**

<b>SIC Level</b>	<b>Number of firms</b>	<b>Percent</b>	<b>Cumulative percent</b>
Four-digit	35	15.42%	15.42%
Three-digit	10	4.41%	19.83%
Two-digit	22	9.69%	29.52%
One-digit	51	22.47%	51.99%
Zero-digit	109	48.01%	100.00%
<b>Total</b>	<b>227</b>	<b>100.00%</b>	

**Panel B: Relatedness between target and acquirer by SIC group**

<b>SIC Group</b>	<b>Description</b>	<b>N</b>	<b>Degree of Relatedness (%)</b>			
			<b>4-digit</b>	<b>3-digit</b>	<b>2-digit</b>	<b>1-digit</b>
01-09	Agriculture, Forestry and Fishing	1	0.00%	0.00%	0.00%	0.00%
10-14	Mining	18	33.33%	33.33%	33.33%	55.56%
15-17	Construction	3	0.00%	0.00%	0.00%	33.33%
20-39	Manufacturing	105	8.57%	14.29%	26.67%	53.33%
40-49	Transportation, Communication, Electric, Gas and Sanitary Services	23	21.74%	30.43%	47.83%	60.87%
50-51	Wholesale Trade	8	12.50%	12.50%	25.00%	37.50%
52-59	Retail Trade	16	25.00%	25.00%	37.50%	37.50%
60-67	Finance, Insurance and Real Estate	34	23.53%	29.41%	35.29%	70.59%
70-89	Services	19	10.53%	10.53%	10.53%	21.05%

While the assessment of the degree of relatedness between the target and acquiring firm based on SIC codes has the advantage of objectivity, it suffers from a potentially serious drawback because it may not accurately measure the degree of

relatedness between the target and acquirer. As an example, cookies and crackers (SIC code=2052) and potato chips, corn chips and snacks (SIC code=2096) share the same 2-digit SIC code and appear to be in reasonably similar lines of business. In contrast, glass and glassware (SIC code=3220) and ready-mixed concrete (SIC code=3273) also share the same 2-digit SIC code but appear to have a much lower relatedness.

As an alternative measure of relatedness, the Compustat SIC code description and the Wall Street Journal description of the target and acquirer's industry were examined to determine the degree of relatedness between the target and acquiring firm. The degree of relatedness was classified as high, medium, or low. Using the alternative measure of relatedness, 36% of the incomplete acquisitions were classified as high-relatedness, 25% were classified as medium-relatedness, and 39% were classified as low-relatedness. In comparison, Healy, Palepu, and Ruback (1992), using a classification system based on business descriptions and industry classifications from Value Line reports, classify 28% of their sample of 50 large mergers as high overlap, 36% as medium overlap, and 36% as low overlap.

In Panel B of Table 5, the degree of relatedness between incomplete acquisition targets and acquirers is reported across industry classifications. Relatedness is highest in the Communication, Electric, Gas, and Sanitary Services category and in the Finance, Insurance, and Real Estate category. Within the former category, high relatedness is observed when targets are in the Communications group (SIC=48xx) with 80% agreement at the two-digit level or better. Within the latter category, high relatedness is observed in the Insurance group (63xx) with 100% agreement at the

two-digit level or better. Relatedness is lowest in the Wholesale Trade category and the Services category.

Since CRSP SIC codes are used when Compustat SIC codes are unavailable, Table 6 presents the degree of agreement between CRSP and Compustat SIC codes when both are available. The results for 214 target firms are similar to Kahle and Walkling's (1996) findings in which the cumulative percentages are 21% agreement at the four-digit level, 50% agreement at the three-digit level, 64% agreement at the two-digit level, and 79% agreement at the one-digit level. The results for 177 parent firms indicate slightly lower levels of agreement.

**Table 6 - Degree of Agreement of Incomplete Acquisition Target and Acquirer Standard Industrial Classification (SIC) Codes across the Compustat and CRSP Databases**

The degree of agreement in SIC codes for 214 target firms (Panel A) and 177 acquirer firms (Panel B) with SIC codes available on both Compustat and CRSP.

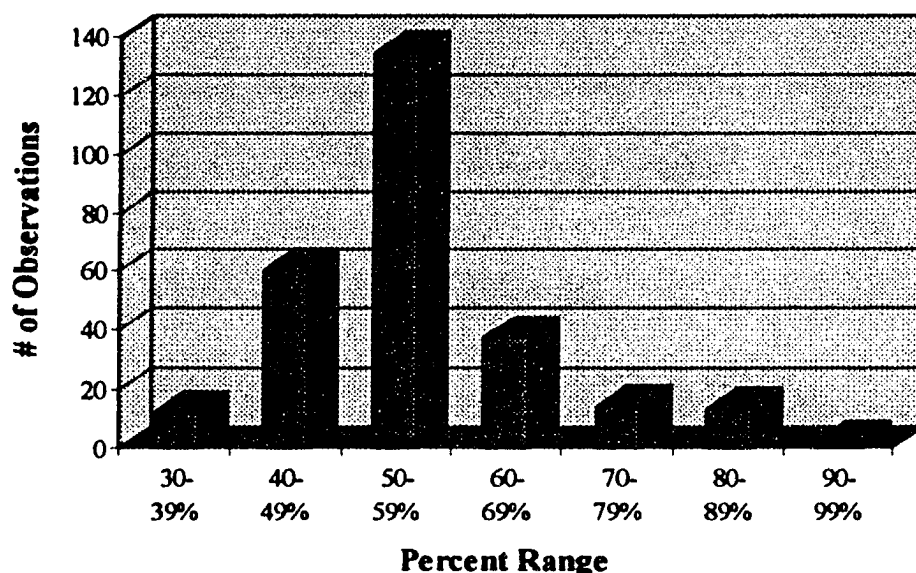
**Panel A: Targets**

<b>SIC Level</b>	<b>Number of firms</b>	<b>Percent</b>	<b>Cumulative percent</b>
Four-digit	49	22.90%	22.90%
Three-digit	51	23.83%	46.73%
Two-digit	34	15.89%	62.62%
One-digit	24	11.21%	73.83%
Zero-digit	56	26.17%	100.00%
<b>Total</b>	<b>214</b>	<b>100.00%</b>	

**Panel B: Acquirers**

<b>SIC Level</b>	<b>Number of firms</b>	<b>Percent</b>	<b>Cumulative percent</b>
Four-digit	35	19.77%	19.77%
Three-digit	21	11.86%	31.64%
Two-digit	37	20.90%	52.54%
One-digit	27	15.25%	67.80%
Zero-digit	57	32.20%	100.00%
<b>Total</b>	<b>177</b>	<b>100.00%</b>	

Figure 1 shows the frequency distribution of control for the final sample of 274 incomplete acquisitions with data available on CRSP. The most common control frequencies are between 40% and 70%. The mean (median) control percentage for the usable sample is 54.4% (51.0%). The mode is 51.0%.



**Figure 1 - Distribution of Control Percentage**  
Percentage control for 274 incomplete acquisition targets.

### 3.5 Summary

Three main findings emerge from the analysis of descriptive statistics. First, the primary methods used to effect an incomplete acquisition are tender offers, the issuance of new equity by the target, and the establishment of a controlling interest through the purchase of existing blocks. Second, as in conventional mergers and acquisitions, the target is typically smaller than the acquirer. Third, incomplete acquisitions do not appear to be concentrated in particular time periods, industry classifications, or degree of relatedness between the target and acquirer.



## **CHAPTER 4**

### **EMPIRICAL RESULTS ON THE VALUATION EFFECTS OF INCOMPLETE ACQUISITION ANNOUNCEMENTS**

#### **4.1 Introduction**

This chapter presents the empirical results for the valuation effects of announcements of incomplete acquisitions using event study methodology described in Chapter 3. The share-price response to incomplete acquisitions is reported for both targets and acquirers. Average combined returns to incomplete acquisitions and combined wealth effects are also reported. These results are presented both in the aggregate and by the method used to establish control. The chapter ends with a summary of the conclusions that can be drawn from excess returns around the time of these announcements.

#### **4.2 Target Returns at Incomplete Acquisition Announcements**

Two-day announcement period returns cumulated over day -1 to day 0 are reported in Panel A of Table 7 for the full sample of 224 target firms. The results for the full sample indicate a statistically significant reaction of 8.12% to the announcement of an incomplete acquisition ( $t$ -statistic = 22.58). The stock price reaction is positive for 73% of the target firms. This result is consistent with the hypothesis that target firms experience a positive stock market reaction to incomplete acquisition announcements. Moreover, the magnitude of this average gain suggests that target firm shareholders obtain a significant increase in wealth that is similar to the increase experienced by targets in conventional mergers, which are corporate control transactions that eliminate target shareholder interests in the target firm. For example,

**Table 7 - Incomplete Acquisition Announcement Excess Returns to Targets by Acquisition Type**

Excess returns (in percent) to targets at announcements of 224 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel C. Difference in means tests for the two-day and seven-day returns are shown in Panel B and Panel D, respectively.

**Panel A: Two-day announcement period returns (-1 to 0)**

Acquisition type	Excess return	Distribution of returns	
		Quartile	Return
Full sample	8.12%	25%	-0.30%
	(22.58)***	50%	4.55%
	[0.73]	75%	13.82%
	N = 224		
Tender offers	12.82%	25%	3.33%
	(24.38)***	50%	10.42%
	[0.84]	75%	18.93%
	N = 66		
New equity issues	9.71%	25%	-0.20%
	(10.78)***	50%	4.94%
	[0.71]	75%	16.29%
	N = 60		
Block purchases	3.60%	25%	-1.42%
	(5.68)***	50%	2.39%
	[0.66]	75%	9.56%
	N = 56		
Open market purchases	2.13%	25%	-0.32%
	(1.62)	50%	1.55%
	[0.67]	75%	2.50%
	N = 9		

**Panel B: Difference in means test for two-day returns**

	Tender offers	New equity issues	Block purchases	Open market purchases
Tender offers	-			
New equity issues	1.055	-		
Block purchases	3.887***	2.180**	-	
Open market purchases	5.082***	2.940**	0.781	-

(Table 7 continued)

Panel C: Seven-day announcement period returns (-5 to +1)			
Acquisition type	Excess return	Distribution of returns	
		Quartile	Return
Full sample	12.60% (22.35)*** [0.74] N = 226	25% 50% 75%	0.03% 8.69% 21.62%
Tender offers	18.97% (23.49)*** [0.85] N = 68	25% 50% 75%	7.84% 15.47% 28.63%
New equity issues	12.89% (9.05)*** [0.73] N = 60	25% 50% 75%	1.32% 7.42% 16.63%
Block purchases	8.44% (8.41)*** [0.66] N = 56	25% 50% 75%	-3.61% 5.83% 14.64%
Open market purchases	1.85% (0.89) [0.56] N = 9	25% 50% 75%	-1.28% 0.06% 1.84%

Panel D: Difference in means test for seven-day returns				
	Tender offers	New equity issues	Block purchases	Open market purchases
Tender offers	-			
New equity issues	1.553	-		
Block purchases	2.991***	1.099	-	
Open market purchases	5.690***	3.051***	2.061**	-

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

in a summary of studies of valuation effects on targets of mergers, Jensen and Ruback's (1983) report two-day average excess returns in the range of 6.2% to 13.4% and a weighted average excess return of 7.7%.

Next, the full sample of two-day share price responses for targets of incomplete acquisitions are disaggregated by method of origination. For incomplete acquisitions that originate via tender offers, the two-day average excess return is 12.82% (t-statistic = 24.38). The stock price reaction is positive for 84% of the target firms.<sup>13</sup> The share price response for targets of incomplete acquisitions via new equity issuance is 9.71% (t-statistic = 10.78). The stock price reaction is positive for 71% of these target firms. It is well documented that the seasoned securities issuance phenomenon is a negative event that conveys negative information about firm value. Nevertheless, the results for incomplete acquisitions indicate that equity issuance that conveys control of a target to an acquiring firm enhances target shareholder value. Moreover these transactions generate positive average returns for target firm shareholders that exceed the returns for private placements of equity reported by Wruck (1989) and Hertz and Smith (1993), whose samples typically do not entail a change in control. Although target firm shareholders sustain a greater gain on average in tender offers associated with an incomplete acquisition than in new equity issuance transactions, a difference in means test between the two returns generates a calculated t-value of only 1.06 which is not statistically significant, and the null hypothesis of equality cannot be rejected. Nevertheless, both methods of incomplete acquisitions generate large gains to target shareholders.

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<sup>13</sup> Amoako-Adu and Smith (1993) report abnormal returns to Canadian target firms of 22.36% over a 31-day period surrounding the announcement of a partial tender offer. The study differs from the current research in two important aspects. First, bidders may be managers, controlling shareholders, or outsiders as well as corporations. Second, their sample of 33 partial offers includes 14 offers in which the tender offer is an any-or-all offer that fails to attract enough shares to take the target private.

The share price response for targets of incomplete acquisitions via block purchases is 3.60% (t-statistic = 5.68). The stock price reaction is positive for 66% of these target firms. There are only 9 firms that are targets of incomplete acquisitions through open market repurchases, and the two-day average share price response to these announcements is 2.13% (t-statistic = 1.62). The stock price reaction is positive for 67% of these target firms.

Difference in means tests between the two-day share price responses for targets of incomplete acquisitions via tender offers versus block purchases, and for new equity issues versus block purchases, reported in Panel B of Table 7, generate calculated t-values of 3.89 significant at the 1% level, and 2.18, respectively, significant at the 5% level. These results suggest that block purchases that convey control to an acquirer generate significantly smaller returns for target shareholders than transactions in which the incomplete acquisition is via tender offers or new equity issuance. Bebchuk (1994) has argued that the trading of large blocks that convey control to an acquirer harms dispersed shareholders because large shareholders can obtain private benefits from control through wealth transfers from the dispersed shareholders. On this basis, he argues that minority shareholders should be able to participate in the sale of a large block on the same terms as the large blockholder, a rule that follows European corporate law. Although incomplete acquisitions that convey control through block sales generate lower returns than transactions that involve tender offers or new equity issuance, target shareholders sustain positive returns, implying that these transactions increase the wealth of both large blockholders and minority shareholders.

Seven-day announcement period returns over day -5 to day +1 are reported in Panel C of Table 7 for a sample of 226 target firms. The results for the full sample indicate a statistically significant share price reaction of 12.60% for targets of incomplete acquisition announcements over the longer window (t-statistic = 22.35). The reaction over the longer window is about 50% higher than the reaction over the two-day window, indicating either information leakage or imprecision in identifying the exact time of the information release. In comparison, Jensen and Ruback's (1983) summary of studies of conventional mergers reports average excess returns to targets over a one month period surrounding successful mergers that range from 13.30% to 21.78%, with a weighted average excess return of 15.90%. They also report average excess returns to targets over a one month period surrounding successful tender offers that range from 16.85% to 34.06%, with a weighted average excess return of 29.09%. Overall, the returns to targets in incomplete acquisitions are positive, but somewhat lower than the returns to targets that have been documented in traditional mergers and acquisitions.

The seven-day share price response for targets of incomplete acquisitions is 18.97% (t-statistic = 23.49) for tender offers, 12.89% (t-statistic = 9.05) for new equity issues, and 8.44% (t-statistic = 8.41) for block purchases. A difference in means test of the seven-day share price response to tender offers and block purchases in incomplete acquisitions, reported in Panel D of Table 7, generates a calculated t-value of 2.99, which is significant at the 1% level. Difference in means tests between tender offers and open market purchases, and between new equity issues and open market purchases generate calculated t-values of 5.69 and 3.05, respectively, both significant at

the 1% level, which reject the null hypothesis of equality. A difference in means tests between block purchases and open market purchases generates a calculated t-value of 2.06, significant at the 5% level. This suggests that the announcement period gains to target stockholders are greater for incomplete acquisitions through tender offers than for incomplete acquisitions through block purchases. Again, target shareholder gains appear to be greater in tender offers than in new equity issuance transactions but the difference is not statistically significant.

#### **4.3 Acquirer Returns at Incomplete Acquisition Announcements**

Two-day announcement period returns over day -1 to day 0 are reported in Panel A of Table 8 for a sample of 182 acquiring firms. The results indicate that bidders in incomplete acquisitions exhibit a positive share price reaction of 0.50% (t-statistic = 1.80), which is significant at the 10% level. The non-negative return to acquirers in incomplete acquisitions is contrary to the negative returns to acquirers documented in studies of conventional mergers and acquisitions that suggest overbidding. These studies include Bradley et al., 1988, -2.90%; Jennings and Mazzeo, 1991, -0.80%; Servaes, 1991, -3.30%; Byrd and Hickman, 1992, -1.20%. Moreover, the results for the various subsamples also provide no evidence of negative returns to bidders. Specifically, the share price response for bidders in incomplete acquisitions is 0.99% (t-statistic = 1.67) for tender offers, 0.75% (t-statistic = 1.56) for new equity issues, and 0.18% (t-statistic = 0.35) for block purchases. Difference in means tests between each of these categories are insignificant, indicating that the share price response for bidders does not differ significantly across acquisition types.

**Table 8 - Incomplete Acquisition Announcement Excess Returns to Acquirers by Acquisition Type**

Excess returns (in percent) to acquirers at announcements of 182 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel C. Difference in means tests for the two-day and seven-day returns are shown in Panel B and Panel D, respectively.

**Panel A: Two-day announcement period returns (-1 to 0)**

Acquisition type	Excess return	Distribution of returns	
		Quartile	Return
Full sample	0.50%	25%	-2.05%
	(1.80)*	50%	-0.06%
	[0.48]	75%	2.11%
	N = 182		
Tender offers	0.99%	25%	-2.65%
	(1.67)*	50%	0.32%
	[0.55]	75%	3.37%
	N = 51		
New equity issues	0.75%	25%	-2.41%
	(1.56)	50%	-0.37%
	[0.37]	75%	1.53%
	N = 51		
Block purchases	0.18%	25%	-1.23%
	(0.35)	50%	-0.03%
	[0.49]	75%	1.86%
	N = 47		
Open market purchases	-0.13%	25%	-1.09%
	(-0.09)	50%	0.01%
	[0.57]	75%	0.46%
	N = 7		

**Panel B: Difference in means test for two-day returns**

	Tender offers	New equity issues	Block purchases	Open market purchases
Tender offers	-			
New equity issues	0.153	-		
Block purchases	0.709	0.412	-	
Open market purchases	0.482	0.361	0.145	-



(Table 8 continued)

Panel C: Seven-day announcement period returns (-5 to +1)

Acquisition type	Excess return	Distribution of returns	
		Quartile	Return
Full sample	1.45% (3.31)*** [0.53] N = 182	25% 50% 75%	-3.45% 0.39% 4.66%
Tender offers	1.06% (1.13) [0.55] N = 51	25% 50% 75%	-4.95% 0.61% 4.79%
New equity issues	1.13% (1.49) [0.43] N = 51	25% 50% 75%	-3.84% -0.90% 3.05%
Block purchases	1.04% (1.26) [0.55] N = 47	25% 50% 75%	-2.88% 0.52% 4.66%
Open market purchases	1.75% (0.73) [0.57] N = 7	25% 50% 75%	-4.07% 0.19% 12.11%

Panel D: Difference in means test for seven-day returns

	Tender offers	New equity issues	Block purchases	Open market purchases
Tender offers	-			
New equity issues	0.036	-		
Block purchases	0.007	0.046	-	
Open market purchases	0.204	0.177	0.216	-

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

Seven-day announcement period returns over day -5 to day +1 are reported in Panel C of Table 8 for a sample of 182 acquiring firms. The results indicate that bidders in incomplete acquisitions earn a positive share price reaction of 1.45%

(t-statistic = 3.31), which is significant at the 1% level, a result that is somewhat greater than for the two-day announcement period. The bidder share price responses to incomplete acquisitions are 1.06% (t-statistic = 1.13) for tender offers, 1.13% (t-statistic = 1.49) for new equity offerings, 1.04% (t-statistic = 1.26) for block purchases, and 1.75% (t-statistic = 0.73) for open market purchases. As in the case of the returns for the two-day announcement period, difference in means tests are insignificant, indicating that the share price response for bidders does not differ significantly across acquisition types.

#### **4.4 Combined Returns at Incomplete Acquisition Announcements**

Efficiency and information hypotheses of mergers and acquisitions predict that corporate control events such as incomplete acquisitions should generate increases in overall wealth. Likewise, if incomplete acquisitions improve corporate performance as a result of an increase in monitoring that is associated with the activities of a majority blockholder, overall wealth should be enhanced. In contrast, the expropriation hypothesis and hypotheses that view takeover bids as a symptom of managerial hubris or agency problems predict that there should be no overall gains from incomplete acquisitions. Thus, these hypotheses generate predictions about the combined returns that occur in response to these transactions.

The average combined returns to incomplete acquisitions for which both the target and the bidder have returns on the CRSP tape, are reported in Panel A of Table 9 for the two-day announcement period and in Panel B of Table 9 for the seven-day announcement period. The combined excess return is calculated as the weighted average of the excess returns for the target and acquirer firm, where the weights are the

**Table 9 - Average Combined Excess Returns to Incomplete Acquisition Announcements by Acquisition Type**

Combined excess returns (in percent) at announcements of 140 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. The combined excess return is the weighted average of the excess returns for the target and acquirer, where the weights are the relative market values of equity of the two firms six weeks prior to the announcement. The average combined change in market value is computed as the cumulative excess return to the target times the target market value six week prior to the announcement plus the cumulative excess return to the acquirer times the acquirer market value six weeks prior to the announcement. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel B.

Panel A: Two-day announcement period returns (-1 to 0)				
Acquisition type	Average combined excess return	Average (median) combined change in market value in millions	Distribution of combined excess return	
Full sample	2.07%	\$54.849	25%	-0.97%
	(3.46)***	(\$ 1.637)	50%	1.11%
	[0.65]		75%	4.31%
	N = 140			
Tender offers	5.37%	\$21.391	25%	0.23%
	(3.85)***	(\$ 8.581)	50%	3.11%
	[0.76]		75%	7.24%
	N = 45			
New equity issues	0.47%	\$79.337	25%	-2.09%
	(0.57)	(\$ 0.354)	50%	0.19%
	[0.53]		75%	2.40%
	N = 38			
Block purchases	-0.23%	\$11.707	25%	-1.12%
	(-0.26)	(\$ 0.058)	50%	0.16%
	[0.54]		75%	2.37%
	N = 37			
Open market purchases	0.21%	\$ 1.948	25%	-0.06%
	(0.25)	(\$ 0.305)	50%	0.45%
	[0.71]		75%	1.77%
	N = 7			

(Table 9 continued)

<b>Panel B: Seven-day announcement period returns (-5 to +1)</b>				
	<b>Average combined excess return</b>	<b>Average (median) combined change in market value in millions</b>	<b>Distribution of combined excess return</b>	
<b>Full sample</b>	4.18% (4.87)*** [0.66] N = 140	\$64.501 (\$ 3.843)	25% 50% 75%	-1.56% 3.05% 7.38%
<b>Tender offers</b>	8.15% (4.34)*** [0.78] N = 45	\$45.824 (\$ 7.422)	25% 50% 75%	1.32% 4.11% 13.73%
<b>New equity issues</b>	0.54% (0.43) [0.53] N = 38	\$72.193 (\$ 0.731)	25% 50% 75%	-3.40% 0.40% 3.47%
<b>Block purchases</b>	2.32% (1.56) [0.65] N = 37	\$12.557 (\$ 1.685)	25% 50% 75%	-1.81% 2.07% 5.01%
<b>Open market purchases</b>	-0.28% (-0.23) [0.29] N = 7	-\$ 1.782 (-\$ 0.233)	25% 50% 75%	-3.31% -0.25% 1.45%

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

relative market values of equity for the two firms six weeks prior to the announcement date. The two-day average combined excess return for the full sample of 140 paired targets and acquirers is 2.07% (t-statistic = 3.46), which is significant at the 1% level. There are 65% of the combined returns that are positive. The average two-day increase in the combined wealth of target and acquirer shareholders is \$54.8 million, with target wealth increasing on average by \$25.9 million and acquirer wealth

increasing on average by \$28.9 million. Thus, incomplete acquisitions generate a large increase in wealth relative to the pre-announcement value of the target firms, suggesting that the market expects the post-transaction entity to sustain enhanced profitability. The large increase in the overall wealth of the combined entity that is associated with incomplete acquisitions is inconsistent with the expropriation and hubris hypotheses of corporate control transactions.

When the sample is disaggregated with respect to the method that is used to effect the incomplete acquisition, the combined average excess return is 5.37% (t-statistic = 3.85) for the paired sample of 45 tender offers, which is significant at the 1% level. The average combined return is positive for 76% of these transactions. The average two-day increase in the combined wealth of target and acquirer shareholders for incomplete acquisitions through tender offers is \$21.4 million, with \$18.3 million accruing to target shareholders and about \$3.1 million accruing to acquiring firm shareholders. In contrast, the remaining samples generate returns that are positive but are not statistically significant. For the sample of 38 transactions that entail equity offerings, the average combined return is 0.47% (t-statistic = 0.57), which is not statistically significant although the average combined wealth effect is a relatively large \$79.3 million for the paired sample of new equity issues. A similar result applies to the sample of 37 block purchases, which generates a small negative combined return of -0.23% (t-statistic = -0.26), although the average combined wealth effect is a small positive figure, \$11.7 million. There are only 7 open market transactions with a paired sample of target and bidder. The average combined return is 0.21% (t-statistic = 0.25), which is not statistically significant.

The seven-day announcement period returns reported in Panel B of Table 9 show a pattern that is similar to the two-day returns. The average combined seven-day excess return for the full sample of 140 paired targets and acquirers is 4.18% (t-statistic = 4.87), which is significant at the 1% level. There are 66% of the combined returns that are positive. The average increase in the combined wealth of target and acquirer shareholders for these transactions is \$64.5 million. This return is in large part the result of the tender offer transactions. More specifically, the average combined return for the paired sample of 45 tender offers is 8.15% (t-statistic = 4.34), which is significant at the 1% level. The average combined return is positive for 78% of these transactions. The average seven-day increase in the combined wealth of target and acquirer shareholders for incomplete acquisitions effected through tender offers is \$45.8 million. In contrast, for the paired sample of 38 new equity offering transactions, the average combined return is 0.54% (t-statistic = 0.43), which is not statistically significant, although the implied average combined wealth effect is \$72.2 million. For the paired sample of 37 block purchases, there is a stronger average combined return of 2.32% (t-statistic = 1.56), which falls short of statistical significance at the usual confidence intervals. The average combined wealth effect of these transactions is \$12.6 million. Once again, there are only 7 open market transactions with a paired sample of target and bidder. The average combined return for these transactions is -0.28% (t-statistic = -0.23), which is not statistically significant.

Overall, these results are consistent with the hypothesis that incomplete acquisitions result in an increase in aggregate wealth. The results indicate that the method used to effect these transactions has an important influence on the wealth

effects of an incomplete acquisition, with the greatest wealth effects associated with the use of tender offers.

#### **4.5 Returns by Degree of Relatedness between Target and Acquirer Industry**

The first measure of the degree of relatedness between target and acquirer industry is based on the agreement between target and acquirer SIC codes. Two-day announcement period returns by degree of relatedness in target and acquirer SIC codes are reported in Panel A of Table 10 for a sample of 170 targets. The two-day share price response of targets is 8.80% (t-statistic = 9.82) when the target and acquirer share the same 4-digit SIC code, 8.80% (t-statistic = 4.97) when the target and acquirer share the same 3-digit SIC code, 11.66% (t-statistic = 11.98) when the target and acquirer share the same 2-digit SIC code, 5.50% (t-statistic = 5.88) when the target and acquirer share the same 1-digit SIC code, and 9.99% (t-statistic = 5.76) when there is no agreement between the target and acquirer SIC codes. Difference in means tests between each of these categories are insignificant, indicating that the share price response of targets does not differ significantly by the degree of relatedness among target and acquirer SIC codes.

Seven-day announcement period returns by degree of relatedness in target and acquirer SIC code are reported in Panel C of Table 10 for a sample of 171 targets. The seven-day share price response of targets is 16.33% (t-statistic = 11.52) when the target and acquirer share the same 4-digit SIC code, 8.80% (t-statistic = 3.14) when the target and acquirer share the same 3-digit SIC code, 17.79% (t-statistic = 12.24) when the target and acquirer share the same 2-digit SIC code, 9.59% (t-statistic = 6.48) when the target and acquirer share the same 1-digit SIC code, and 14.36%

**Table 10 - Incomplete Acquisition Announcement Excess Returns to Targets by Degree of Relatedness in Target and Acquirer SIC Code**

Excess returns (in percent) to targets at announcements of 170 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. Returns are reported by the degree of relatedness between target and acquirer SIC codes. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel C. Difference in means tests for the two-day and seven-day returns are shown in Panel B and Panel D, respectively.

**Panel A: Two-day announcement period returns (-1 to 0)**

Relatedness	Excess return	Distribution of returns	
		Quartile	Return
Same 4-digit SIC code	8.80%	25%	0.57%
	(9.82)***	50%	6.10%
	[0.89]	75%	16.21%
	N = 26		
Same 3-digit SIC code	8.80%	25%	0.25%
	(4.97)***	50%	5.09%
	[0.77]	75%	16.51%
	N = 9		
Same 2-digit SIC code	11.66%	25%	2.01%
	(11.98)***	50%	6.57%
	[0.83]	75%	14.82%
	N = 17		
Same 1-digit SIC code	5.50%	25%	-0.90%
	(5.88)***	50%	3.33%
	[0.59]	75%	12.70%
	N = 33		
No agreement between SIC codes	9.99%	25%	0.57%
	(5.76)***	50%	6.10%
	[0.78]	75%	16.21%
	N = 85		

**Panel B: Difference in means test for two-day returns**

	Same 4-digit	Same 3-digit	Same 2-digit	Same 1-digit	No agreement
Same 4-digit	-				
Same 3-digit	0.001	-			
Same 2-digit	0.650	0.433	-		
Same 1-digit	0.904	0.540	1.224	-	
No agreement	0.460	0.214	0.386	1.264	-



(Table 10 continued)

Panel C: Seven-day announcement period returns (-5 to +1)

Relatedness	Excess return	Distribution of returns	
		Quartile	Return
Same 4-digit SIC code	16.33%	25%	1.37%
	(11.52)***	50%	8.65%
	[0.78]	75%	25.11%
	N = 26		
Same 3-digit SIC code	8.80%	25%	2.37%
	(3.14)***	50%	4.88%
	[0.78]	75%	14.29%
	N = 9		
Same 2-digit SIC code	17.79%	25%	4.88%
	(12.24)***	50%	12.80%
	[0.94]	75%	33.17%
	N = 18		
Same 1-digit SIC code	9.59%	25%	-1.70%
	(6.48)***	50%	8.36%
	[0.68]	75%	20.38%
	N = 33		
No agreement between SIC codes	14.36%	25%	1.39%
	(15.28)***	50%	10.81%
	[0.76]	75%	24.12%
	N = 85		

Panel D: Difference in means test for seven-day returns

	Same 4-digit	Same 3-digit	Same 2-digit	Same 1-digit	No agreement
Same 4-digit	-				
Same 3-digit	1.049	-			
Same 2-digit	0.242	1.350	-		
Same 1-digit	1.149	0.122	1.572	-	
No agreement	0.376	0.935	0.763	1.116	-

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

(t-statistic = 15.28) when there is no agreement between the target and acquirer SIC codes. Difference in means tests between each of these categories are insignificant, again indicating that the share price response of targets does not differ significantly by the degree of relatedness among target and acquirer SIC codes.

Two-day announcement period returns by degree of relatedness in target and acquirer SIC code are reported in Panel A of Table 11 for a sample of 183 acquirers. The two-day share price response of acquirers is 1.62% (t-statistic = 2.26) when the target and acquirer share the same 4-digit SIC code, 1.30% (t-statistic = 1.00) when the target and acquirer share the same 3-digit SIC code, 0.18% (t-statistic = 0.94) when the target and acquirer share the same 2-digit SIC code, 0.69% (t-statistic = 1.45) when the target and acquirer share the same 1-digit SIC code, and 0.27% (t-statistic = 0.63) when there is no agreement between the target and acquirer SIC codes. Difference in means tests between each of these categories are insignificant, indicating that the share price response of acquirers does not differ significantly by the degree of relatedness among target and acquirer SIC codes.

Seven-day announcement period returns by degree of relatedness in target and acquirer SIC code are reported in Panel C of Table 11 for a sample of 183 acquirers. The seven-day share price response of acquirers is 3.15% (t-statistic = 2.78) when the target and acquirer share the same 4-digit SIC code, 13.24% (t-statistic = 6.46) when the target and acquirer share the same 3-digit SIC code, 1.46% (t-statistic = 1.01) when the target and acquirer share the same 2-digit SIC code, 1.36% (t-statistic = 1.81) when the target and acquirer share the same 1-digit SIC code, and -0.16% (t-statistic = -0.25) when there is no agreement between the target and acquirer SIC

**Table 11 - Incomplete Acquisition Announcement Excess Returns to Acquirers by Degree of Relatedness in Target and Acquirer SIC Code**

Excess returns (in percent) to acquirers at announcements of 183 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. Returns are reported by the degree of relatedness between target and acquirer SIC codes. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel C. Difference in means tests for the two-day and seven-day returns are shown in Panel B and Panel D, respectively.

**Panel A: Two-day announcement period returns (-1 to 0)**

Relatedness	Excess return	Distribution of returns	
		Quartile	Return
Same 4-digit SIC code	1.62%	25%	-2.07%
	(2.26)**	50%	-0.13%
	[0.44]	75%	3.53%
	N = 26		
Same 3-digit SIC code	1.30%	25%	-0.06%
	(1.00)	50%	1.53%
	[0.67]	75%	2.38%
	N = 9		
Same 2-digit SIC code	0.18%	25%	-0.08%
	(0.94)	50%	1.05%
	[0.67]	75%	2.01%
	N = 15		
Same 1-digit SIC code	0.69%	25%	-1.29%
	(1.45)	50%	-0.15%
	[0.48]	75%	1.89%
	N = 42		
No agreement between SIC codes	0.27%	25%	-2.67%
	(0.63)	50%	-0.13%
	[0.43]	75%	2.28%
	N = 91		

**Panel B: Difference in means test for two-day returns**

	Same 4-digit	Same 3-digit	Same 2-digit	Same 1-digit	No agreement
Same 4-digit	-				
Same 3-digit	0.192	-			
Same 2-digit	0.891	0.968	-		
Same 1-digit	0.583	0.543	0.481	-	
No agreement	0.824	0.867	0.079	0.384	-

(Table 11 continued)

Panel C: Seven-day announcement period returns (-5 to +1)

Relatedness	Excess return	Distribution of returns	
		Quartile	Return
Same 4-digit SIC code	3.15%	25%	-1.83%
	(2.78)***	50%	-0.56%
	[0.44]	75%	10.13%
	N = 26		
Same 3-digit SIC code	13.24%	25%	1.45%
	(6.46)***	50%	7.66%
	[0.78]	75%	12.99%
	N = 9		
Same 2-digit SIC code	1.46%	25%	-2.33%
	(1.01)	50%	2.11%
	[0.67]	75%	3.94%
	N = 15		
Same 1-digit SIC code	1.36%	25%	-3.10%
	(1.81)*	50%	0.62%
	[0.62]	75%	3.11%
	N = 42		
No agreement between SIC codes	-0.16%	25%	-4.67%
	(-0.25)	50%	-0.36%
	[0.46]	75%	3.84%
	N = 91		

Panel D: Difference in means test for seven-day returns

	Same 4-digit	Same 3-digit	Same 2-digit	Same 1-digit	No agreement
Same 4-digit	-				
Same 3-digit	1.359	-			
Same 2-digit	0.698	1.596	-		
Same 1-digit	0.827	1.627	0.047	-	
No agreement	1.639	1.846*	0.875	1.024	-

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

codes. Difference in means tests between the share price response of acquirers when the target and acquirer share the same 3-digit SIC code and the share price response of acquirers when there is no agreement between the target and acquirer SIC codes generate a calculated t-value of 1.846, significant at the 10% level.

The average combined returns to incomplete acquisitions by the degree of relatedness between target and bidder SIC codes are reported in Panel A of Table 12 for the two-day announcement period. The two-day average combined excess return is 2.51% (t-statistic = 1.61) when the target and acquirer share the same 4-digit SIC code, 3.02% (t-statistic = 0.62) when the target and acquirer share the same 3-digit SIC code, 1.58% (t-statistic = 1.27) when the target and acquirer share the same 2-digit SIC code, 0.09% (t-statistic = 0.73) when the target and acquirer share the same 1-digit SIC code, and 2.32% (t-statistic = 2.61) when there is no agreement between the target and acquirer SIC codes. Difference in means tests between each of these categories are insignificant, indicating that the two-day average combined return does not differ significantly by the degree of relatedness among target and acquirer SIC codes.

The seven-day average combined excess returns, reported in Panel C of Table 12, are 5.67% (t-statistic = 2.80) when the target and acquirer share the same 4-digit SIC code, 4.17% (t-statistic = 1.40) when the target and acquirer share the same 3-digit SIC code, 3.37% (t-statistic = 1.71) when the target and acquirer share the same 2-digit SIC code, 3.09% (t-statistic = 1.63) when the target and acquirer share the same 1-digit SIC code, and 3.66% (t-statistic = 2.94) when there is no agreement between the target and acquirer SIC codes. Difference in means tests between each of

**Table 12 - Average Combined Excess Returns to Incomplete Acquisition Announcements by Degree of Relatedness in Target and Acquirer SIC Code**  
Combined excess returns (in percent) at announcements of 147 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. The combined excess return is the weighted average of the excess returns for the target and acquirer, where the weights are the relative market values of equity of the two firms six weeks prior to the announcement. The average combined change in market value is computed as the cumulative excess return to the target times the target market value six week prior to the announcement plus the cumulative excess return to the acquirer times the acquirer market value six weeks prior to the announcement. Combined returns are reported by the degree of relatedness between target and acquirer SIC codes.

Panel A: Two-day announcement period returns (-1 to 0)					
Relatedness	Average combined excess return	Distribution of returns			
		Quartile	Return		
Same 4-digit SIC code	2.51%	25%	-1.12%		
	(1.61)	50%	1.04%		
	[0.59]	75%	5.37%		
	N = 22				
Same 3-digit SIC code	3.02%	25%	-1.38%		
	(0.62)	50%	1.26%		
	[0.63]	75%	2.93%		
	N = 8				
Same 2-digit SIC code	1.58%	25%	0.15%		
	(1.27)	50%	2.17%		
	[0.77]	75%	2.46%		
	N = 13				
Same 1-digit SIC code	0.09%	25%	-1.85%		
	(0.73)	50%	0.65%		
	[0.57]	75%	4.59%		
	N = 28				
No agreement between SIC codes	2.32%	25%	-1.03%		
	(2.61)**	50%	0.58%		
	[0.64]	75%	4.37%		
	N = 76				
Panel B: Difference in means test for two-day returns					
	Same 4-digit	Same 3-digit	Same 2-digit	Same 1-digit	No agreement
Same 4-digit	-				
Same 3-digit	0.979	-			
Same 2-digit	0.472	0.558	-		
Same 1-digit	0.809	0.148	0.383	-	
No agreement	0.109	1.191	0.488	0.929	-

(Table 12 continued)

Panel C: Seven-day announcement period returns (-5 to +1)			
Relatedness	Average combined excess return	Distribution of returns	
		Quartile	Return
Same 4-digit SIC code	5.67%	25%	-1.81%
	(2.80)***	50%	3.60%
	[0.68]	75%	10.40%
	N = 22		
Same 3-digit SIC code	4.17%	25%	-0.87%
	(1.40)	50%	2.89%
	[0.63]	75%	9.57%
	N = 8		
Same 2-digit SIC code	3.37%	25%	-1.46%
	(1.71)	50%	3.75%
	[0.69]	75%	4.88%
	N = 13		
Same 1-digit SIC code	3.09%	25%	-1.69%
	(1.63)	50%	2.03%
	[0.61]	75%	5.88%
	N = 28		
No agreement between SIC codes	3.66%	25%	-1.98%
	(2.94)***	50%	2.31%
	[0.64]	75%	6.77%
	N = 76		

Panel D: Difference in means test for seven-day returns

	Same 4-digit	Same 3-digit	Same 2-digit	Same 1-digit	No agreement
Same 4-digit	-				
Same 3-digit	0.419	-			
Same 2-digit	0.815	0.224	-		
Same 1-digit	0.930	0.305	0.102	-	
No agreement	0.846	0.157	0.125	0.251	-

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

these categories are insignificant, indicating that the seven-day average combined return does not differ significantly by the degree of relatedness among target and acquirer SIC codes.

The second measure of the degree of relatedness between target and acquirer industry is based on classification from an analysis of the SIC code descriptions and the description of the target and acquirers industry contained in the Wall Street Journal announcement. Relatedness is classified as either high, medium, or low. Two-day announcement period returns by degree of relatedness in target and acquirer industry are reported in Panel A of Table 13 for a sample of 215 targets. The two-day share price response of targets is 8.64% (t-statistic = 16.05) when the target and acquirer are classified as high-relatedness, 9.41% (t-statistic = 11.10) when the target and acquirer are classified as medium-relatedness, and 6.78% (t-statistic = 11.87) when the target and acquirer are classified as low-relatedness. Difference in means tests between each of these categories are insignificant, indicating that the share price response of targets does not differ significantly by the degree of relatedness among target and acquirer industry relatedness.

Seven-day announcement period returns by degree of relatedness in target and acquirer industry are reported in Panel C of Table 13 for a sample of 217 targets. The seven-day share price response of targets is 13.33% (t-statistic = 15.66) when the target and acquirer are classified as high-relatedness, 17.19% (t-statistic = 13.34) when the target and acquirer are classified as medium-relatedness, and 9.83% (t-statistic = 10.88) when the target and acquirer are classified as low-relatedness. A difference in means test between the low- and medium- relatedness categories generates a calculated



**Table 13 - Incomplete Acquisition Announcement Excess Returns to Targets by Degree of Relatedness in Target and Acquirer Industry**

Excess returns (in percent) to targets at announcements of 215 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. Returns are reported by the degree of relatedness between target and acquirer industry based on business description. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel C. Difference in means tests for the two-day and seven-day returns are shown in Panel B and Panel D, respectively.

**Panel A: Two-day announcement period returns (-1 to 0)**

Relatedness	Excess return	Distribution of returns	
		Quartile	Return
High	8.64%	25%	0.47%
	(16.05)***	50%	6.77%
	[0.77]	75%	16.19%
	N = 80		
Medium	9.41%	25%	-0.28%
	(11.10)***	50%	6.17%
	[0.69]	75%	16.06%
	N = 49		
Low	6.78%	25%	-0.42%
	(11.87)***	50%	3.03%
	[0.72]	75%	11.95%
	N = 86		

**Panel B: Difference in means test for two-day returns**

	High	Medium	Low
High	-		
Medium	0.267	-	
Low	0.826	0.945	-

(Table 13 continued)

Panel C: Seven-day announcement period returns (-5 to +1)			
Relatedness	Excess return	Distribution of returns	
		Quartile	Return
High	13.33%	25%	-0.75%
	(15.66)***	50%	10.94%
	[0.73]	75%	26.18%
	N = 80		
Medium	17.19%	25%	4.88%
	(13.34)***	50%	12.98%
	[0.77]	75%	25.83%
	N = 51		
Low	9.83%	25%	-0.37%
	(10.88)***	50%	5.88%
	[0.73]	75%	14.79%
	N = 86		
Panel D: Difference in means test for seven-day returns			
	High	Medium	Low
High	-		
Medium	0.987	-	
Low	1.135	1.964**	-

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

t-value of 1.964, significant at the 5% level. This result suggests that target shareholder returns are higher when the target and acquirer are in moderately related industries than when the target and acquirer are in very different industries.

Two-day announcement period returns by degree of relatedness in target and acquirer industry are reported in Panel A of Table 14 for a sample of 180 acquirers. The two-day share price response of acquirers is -0.29% (t-statistic = -0.51) when the target and acquirer are classified as high-relatedness, 0.47% (t-statistic = 0.91) when

**Table 14 - Incomplete Acquisition Announcement Excess Returns to Acquirers by Degree of Relatedness in Target and Acquirer Industry**

Excess returns (in percent) to acquirers at announcements of 180 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. Returns are reported by the degree of relatedness between target and acquirer industry based on business description. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel C. Difference in means tests for the two-day and seven-day returns are shown in Panel B and Panel D, respectively.

**Panel A: Two-day announcement period returns (-1 to 0)**

Relatedness	Excess return	Distribution of returns	
		Quartile	Return
High	-0.29%	25%	-2.55%
	(-0.51)	50%	-0.11%
	[0.45]	75%	2.22%
	N = 53		
Medium	0.47%	25%	-1.93%
	(0.91)	50%	-0.07%
	[0.47]	75%	2.65%
	N = 51		
Low	1.14%	25%	-1.19%
	(2.86)***	50%	-0.02%
	[0.48]	75%	2.03%
	N = 76		

**Panel B: Difference in means test for two-day returns**

	High	Medium	Low
High	-		
Medium	0.824	-	
Low	1.171	0.573	-

(Table 14 continued)

Panel C: Seven-day announcement period returns (-5 to +1)			
Relatedness	Excess return	Distribution of returns	
		Quartile	Return
High	0.68%	25%	-2.81%
	(0.77)	50%	-0.11%
	[0.49]	75%	3.14%
	N = 53		
Medium	0.57%	25%	-5.75%
	(0.69)	50%	-0.01%
	[0.49]	75%	4.66%
	N = 51		
Low	2.41%	25%	-2.62%
	(3.83)***	50%	0.52%
	[0.56]	75%	5.33%
	N = 76		
Panel D: Difference in means test for seven-day returns			
	High	Medium	Low
High	-		
Medium	0.069	-	
Low	1.040	1.007	-
*Significant at the 10% level. **Significant at the 5% level. ***Significant at the 1% level.			

the target and acquirer are classified as medium-relatedness, and 1.14% (t-statistic = 2.86) when the target and acquirer are classified as low-relatedness. Difference in means tests between each of these categories are insignificant, indicating that the share price response of acquirers does not differ significantly by the degree of relatedness among target and acquirer industry.

Seven-day announcement period returns by degree of relatedness in target and acquirer industry are reported in Panel C of Table 14 for a sample of 180 acquirers. The seven-day share price response of acquirers is 0.68% (t-statistic = 0.77) when the

target and acquirer are classified as high-relatedness, 0.57% (t-statistic = 0.69) when the target and acquirer are classified as medium-relatedness, and 2.41% (t-statistic = 3.83) when the target and acquirer are classified as low-relatedness. Difference in means tests between each of these categories are insignificant, indicating that the share price response of acquirers does not differ significantly by the degree of relatedness among target and acquirer industry.

The average combined returns to incomplete acquisitions by the degree of relatedness between target and bidder industry are reported in Panel A of Table 15 for the two-day announcement period and in Panel C of Table 15 for the seven-day announcement period. The two-day average combined excess return is 1.27% (t-statistic = 1.31) when the target and acquirer are classified as high-relatedness, 2.94% (t-statistic = 3.61) when the target and acquirer are classified as medium-relatedness, and 1.77% (t-statistic = 1.69) when the target and acquirer are classified as low-relatedness. Difference in means tests between each of these categories are insignificant, indicating that the two-day average combined return does not differ significantly by the degree of relatedness among target and acquirer industry.

The seven-day average combined excess return is 3.50% (t-statistic = 2.61) when the target and acquirer are classified as high-relatedness, 4.23% (t-statistic = 2.89) when the target and acquirer are classified as medium-relatedness, and 3.89% (t-statistic = 2.70) when the target and acquirer are classified as low-relatedness. Difference in means tests between each of these categories are insignificant, indicating that the seven-day average combined return does not differ significantly by the degree of relatedness among target and acquirer industry.

**Table 15 - Average Combined Excess Returns to Incomplete Acquisition Announcements by Degree of Relatedness in Target and Acquirer Industry**  
Combined excess returns (in percent) at announcements of 147 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. The combined excess return is the weighted average of the excess returns for the target and acquirer, where the weights are the relative market values of equity of the two firms six weeks prior to the announcement. The average combined change in market value is computed as the cumulative excess return to the target times the target market value six week prior to the announcement plus the cumulative excess return to the acquirer times the acquirer market value six weeks prior to the announcement. Combined returns are reported by the degree of relatedness between target and acquirer based on business description.

Panel A: Two-day announcement period returns (-1 to 0)			
Relatedness	Average combined excess return	Distribution of returns	
		Quartile	Return
High	1.27%	25%	-1.81%
	(1.31)	50%	1.06%
	[0.66]	75%	4.05%
	N = 47		
Medium	2.94%	25%	-0.66%
	(3.61)***	50%	2.46%
	[0.64]	75%	4.95%
	N = 39		
Low	1.77%	25%	-1.40%
	(1.69)*	50%	0.38%
	[0.61]	75%	2.41%
	N = 61		
Panel B: Difference in means test for two-day returns			
	High	Medium	Low
High	-		
Medium	1.320	-	
Low	0.353	0.879	-

(Table 15 continued)

<b>Panel C: Seven-day announcement period returns (-5 to +1)</b>			
<b>Relatedness</b>	<b>Average combined excess return</b>	<b>Distribution of returns</b>	
		<b>Quartile</b>	<b>Return</b>
<b>High</b>	3.50%	25%	-1.60%
	(2.61)**	50%	2.64%
	[0.64]	75%	7.57%
	N = 47		
<b>Medium</b>	4.23%	25%	-1.73%
	(2.89)***	50%	3.13%
	[0.69]	75%	10.76%
	N = 39		
<b>Low</b>	3.89%	25%	-1.94%
	(2.70)***	50%	2.07%
	[0.62]	75%	5.56%
	N = 61		
<b>Panel D: Difference in means test for seven-day returns</b>			
	<b>High</b>	<b>Medium</b>	<b>Low</b>
<b>High</b>	-		
<b>Medium</b>	0.371	-	
<b>Low</b>	0.202	0.165	-

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

#### **4.6 Tender Offer Returns by Management's Reaction to the Offer**

For the purposes of this section, management hostility is defined as litigation or other defensive measures initiated by management against the acquirer in an effort to thwart the acquisition. In contrast, the assertion by management that the offer price is too low is viewed as a negotiation strategy rather than a hostile stance against the acquirer. An analysis of management's reaction to incomplete acquisitions across acquisition methods indicates that incomplete acquisitions via new equity issues are always friendly transactions. This is not surprising given that the transaction is negotiated between the acquirer and the managers, and subsequently approved by the

target shareholders. In addition, incomplete acquisitions via blockholder purchases are almost always friendly. This is also not surprising given that in many of the blockholder transactions, the blockholder is a founding family or several members of top management. In contrast, one-third of the 75 incomplete acquisitions via tender offers are characterized by management hostility toward the acquirer.

Two-day announcement period returns to tender offer targets by target management's reaction are reported in Panel A of Table 16. The two-day target share price response to friendly offers is 13.74% (t-statistic = 21.43). The two-day target share price response to hostile offers is 10.86% (t-statistic = 11.81). Seven-day announcement period returns to tender offer targets by target management's reaction are reported in Panel B of Table 16. The seven-day target share price response to friendly offers is 18.32% (t-statistic = 18.07). The seven-day target share price response to hostile offers is 20.22% (t-statistic = 15.23). Difference in means tests between the target share price response to friendly and hostile tender offers are insignificant, indicating that management's reaction does not significantly affect the returns to target shareholders.

Two-day announcement period returns to tender offer acquirers by target management's reaction are reported in Panel A of Table 17. The two-day acquirer share price response to friendly offers is 1.62% (t-statistic = 2.57). The two-day acquirer share price response to hostile offers is -0.18% (t-statistic = -0.15). Seven-day announcement period returns to tender offer acquirers by target management's reaction are reported in Panel B of Table 17. The seven-day acquirer share price response to friendly offers is 1.67% (t-statistic = 1.67). The seven-day target share price response



**Table 16 - Incomplete Acquisition Announcement Excess Returns to Targets in Tender Offers by Target Management's Reaction to the Offer**

Excess returns (in percent) to targets at announcements of 67 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. Returns are reported by whether target management supports (friendly) or opposes (hostile) the tender offer. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel B. Difference in means tests for the two-day and seven-day returns are shown in Panel C.

**Panel A: Two-day announcement period returns (-1 to 0)**

Target Management Attitude	Excess return	Distribution of returns	
		Quartile	Return
Friendly	13.74%	25%	3.82%
	(21.43)***	50%	10.36%
	[0.87]	75%	18.93%
	N = 45		
Hostile	10.86%	25%	2.73%
	(11.81)***	50%	10.48%
	[0.78]	75%	18.09%
	N = 21		

**Panel B: Seven-day announcement period returns (-5 to +1)**

Target Management Attitude	Excess return	Distribution of returns	
		Quartile	Return
Friendly	18.32%	25%	7.25%
	(18.07)***	50%	14.68%
	[0.84]	75%	24.12%
	N = 45		
Hostile	20.22%	25%	8.71%
	(15.23)***	50%	18.05%
	[0.87]	75%	35.55%
	N = 23		

**Panel C: Difference in means test for two-day and seven-day returns**

	Two-day target returns	Seven-day target returns
Friendly vs. Hostile	0.892	0.410

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

**Table 17 - Incomplete Acquisition Announcement Excess Returns to Acquirers in Tender Offers by Target Management's Reaction to the Offer**

Excess returns (in percent) to acquirers at announcements of 51 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. Returns are reported by whether target management supports (friendly) or opposes (hostile) the tender offer. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel B. Difference in means tests for the two-day and seven-day returns are shown in Panel C.

Panel A: Two-day announcement period returns (-1 to 0)			
Target Management Attitude	Excess return	Distribution of returns	
		Quartile	Return
Friendly	1.62%	25%	-0.91%
	(2.57)**	50%	1.84%
	[0.64]	75%	3.37%
	N = 33		
Hostile	-0.18%	25%	-5.45%
	(-0.15)	50%	-0.07%
	[0.39]	75%	2.38%
	N = 18		
Panel B: Seven-day announcement period returns (-5 to +1)			
Target Management Attitude	Excess return	Distribution of returns	
		Quartile	Return
Friendly	1.67%	25%	-3.92%
	(1.67)	50%	0.43%
	[0.55]	75%	3.75%
	N = 33		
Hostile	-0.07%	25%	-7.40%
	(-0.04)	50%	1.48%
	[0.56]	75%	4.79%
	N = 18		
Panel C: Difference in means test for two-day and seven-day returns			
	Two-day target returns	Seven-day target returns	
Friendly vs. Hostile	0.772	0.543	

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

to hostile offers is -0.07% (t-statistic = -0.04). While the acquirer share price response to friendly tender offers is significantly positive, the acquirer share price response to hostile tender offers is insignificantly different from zero. However, difference in means tests between the acquirer share price response to friendly and hostile tender offers are insignificant, indicating that management's reaction does not significantly affect the returns to acquirer shareholders.

#### **4.7 Summary**

The overall empirical results of the valuation effects of incomplete acquisitions indicate that these transactions are value enhancing for targets and have a non-negative effect on acquirers. The empirical analysis of incomplete acquisition announcements indicates that target firm shareholders experience significant gains regardless of the method of acquisition. However, the gains appear to be greatest when the incomplete acquisition is effected via a tender offer. In addition, the gains to target shareholders are greater for incomplete acquisitions via new equity issues than for incomplete acquisitions via block purchases. Finally, targets appear to capture the lion's share of the average combined increase in wealth tender offer transactions.

Overall, the incomplete acquisition announcement returns to acquirers are significantly positive, but strong positive returns are largely limited to acquirers in tender offers. The combined wealth effects on acquirer and target shareholders are positive and this gain also appears to be mostly attributable to incomplete acquisitions that entail tender offers.

In general, the degree of relatedness between target and acquirer industry does not have a significant effect on the returns to targets and acquirer or on the combined

**wealth effects of incomplete acquisitions. In addition, target management's reaction toward tender offers does not significantly affect the share price response of tender offer targets and acquirers.**

## **CHAPTER 5**

### **PRE- AND POST-ACQUISITION OPERATING PERFORMANCE**

#### **5.1 Introduction**

**This chapter examines how a change in control induced by an incomplete acquisition affects target firm operating performance. Mergers and acquisitions have become a pervasive element of contemporary corporate finance and an important topic in financial research. There is substantial evidence that such acquisitions increase the wealth of target firm shareholders, but little evidence that these transactions benefit the shareholders of acquiring firms. Several recent empirical papers in the accounting and finance literature have studied the subsequent operating and stock price performance of corporations following major corporate events, such as mergers and acquisitions. The primary purpose of most of these studies is to assess whether a particular event results in improvements or deterioration in subsequent performance. Such an investigation of operating performance is of particular interest in the case of changes in corporate control because these transactions are major discrete events that can provide evidence on alternative economic hypotheses that attempt to explain the major gains in shareholder wealth associated with acquisition announcements.**

**The efficiency hypothesis suggests that the premium paid to target firm shareholders in acquisitions is justified by the acquirer's expectations of making subsequent improvements in the target firm's operating performance, or by exploiting synergies between the two firms. These improvements must be sufficient (in present value terms) to justify the premium paid to acquire the target firm and should be reflected in improved operating performance of the merged firm relative to the two**

stand-alone firms. Unlike a standard corporate acquisition, in which a target is completely absorbed into (a typically much larger) acquirer, in an incomplete acquisition the target firm continues to publicly trade. Thus, any improved performance in the target's operations due to operating synergies or gains in efficiency can be observed directly via required disclosure reporting and stock price movements. The inefficient (target) management hypothesis implies that target firms perform poorly prior to the acquisition, but with the advent of new management, the target firm's future operating performance will improve. The expropriation hypothesis suggests that target firm operating performance will deteriorate after the acquisition as the parent firm allocates to itself a disproportionate share of the combined entity's income through self-dealing transactions. The information hypothesis suggests that an acquirer possesses important private information about the value of the target, which implies either superior or normal target firm operating performance after an acquisition.

Recent research has raised the issue of the appropriate method for evaluating the operating performance gains from an acquisition. The key aspect of such methodology requires finding an appropriate benchmark to judge the post-acquisition operating performance of the merged firm. Some studies assess the effect of a merger by calculating alternative measures of profitability, including the return on assets or return on sales, and comparing the pre-acquisition and post-acquisition operating performance of the relevant firms. Alternatively, such profitability measures can be used to compare the pre-acquisition and post-acquisition performance of the target firms to control firms, that is similar but non-acquiring firms, to gauge whether there are any gains in performance. The difficulties of this process are exacerbated by the

fact that, subsequent to the merger, the bidder and the target firms no longer exist as separate firms. From this perspective, incomplete acquisitions offer a unique opportunity to directly assess the subsequent operating performance of target firms because the target firm remains a publicly traded entity that continues to conduct normal financial reporting throughout the relevant period. Thus, an examination of the post-acquisition operating performance of incomplete acquisition targets may shed light on the motivations for these transactions and provide insight into the source of the shareholder wealth gains from incomplete acquisitions that are documented in Chapter 4.

The results of several studies of stock price performance are presented since these studies also attempt to measure the pre-acquisition performance of targets and the post-acquisition performance of the combined firm. However, Fama (1998) argues that the results of most of these studies are difficult to interpret due to methodological problems. Specifically, long-run performance results are highly sensitive to the method used to measure performance. For this reason, an investigation of the stock price performance of incomplete acquisition targets is not undertaken in the present study.

## **5.2 Literature on Pre- and Post- Acquisition Performance**

In an efficient market, the observed changes in target firm and acquiring firm equity values associated with announcements of changes in control will reflect the market's expectations about efficiency gains, information effects, and wealth transfers between the bidder and the target. If the overall gains in shareholder wealth observed in response to incomplete acquisitions are the result of expectations about the improved operating performance or the efficiency of target firms, then target firms should exhibit

improved operating performance subsequent to incomplete acquisitions. Previous studies of mergers and acquisitions have attempted to investigate the issue of improvements in operating performance indirectly by examining the subsequent operating performance of the combined bidder and target after a change in control.

Healy, Palepu, and Ruback (1992), Jarrell (1997), and Parrino and Harris (1999) find that merged firms exhibit improved operating performance following a merger. Healy, Palepu, and Ruback examine the post-acquisition cash-flow returns of the 50 largest U.S. mergers between 1979 and mid-1984. They find that, although non-industry adjusted performance deteriorates after a merger, the merged firms show significant improvements in asset productivity relative to their industries, which leads to higher operating cash flows. Specifically, for the five years preceding the merger, median industry-adjusted operating cash flow returns are 0.3% while in the five years following the merger, median industry-adjusted operating cash flow returns are 2.8%. In addition, they find that performance improvements are greater when the acquirer and target are in closely related businesses. They also find a strong positive relationship between post-merger performance and abnormal stock returns at the merger announcement, indicating that the stock price reaction reflects anticipation of post-merger economic gains.

Jarrell (1997) uses a different methodology that is based on generating forecasts for how the merging firms would have performed had they not merged, by using analysts' pre-merger forecasts. She finds that the post-merger performance of the combined firms is significantly negative in the year immediately following the merger but significantly positive in the period four to six years after the merger. She also



documents a strong positive relationship between the stock market response to the merger announcement and subsequent operating performance. In contrast to Healy, Palepu, and Ruback, she finds that performance is not affected by the degree of relatedness between the industries of the target and acquirer. Both studies use Value Line industry descriptions to classify targets and acquirers in terms of relatedness. However, Healy, Palepu, and Ruback stratify firms into three groups: high relatedness, medium relatedness, and low relatedness. In contrast, Jarrell considers both horizontal and vertical mergers to be related mergers and all others to be conglomerate mergers. This alternative definition of relatedness may be a factor in the difference in their findings.

Earlier studies of operating performance, such as Ravenscraft and Scherer (1987) and Herman and Lowenstein (1988), examine earnings performance after takeovers and conclude that merged firms display no operating improvements.<sup>14</sup> However, Healy, Palepu, and Ruback point out several methodological problems that make prior results difficult to interpret. The Ravenscraft and Scherer study examines performance from 1974 to 1977 for mergers that occurred between 1950 and 1977 so that post-merger years are not aligned with the actual mergers. The Herman and Lowenstein study uses a return on equity measure of performance that does not control for differences in pooling and purchase accounting, methods of merger financing, or the effects of common industry shocks. Kaplan and Weisbach (1992) find that diversifying acquisitions are almost four times more likely to be subsequently divested than related

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<sup>14</sup>The Holderness and Sheehan (1988) study of majority owners documents a mean (median) return on equity of 12.2% (12.4%) for firms with corporate majority owners versus 4.6% (13.8%) for diffusely-held firms. However, these differences are not significant at conventional levels.

acquisitions, but they find no performance-related evidence that diversifying acquisitions are less successful than related ones.

If expectations of subsequent improvements in operating performance from operating synergies are responsible for the gains in wealth observed at announcements of mergers and acquisitions, then observed improvements in operating performance should be related to the degree to which the parent and target are in similar lines of business. This suggests that subsequent target firm performance should be better when the acquirer and target are in related industries than when they are in unrelated industries.

Many recent studies in finance analyze the long-run behavior of stock returns following major corporate events. Generally, these studies examine stock price performance for a period of three to five years following the event. If the future benefits of an acquisition are correctly assessed by the market at the time of the announcement then post-acquisition share price performance should be equal, on average, to benchmark returns. The results of several studies that examine the post-acquisition stock price performance of acquiring firms are summarized in Jensen and Ruback (1983). Jensen and Ruback conclude that there are generally significantly negative average abnormal returns during the twelve months following a takeover. Franks, Harris and Titman (1991) argue that these post-acquisition results are sensitive to the benchmark used to measure abnormal returns. Using an eight-portfolio benchmark, they find no evidence of abnormal performance by bidders over the three year period following takeovers. However, Agrawal, Jaffe and Mandelker (1992) argue that prior studies do not properly adjust for the firm size effect and do not allow

for time-varying betas. After adjusting for the size effect and beta risk, they conclude that acquiring firms experience a statistically significant wealth loss of about 10% over the five years subsequent to the merger completion date.

Loughran and Vijh (1997) find that the post-acquisition returns to acquirers depend on the mode of acquisition and the form of payment. Specifically, over the five-year period following an acquisition, firms that complete stock mergers earn significantly negative excess returns of -25.0% while firms that complete cash tender offers earn significantly positive excess returns of 61.7%. Rau and Vermaelen (1998) also find evidence that means of payment and mode of acquisition affect long-run performance. However, they argue that the long-term underperformance of acquiring firms in mergers is predominantly due to the poor post-acquisition performance of low book-to-market value “glamour” firms.

Several studies examine the pre-acquisition stock price performance of target firms. Ellert (1976), Asquith (1983) and Agrawal and Jaffe (1997) find that, consistent with the inefficient management hypothesis, target firms experience negative abnormal returns prior to the acquisition announcement. However, Dodd and Ruback (1977), Langetieg (1978), Martin and McConnell (1991), Agrawal and Walkling (1994), and Agrawal and Jaffe (1995) document insignificant pre-acquisition period abnormal returns. Moreover, Malatesta (1983) and Kini, Kracaw, and Mian (1995) find significantly positive pre-acquisition period abnormal returns for target firms, a finding that is inconsistent with the inefficient management hypothesis. Thus, the evidence on pre-acquisition target firm stock price performance varies depending on the time period and methodology used.

### **5.3 Methodology**

This chapter provides an assessment of whether there is evidence that an acquirer in an incomplete acquisition makes significant improvements in the target's firm's future operating performance. The determination of actual performance gains requires that an appropriate benchmark be developed against which to assess the post-acquisition performance of the target firm. Since the long-term operating performance of the target firm is a function of numerous factors, the methodology for analyzing long-term operating performance focuses on a comparison of the performance of the target firms with a sample of control firms. The comparison is made for a period prior to and a period subsequent to the target's acquisition. The procedure first requires the matching of target firms to control firms. The primary method used in this study matches target firms to control firms based on industry and past performance. Second, operating performance data are obtained for the target firms and for the control firms in order to compare the post-acquisition performance of the target firms to firms that are in similar industries and have comparable pre-acquisition performance. The control firms' operating performance provides the benchmark to assess the target firm's operating performance. This evidence is used to test the null hypothesis that incomplete acquisitions have no effect on the target firm's long-term operating performance. The methodology assumes that random errors that arise in the process of generating this evidence will cancel out as the performance results are aggregated across incomplete acquisition events.

To investigate the long-run operating performance of the target firms, pre-event and post-event accounting data are collected from the Compustat Industrial and

Research files and from Moody's Manuals. The fiscal year in which the incomplete acquisition is announced is defined as year 0 and available data are collected for each year from year -5 to year +5. Since year -1 is used to match sample firms with control firms, firms with no data in year -1 are not included in the sample. Accounting data for year -1 is available for 136 target firms. Due to the unavailability of certain data items needed to calculate specific performance measures and to the unavailability of data in years other than year -1, sample sizes vary across performance measures and across years.

Accounting measures of operating performance are subject to three potential drawbacks.<sup>15</sup> First, balance sheet items are recorded at historical cost while income statement items are recorded in current dollars. Second, total asset measures reflect all assets of the firm rather than operating assets alone. Third, operating income is an accrual-based measure subject to manipulation by managers. As a result, this study uses several alternative measures of performance to ensure the robustness of the results. The measures employed are return on assets (ROA), return on cash-adjusted assets (CAROA), return on sales (ROSALE), and cash-flow return on assets (CFROA). The four measures are as follows:

$$ROA_t = \frac{OIBDP_t}{(AT_t + AT_{t-1}) / 2}$$

$$CAROA_t = \frac{OIBDP_t}{(AT_t - CHE_t + AT_{t-1} - CHE_{t-1}) / 2}$$

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<sup>15</sup> See Barber and Lyon (1996).

$$ROSALE_t = \frac{OIBDP_t}{SALE_t}$$

$$CFROA_t = \frac{OIBDP_t - \Delta RECT_t - \Delta INVT_t - \Delta ACO_t + \Delta AP_t + \Delta LCO_t}{(AT_t + AT_{t-1}) / 2}$$

The specific variables are defined as follows: OIBDP is operating income before depreciation, interest, and taxes, AT is total assets, CHE is cash and cash equivalents, SALE is total sales, RECT is accounts receivable, INVT is inventory, ACO is other current assets, AP is accounts payable, LCO is other current liabilities, and  $\Delta$  denotes the change between time  $t$  and time  $t-1$ .

Barber and Lyon (1996) investigate the empirical power and specification of test statistics for studies in which the objective is the detection of abnormal operating performance. They find that, in general, the expectations models that yield well-specified, powerful test statistics are those that incorporate past performance in the benchmark selection process. However, previous studies, such as Healy, Palepu, and Ruback (1992) and Parrino and Harris (1999), generally match sample firms to control firms based only on industry.

For these reasons, sample firms are matched to control firms using two procedures: industry matching and past performance/industry matching. The industry matching procedure matches sample firms with control firms in the same 4-digit SIC code. If no matching firms are found, an alternative rule is used that matches the sample firm to control firms with the same 3-digit SIC code. The performance/industry matching procedure matches sample firms with control firms that have the same 2-digit SIC code and performance in year  $-1$  within 90-100% of the sample firm's performance

in year -1. If no matching firms are found, the same performance criteria are used to match the sample firm, but the matching is done with firms in the same 1-digit SIC code. Finally, if no matching firms with similar performance and the same 1-digit SIC code are found, the same performance criteria are used to match the target firm with control firms regardless of SIC code.

Kahle and Walkling (1996) find that matched samples based on Compustat SIC codes rather than those based on CRSP classifications are more powerful in detecting abnormal operating performance. As a result, Compustat SIC codes are primarily used for industry matching in this study. However, CRSP SIC codes are used in a small number of cases where Compustat SIC codes are not available.

To assess operating performance, the expected performance in the absence of the change in control must be specified to provide a benchmark to compare against observed performance. The model used is one where the firm's expected performance is equal to its past performance plus the change in performance for the control group:

$$E(P_{it}) = P_{i,t-1} + \Delta PI_{it}$$

In this specification  $P_{it}$  and  $P_{i,t-1}$  denote the performance of firm  $i$  in year  $t$  and year  $t-1$ ,  $PI_{it}$  denotes the median performance of the control group for firm  $i$  in year  $t$ ,  $\Delta$  denotes the change between time  $t$  and time  $t-1$ , and  $E(\cdot)$  is an expectations operator.

A preliminary analysis indicates that extreme observations have a distorting effect on mean abnormal performance due to the relatively small sample sizes. To eliminate the influence of these extreme observations on the distribution of the operating performance measures, performance ratios greater than or equal to 2 and performance ratios less than or equal to -2 are eliminated for both target firms and

control firms.<sup>16</sup> The analysis focuses on median abnormal performance and tests of significance using non-parametric Wilcoxon signed-rank test statistics while also presenting mean abnormal performance and tests of significance using parametric t-statistics.

The analysis of operating performance is conducted both in the aggregate and by disaggregating the performance sample in two ways. One, the sample is disaggregated in accordance with the manner by which control of the target firms is established. Two, following Healy, Palepu, and Ruback (1992), this study analyzes the relationship between post-event operating performance and the degree to which the acquirer and target are in related businesses. Two measures of relatedness are used. The first measure is the degree of agreement between target and acquirer SIC codes. The advantage of this measure is its objectivity. However, this procedure has a drawback because, as discussed previously, SIC codes are an imperfect measure of the true degree of relatedness between industries. Therefore, a second measure of relatedness is employed. This second measure is the degree of relatedness between target and acquirer industry classified according to the descriptions of the target firm and acquiring firm industries at the time of the initial acquisition announcement. There are two major advantage of this classification method. First, it permits the classification of a larger number of sample observations due to the greater availability of industry descriptions relative to SIC codes. Second, it uses the description of the target and acquirer industry at the time of the acquisition whereas Compustat reports

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<sup>16</sup> All tests were also conducted without the elimination of extreme observations. The results were qualitatively the same except that the mean abnormal performance was often distorted by outliers and hence, less meaningful.



only current SIC codes. The procedure used to classify paired targets and acquirers by degree of relatedness is based on Healy, Palepu, and Ruback's classification procedure. Healy, Palepu, and Ruback use industry descriptions reported in Value Line, a practical source of such data since their study examines the 50 largest mergers completed between 1979 and 1983. For this study, the descriptions of target firm and acquiring firm industries that are contained in Wall Street Journal articles are used as the basis for determining the degree of relatedness to classify paired targets and acquirers into groups of high-relatedness, medium-relatedness, or low-relatedness.

#### **5.4 Descriptive Statistics**

The number and percentage of matching firms using the return on assets performance measure are reported in Table 18 for both procedures for control firm matching described in Section 5.3. For the first comparison group, industry matching, all but two sample firms are matched with control firms in the same 4-digit SIC code. Moreover, 117 sample firms (86%) are matched with more than five control firms. For the second comparison group, industry and performance matching, 110 sample firms (80.9%) are matched with control firms in the same 2-digit SIC code and with performance within 90-100% of sample firm performance in year -1. Sixty-two sample firms (45.6%) are matched with more than five control firms. The alternative rules which match sample firms to control firms with performance within 90-100% of sample performance in year -1 based on 1-digit SIC code or regardless of SIC code are used to match 26 sample firms (19.1%) with control firms.

To enhance comparability and to more accurately reflect the economic impact of the event, the variables used in the four performance measures are as follows. The

**Table 18 - Number and Percentage of Firms with Available Matching Firms by Matching Criteria for Return on Assets Performance Measure**

Two matching criteria are used to match sample firms with control firms. The first criteria matches sample firms with all firms in the same four-digit SIC code. The second criteria matches sample firms with all firms in the same two-digit SIC code and between 90%-110% of sample firm performance in year -1. Alternative matching rules are described in detail in the text.

Matching criteria:				
Number of matching firms	Four-digit SIC		Two-digit SIC and performance	
	Number of observations.	% of all observations.	Number of observations.	% of all observations.
1	4	2.9	16	11.8
2	2	1.5	15	11.0
3	1	0.7	6	4.4
4	2	1.5	6	4.4
5	8	5.9	5	3.7
>5	117	86.0	62	45.6
Alt.	2	1.5	26	19.1
All observations	136	100.0	136	100.0

income variable used is operating income before depreciation, interest, taxes, and extraordinary items. Return on assets is calculated as operating income divided by average total assets. Cash-adjusted return on assets is defined similarly, except that cash and cash equivalents are subtracted from total assets. The use of this measure may be particularly important for incomplete acquisitions via new equity issuance since these firms are expected to record a large increase in cash in year 0. Return on sales data are also provided, with the return on sales calculated as operating income divided by total sales. Scaling operating income by sales can overcome the historic cost and non-operating assets problems associated with return on assets measures. Cash-flow return on assets is calculated as operating income before depreciation, interest, and taxes plus decreases in current assets plus increases in current liabilities divided by

average total assets. This measure can overcome the potential earnings manipulation problem associated with accrual based measures of operating income. Because the distribution of these rates of return tend to be skewed, the analysis focuses on the medians and a non-parametric test of significance, the Wilcoxon rank-sum test.

## **5.5 Empirical Results**

Operating performance results for the full sample of 136 incomplete acquisition target firms are reported in Table 19. The median unadjusted operating performance is monotonically decreasing for the five years prior to and including the year of the incomplete acquisition announcement (years -5 to 0) for each of the measures of performance. Thus, at the time of the acquisition, the typical target firm is experiencing a rate of return on assets or return on sales that is lower than any of the five preceding years. In contrast, for the five years following the incomplete acquisition announcement (years +1 to +5), median unadjusted operating performance is generally modestly higher than in the year of the incomplete acquisition announcement (year 0) for all performance measures. The unadjusted post-acquisition performance shows little evidence of a trend and the median rates of return on assets and sales after the acquisition typically remain below the rates of return for the pre-acquisition period. The results for the operating performance of target firms relative to the matched control portfolios provide little evidence of operating performance improvement or deterioration. The adjusted operating performance of targets is generally statistically insignificant and no clear pattern emerges over the pre- or post-acquisition period. In general, the adjusted operating performance results suggest that targets of incomplete acquisitions sustain normal performance prior to the acquisition announcement, and this

**Table 19 - Operating Performance of Incomplete Acquisition Targets**

Return on assets is calculated as operating income before depreciation, interest, taxes and extraordinary items divided by average total assets (panel A). Cash-adjusted return on assets is similar to return on assets except that cash and cash equivalents are subtracted from total assets in the denominator (Panel B). Return on sales is calculated as total sales divided by average total assets (Panel C). Cash-flow return on assets is similar to return on assets except that the effects of changes in current assets and liabilities are excluded from operating income (Panel D). Performance measures of each company are adjusted by subtracting the median performance measure for a group of matched companies. Year 0 denotes the fiscal year in which the incomplete acquisition announcement is made. Sample sizes are the number of observations in year -1.

Panel A: Median (mean) return on assets in percent												
Year	N	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Unadjusted	136	11.00 (8.81) N=95	10.60 (8.22) N=115	10.25 (7.85) N=120	8.45 (6.41) N=130	8.30 (4.43) N=136	7.80 (4.48) N=131	8.55 (7.75) N=126	8.50 (7.80) N=110	7.10 (8.06) N=91	8.80 (7.37) N=81	6.90 (4.67) N=66
Industry-adjusted	129		-0.50 (-0.95) N=73	-0.04 (-0.13) N=99	0.75 (-1.29) N=112	-0.60 (-2.38) N=129	-0.85 (0.09) N=131	1.60** (3.53)* N=125	0.28 (-1.39) N=108	-0.20 (-0.91) N=88	0.98 (-0.11) N=76	-1.13** (-3.92)*** N=62
Industry- and performance-adjusted	121		0.70 (-1.05) N=62	-0.10 (-0.35) N=84	0.53 (-0.24) N=98	0.20 (-0.59) N=121	-0.83 (-0.88) N=130	1.10 (3.44)* N=123	0.40 (-0.51) N=105	-1.65 (-2.32)*** N=86	0.60 (-0.47) N=78	-1.85** (-2.52)** N=62
Panel B: Median (mean) cash-adjusted return on assets in percent												
Year	N	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Unadjusted	134	11.55 (11.12) N=94	11.20 (10.01) N=113	11.00 (9.78) N=119	-10.20 (7.64) N=127	9.30 (7.45) N=134	8.20 (3.25) N=130	10.50 (8.19) N=125	9.85 (9.56) N=110	8.45 (9.80) N=92	10.70 (9.94) N=81	7.90 (6.01) N=66
Industry-adjusted	121		1.30 (1.11) N=67	-0.20 (2.49) N=91	-0.08 (-2.25) N=102	-0.10 (-1.23) N=121	-0.70 (-0.35) N=128	1.20* (5.22)* N=124	-1.10 (-2.07) N=111	-0.10 (-0.65) N=94	0.53 (-1.58) N=80	-0.38 (-2.76)** N=66
Industry- and performance-adjusted	114		0.02 (1.45) N=59	-0.90 (1.38) N=79	0.20 (-1.61) N=94	-0.05 (-0.64) N=114	-0.40 (0.39) N=125	1.38 (3.85) N=120	-0.30 (-1.09) N=105	-1.60 (0.62) N=87	0.70 (-2.60) N=75	-3.45*** (-4.45)*** N=58

(Table 19 continued)

Panel C: Median (mean) return on sales in percent												
Year	N	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Unadjusted	132	11.40 (8.54) N=105	11.00 (10.33) N=118	10.20 (10.11) N=125	8.85 (6.61) N=132	8.85 (7.50) N=132	7.60 (8.61) N=128	8.20 (10.28) N=124	10.50 (12.07) N=107	10.45 (9.10) N=92	11.75 (14.13) N=82	8.10 (8.03) N=68
Industry- adjusted	130		0.33 (-0.05) N=86	-0.93 (-0.18) N=104	0.48 (0.85) N=118	0.03 (0.63) N=130	-0.70 (-0.13) N=125	0.58 (1.28) N=122	-0.25 (1.45) N=105	-0.35 (-3.26) N=88	0.70 (0.93) N=77	-2.10* (-3.89)** N=63
Industry- and performance- adjusted	120		-1.10 (1.12) N=68	1.70* (1.22) N=91	0.15 (-1.67) N=104	-0.23 (0.21) N=120	0.70* (1.92) N=125	1.38 (1.63) N=120	0.10 (-2.00) N=102	-1.00 (-2.67) N=84	1.95*** (4.22)** N=76	-1.83* (-5.29)** N=58
Panel D: Median (mean) cash-flow return on assets in percent												
Year	N	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Unadjusted	129	10.25 (6.88) N=86	10.10 (5.88) N=108	7.80 (6.53) N=114	8.35 (3.59) N=122	8.60 (4.39) N=129	6.20 (5.05) N=125	7.60 (6.55) N=118	8.25 (7.45) N=102	7.30 (4.94) N=83	8.10 (7.50) N=74	6.35 (7.42) N=58
Industry- adjusted	114		0.15 (3.40) N=60	1.25 (3.08) N=85	-1.00 (-2.88) N=95	-0.28 (0.65) N=114	-0.35 (0.65) N=123	0.35 (0.53) N=115	-0.10 (2.08) N=98	2.78 (-1.37) N=78	-0.05 (1.66) N=67	-0.78 (0.36) N=54
Industry- and performance- adjusted	114		3.00 (0.36) N=57	-0.58 (2.91) N=84	0.55 (-0.13) N=95	0.35 (1.74) N=114	-1.93 (-1.39) N=124	-0.55 (1.31) N=113	0.00 (1.17) N=94	1.75 (-2.58) N=72	1.00 (1.54) N=65	-1.10 (-0.89) N=51

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

normal performance continues during the period after the incomplete acquisition. The one exception is year +5 in which target firms appear to underperform relative to control firms. However, it is important to note that this result may be biased towards unsuccessful acquisitions. For example, in the industry and performance adjusted sample for return on assets, only 62 target firms remain by year +5 compared to the total sample of 136 target firms. Thus, more than half of the sample firms has disappeared from the sample by year +5. If certain outcomes are more likely for the successful (unsuccessful) targets, then the sample becomes biased toward unsuccessful (successful) acquisitions over time. For the industry and performance adjusted return on assets sample, the 74 firms eliminated from the year +5 results disappear from the sample for the following reasons. In 37 cases, the target firms are merged with the acquirer. In 18 cases, the target firms are recent acquisitions (i.e., year +5 data are not available). In 9 cases, the target firms file for Chapter 11 bankruptcy. In 5 cases, the target firms are merged with a third party. In 4 cases, the target firms are deleted from the sample because the majority stake is sold by the original acquirer to a third party. There is one case in which the target firm is liquidated. Thus, the percentage of firms eliminated from the sample due to merger with the parent and the number eliminated due to bankruptcy appears high relative to the overall distribution of outcomes. Overall, the mean and median results for adjusted operating performance for both the pre-acquisition and post-acquisition periods can be attributed to random statistical fluctuation.

The finding that there is normal pre- and post-acquisition operating performance for targets of incomplete acquisition relative to control firms suggests that the announcement period increase in wealth that is generated by incomplete acquisitions is

not the result of increases in efficiency that the market expects from the acquirer's managing of target firm's future operations. Although target firms are typically experiencing a decline in unadjusted performance prior to the incomplete acquisition, there are no significantly negative departures from the changes in performance experienced by control firms during this period. This finding suggests that incomplete acquisitions are not likely to be undertaken as a means to discipline underperforming target firm managers.

The synergy hypothesis predicts that the premium paid to target firm shareholders in an acquisition is based on the acquirer's expectations of exploiting synergies between the two firms. However, the operating performance results for target firms after incomplete acquisitions suggests that there is no evidence of operating synergies since target firms' subsequent operating performance does not differ significantly from that of control firms. In contrast to the concept of synergy, the expropriation hypothesis implies that an acquirer is able to gain from the acquisition of a target firm by allocating to itself a disproportionate share of the combined entity's post-acquisition operating earnings by means such as self-dealing transactions between the parent and its new subsidiary. However, the operating earnings of targets of incomplete acquisitions indicate that there is no evidence of deterioration in the operating performance of target firms, relative to that of control firms, after the change in control. Thus, the post-acquisition operating performance is also inconsistent with the expropriation hypothesis.

The finding of normal pre- and post-acquisition performance of target firms, combined with the evidence of significant gains in aggregate shareholder wealth in response to announcements of incomplete acquisitions, is consistent with the information

**hypothesis of acquisitions. Specifically, the event study results suggest that target firm shareholder wealth increases significantly at the announcement of an incomplete acquisition. Moreover, there are non-negative returns to acquirers in these transactions, so the gains to the target firms are not the result of a wealth transfer from the acquirers to the targets. The event study results and the finding that there are no significant changes in the subsequent operating performance of target firms relative to control firms, suggest that incomplete acquisition announcements convey credible, private information to the market concerning the value of the target firm. As a result of the acquirer's bid to purchase the target firm's stock, the value of the target firm increases, and this increase in value is shared among all target shareholders. From this perspective, the acquiring firm's bid alters the market's assessment of value without changing the actual pattern of target firm earnings.**

**Further evidence about the efficiency hypothesis is obtained by disaggregating the operating performance results in accordance with the degree to which the target and the acquirer are in related industries. If acquisitions of related firms are characterized by important product line synergies, while conglomerate acquisitions are motivated by empire building or by diversification that can be easily duplicated by investors, then the operating performance of target firms should be closely associated with the degree of the relatedness of the firms involved in incomplete acquisitions. Healy, Palepu, and Ruback (1992) find that improvements in productivity for acquirers after acquisitions are strongest for firms in closely related industries, evidence that is supportive of the efficiency hypothesis.**



To provide evidence on this issue, the adjusted operating performance of targets is disaggregated by the degree of relatedness in target and acquirer SIC codes. The results are reported in Table 20. For the years in which a subsample has fewer than five observations, no statistics are reported. The results indicate that there is some evidence that unrelated acquisitions (i.e., those with no agreement in SIC codes and those with only 1-digit agreement) perform more poorly than control firms in years +3 and +5. However, there is also evidence of significantly positive abnormal operating performance in year +4 for these firms using the return on sales measure of operating performance. Moreover, adjusted post-acquisition operating performance for these two groups is positive for 9 of the 15 measures. Overall, it appears that the subsequent performance of incomplete acquisition targets is unrelated to the degree of agreement between target and acquirer SIC codes.

The industry and performance adjusted operating performance of targets disaggregated by the degree of relatedness of target and acquirer industries as classified according to industry description is reported in Table 21. While there are years in which adjusted operating performance is significant, there is no clear pattern across any of the groups. These results combined with the results in Table 20 generally suggest that there is normal operating performance both before and after the incomplete acquisition regardless of the degree of relatedness between the target and acquirer industry. Thus, the pattern of the results suggests that the performance of acquisitions between related firms is indistinguishable from that of conglomerate acquisitions. As such, the evidence fails to support the synergy hypothesis; instead, it is supportive of the information hypothesis.

**Table 20 - Adjusted Operating Performance of Incomplete Acquisition Targets by Degree of Relatedness in Target and Acquirer SIC Codes**

Return on assets is calculated as operating income before depreciation, interest, taxes and extraordinary items divided by average total assets (Panel A). Cash-adjusted return on assets is similar to return on assets except that cash and cash equivalents are subtracted from total assets in the denominator (Panel B). Return on sales is calculated as total sales divided by average total assets (Panel C). Cash-flow return on assets is similar to return on assets except that the effects of changes in current assets and liabilities are excluded from operating income (Panel D). Performance measures of each company are adjusted by subtracting the median performance measure for a group of matched companies. Year 0 denotes the fiscal year in which the incomplete acquisition announcement is made. Sample sizes are the number of observations in year -1.

Panel A: Median (mean) return on assets in percent											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Same 4-digit	18	-0.90	-0.48	0.05	1.50	-0.70	2.08	-2.83	-0.15	0.75	-0.93
SIC code		(0.82)	(-0.01)	(-7.70)*	(5.31)	(1.65)	(2.59)	(-5.67)	(2.81)	(-4.00)	(-2.21)
Same 3-digit	5	n.a.	n.a.	n.a.	-0.60	0.50	0.05	0.40	-0.40	0.65	n.a.
SIC code					(-5.01)	(5.43)	(-0.14)	(-2.24)	(-0.81)	(1.41)	
Same 2-digit	12	1.80	0.40	2.05**	1.40	-0.85	4.10	-1.20	-0.23	-1.08	-1.65
SIC code		(2.17)	(-0.39)	(3.53)**	(0.40)	(-3.09)	(6.13)	(-3.45)	(1.87)	(4.97)	(-1.53)
Same 1-digit	14	2.70	-2.90	-1.30	1.00	-0.98	-1.53	0.05	-1.95	0.85*	-0.73
SIC code		(3.50)	(0.35)	(3.30)	(-3.64)	(1.32)	(-0.70)	(-1.30)	(1.89)	(2.20)	(-0.24)
No agreement	48	-1.30	1.55	0.00	-0.43	0.28	0.25	2.83	-3.15***	0.60	-3.35*
in SIC codes		(-3.22)	(2.25)	(-0.90)	(-1.29)	(-0.72)	(1.48)	(3.57)	(-5.74)**	(-1.84)	(-3.78)*
Panel B: Median (mean) cash-adjusted return on assets											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Same 4-digit	17	-0.85	0.45	-0.88	-1.20	-0.30	3.45	-2.80	2.05	2.65	-4.45
SIC code		(1.38)	(1.62)	(-7.77)	(3.81)	(2.35)	(3.23)	(-5.57)	(5.31)	(-3.00)	(-4.44)
Same 3-digit	5	n.a.	n.a.	n.a.	-0.70	0.40	0.40	0.10	-0.40	0.60	n.a.
SIC code					(-7.39)	(8.63)	(-0.10)	(0.18)	(-1.44)	(2.85)	
Same 2-digit	12	1.80	-1.63	1.95	0.78	-2.10*	1.03	-2.90	0.58	-4.78	-3.73
SIC code		(3.29)	(-1.33)	(3.37)	(-0.86)	(-3.19)	(6.56)*	(-4.35)	(2.84)	(-4.31)	(-5.23)
Same 1-digit	14	3.90	-3.80	-3.05	0.13	1.28	0.08	0.15	-1.80	0.90	0.00
SIC code		(4.49)	(-1.79)	(-3.46)	(-4.63)	(1.25)	(0.56)	(-2.13)	(5.94)	(0.42)	(-1.62)
No agreement	45	0.15	-0.15	-0.25	0.20	1.10	1.25	2.80	-2.98*	0.20	-4.45**
in SIC codes		(2.38)	(-2.12)	(-3.57)	(-0.68)	(-0.38)	(0.50)	(4.25)	(-3.55)	(-1.74)	(-5.33)**

(Table 20 continued)

Panel C: Median (mean) return on sales in percent											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Same 4-digit	17	-1.85	0.65	1.20	-1.20	-0.95	5.85	-0.95	5.75	3.10	-0.30
SIC code		(3.15)	(-7.12)	(2.63)	(0.48)	(2.42)	(-5.10)	(0.96)	(3.44)	(-1.14)	(-6.13)
Same 3-digit	6	n.a.	-2.13	0.65	-0.33	0.50	0.85	3.95	-1.30	1.00	n.a.
SIC code			(-2.13)	(5.44)	(-0.09)	(7.48)	(-1.62)	(1.04)	(2.86)	(8.77)	
Same 2-digit	11	0.95	1.25	0.20	-0.50	0.70	2.25	0.30	5.30	-0.70	-1.45
SIC code		(5.88)	(2.77)	(1.77)	(-3.91)	(1.04)	(2.05)	(2.24)	(3.77)	(-5.34)	(-2.40)
Same 1-digit	14	n.a.	1.68	-2.60*	2.98	2.50	-1.20	0.80	-1.90**	1.30*	0.00
SIC code			(0.53)	(-4.84)*	(4.51)	(2.60)	(-2.80)	(-1.64)	(-6.48)	(6.19)	(-5.64)
No agreement in SIC codes	49	-2.55	4.18***	-1.35	-0.20	1.23*	1.60	2.30	-3.50	2.65**	-3.80**
		(-2.28)	(7.08)***	(-6.80)*	(-2.96)	(-0.50)	(5.86)	(-0.33)	(-6.29)	(8.52)***	(-7.81)**
Panel D: Median (mean) cash-flow return on assets in percent											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Same 4-digit	14	6.20	-2.40	3.50	1.03	-0.18	0.20	1.18	0.00	-3.13	n.a.
SIC code		(3.92)	(-0.61)	(2.19)	(3.77)	(1.68)	(-0.95)	(2.88)	(-1.53)	(-3.71)	
Same 3-digit	5	n.a.	-4.50	3.20	1.10	-11.15	1.35	n.a.	n.a.	n.a.	n.a.
SIC code			(-4.83)*	(7.01)	(-10.32)	(-4.13)	(7.55)				
Same 2-digit	12	-11.55	-4.35	9.35	-4.30*	-1.70	1.53	-1.53	0.85	5.35	1.63
SIC code		(-6.26)	(8.56)	(0.62)	(-6.57)*	(-1.48)	(-0.43)	(-12.55)	(6.65)	(11.24)	(-4.11)
Same 1-digit	13	n.a.	-0.45	-5.95	0.00	-1.50	-2.45	-1.98	1.30	-0.40	-1.10
SIC code			(14.71)	(-4.34)*	(-0.04)	(0.09)	(2.01)	(-6.55)	(-3.54)	(-0.65)	(14.31)
No agreement in SIC codes	46	4.40	1.10	-4.53	1.93	-4.10	-1.10	-5.80	7.50	4.88	-3.00
		(2.80)	(2.60)	(-5.12)	(6.65)	(-2.85)	(-3.62)	(4.98)	(3.05)	(0.21)	(-4.25)

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

**Table 21 - Adjusted Operating Performance of Incomplete Acquisition Targets by Degree of Relatedness in Target and Acquirer Industry**

Return on assets is calculated as operating income before depreciation, interest, taxes and extraordinary items divided by average total assets (Panel A). Cash-adjusted return on assets is similar to return on assets except that cash and cash equivalents are subtracted from total assets in the denominator (Panel B). Return on sales is calculated as total sales divided by average total assets (Panel C). Cash-flow return on assets is similar to return on assets except that the effects of changes in current assets and liabilities are excluded from operating income (Panel D). Performance measures of each company are adjusted by subtracting the median performance measure for a group of matched companies. Year 0 denotes the fiscal year in which the incomplete acquisition announcement is made. Sample sizes are the number of observations in year -1.

Panel A: Median (mean) return on assets in percent											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
High	51	2.05 (1.29)	-0.10 (-1.17)	-0.33* (-5.29)**	1.20 (1.29)	-0.50 (-1.52)	1.25 (4.72)	-3.20** (-7.24)**	-0.10 (2.32)	1.40 (3.80)	-1.10 (-1.30)
Medium	27	-0.10 (-3.38)*	0.40 (4.11)	1.50 (1.94)	-2.80** (-5.15)	-0.98 (3.00)	-0.80 (-1.03)	3.65** (4.56)*	-2.80** (-3.83)	-1.78 (-2.26)	-1.85 (-3.54)
Low	43	-1.70 (-1.76)	-0.75 (-2.08)	1.95 (3.86)	0.80 (0.12)	-1.15 (-2.83)	0.83 (5.10)	0.25 (1.76)	-1.90** (-3.89)**	-0.25 (-2.72)	-2.25 (-2.29)
Panel B: Median (mean) cash-adjusted return on assets											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
High	50	2.60 (2.86)	-0.23 (-1.97)	0.00 (-4.40)	0.20 (0.80)	-0.50 (-0.72)	1.88 (3.88)	-3.65*** (-7.08)***	2.10 (7.17)**	1.20 (-1.21)	-4.85** (-4.16)**
Medium	25	-0.80 (-1.95)	-0.40 (6.88)	0.35 (1.14)	-5.70*** (-6.63)***	-0.40 (8.05)	0.70 (-3.05)	3.35** (5.41)	-4.80* (-5.89)	-1.10 (-1.59)	-2.60 (-5.22)
Low	39	0.20 (2.37)	-2.20 (-6.31)*	0.20 (-0.12)	0.55 (1.36)	-0.40 (-3.60)	1.60 (8.47)	0.18 (0.16)	-1.80 (0.59)	0.70 (-4.28)	-3.40 (-3.91)

(Table 21 continued)

Panel C: Median (mean) return on sales in percent											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
High	50	0.55 (7.11)	0.75 (-1.09)	0.15 (-0.40)	-0.15 (0.88)	-0.10 (1.23)	-1.25 (-0.36)	-0.50 (-0.04)	-0.10 (3.40)*	4.20*** (4.38)	-0.30 (-3.15)
Medium	26	-1.70 (-1.80)	2.90 (4.05)*	-1.30 (0.50)	-0.28 (-3.51)*	0.40 (-0.87)	2.38** (3.98)*	1.45 (0.77)	-3.53 (-12.61)	0.45 (2.01)	-1.45 (-5.12)
Low	44	-2.20 (-3.54)	3.43 (2.11)	1.55 (-4.52)	0.08 (1.66)	1.30** (4.78)**	1.33 (2.23)	-1.78 (-5.27)	-2.15 (-0.19)	0.85 (5.59)	-4.03 (-7.00)*
Panel D.: Median (mean) cash-flow return on assets in percent											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
High	45	1.20 (-5.79)	0.00 (5.73)	2.50 (-0.52)	1.10 (-1.87)	-4.10 (-1.26)	0.28 (3.60)	0.70 (-3.64)	2.45* (6.42)**	1.30 (5.50)	0.65 (-5.64)
Medium	27	-0.50 (-0.26)	0.10 (12.13)*	-6.13 (-0.97)	0.00 (4.34)	-3.15 (0.73)	2.55 (1.29)	-1.60 (-7.34)	1.00 (2.75)	-0.10 (-1.26)	-5.10 (2.52)
Low	40	4.90* (7.34)*	-3.55** (-5.79)**	1.70 (1.14)	-0.25 (3.57)	1.50 (-2.88)	-1.70 (-1.49)	-0.60 (11.18)	0.55 (-13.52)	4.15 (0.90)	0.55 (-0.86)

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

The industry and adjusted operating performance of targets of incomplete acquisitions is next disaggregated by the mechanism used to conduct the acquisition. The results are reported in Table 22. In general, pre-acquisition performance and post-acquisition performance appear normal across all acquisition types. There is some evidence that target firms acquired by tender offer are underperforming relative to the benchmark in the year of the incomplete acquisition announcement (year 0). For this set of firms, the return on assets is significantly negative at the five percent level for both the median and the mean, and the mean cash-adjusted return on assets is significantly negative at the ten percent level. Subsequent to the acquisition, targets of tender offers have consistently normal performance. Moreover, while 8 of the 15 adjusted performance measures are negative for tender offers in years -5 to 0, only 3 of the 15 adjusted performance measures are negative in years +1 to +5. These results are mildly suggestive of slight improvements in the performance of tender offer targets.

Target firms that are acquired through new equity issues have a significantly higher return on sales than matched firms in year 0, but both target and control firms display similar performance for the two return on assets measures. In year +2, there is also evidence that the targets acquired through new equity issues perform significantly better than their peers as measured by the return on sales. Moreover, for these target firms, the return on assets measure is a less reliable measure of operating performance because they experience a large cash infusion around year +1 that is unlikely to produce an immediate increase in operating income. Nevertheless, there is no evidence of continuing improvement relative to the control group of firms in subsequent years for any of the three measure of operating performance.

**Table 22 - Adjusted Operating Performance of Incomplete Acquisition Targets by Acquisition Type**

Return on assets is calculated as operating income before depreciation, interest, taxes and extraordinary items divided by average total assets (Panel A). Cash-adjusted return on assets is similar to return on assets except that cash and cash equivalents are subtracted from total assets in the denominator (Panel B). Return on sales is calculated as total sales divided by average total assets (Panel C). Cash-flow return on assets is similar to return on assets except that the effects of changes in current assets and liabilities are excluded from operating income (Panel D). Performance measures of each company are adjusted by subtracting the median performance measure for a group of matched companies. Year 0 denotes the fiscal year in which the incomplete acquisition announcement is made. Sample sizes are the number of observations in year -1.

Panel A: Median (mean) return on assets in percent											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Tender offers	20	-1.30 (-1.16)	0.35 (0.25)	1.50 (-0.54)	-1.28 (-1.87)	-1.50** (-5.75)**	1.20 (-1.25)	2.58 (2.50)	-1.80 (-3.94)	1.40 (5.93)	0.50 (-0.12)
New equity issuance	43	1.80 (0.42)	-1.60 (-2.43)	-2.08 (-3.26)	0.20 (0.91)	0.15 (-0.27)	-0.18 (3.58)	1.63 (1.38)	-1.35 (1.28)	-0.08 (-1.51)	-4.20 (-3.84)
Block purchases	30	-1.70* (-4.88)**	-1.50 (-2.25)	2.18* (1.85)	2.05** (1.23)	-0.85 (0.32)	1.33 (1.61)	-1.65 (-4.42)	-1.35 (-1.73)	0.85 (-3.08)	-2.10 (-3.04)
Panel B: Median (mean) cash-adjusted return on assets											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Tender offers	20	0.05 (5.08)	-2.35 (-11.00)	1.75** (5.62)	0.05 (1.42)	-1.25 (-4.65)*	1.05 (-3.15)	2.35 (-0.88)	-1.90 (-2.94)**	1.35 (1.04)	0.70 (-1.26)
New equity issuance	41	2.90 (2.30)	-1.80 (-4.31)	-2.80 (-5.26)	-1.10 (0.06)	0.70 (-1.18)	2.45 (6.00)	1.70 (2.58)	-1.00 (4.59)	0.70 (-1.79)	-6.65 (-6.10)*
Block purchases	27	-0.90 (-1.32)	-0.50 (-0.49)	0.90 (-0.20)	0.50 (-2.37)	-1.00 (2.93)	1.45 (-0.54)	-3.33** (-6.70)**	0.60 (5.35)	0.90 (-0.42)	-3.50* (-5.25)

(Table 22 continued)

Panel C: Median (mean) return on sales in percent											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Tender offers	21	-2.00 (-1.61)	0.90 (2.90)	1.93 (1.42)	-0.85 (-1.01)	-0.40 (-0.71)	2.10 (-9.03)	1.33 (-1.91)	1.35 (2.40)	1.35 (3.19)	-1.08 (-1.74)
New equity issuance	42	0.75 (6.71)*	3.10 (-1.60)	-2.33 (-2.28)	-0.15 (-1.76)	3.15** (3.66)	2.30 (7.50)	4.05* (4.72)	-1.60 (-5.75)	1.00 (4.06)	-3.00 (-4.21)
Block purchases	32	-2.43* (-8.73)**	0.90 (3.60)	-0.30 (-4.88)	0.00 (1.40)	-0.10 (1.85)	1.25 (2.68)	-2.50** (-6.10)*	-0.38 (1.48)	2.48 (2.26)	-3.05 (-5.43)*
Panel D: Median (mean) cash-flow return on assets in percent											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Tender offers	18	1.38 (-11.04)	0.80 (4.07)	0.70 (-3.09)	-1.15 (-3.63)	-4.55* (-5.56)*	-3.35 (-4.67)	5.40** (20.86)**	-4.15 (-24.78)	1.30 (-1.73)	-4.73 (-4.17)
New equity issuance	41	3.83 (1.89)	0.00 (1.45)	0.48 (0.24)	0.10 (3.29)	-0.80 (0.68)	-1.35 (-3.85)	2.15 (3.57)	5.10* (4.99)	4.98 (10.13)	-8.30 (-8.55)
Block purchases	28	5.20 (0.48)	-1.40 (0.85)	-0.05 (-2.15)	4.23** (5.63)*	-4.00 (-0.35)	3.55 (2.99)	-4.20** (-10.13)*	0.38 (0.45)	-2.70 (-2.66)	0.63 (-2.93)

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.



For incomplete acquisitions by block purchases, there is significant evidence of poor performance relative to the control firms in year +2 and year +5 for two measures of performance. However, there is no evidence of significant underperformance for the third measure (return on assets) and no clear pattern of abnormal performance appears over the post-acquisition period.

In general, the pattern of the operating performance results, disaggregated by acquisition method, is mildly suggestive of the differences in abnormal returns at incomplete acquisition announcements. Specifically, target firms acquired through tender offers and new equity issues have some evidence of improvements in operating performance, while block purchases exhibit no evidence of improvements in operating performance. However, consistent with the results for the overall sample, there is little evidence of significant improvements in operating performance or of significant differences in pre- and post-acquisition operating performance across acquisition types. Thus, the differential announcement returns across acquisition types do not appear to be driven by differences in the subsequent operating performance displayed by firms that are acquired through these alternative acquisition mechanisms.

## **5.6 Summary**

In general, the analysis of pre- and post-acquisition operating performance of incomplete acquisition targets indicates that target firm operating performance is normal relative to the median performance of control firms both before and after the acquisition. Thus, there is neither deterioration nor improvement in target firm operating performance in the five years following the change in control. This finding of normal performance suggests that acquiring firm expropriation of minority shareholder

wealth through self-dealing transactions and access to target firm assets, is not a motivation for incomplete acquisitions. In addition, the finding that target firm performance is normal prior to the incomplete acquisition indicates that targets are not performing poorly relative to control firms, which suggests that the target firms are not likely to be mismanaged firms.

Since target firm performance does not significantly improve subsequent to the change in control, the analysis of operating performance indicates that there is no evidence of efficiency gains or operating synergies. Moreover, the analysis of the post-acquisition operating performance of targets disaggregated by the degree of relatedness between the target firm and acquirer industries, indicates that the subsequent performance of unrelated incomplete acquisition targets is similar to that of target firms that are in an industry that is closely related to the acquirer. The finding that the performance of industry-related acquisitions is similar to that of conglomerate acquisitions is consistent with the valuation effects reported in Chapter 4 which indicate that wealth gains in industry-related incomplete acquisitions are comparable to wealth gains in incomplete acquisitions where the target firm has low-relatedness with the parent.

It remains possible that there are important gains in efficiency that result in significant improvements in the performance of targets that occur subsequent to a five-year period of analysis or that occur after a target firm becomes a wholly owned subsidiary when merged with the parent. If such gains exist, however, they are unlikely to be large enough in the present value sense to justify the announcement period returns documented for these transactions. In addition, there may be gains in operating

performance that occur within the parent firm and that are not observable in target firm performance. Such possibilities are not pursued in the current study.

The analysis of the valuation effects of incomplete acquisitions presented in Chapter 4 indicates that target firm shareholder wealth increases significantly at the time of the acquisition announcement and that this increase does not come at the expense of the acquirer (i.e., the acquirer share price response is non-negative). Overall, the results of the analysis in this chapter combined with the evidence presented in Chapter 4 is consistent with the view that private positive information concerning the value of the target is generated by acquirers and that this information generation is a central element of the market for corporate control. More specifically, these findings are consistent with the view that acquiring firms are able to identify undervalued firms even when the target is in an industry of low relatedness. Thus, the use of an incomplete acquisition, which entails the continued observability of target operating performance subsequent to the acquisition, rather than a complete acquisition, enables the acquirer to certify that the target firm's adjusted operating performance is sustainable throughout the period of continued public trading of the minority shares. If the benefits of an incomplete acquisition arise from the certification role played by the maintenance of this costly transparency, then incomplete acquisitions are likely to be a transitory form of corporate governance. This hypothesis is further explored in the following chapter by examining the ultimate disposition of the acquirer's controlling interest in the target firm.

## **CHAPTER 6**

### **THE VALUATION EFFECTS OF DISPOSITION OF THE MAJORITY STAKE**

#### **6.1 Introduction**

This chapter investigates the ultimate disposition of the parent's controlling stake and the minority interest in the target firm. If there are ongoing benefits to continued public trading of the minority interest in the target firm that are sufficient to outweigh the costs of disclosure and attendant requirements of being a public firm, then incomplete acquisitions should persist as the organizational form for the corporate entity. In contrast, if the benefits of a publicly traded minority interest diminish over time, then incomplete acquisitions should be a temporary form of corporate organization. In this case, the publicly traded minority interest would be terminated by the acquirer when the benefits of maintaining the minority interest fall below the costs of the associated disclosure.

The first part of this chapter contains an examination of the limited literature that exists about the disposition of majority ownership, and also reviews the extensive research on divestitures of wholly owned subsidiaries. The next part of the chapter reports the results of a search to determine the subsequent disposition of the majority ownership and/or the minority interest that emanates from an incomplete acquisition, and the mechanisms parent firms use to effect the disposition. These results provide evidence about the duration of incomplete acquisitions as a form of corporate governance.

The remaining part of the chapter provides empirical results about the effect of disposition transactions on target and acquirer firm value. This analysis of the wealth

effects of disposition announcements can shed light on the motivation behind these transactions and their implications for parent and minority shareholder wealth. The announcement of an incomplete acquisition may influence market expectations concerning a subsequent control event, such as a parent-subsidary merger or a third party buyout of the minority interest (e.g., a complete merger). Financial market efficiency implies that share price responses to the initial announcement of an incomplete acquisition will capitalize gains or losses expected to ensue from subsequent disposition events. Thus, market-based evidence is used to evaluate whether share price responses to incomplete acquisition announcements reflect future disposition events. In addition, as Malatesta and Thompson (1985) indicate, when an expected event actually occurs, there will also be a market reaction that reflects the resolution of uncertainty and impounds residual economic effects not capitalized at the time of the initial event, the incomplete acquisition announcement. Thus, an analysis is provided of the stock market response to the announcement of the disposition of the majority interest, with the results disaggregated by the alternative types of disposition outcomes. This analysis is followed by an examination of the operating performance of target firms, disaggregated by the type of disposition outcome to determine whether interim operating performance affects the outcome of incomplete acquisitions.

## **6.2 The Role and Disposition of Control**

There is a large literature that analyzes the role of blockholders as corporate monitors and the role that these investors play in corporate control contests. Nevertheless, the existing literature focuses almost entirely on specific blockholders, both corporate and individual blockholders, who have blocks of stock that are

significantly smaller than the concentrated majority holdings that are the topic of this study. An exception is the work of Holderness and Sheehan (1988) who conduct a study of majority held firms and find that corporate majority-owned firms are more likely to be involved in mergers than a control sample of diffusely-held firms. In addition, firms with corporate majority shareholders are more likely to experience a change in the identity of the largest shareholder than are firms that are controlled by individual blockholders. They argue that the frequency of control transactions among corporate majority-owned firms could be due to the premiums paid in sales of controlling blocks. They also suggest that a third party who purchases a controlling block with the intention of subsequently effecting a complete merger may have an incentive to delay the purchase of the minority shares in order to avoid legal prohibitions on differential offers to the remaining shareholders.

In a study of toeholds, Mikkelsen and Ruback (1985) follow a sample of 13D filings from the initial announcement date through the announcement of the final outcome of the 13D filing. They find that, over the three years following establishment of these toehold positions, one-third of the targets are fully-acquired, one-third remain a publicly traded firm, and the remaining one-third are spread across third-party takeovers, targeted repurchases, and open market sale of the shares. Mikkelsen and Ruback find that the 13D entity's share price response at the outcome announcement is significantly positive for cases of targeted share repurchases (greenmail), the sale of the ownership stake in the market, or the sale of the stake to a third party. The returns to 13D entities are insignificantly different from zero for complete takeovers by the 13D entity or by a third party. The cumulative share price response of 13D entities from the

initial announcement to the final outcome is significantly positive for targeted share repurchases, the open market sale of shares, and third party takeovers, but is insignificantly different from zero for cases when the 13D entity takes over the target.

For target firms, Mikkelson and Ruback find that the share price response at the outcome announcement is significantly positive for takeovers completed by the 13D entity and significantly negative in the case of targeted share repurchases. The cumulative share price response of target firms from the initial announcement to the final outcome is significantly positive across all outcomes, but is much greater when the outcome is either a takeover by the 13D entity or a takeover by a third party. Mikkelson and Ruback's results indicate that these transactions create value regardless of the outcome, and that targets capture the greater share of the gains. However, there is evidence of a transfer of wealth from the target to the 13D entity when the transaction ends in a targeted share repurchase.

Slovin and Sushka (1998) argue that there are two key differences between a merger of a subsidiary into its parent and a conventional corporate control transaction. First, a conventional merger or acquisition entails a change in corporate control whereas a parent-subsidary merger does not entail a change in control. Second, in a merger or acquisition between unaffiliated companies, each side bargains for its own interests through arm's length negotiations and approval typically requires a simple majority shareholder vote. In a tender offer, the acquirer deals directly with shareholders who individually decide whether to accept or reject the offer. In contrast, a parent with majority ownership of a subsidiary can force a parent-subsidary merger by voting its majority shareholding in the subsidiary in favor of the merger. Thus,

unlike a parent-subsidary merger, a third party buyout of a majority-controlled subsidiary entails arm's length negotiations within a contestable environment and results in a change in control. These characteristics suggest that minority shareholders of the subsidiary may experience a greater increase in wealth in third party buyouts than in parent-subsidary mergers.

Moreover, studies by Lease, McConnell, and Mikkelsen (1983,1984) and DeAngelo and DeAngelo (1985) find that control shares are more valuable than non-control shares. These findings suggest that the offer for shares of a subsidiary should be higher in a third party buyout where the acquirer is purchasing control, than in a parent-subsidary merger where control has already been established and only non-control shares are being acquired.

Slovin and Sushka (1998) examine a sample of parent-controlled publicly traded subsidiaries that are either merged with the parent company or sold to a third party buyer. Their sample of majority-owned subsidiaries includes those that originate from equity carve-outs, incomplete acquisitions, and partial spin-offs. They find that when majority-owned subsidiaries are subsequently merged with the parent, minority shareholders experience significant increases in wealth and that the minority shareholders' portion of the overall gains in value exceeds their proportional ownership in the subsidiary. They also document positive returns to parents and conclude that parent-subsidary mergers are value-enhancing transactions for both the subsidiary and the parent. Interestingly, the returns to subsidiaries sold to third parties are not significantly different from those in parent-subsidary mergers. The returns to parents are greater in third party buyouts than in parent-subsidary mergers, while the returns to



third party buyers are negative, suggesting that there is a wealth transfer from buyers to parents.

Slovin and Sushka (1998) argue that the elimination of minority shareholders through a parent-subsidary merger can enhance overall value by reducing proprietary costs that arise from disclosure, conflicts of interest and legal concerns, and/or by generating gains in productive efficiency. If parent-subsidary mergers and/or third party mergers following an incomplete acquisition are value enhancing, their announcement should increase the combined value of the parties to the transaction. If the price paid to the minority shareholders is equivalent to the pre-announcement value of their shares, then any gains will accrue to the parent or third party acquirer. However, if the parent or third party acquirer pays a premium for the minority shares, then there will be positive abnormal returns to the minority shareholders. Furthermore, if all gains accrue to the subsidiary, as is typical in mergers and tender offers between unaffiliated firms, the parent and minority shareholders will capture all of the value from third party buyouts of the subsidiary.

Several studies of acquisitions in which the acquired firm was subsequently divested interpret the divestiture as a failure of the original acquisition.<sup>17</sup> However, Weston (1989) argues that acquirers may later divest targets for a number of reasons that do not involve poor performance. For instance, the acquirer may sell a business that it has improved or a business with which it once had synergies but no longer does. Kaplan and Weisbach (1992) study divestitures of complete acquisition targets. They

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<sup>17</sup> See Ravenscraft and Scherer (1987) and Porter (1987).

find that the abnormal returns of acquirers and the combined abnormal returns to targets and acquirers at the acquisition announcement are significantly lower for unsuccessful acquisitions than for successful acquisitions and acquisitions that are not divested. As a result, they suggest that at the initial announcement of an acquisition, the stock market can differentiate between unsuccessful and successful acquisitions. Nevertheless, they find that at the acquisition announcement, the abnormal returns of targets of unsuccessful acquisitions are not significantly different from the abnormal returns to successful acquisitions and acquisitions that are not divested, suggesting that the future performance of the acquisition does not affect the acquisition price. While Kaplan and Weisbach's results indicate that unrelated acquisitions are more likely to be divested than related acquisitions, they find little evidence that unrelated acquisitions are less successful than related acquisitions or that the stock market reaction to the acquisition announcement differs across relatedness.

Slovin and Sushka (1998) find that parent-subsidary mergers are frequently followed by subsidiary restructurings. After the wholly-owned subsidiary is restructured, parent retention of the unit and parent divestiture of the unit are about equally likely. Alexander, Benson, and Kampmeyer (1984) argue that voluntary asset sell-offs may in fact be positive net present value investment decisions. Under these circumstances, both the original acquisition and the divestiture may be value-enhancing transactions. Consistent with these arguments, Schipper and Smith (1983), Alexander, Benson, and Kampmeyer (1984), Jain (1985), Klein (1986), and Hite, Owers, and Rogers (1987) find that the average share price reaction to divestiture announcements is significantly positive for the divesting firm.

The merger of a majority-controlled subsidiary into the parent should be a value-increasing transaction if the decision to merge conveys information about the success of the acquisition or that the proprietary costs associated with a publicly-traded minority interest are no longer offset by the benefits of being publicly traded. The parent's establishment of complete control of the subsidiary should allow it to capture at least some of these benefits. The sale of a majority-controlled subsidiary to a third party should also be value-increasing if the sale moves assets to higher valued uses and the parent is able to capture part of the gain. Alternatively, the sale of the subsidiary to a third party may convey negative information about expectations of poor subsidiary performance that may result in a loss in value if the majority owner divests the unit at a price lower than the market's previous assessment of its value.

### **6.3 Sample Development and Methodology**

For each incomplete acquisition in the sample developed in Chapter 3, a search for the disposition of the controlling interest or the minority interest is conducted using the Wall Street Journal Index, the Directory of Obsolete Securities, and Moody's Manuals. Disposition dates are identified using the Wall Street Journal Index and the Lexis-Nexis Company News database. Relevant news articles are obtained and examined to determine the substance of the transaction and the means by which the controlling interest is dissolved. If the acquirer was itself subsequently acquired by another firm, but still holds a majority interest in the target, the disposition is classified according to the disposition that is made by the new owner (i.e., the acquirer of the original parent firm). Information subsequent to the disposition announcement is examined to determine that the transaction is successfully completed. For the sample

observations where no indication of dissolution is found, the continued trading of the controlling interest is verified using Moody's Manuals.

These procedures result in a sample of 229 incomplete acquisitions for which the method of subsequent disposition of the majority interest could be determined and 36 incomplete acquisitions in which it is determined that the subsidiary continues to trade as a majority-controlled subsidiary of the acquirer. The disposition announcement date and method of disposition are available for 221 target firms and 188 parent firms. Share price data are available for both targets and acquirers for 188 transactions. Event study methodology, as described in Chapter 4, is used to ascertain the share price effects of the disposition announcements.

#### **6.4 Descriptive Statistics**

The distribution of disposition announcements by year is reported in Table 23. Not surprisingly, there are fewer dispositions in the earlier years of the sample period since there are fewer incomplete acquisitions in the sample to be potentially extinguished. Some concentration of disposition announcements is observed in 1978, during the late 1980s, and during the early 1990s.

The frequency distribution of 264 disposition outcomes is reported in Table 24. The data indicate that the dominant type of disposition (45.9%) of an incomplete acquisition is the elimination of the minority shareholding through the merger of the majority-controlled subsidiary with the parent firm. Two corporate control outcomes are observed with identical frequency in the sample. These are the buyout and merger of the subsidiary with a third party acquirer (12.1%), a transaction that eliminates the minority interest, and the sale of the parent's controlling stake to a third party (12.1%),

**Table 23 - Distribution of Disposition Announcements by Year**

Number of dispositions occurring in each year, 1967-1997.

<b>Year</b>	<b>Number of dispositions</b>
1967	0
1968	1
1969	2
1970	2
1971	3
1972	2
1973	5
1974	9
1975	4
1976	9
1977	5
1978	14
1979	4
1980	6
1981	8
1982	9
1983	9
1984	7
1985	16
1986	8
1987	11
1988	10
1989	7
1990	10
1991	11
1992	9
1993	10
1994	14
1995	7
1996	7
1997	5
<b>Total</b>	<b>224</b>

**Table 24 – Distribution of Outcomes**  
Disposition by method for 264 incomplete acquisitions.

<b>Method</b>	<b># of Events</b>	<b>Percentage</b>
Merged with acquirer	121	45.9%
Merged with third party	32	12.1%
Still trades as majority owned subsidiary	36	13.6%
Sale of controlling stake to third party	32	12.1%
Repurchase of stake by subsidiary	14	5.3%
Bankruptcy	19	7.2%
Liquidation	7	2.7%
Spin-off of majority stake	3	1.1%
<b>Total</b>	<b>264</b>	<b>100.0%</b>

a transaction that transfers majority control but does not eliminates the publicly traded minority interest. Outcomes that occur less frequently are the bankruptcy of the subsidiary (7.2%), and the repurchase by the subsidiary of the parent's controlling stake (5.3%). The small number of remaining disposition events are accounted for by the liquidation of the subsidiary (2.7%), and the spin-off of the majority interest in the subsidiary to the shareholders of the parent (1.1%).

The data indicate that only in a modest percent of cases (13.6%) does the target of an incomplete acquisition continue as a majority-owned subsidiary with a publicly traded minority interest. Moreover, to the extent that these target firms will experience a disposition outcome subsequent to the period under study, this figure represents an upper-bound on the percentage of targets of incomplete acquisitions that continue as majority-controlled entities with publicly traded minority interests. Thus, the data indicate that incomplete acquisitions are typically a temporary, rather than a permanent form of corporate governance structure.

Two methods of disposition, specifically the merger of the target with the acquirer and the continued majority control by the parent with public trading of the minority interest, can be viewed as comparable to Kaplan and Weisbach's definition of non-divested acquisitions in their sample of complete acquisitions. Kaplan and Weisbach find that 56% of the acquisitions in their sample are not divested by the end of the period studied. In comparison, 59.5% of the incomplete acquisitions in this study subsequently merge with the parent or continue to trade as majority-owned subsidiaries. This is a slightly higher rate than the figure reported in Kaplan and Weisbach even though the period of possible divestiture in this study is longer than in Kaplan and Weisbach's study. However, this study does not investigate possible divestitures during the period that is subsequent to a parent-subsidary merger. Nevertheless, in terms of the overall rate of divestiture, the results of this study of incomplete acquisitions appear to be broadly similar to the Kaplan and Weisbach results for complete acquisitions.

The time that elapses between the incomplete acquisition announcement and the disposition announcement is reported in Table 25. The overall mean (median) time elapsed between the acquisition of control and the relevant disposition event is 5.7 (4.2) years. These data, together with the finding in Table 24 that less than 14% of the sample still exists as a majority controlled subsidiary with a publicly traded interest, suggest that incomplete acquisitions are a transitory form of organization. This modest degree of permanence suggests that the benefits of a publicly traded minority interest are temporary. Moreover, parent-subsidary mergers and the sale of the stake to a third party appear to occur more quickly than third party mergers and subsidiary repurchases

**Table 25 - Time Elapsed from Announcement of Incomplete Acquisition to Announcement of Disposition**

Statistics for the time elapsed in years from the acquisition announcement to the disposition announcement for 263 incomplete acquisitions. For targets that still trade, these calculations are truncated at December 31, 1997.

<b>Disposition Type</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Minimum</b>	<b>Maximum</b>
Full sample	263	5.7	4.2	0.5	25.5
Still trades	36	9.0	6.9	0.5	24.3
Merges with parent	121	4.5	3.2	0.5	25.5
Merges with third party	32	6.7	5.7	1.4	21.5
Stake sold to third party	32	4.2	3.5	1.0	12.6
Repurchased by subsidiary	13	5.9	4.2	2.1	15.9
Subsidiary files for bankruptcy or reorganization	19	5.3	3.4	0.5	18.1

of their own stock from the parent firm. Moreover, the figures shown in the table for the full sample and for incomplete acquisitions that still trade as majority-owned subsidiaries represent a lower bound on the true duration from initial acquisition until disposition since the calculations are truncated at December 31, 1997. In comparison, Kaplan and Weisbach report a median duration of 7.0 years for complete acquisitions in which the target is subsequently divested. Similarly, Slovin and Sushka (1998) report a mean (median) duration of 6.0 (5.0) years between the establishment of a publicly traded minority interest and parent-subsidiary mergers and 6.1 (3.6) years between the establishment of the minority interest and third-party mergers. Thus, evidence of the modest duration of incomplete acquisitions is broadly similar to the results of previous studies that examine the period that elapses between acquisitions and divestitures.

## **6.5 Empirical Results**

To investigate whether the market response at the announcement of the incomplete acquisition differs depending on the ultimate disposition, that is whether the



capital market anticipates the outcome, the share price responses of targets and acquirers at the initial announcement are disaggregated by the type of disposition that ultimately occurs. The two-day incomplete acquisition announcement period returns by disposition type for 206 target firms are reported in Panel A of Table 26. Targets that are subsequently merged into the acquirer have the most favorable share price reaction to the initial announcement of the incomplete acquisition, with an average two-day excess return of 10.18% (t-statistic = 18.45). This result is consistent with the view that the market partially anticipates the ultimate acquisition of the minority interest in the subsidiary and that this anticipation of the transaction generates, on average, the most value enhancement among the incomplete acquisitions. In contrast, the two-day excess return is a modest 2.67% (t-statistic = 2.14) for the set of targets that eventually repurchase the controlling interest from the acquirer. This type of repurchase transaction can be viewed as a reversal of the original incomplete acquisition. Thus, the small return suggests that the market partially anticipates the ultimate resale of the majority interest to the subsidiary and that these transactions are anticipated to generate, on average, the least value enhancement among the incomplete acquisitions.

The second most positive stock price response is observed for targets that experience financial distress after the acquisition. These target firms have a two-day excess return of 8.11% (t-statistic = 6.69). The strongly significant return suggests that incomplete acquisition announcements convey positive information about the value of these target firms, a set of firms that are characterized by poor pre-acquisition operating performance, as documented in Chapter 5. Despite the favorable market response to

**Table 26 - Incomplete Acquisition Announcement Excess Returns to Targets by Disposition Type**

Excess returns (in percent) to targets at announcements of 206 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel C. Difference in means tests for the two-day and seven-day returns are shown in Panel B and Panel D, respectively.

Panel A: Two-day announcement period returns (-1 to 0)			
Disposition type	Excess return	Distribution of returns	
		Quartile	Return
Still trades	7.55%	25%	-2.97%
	(7.07)***	50%	4.36%
	[0.67]	75%	17.35%
	N = 32		
Merges with parent	10.18%	25%	1.06%
	(18.45)***	50%	6.56%
	[0.76]	75%	16.21%
	N = 101		
Merges with third party	6.11%	25%	-1.09%
	(6.68)***	50%	2.01%
	[0.62]	75%	8.95%
	N = 25		
Stake sold to third party	7.68%	25%	2.65%
	(6.38)***	50%	7.37%
	[0.85]	75%	11.76%
	N = 20		
Repurchased by subsidiary	2.67%	25%	-0.39%
	(2.14)*	50%	2.16%
	[0.70]	75%	2.56%
	N = 10		
Subsidiary files for bankruptcy or reorganization	8.11%	25%	0.01%
	(6.69)***	50%	5.94%
	[0.78]	75%	17.59%
	N = 18		

(Table 26 continued)

Panel B: Difference in means test for two-day returns

	Still trades	Merges with parent	Third party merger	Third party sale	Subsidiary repurchase	Financial distress
Still trades	-					
Merges with parent	0.914	-				
Third party merger	0.400	1.283	-			
Third party sale	0.042	0.938	0.459	-		
Subsidiary repurchase	1.278	2.196**	0.851	1.371	-	
Financial distress	0.157	0.652	0.522	0.126	1.346	-

Panel C: Seven-day announcement period returns (-5 to +1)

Disposition type	Excess return	Distribution of returns	
		Quartile	Return
Still trades	8.89%	25%	-0.04%
	(5.26)***	50%	7.29%
	[0.73]	75%	18.33%
	N = 32		
Merges with parent	15.62%	25%	1.37%
	(18.08)***	50%	10.94%
	[0.76]	75%	24.69%
	N = 102		
Merges with third party	8.95%	25%	-1.28%
	(6.19)***	50%	5.60%
	[0.69]	75%	15.82%
	N = 25		
Stake sold to third party	9.96%	25%	-0.01%
	(5.23)***	50%	13.13%
	[0.75]	75%	18.33%
	N = 20		
Repurchased by subsidiary	3.66%	25%	-2.14%
	(1.85)*	50%	2.88%
	[0.70]	75%	7.98%
	N = 10		
Subsidiary files for bankruptcy or reorganization	15.89%	25%	4.88%
	(8.28)***	50%	12.17%
	[0.89]	75%	17.72%
	N = 18		

(Table 26 continued)

Panel D: Difference in means test for seven-day returns						
	Still trades	Merges with parent	Third party merger	Third party sale	Subsidiary repurchase	Financial distress
Still trades	-					
Merges with parent	2.034**	-				
Third party merger	0.014	1.638	-			
Third party sale	0.298	1.624	0.235	-		
Subsidiary repurchase	1.254	2.923***	1.101	1.460	-	
Financial distress	1.486	0.058	1.316	1.226	2.313**	-

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

the acquisition announcement, on average the incomplete acquisition fails to rescue target firms from financial demise, so the market response poorly anticipates the ultimate outcome for this set of firms.

The remaining groups of firms, which consist of targets that are ultimately divested by the acquirer or that continue to trade, have two-day announcement period returns that show no pattern consistent with respect to market anticipation of whether or not a subsequent disposition event occurs. Specifically, the two-day excess return for targets that will continue to trade as majority-owned subsidiaries is 7.55% (t-statistic = 7.07). The two-day excess return is 6.11% (t-statistic = 6.68) for the set of target firms that are subsequently merged with a third party. This result is similar to the two-day return of 7.68% (t-statistic = 6.38) for the set of target firms in which the majority interest is later sold to a third party without the minority interest being acquired. Overall, this pattern of returns indicates that there is modest evidence of market anticipation of subsequent events. Moreover, difference in means tests between the various categories of events are almost consistently insignificant, so that the null

hypothesis of equality cannot be rejected. The sole exception is the difference in means test between the share price responses to incomplete acquisitions when the target later merges with the parent versus cases in which the majority interest is later repurchased by the target. This difference generates a calculated t-value of 2.20, significant at a 5% level. This result confirms that the stock market response is more favorable for targets that later merge with the acquirer than for targets that later repurchase the controlling interest and thus reverse the transaction.

The seven-day returns to targets at incomplete acquisition announcements are also disaggregated by disposition type. The results are reported in Panel C of Table 26. The pattern of these returns is very similar to the two-day excess returns. The seven-day share price response at the incomplete acquisition announcement is 15.62% (t-statistic = 18.08) for targets that are later merged with the parent, versus 3.66% (t-statistic = 1.85) for events in which the majority stake is later repurchased by the subsidiary. A difference in means test between these two returns has a calculated t-value of 2.92, which is significant at the 1% level. This indicates that the seven-day target share price reaction to the acquisition announcement is significantly greater for targets that later merge with the parent than for targets that later repurchase the majority interest from the acquirer.

As in the case of the two-day returns, the seven-day share price response is relatively high for targets that subsequently experience financial distress, 15.89% (t-statistic = 8.28), indicating that the market poorly anticipates the ultimate outcome for this set of firms. Moreover, the returns for targets are similar in the cases in which the targets are subsequently sold to and merged with a third party acquirer, 8.95%

(t-statistic = 6.19), and the cases in which the majority stake is subsequently sold to a third party, 9.96% (t-statistic = 5.23). These returns are almost identical to the returns of 8.89% (t-statistic = 5.26) for targets that continue to trade. None of the differences in returns between these three groups are statistically significant. However, the difference in returns between targets that are ultimately merged into the parent versus targets that continue to trade is statistically significant at the 5 percent level, given a calculated t-value of 2.03.

Overall, the results reported in Table 26 suggest that target firm shareholders fare equally well at the announcement of an incomplete acquisition regardless of whether the parent continues to have a minority interest in the subsidiary that is publicly traded or whether the parent subsequently eliminates the public minority interest. However, there is some evidence that target acquisition announcement returns are higher for incomplete acquisitions that are followed by parent-subsidiary mergers, suggesting that the market is capable of partially anticipating the acquirer's ultimate acquisition of the remaining minority stake.

The two-day returns at incomplete acquisition announcements, disaggregated by disposition type for 170 acquirer firms are reported in Panel A of Table 27. These returns are typically positive, but are modest in size and significance. The two-day announcement period returns for acquirers are 1.88% (t-statistic = 1.97) when the target continues to trade as a majority-owned subsidiary. The returns are 0.37% (t-statistic = 0.89) when the target later merges with the parent. The returns are -1.25% (t-statistic = -1.68) when the target is subsequently sold to, and merges with, a third party. The returns are 2.76% (t-statistic = 3.89) when the majority interest is later

**Table 27 - Incomplete Acquisition Announcement Excess Returns to Acquirers by Disposition Type**

Excess returns (in percent) to acquirers at announcements of 170 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel C. Difference in means tests for the two-day and seven-day returns are shown in Panel B and Panel D, respectively.

Panel A: Two-day announcement period returns (-1 to 0)			
Disposition type	Excess return	Distribution of returns	
		Quartile	Return
Still trades	1.88%	25%	-1.94%
	(1.97)*	50%	-0.01%
	[0.47]	75%	2.04%
	N = 17		
Merges with parent	0.37%	25%	-1.91%
	(0.89)	50%	0.08%
	[0.53]	75%	2.34%
	N = 85		
Merges with third party	-1.25%	25%	-3.37%
	(-1.68)	50%	-0.65%
	[0.30]	75%	0.26%
	N = 23		
Stake sold to third party	2.76%	25%	-1.29%
	(3.89)***	50%	-0.04%
	[0.48]	75%	3.51%
	N = 23		
Repurchased by subsidiary	0.02%	25%	-1.17%
	(0.02)	50%	-0.77%
	[0.33]	75%	3.12%
	N = 9		
Subsidiary files for bankruptcy or reorganization	2.57%	25%	-0.07%
	(2.33)**	50%	0.47%
	[0.69]	75%	3.27%
	N = 13		

(Table 27 continued)

Panel B: Difference in means test for two-day returns						
	Still trades	Merges with parent	Third party merger	Third party sale	Subsidiary repurchase	Financial distress
Still trades	-					
Merges with parent	0.763	-				
Third party merger	1.506	1.587	-			
Third party sale	0.280	0.931	1.515	-		
Subsidiary repurchase	0.830	0.262	0.872	0.987	-	
Financial distress	0.275	1.266	2.066**	0.063	1.257	-

Panel C: Seven-day announcement period returns (-5 to +1)			
Disposition type	Excess return	Distribution of returns	
		Quartile	Return
Still trades	0.36%	25%	-3.63%
	(0.24)	50%	-1.16%
	[0.41]	75%	2.65%
	N = 17		
Merges with parent	0.93%	25%	-4.07%
	(1.42)	50%	-0.14%
	[0.49]	75%	4.79%
	N = 85		
Merges with third party	2.11%	25%	-1.25%
	(1.81)*	50%	1.04%
	[0.70]	75%	6.43%
	N = 23		
Stake sold to third party	0.59%	25%	-3.91%
	(0.53)	50%	0.28%
	[0.52]	75%	4.65%
	N = 23		
Repurchased by subsidiary	2.45%	25%	-0.11%
	(1.54)	50%	1.42%
	[0.56]	75%	5.79%
	N = 9		
Subsidiary files for bankruptcy or reorganization	10.19%	25%	-0.08%
	(5.83)***	50%	3.15%
	[0.69]	75%	9.00%
	N = 13		



(Table 27 continued)

<b>Panel D: Difference in means test for seven-day returns</b>						
	<b>Still trades</b>	<b>Merges with parent</b>	<b>Third party merger</b>	<b>Third party sale</b>	<b>Subsidiary repurchase</b>	<b>Financial distress</b>
Still trades	-					
Merges with parent	0.224	-				
Third party merger	0.660	0.754	-			
Third party sale	0.087	0.214	0.864	-		
Subsidiary repurchase	0.702	0.735	0.153	0.838	-	
Financial distress	1.628	1.640	1.416	1.683*	1.320	-

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

sold to a third party but the minority interest is not acquired. When the target later repurchases the controlling interest from the acquirer, the returns are 0.02% (t-statistic = 0.02). When the target subsequently experiences financial distress, the returns are 2.57% (t-statistic = 2.33). None of the differences between these returns approach statistical significance, with the sole exception of the difference between the acquirer share price response to incomplete acquisitions when the target later merges with a third party and the share price response when the target subsequently experiences financial distress. The difference between these means generates a calculated t-value of 2.07, significant at a 5% level. Overall, the results for acquirers suggest that the market response at the announcement of the incomplete acquisition does not differ depending on the ultimate disposition of the acquisition.

The seven-day returns at incomplete acquisition announcement, disaggregated by disposition type for 170 acquirer firms are reported in Panel C of Table 27, and are generally similar to the two-day returns to acquirers at incomplete acquisition announcements. The seven-day average returns to acquirers are 0.36% (t-statistic

= 0.24) when the target continues to trade as a majority-owned subsidiary. The returns are 0.93% (t-statistic = 1.42) when the target later merges with the parent. The returns are 2.11% (t-statistic = 1.81) when the target subsequently merges with a third party. The returns are 0.59% (t-statistic = 0.53) when the majority interest is later sold to a third party. When the target later repurchases the controlling interest, the returns are 2.45% (t-statistic = 1.54). When the target later experiences financial distress, the returns are 10.19% (t-statistic = 5.83). The latter result, which is consistent across acquirers and targets, indicates that the share price response to acquisitions in which the target later experiences financial distress is significantly positive. Indeed, the three most positive individual acquirer share price responses of 67.7%, 35.1%, and 12.6% are events in which target firms ultimately file for Chapter 11 bankruptcy reorganization 8.6, 3.3, and 12.6 years after the acquisition, respectively. Thus, the market response to incomplete acquisition announcements poorly anticipates the ultimate outcome for this set of firms.

The average two-day combined returns at incomplete acquisitions for 136 paired targets and acquirers are reported by disposition type in Panel A of Table 28. As in Chapter 4, the combined excess return is calculated as the weighted average of the excess returns for the target firm and the acquirer firm, where the weights are the relative market values of equity for the two firms six weeks prior to the announcement date. The two-day average combined excess returns at incomplete acquisition announcements are 2.54% (t-statistic = 1.42) when the target continues to trade as a majority-owned subsidiary, 2.90% (t-statistic = 3.11) when the target is later merged with the parent, -0.20% (t-statistic = -0.22) when the target is subsequently merged

**Table 28 - Average Combined Excess Returns to Incomplete Acquisition Announcements by Disposition Type**

Combined excess returns (in percent) at announcements of 136 incomplete acquisitions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. The combined excess return is the weighted average of the excess returns for the target and acquirer, where the weights are the relative market values of equity of the two firms six weeks prior to the announcement. The average combined change in market value is computed as the cumulative excess return to the target times the target market value six weeks prior to the announcement plus the cumulative excess return to the acquirer times the acquirer market value six weeks prior to the announcement. Two-day announcement period returns are reported in Panel A; seven-day announcement period returns are reported in Panel B.

Panel A: Two-day announcement period returns (-1 to 0)				
Disposition type	Average combined excess return	Average (median) combined change in market value in millions	Distribution of combined excess return	
Still trades	2.54% (1.42) [0.60] N = 15	\$260.022 (\$ 0.665)	25% 50% 75%	-1.12% 0.29% 5.85%
Merges with parent	2.90% (3.11)*** [0.64] N = 72	\$42.933 (\$ 1.863)	25% 50% 75%	-1.29% 0.98% 4.96%
Merges with third party	-0.20% (-0.22) [0.53] N = 17	\$28.569 (\$ 1.628)	25% 50% 75%	-1.45% 0.35% 2.27%
Stake sold to third party	1.71% (2.52)** [0.67] N = 15	\$ 8.014 (\$ 1.398)	25% 50% 75%	-0.66% 2.15% 4.65%
Repurchased by subsidiary	-0.51% (-0.34) [0.50] N = 6	\$ 0.604 (\$-2.376)	25% 50% 75%	-3.19% -0.46% 2.26%
Subsidiary files for bankruptcy or reorganization	3.34% (2.32)** [0.82] N = 11	\$25.739 (\$13.203)	25% 50% 75%	0.38% 2.34% 5.33%

(Table 28 continued)

Panel B: Seven-day announcement period returns (-5 to +1)				
Disposition type	Average combined excess return	Average (median) combined change in market value in millions	Distribution of combined excess return	
Still trades	1.82% (0.82) [0.60] N = 15	\$284.455 (\$ 1.685)	25% 50% 75%	-3.54% 1.98% 4.90%
Merges with parent	5.49% (4.51)*** [0.61] N = 72	\$35.238 (\$ 3.207)	25% 50% 75%	-1.84% 3.21% 9.75%
Merges with third party	2.82% (1.97)* [0.76] N = 17	\$78.918 (\$ 5.375)	25% 50% 75%	0.55% 2.59% 6.19%
Stake sold to third party	2.43% (1.48) [0.67] N = 15	\$ 5.219 (\$ 2.329)	25% 50% 75%	-1.14% 3.01% 5.48%
Repurchased by subsidiary	-0.80% (-0.68) [0.50] N = 6	-\$ 5.868 (-\$ 1.251)	25% 50% 75%	-1.85% -0.85% 0.69%
Subsidiary files for bankruptcy or reorganization	7.99% (3.10)** [0.91] N = 11	\$45.508 (\$47.266)	25% 50% 75%	0.36% 4.13% 18.04%

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

with a third party, 1.71% (t-statistic = 2.52) when the majority interest is later sold to a third party, -0.51% (t-statistic = -0.34) when the majority interest is later repurchased by the target, and 3.34% (t-statistic = 2.32) when the target subsequently experiences financial distress.

The average seven-day combined returns at incomplete acquisition announcements for 136 paired targets and acquirers are reported by disposition type in Panel C of Table 28. The seven-day average combined excess returns at incomplete acquisition announcements are 1.82% (t-statistic = 0.82) when the target continues to trade as majority-owned subsidiaries, 5.49% (t-statistic = 4.51) when the target is later merged with the parent, 2.82% (t-statistic = 1.97) when the target is subsequently merged with a third party, 2.43% (t-statistic = 1.48) when the majority interest is later sold to a third party, -0.80% (t-statistic = -0.68) when the majority interest is later repurchased by the target, and 7.99% (t-statistic = 3.10) when the target firm subsequently experiences financial distress.

The results in Table 28 indicate that incomplete acquisition announcements are typically associated with an increase in value of the combined entity regardless of whether the acquirer ultimately retains or disposes its majority interest in the target. There is some evidence that the greatest gains in shareholder wealth at the announcement occur for cases in which the subsidiary is later merged with the parent. Overall, this evidence suggests that the market is, at least in part, capable of anticipating these subsequent mergers. Given the market response to incomplete acquisitions that ultimately culminate in the Chapter 11 bankruptcy of the target, these results do not corroborate Kaplan and Weisbach's (1992) finding that the acquirer share price response and combined returns at the acquisition announcement are strongly related to the subsequent success of the acquisition.

To investigate the wealth effects of disposition announcements, the share price responses of targets and acquirers at the disposition announcement are

disaggregated by disposition type. The two-day stock price reaction at the time of the disposition announcement for a sample of 177 targets is reported in Panel A of Table 29. The target share price response for this full sample of disposition events is 8.76% (t-statistic = 22.55), significant at a 1% level. This result indicates that, on average, disposition events generate a substantial increase in the wealth of minority shareholders of the subsidiary.

When these events are disaggregated by the type of disposition, a clear pattern emerges among the returns. There are large gains in minority shareholder wealth associated with disposition events in which the holdings of minority shareholders are acquired and the minority stake is extinguished, compared to relatively modest gains for events in which minority shares are not acquired.

In the case of parent-subsidiary mergers, which are transactions that eliminate the minority shareholding but are conducted without arm's length bargaining and do not generate a change in control, the two-day share price response for target firms is 10.48% (t-statistic = 23.12). The other type of disposition event in which the minority shareholding is eliminated is third party buyouts, a transaction in which the majority blockholding of the parent is sold to a third party that also acquires all of the minority shares at the same price. These transactions generate a two-day return of 15.04% (t-statistic = 17.24). The difference between the returns for these two types of transactions is not statistically significant since a difference in means test generates a calculated value of 1.00. The two-day stock price response is significantly positive for all disposition types except for the set of events in which the acquirer's stake is sold to a third party, which has an average excess return that is not significantly different from

**Table 29 - Disposition Announcement Excess Returns to Targets by Disposition Type**

Excess returns (in percent) to targets at announcements of 177 dispositions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel C. Difference in means tests for the two-day and seven-day returns are shown in Panel B and Panel D, respectively.

**Panel A: Two-day announcement period returns (-1 to 0)**

Disposition type	Excess return	Distribution of returns	
		Quartile	Return
Full sample	8.76%	25%	-1.09%
	(22.55)***	50%	5.22%
	[0.66]	75%	15.79%
	N = 177		
Merged with parent	10.48%	25%	-0.93%
	(23.12)***	50%	5.52%
	[0.69]	75%	17.86%
	N = 107		
Merged with third party	15.04%	25%	5.67%
	(17.24)***	50%	12.77%
	[0.90]	75%	22.23%
	N = 28		
Stake sold to third party	1.33%	25%	-4.18%
	(0.99)	50%	-0.67%
	[0.41]	75%	6.87%
	N = 26		
Repurchased by subsidiary	3.04%	25%	-5.56%
	(2.41)**	50%	0.04%
	[0.54]	75%	7.17%
	N = 13		

**Panel B: Difference in means test for two-day returns**

	Merges with parent	Third party merger	Third party sale	Subsidiary repurchase
Merges with parent	-			
Third party merger	1.003	-		
Third party sale	3.271***	2.915***	-	
Subsidiary repurchase	2.037**	2.283**	0.447	-

(Table 29 continued)

Panel C: Seven-day announcement period returns (-5 to +1)				
Disposition type	Excess return	Distribution of returns		
		Quartile	Return	
Full sample	10.53%	25%	-1.87%	
	(17.24)***	50%	7.04%	
	[0.68]	75%	20.16%	
	N = 178			
Merged with parent	12.44%	25%	-1.19%	
	(17.52)***	50%	9.18%	
	[0.71]	75%	22.30%	
	N = 108			
Merged with third party	16.95%	25%	1.87%	
	(12.28)***	50%	14.34%	
	[0.86]	75%	27.20%	
	N = 28			
Stake sold to third party	1.92%	25%	-10.00%	
	(0.94)	50%	-0.09%	
	[0.48]	75%	10.04%	
	N = 27			
Repurchased by subsidiary	4.20%	25%	-4.62%	
	(2.11)*	50%	4.68%	
	[0.62]	75%	6.81%	
	N = 13			
Panel D: Difference in means test for seven-day returns				
	Merges with parent	Third party merger	Third party sale	Subsidiary repurchase
Merges with parent	-			
Third party merger	0.865	-		
Third party sale	2.897***	2.665***	-	
Subsidiary repurchase	1.671*	1.946*	0.424	-
*Significant at the 10% level. **Significant at the 5% level. ***Significant at the 1% level.				



zero. These subsidiary share price responses are lower than those documented by Slovin and Sushka (1998) who report returns of 18.53% for parent-subsidary mergers and 20.92% for third party buyouts, and indicate that the difference between the two returns is not statistically significant.

The target returns for disposition events that do not eliminate the minority shareholders are 1.33% (t-statistic = 0.99) for events in which the acquirer's stake is sold to a third party without the buyout of the minority shareholders. The returns are 3.04% (t-statistic = 2.41) when the acquirer's controlling interest is repurchased by the subsidiary. The results of a difference in means test indicates that the target share price responses to these two events are not significantly different (calculated t-value = 0.45). However, the results of difference in means tests indicate that the target share price response to the sale of the stake to a third party is significantly lower than the target share price response to a parent-subsidary merger (t-value = 3.27) or to a third party merger (t-value = 2.92). Likewise, the target share price response to subsidiary repurchases is also significantly lower than the target share price response to a parent-subsidary merger (t-value = 2.04) and the share price response to a third party merger (t-value = 2.28).

The seven-day stock price reaction for targets in response to disposition announcements shows an identical pattern to the two-day returns. The results are reported in Panel C of Table 29. The target share price response for the full sample of dispositions is 10.53% (t-statistic = 17.24), significant at a 1% level. The seven-day target returns are 12.44% (t-statistic = 17.52) for parent-subsidary mergers, 16.95% (t-statistic = 12.28) for third-party mergers, 1.92% (t-statistic = 0.94) for the sale of

the controlling stake to a third party without the buyout of the minority shares, and 4.20% (t-statistic = 2.11) when the controlling interest is repurchased by the subsidiary. Again, the stock price responses are significantly positive for all disposition types except the sale of the majority stake to a third party and difference in means tests are consistent with the results for the two-day returns.

Interestingly, the sum of the gains to target firms at the incomplete acquisition announcement and at the disposition announcement is similar for parent-subsidiary mergers and third party mergers (approximately 21% over the two-day window). The sum of the revaluations at the acquisition and disposition announcements is lower when the stake is subsequently sold to a third party and when the stake is subsequently repurchased by the subsidiary (about 9% and 6%, respectively, over the two-day window).

The two-day stock price returns for a sample of 151 acquirers in response to disposition announcements are reported in Panel A of Table 30. The acquirer share price response for the full sample of dispositions is 0.00% (t-statistic = 0.01). Thus, disposition transactions do not generate significant gains in shareholder wealth for parent firms. This suggests that, as in the case of conventional mergers and acquisitions, all of the gains in wealth generated by disposition transactions are captured by target firms, that is, by minority shareholders.

When disaggregated by the type of disposition transaction, none of the acquirer two-day share price responses is significantly different from zero at conventional significance levels. The average excess returns are -0.14% (t-statistic = -0.32) for parent-subsidiary mergers, -0.41% (t-statistic = -0.43) for third-party mergers, 0.08%

**Table 30 - Disposition Announcement Excess Returns to Acquirers by Disposition Type**

Excess returns (in percent) to acquirers at announcements of 151 dispositions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. Two-day announcement period returns are shown in Panel A; seven-day announcement period returns are shown in Panel C. Difference in means tests for the two-day and seven-day returns are shown in Panel B and Panel D, respectively.

**Panel A: Two-day announcement period returns (-1 to 0)**

Disposition type	Excess return	Distribution of returns	
		Quartile	Return
Full sample	0.00%	25%	-2.28%
	(0.01)	50%	-0.01%
	[0.49]	75%	1.86%
	N = 151		
Merged with parent	-0.14%	25%	-2.47%
	(-0.32)	50%	-0.31%
	[0.41]	75%	1.55%
	N = 91		
Merged with third party	-0.41%	25%	-4.04%
	(-0.43)	50%	-0.01%
	[0.43]	75%	2.80%
	N = 19		
Stake sold to third party	0.08%	25%	-3.11%
	(0.07)	50%	1.34%
	[0.63]	75%	4.37%
	N = 24		
Repurchased by subsidiary	0.42%	25%	-2.05%
	(0.32)	50%	0.40%
	[0.56]	75%	0.62%
	N = 9		

**Panel B: Difference in means test for two-day returns**

	Merges with parent	Third party merger	Third party sale	Subsidiary repurchase
Merges with parent	-			
Third party merger	0.181	-		
Third party sale	0.153	0.282	-	
Subsidiary repurchase	0.353	0.445	0.185	-

(Table 30 continued)

Panel C: Seven-day announcement period returns (-5 to +1)				
Disposition type	Excess return	Distribution of returns		
		Quartile	Return	
Full sample	0.04%	25%	-3.94%	
	(0.06)	50%	-0.29%	
	[0.47]	75%	4.02%	
	N = 151			
Merged with parent	-0.96%	25%	-4.83%	
	(-1.40)	50%	-0.91%	
	[0.41]	75%	3.77%	
	N = 91			
Merged with third party	2.61%	25%	-2.53%	
	(1.71)	50%	0.49%	
	[0.48]	75%	5.67%	
	N = 19			
Stake sold to third party	2.11%	25%	-1.29%	
	(1.21)	50%	2.46%	
	[0.67]	75%	7.65%	
	N = 24			
Repurchased by subsidiary	-3.70%	25%	-6.01%	
	(-1.82)	50%	-0.37%	
	[0.44]	75%	1.42%	
	N = 9			
Panel D: Difference in means test for seven-day returns				
	Merges with parent	Third party merger	Third party sale	Subsidiary repurchase
Merges with parent	-			
Third party merger	1.226	-		
Third party sale	1.403	0.153	-	
Subsidiary repurchase	0.851	1.570	1.645*	-
*Significant at the 10% level. **Significant at the 5% level. ***Significant at the 1% level.				

(t-statistic = 0.07) for sale of the controlling stake to a third party, and 0.42% (t-statistic = 0.32) when the controlling interest is repurchased by the subsidiary. These figures can be compared to the 2.03% parent share price response to parent-subsidiary mergers documented by Slovin and Sushka (1998). Difference in means are consistently not significant, indicating that the acquirer share price response to dispositions does not differ significantly across disposition methods.

The seven-day stock price reactions for 151 acquirers in response to disposition announcements are reported in Panel C of Table 30. The results are largely similar to the results for the two-day returns. The acquirer share price response for the full sample of dispositions is 0.04% (t-statistic = 0.06). The acquirer share price responses are -0.96% (t-statistic = -1.40) for parent-subsidiary mergers, 2.61% (t-statistic = 1.71) for third-party mergers, 2.11% (t-statistic = 1.21) for sale of the controlling stake to a third party, and -3.70% (t-statistic = -1.82) when the controlling interest is repurchased by the subsidiary. None of these returns is significantly different from zero at conventional significance levels. As in the case of the two-day returns, none of the difference in means calculated t-values are significant at the 5% level, indicating that the acquirer share price response to dispositions does not differ significantly across disposition methods.

The two-day average combined returns at the disposition announcement, disaggregated by disposition type, are reported in Panel A of Table 31. The two-day average combined excess return for the full sample of 125 paired targets and acquirers is 0.97% (t-statistic = 1.81), significant at the 10% level. The proportion of combined returns that are positive is 61%. The average (median) two-day change in combined

**Table 31 - Average Combined Excess Returns to Disposition Announcements by Disposition Type**

Combined excess returns (in percent) at announcements of 125 dispositions; t-statistics are in parentheses, the percentage of positive returns is in brackets and *N* is the sample size. The combined excess return is the weighted average of the excess returns for the target and acquirer, where the weights are the relative market values of equity of the two firms six weeks prior to the announcement. The average combined change in market value is computed as the cumulative excess return to the target times the target market value six week prior to the announcement plus the cumulative excess return to the acquirer times the acquirer market value six weeks prior to the announcement. Two-day returns are reported in Panel A; seven-day returns are reported in Panel B.

**Panel A: Two-day announcement period returns (-1 to 0)**

<b>Disposition type</b>	<b>Average combined excess return</b>	<b>Average (median) combined change in market value in millions</b>	<b>Distribution of combined excess return</b>	
<b>Full sample</b>	0.97% (1.81)* [0.61] N = 125	-\$11.021 (\$ 1.783)	25% 50% 75%	- 1.70% 0.79% 3.59%
<b>Merged with parent</b>	1.13% (1.49) [0.64] N = 77	-\$20.263 (\$ 1.466)	25% 50% 75%	- 0.90% 0.92% 3.79%
<b>Merged with third party</b>	2.04% (1.55) [0.63] N = 19	\$22.639 (\$ 7.695)	25% 50% 75%	- 2.56% 1.45% 6.21%
<b>Stake sold to third party</b>	0.35% (0.30) [0.47] N = 17	-\$21.573 (-\$ 1.148)	25% 50% 75%	- 1.70% - 1.20% 2.83%
<b>Repurchased by subsidiary</b>	-0.25% (-0.31) [0.56] N = 9	\$ 1.116 (\$ 2.932)	25% 50% 75%	- 2.22% 0.14% 1.41%

(Table 31 continued)

Panel B: Seven-day announcement period returns (-5 to +1)				
Disposition type	Average combined excess return	Average (median) combined change in market value in millions	Distribution of combined excess return	
Full sample	1.38% (1.59) [0.56] N = 126	-\$39.624 (\$ 0.945)	25% 50% 75%	- 2.91% 0.76% 4.98%
Merged with parent	0.69% (0.59) [0.58] N = 78	-\$58.556 (\$ 0.945)	25% 50% 75%	- 3.22% 1.10% 5.05%
Merged with third party	4.57% (2.14)** [0.58] N = 19	- \$ 5.325 (\$ 4.217)	25% 50% 75%	- 1.60% 0.77% 9.94%
Stake sold to third party	2.12% (0.86) [0.59] N = 17	\$27.409 (\$ 3.863)	25% 50% 75%	- 1.21% 2.32% 5.46%
Repurchased by subsidiary	-0.49% (-0.46) [0.56] N = 9	-\$38.862 (\$ 1.772)	25% 50% 75%	- 1.50% 0.93% 1.67%

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

wealth is -\$11.0 million (\$1.8 million). When the sample is disaggregated with respect to disposition method, the combined average excess returns are 1.13% (t-statistic = 1.49) for parent-subsidiary mergers, 2.04% (t-statistic = 1.55) for third party mergers, 0.35% (t-statistic = 0.30) for sales of the stake to a third party, and -0.25% (t-statistic = -0.31) for repurchases of the stake by the subsidiary.

The seven-day average combined returns at the disposition announcement, disaggregated by disposition type, are reported in Panel B of Table 31. The average combined excess return for the full sample of 126 paired targets and acquirers is 1.38% (t-statistic = 1.59), which is not significant at conventional levels. The proportion of combined returns that are positive is 56%. The average (median) change in combined wealth for the seven-day period is -\$39.6 million (\$0.9 million). When the sample is disaggregated with respect to disposition method, the combined average excess returns are 0.69% (t-statistic = 0.59) for parent-subsidiary mergers, 4.57% (t-statistic = 2.14) for third party mergers, 2.12% (t-statistic = 0.86) for sales of the stake to a third party, and -0.49% (t-statistic = -0.46) for repurchases of the stake by the subsidiary.

Overall, the results suggest that there is a large gain in wealth to target firm (minority) shareholders in response to disposition events that eliminate the publicly traded minority interest that remains after an incomplete acquisition, but there are no gains to the acquirer firm. There are only modest gains in wealth to target firm (minority) shareholders, and no gains to acquirers, in response to disposition events that do not eliminate the publicly traded minority interest that remains after an incomplete acquisition. The results also suggest that there is a small gain in combined wealth for disposition transactions in which the publicly traded minority interest that remains after an incomplete acquisition is eliminated. This seems especially clear in transactions in which the target is subsequently merged with a third party. For disposition transactions in which the minority shareholding is not extinguished, there is no evidence of any combined gains in wealth.



The industry and adjusted operating performance of targets is disaggregated on the basis of ultimate disposition to determine whether interim operating performance affects the disposition of the minority interest. The results are reported in Table 32. Overall, adjusted performance appears normal across all disposition types both before and after the incomplete acquisition occurs. There is some evidence that targets in which the stake is later sold to a third party or repurchased by the subsidiary perform poorly in year -1. However, caution should be exercised in drawing inferences because of the small sample sizes. Target firms that ultimately end up in financial distress exhibit poor performance prior to the incomplete acquisition, but seemingly have normal performance in most of the post-acquisition years. On average, the unadjusted performance of these firms deteriorates rapidly over the five years preceding the acquisition but stabilizes around year -1. Thus, even though the unadjusted performance of these target firms is poor relative to the typical firm in the industry in the post-acquisition years, expected performance, which is based on the sample firm's own past performance adjusted for the change in performance of other poorly performing firms, is close to actual performance. Finally, there is weak evidence that the target firms that ultimately merge with the parent, but have not done so in the five years following the incomplete acquisition announcement, experience poor performance in year +5. However, the results generally suggest that post-acquisition operating performance is not a good predictor of the ultimate disposition of the controlling stake.

**Table 32 - Adjusted Operating Performance of Incomplete Acquisition Targets by Disposition Type**

Return on assets is calculated as operating income before depreciation, interest, taxes and extraordinary items divided by average total assets (Panel A). Cash-adjusted return on assets is similar to return on assets except that cash and cash equivalents are subtracted from total assets in the denominator (Panel B). Return on sales is calculated as total sales divided by average total assets (Panel C). Cash-flow return on assets is similar to return on assets except that the effects of changes in current assets and liabilities are excluded from operating income (Panel D). Performance measures of each company are adjusted by subtracting the median performance measure for a group of matched companies. Year 0 denotes the fiscal year in which the incomplete acquisition announcement is made. Sample sizes are the number of observations in year -1.

Panel A: Median (mean) return on assets in percent											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Still trades	27	2.10 (0.85)	0.15 (-1.28)	0.15 (2.42)	0.80 (0.92)	-2.95** (-6.05)*	1.20 (9.18)	-1.20 (-0.51)	-1.43 (-3.71)	-0.95 (-0.25)	-1.88 (-1.06)
Merged with parent	48	-1.70 (-2.35)	1.30 (0.61)	0.05 (-4.67)**	1.20 (2.25)	-0.65 (-1.31)	0.80 (3.19)	-0.45 (-2.62)	-1.90 (1.61)	0.63 (-0.37)	-1.18 (-3.02)*
Merged with third party	15	2.30 (1.21)	-1.95 (-5.22)	2.40 (3.72)	0.80 (4.30)	0.18 (-0.52)	3.38 (6.92)	-0.10 (-1.69)	-1.35 (-0.30)	1.10 (-4.88)	-3.70 (-2.94)
Stake sold to third party	10	-4.60 (-3.94)	0.15 (10.56)	0.20 (1.79)	-7.55** (-9.53)**	-1.10 (-1.87)	5.20 (1.18)	-6.78 (-3.97)	-1.80 (-5.11)	1.50 (1.83)	-1.85 (-7.52)
Repurchased by subsidiary	7	4.70 (5.07)**	-1.05 (-3.16)	0.70 (2.53)	-3.25 (-14.97)	-1.05 (14.20)	0.55 (-0.73)	0.85 (3.85)	-3.70* (-8.93)	0.85 (-0.20)	1.30 (2.36)
Financial distress	10	-2.78 (-2.81)	-5.15 (-5.54)	-3.50 (3.73)	-6.08 (-6.57)	0.60 (6.08)	-2.75 (-5.46)**	1.85 (2.32)	-1.35 (-2.36)	-0.25 (-0.86)	-0.60 (-0.20)

(Table 32 continued)

Panel B: Median (mean) cash-adjusted return on assets											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Still trades	26	2.60 (2.29)	-1.75 (-3.34)	-2.00 (-0.01)	2.65 (1.81)	-1.05 (-1.53)	1.98 (11.63)	-0.30 (-1.48)	-1.80 (-5.78)	0.80 (-8.18)	-4.30 (-3.48)
Merged with parent	45	-1.10 (-0.95)	-0.38 (-1.98)	-0.10 (-7.84)**	0.50 (1.23)	-0.30 (-2.27)	1.60 (5.03)	-0.85 (-2.88)	-1.60 (3.51)	1.03 (-0.23)	-2.60* (-4.29)**
Merged with third party	13	1.80 (0.07)	1.30 (1.46)	7.90** (6.48)***	0.60 (0.62)	0.20 (-0.67)	6.30 (6.11)	-1.15 (-2.79)	6.05* (2.10)	-7.90 (-6.06)	-5.50 (-6.67)
Stake sold to third party	10	-3.58 (-3.13)	-0.90 (16.59)	0.10 (1.26)	-5.30** (-13.54)*	2.80 (2.31)	0.60 (-4.37)	-5.65 (-4.39)	-3.63 (-1.16)	0.90 (4.78)	-3.50 (-10.16)
Repurchased by subsidiary	7	3.90 (4.70)*	0.85 (-2.13)	4.50 (3.60)	-9.90** (-8.49)**	0.70 (20.71)	0.75 (-2.95)	0.60 (9.57)	-3.15 (-18.07)	0.05 (-4.44)	-3.50 (-3.19)
Financial distress	9	5.63 (13.15)	-5.65 (-18.91)	-2.80 (-1.29)	-6.45 (-5.93)	-0.80 (2.31)	-0.70 (-4.83)*	2.08 (3.10)	-1.40 (-2.47)	-0.30 (-1.12)	-0.60 (1.14)
Panel C: Median (mean) return on sales in percent											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Still trades	27	3.40* (4.29)	1.73 (-1.24)	-2.00* (-5.43)**	2.10 (3.51)	-0.85 (0.82)	-1.85 (2.54)	-0.70 (-0.13)	-2.95 (-2.90)	0.85 (-3.91)	0.35 (-1.53)
Merged with parent	47	-2.15 (5.99)	1.90 (-1.15)	0.35 (0.31)	0.20 (0.79)	2.55 (1.19)	1.98 (4.09)	-0.30 (-4.64)	-0.10 (5.65)*	2.73*** (11.44)**	-4.65* (-7.88)**
Merged with third party	14	-4.65* (-7.88)**	0.85 (4.17)*	1.08 (0.28)	-0.40 (-0.74)	1.80 (4.79)	2.33 (6.80)	1.25 (-1.03)	-1.00 (2.10)	2.70 (1.85)	-2.70 (-4.32)
Stake sold to third party	10	-2.70 (-6.27)	2.00 (9.89)	-3.30 (-1.20)	-5.18** (-9.91)	2.40 (2.76)	1.70 (0.24)	-3.20 (-2.52)	-3.85 (-4.41)	4.60 (8.15)	-1.45 (-1.31)
Repurchased by subsidiary	6	n.a.	1.65 (-2.03)	1.55 (-1.48)	-4.15** (-9.96)	-1.20 (2.09)	5.50** (5.23)**	0.30 (-7.50)	-1.30 (-11.40)	3.10 (6.10)	-4.20 (-2.09)
Financial distress	12	-0.90 (1.04)	4.80 (3.28)	1.45 (4.16)	-0.03 (-0.90)	0.15 (0.73)	-0.50 (-13.73)	3.95 (7.83)	-4.05 (-20.98)	-2.83 (-0.55)	0.30 (-1.70)

(Table 32 continued)

Panel D: Median (mean) cash-flow return on assets in percent											
Year	N	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Still trades	27	2.40 (-0.99)	-0.45 (0.44)	3.40 (7.69)	-1.25 (-2.68)	-0.60 (-2.04)	-1.45 (4.57)	2.35 (5.69)*	2.90 (-6.29)	0.75 (-1.44)	0.33 (-1.18)
Merged with parent	45	1.20 (-0.75)	0.00 (1.59)	2.50 (-3.61)	2.45 (4.61)	-5.80** (-3.99)	-0.40 (-1.66)	0.45 (9.45)	1.30 (-3.90)	0.35 (1.57)	-3.00 (3.79)
Merged with third party	15	4.60 (8.20)	-3.63 (-5.27)	-1.00 (0.32)	2.25 (2.67)	0.10 (-1.85)	-1.00 (1.81)	-1.65 (-6.48)	2.20* (11.73)	6.30 (-5.28)	6.60 (4.53)
Stake sold to third party	11	2.45 (-2.35)	1.78 (2.02)	-3.33 (1.61)	-1.75* (-11.06)*	-1.85 (0.12)	0.05 (-2.15)	2.25 (-0.12)	-3.83 (-5.56)	-0.70 (8.36)	-5.55* (-18.93)*
Repurchased by subsidiary	5	n.a.	n.a.	n.a.	-1.80 (21.72)	-1.63 (1.91)	24.08* (17.91)**	-9.83* (-25.70)	-0.65 (3.22)	6.73 (15.29)	21.45 (12.22)
Financial distress	8	6.00 (3.93)	0.75 (2.58)	-7.65 (-8.84)	-0.50 (1.24)	0.60 (7.30)	-0.55 (9.44)	-8.58 (-3.63)	-1.15 (3.24)	n.a.	n.a.

\*Significant at the 10% level. \*\*Significant at the 5% level. \*\*\*Significant at the 1% level.

## **6.6 Summary**

The evidence reported in this chapter suggests that incomplete acquisitions are a transitory form of corporate governance that lasts on average less than six years. The most common disposition of an incomplete acquisition is a parent-subsidiary merger, a transaction that extinguishes the publicly traded minority interest. Other common, though less frequent, outcomes are third party mergers in which the publicly traded minority interest is also extinguished, and sales of the majority interest to a third party in which the minority interest continues to publicly trade but is under the control of a different entity.

The empirical results on the valuation effects of incomplete acquisition announcements across disposition methods indicate that target firm shareholder wealth is enhanced regardless of the eventual outcome. However, there is some evidence that target firm shareholders experience greater acquisition announcement gains when the ultimate outcome is a parent-subsidiary merger. The results for the valuation effects of disposition announcements indicate that target firm shareholders sustain large gains in wealth in response to parent-subsidiary mergers and third party mergers, and only small gains in response to third party acquisitions or subsidiary repurchases of majority stakes. There are no gains to acquirers at disposition announcements. Overall, target firm shareholders experience the greatest gains when the target is subsequently merged, regardless of whether the merger is with the parent or a third party.

The main result of the empirical analysis of the valuation effects of incomplete acquisition announcements on acquirers, disaggregated by disposition method, is that, on average, acquirer wealth is not diminished at the time of the incomplete acquisition

announcement regardless of the subsequent disposition. The analysis of the valuation effects of the disposition announcement on acquirers indicates that acquirer shareholder wealth is not affected by the disposition. There is some evidence that the acquirer fares marginally better when the majority interest is sold to a third party.

Finally, the evidence from the analysis of the combined wealth effects of dispositions indicates that the overall wealth of parents and subsidiaries is modestly enhanced at the disposition of the incomplete acquisition. Moreover, there is some evidence that overall wealth is significantly enhanced when the minority interest in the subsidiary is subsequently merged with the parent or a third party.

## CHAPTER 7

### CONCLUSION

#### 7.1 Introduction

This dissertation provides an extensive examination of incomplete acquisitions, which are a type of corporate control transaction that has not been previously examined in the finance literature. For purposes of this study, an incomplete acquisition is defined as an offer for a sufficient amount of equity in a target firm that gives the bidder effective control of the target firm that is not accompanied by a disclosed intention to acquire the remaining minority shares. Subsequent to the incomplete acquisition transaction, the target firm is a legally separate, parent-controlled, operating entity that has a publicly traded minority interest and continues to be subject to all of the mandates required of a public corporation.

An original database of incomplete acquisitions is developed in this dissertation. It is used to examine three major aspects of these unique control transactions. First, descriptive data about the prevalence of incomplete acquisitions and the alternative mechanisms that are used to effect these transactions are provided. Then event study methodology is used to assess the market valuation effects of incomplete acquisition announcements. Second, the pre- and post-acquisition operating performance of incomplete acquisition targets is examined. By analyzing both the valuation effects and subsequent operating performance of incomplete acquisitions, this study provides evidence to distinguish among alternative hypotheses that generate differential predictions about the wealth effects of changes in control, the distribution of wealth between targets and acquirers, and the subsequent performance of target firms. Third,

the ultimate disposition of the parent's controlling stake and the minority interest in the target is detailed and the valuation effects of disposition transactions are examined. This analysis provides evidence about the wealth effects of alternative forms of disposition. Operating performance is further analyzed by disaggregating the sample of target firms based on the alternative types of disposition outcomes. This affords the opportunity to determine whether interim operating performance influences the subsequent disposition of the majority interest.

Overall, combined evidence from the analysis of acquisition announcements, target firm operating performance, and dispositions of the majority or minority interests is used to generate conclusions about the effects of incomplete acquisitions as a mechanism for changing corporate control. The empirical results also provide insight into the reasons why incomplete acquisitions are undertaken.

## **7.2 Summary and Interpretation of Main Results**

The descriptive analysis of incomplete acquisitions reported in Chapter 3 indicates that there are three dominant methods by which control is established in these transactions. These methods are i) tender offers for a majority of outstanding shares of the target, ii) the issuance of new equity by the target to the acquirer, and iii) the purchase of several existing blocks to form a majority stake. The latter two methods are unique to this form of corporate control transaction because no shares are acquired from dispersed shareholders. The analysis of target and acquirer market valuation effects indicates that, as in studies of conventional mergers and acquisitions, targets of incomplete acquisitions are typically much smaller than acquiring firms. The analysis also indicates that incomplete acquisitions are well distributed over the sample period



and across industries. These findings suggest that the use of incomplete acquisitions as a mechanism for changing control is not confined to a particular time period or concentrated in certain industries. In addition, the degree of relatedness between the industries of the target and acquirer firms in the sample varies widely, ranging from transactions between firms in the same industry to transactions that are purely conglomerate. Thus, the sample of incomplete acquisitions provides an opportunity to test the synergy hypothesis of mergers and acquisitions.

The empirical results of the valuation effects of incomplete acquisitions in Chapter 4 indicate that these transactions are value enhancing for targets and have a non-negative effect on the wealth of acquirers. When the sample of incomplete acquisition announcements is disaggregated by acquisition method, the results indicate that target firm shareholders experience significant gains in wealth for each method of acquisition. However, the gains to target shareholders are greatest when the incomplete acquisition is effected via a tender offer. In addition, target shareholder gains are greater for incomplete acquisitions via new equity issues than for incomplete acquisitions via block purchases.

For the full sample of transactions, the returns to acquirers at incomplete acquisition announcements are significantly positive, but statistically significant positive returns to acquirers are largely limited to events in which the transaction occurs by tender offer. The combined wealth effects for acquirer firm shareholders and target firm shareholders are also positive. The greatest combined gains occur for incomplete acquisitions through tender offers. Target firm shareholders capture the preponderance of the average combined increase in wealth generated by incomplete acquisitions, a

result that is similar to the well-documented evidence for conventional mergers and acquisitions.

The analysis of pre- and post-acquisition operating performance of incomplete acquisition targets, reported in Chapter 5, indicates that target firm operating performance is similar to operating performance for sets of control firms both before and after the acquisition. Thus, there is neither deterioration nor improvement in target firm operating performance following a change in control through an incomplete acquisition. Normal performance indicates that there is no evidence to support the view that acquiring firms use incomplete acquisitions to expropriate the wealth of minority shareholders through activities such as self-dealing transactions and or direct access to target firm assets. The finding of normal operating firm performance prior to incomplete acquisitions indicates that targets are not performing poorly relative to control firms, which suggests that the target firms are not mismanaged firms

Since target firm operating performance does not improve significantly subsequent to the change in control, the performance results provide no evidence of efficiency gains or operating synergies for these transactions. Moreover, the analysis of post-acquisition operating performance of targets indicates that the subsequent performance of target firms that are in an industry that is unrelated to the acquirer's industry is similar to the performance of target firms that are in an industry that is closely related to the acquirer's industry. This finding is consistent with the pattern of valuation effects reported in Chapter 4, which indicate that wealth gains in industry-related incomplete acquisitions are comparable to wealth gains in incomplete acquisitions where the target firm has low-relatedness with the acquirer.

The data reported in Chapter 6 suggest that an incomplete acquisition is a transitory form of corporate governance, lasting on average less than six years. The most common disposition of an incomplete acquisition is a parent-subsidary merger, a transaction that eliminates the publicly traded minority interest without a change in control. Other common outcomes, in which there is a change in control, are third party mergers, transactions that also eliminate the publicly traded minority interest, and sales of the acquirer's controlling interest to a third party in which the minority interest continues to publicly trade.

Empirical results on the valuation effects of incomplete acquisition announcements across disposition methods, reported in Chapter 6, indicate that target firm shareholder wealth is enhanced regardless of the eventual outcome of the transaction. There is some evidence that target firm shareholders experience greater acquisition announcement gains when the ultimate outcome is a parent-subsidary merger. The results for the valuation effects of disposition announcements indicate that target firm shareholders sustain large gains in wealth in response to parent-subsidary mergers and third party mergers, but only small gains in wealth in response to third party acquisitions or subsidiary repurchases of majority stakes. Overall, target firm shareholders experience the greatest gains when the target is subsequently merged with either the parent or a third party. The valuation effects of incomplete acquisition announcements on acquirers indicate that, on average, acquirer wealth is not diminished at the time of the incomplete acquisition announcement regardless of the subsequent disposition. The analysis of the combined wealth effects of dispositions

indicates that the overall wealth of parents and subsidiaries is modestly enhanced at the announcement of the disposition of the incomplete acquisition.

The normal pre- and post-acquisition operating performance shown by target firms relative to control firms, suggests that the increase in target shareholder wealth at incomplete acquisitions announcements is not due to the market's anticipation of increased efficiency from the acquirer's management of the target firm's operations. Similarly, the pervasiveness of normal pre- and post-acquisition target firm operating performance indicates that there is no evidence of gains from operating synergies or improvements in managerial efficiency. In contrast to the efficiency hypothesis, the expropriation hypothesis implies that an acquirer is able to gain from an incomplete acquisition of a target firm through its subsequent expropriation of minority interests. In particular, this hypothesis predicts that an acquirer will allocate to itself a disproportionate share of the combined entity's post-acquisition operating earnings by means such as self-dealing transactions between the parent and its new subsidiary. However, the empirical results indicate that after the change in control, there is no evidence of deterioration in the operating performance of target firms relative to that of the set of control firms. Thus, the post-acquisition operating performance of target firms is inconsistent with the expropriation hypothesis. The information hypothesis posits that positive private information obtained by a bidder about target firm value is conveyed to the market by an acquisition announcement, resulting in a permanent upward revaluation of target value. The finding of normal pre- and post-acquisition performance of target firms, combined with the evidence of significant gains in aggregate shareholder wealth in response to announcements of incomplete acquisitions,

is consistent with the information hypothesis. From this perspective, incomplete acquisitions are value enhancing corporate control transactions.

### **7.3 Future Research**

This dissertation provides an analysis of the valuation effects of incomplete acquisitions on targets and acquirers and an examination of the operating performance of target firms. The continued public trading of the target permits a more detailed examination of the gains in value generated by control transactions than can be obtained by studying control transactions such as conventional mergers and acquisitions or divestitures. A benefit of the continued trading in target firm shares subsequent to the control transaction in incomplete acquisitions is that market prices can be used to help align the interests of managers and shareholders by basing compensation contracts on target, rather than parent, stock price performance. A future analysis of the structure of management compensation and managerial ownership of shares can provide evidence on this issue. Another important avenue of future research is a direct comparison of incomplete acquisitions with a matched sample of conventional corporate control transactions, such as mergers and acquisitions, to provide evidence on alternative hypotheses about the motivations for the use of incomplete acquisitions rather than conventional corporate control mechanisms.

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## **VITA**

**Karyn Lynn Neuhauser received a Bachelor of Business Administration degree in accounting from the University of Texas at San Antonio in 1986. In 1992, after working as a Certified Public Accountant for five years, she matriculated in the University of Texas at San Antonio's Master of Business Administration program and received a Master of Business Administration degree in May 1997. In 1994, she entered the doctoral program in Business Administration at Arizona State University. In the fall of 1996, she transferred to the Louisiana State University doctoral program and completed her doctoral degree in the summer of 1999.**

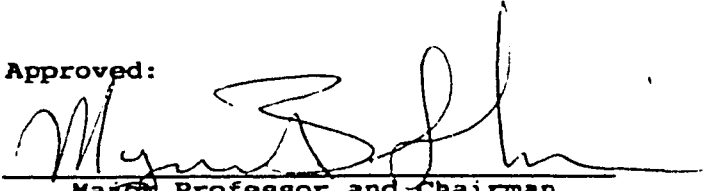
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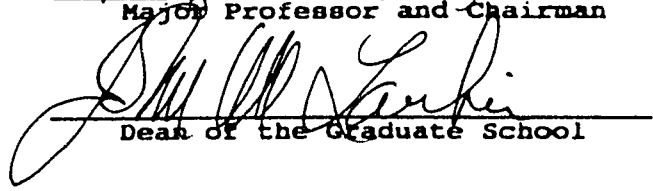
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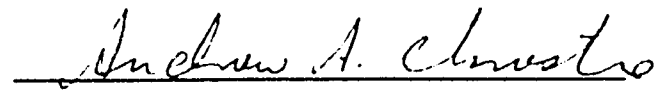
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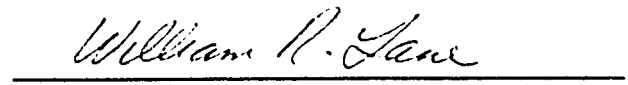
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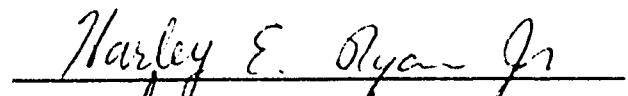
  
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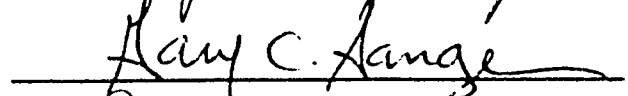
  
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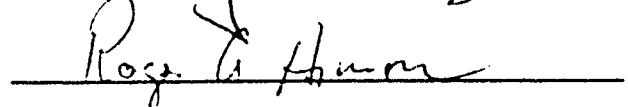
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**Date of Examination:**

June 16, 1999

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